UNITED STATES COAST SURVEY.

U.S. COAST & GEODETIC SURVEY
FEB 20 1895
MISCELLANEOUS DIVISION

COAST-PILOT

FOR THE

ATLANTIC SEA-BOARD.

Rare book
VK
951
.A96
1874

GULF OF MAINE

AND ITS COAST FROM

EASTPORT TO BOSTON.

1874.

LIBRARY
U.S. Department of Commerce

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1875.

National Oceanic and Atmospheric Administration

Climate Database Modernization Program

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This document has been imaged through the NOAA Climate Database Modernization Program. To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or www.reference@nodc.noaa.gov.

LASON
Imaging Subcontractor
12200 Kiln Court
Beltsville, MD 20704-1387
March 28, 2002

PREFACE.

THE immediate interests of our domestic commerce, as evidenced by frequent inquiry for a Coast-Pilot of the Atlantic Coast of the United States, have induced a hurried issue of this volume of notes relating to the *Gulf of Maine*, which includes that body of water lying between Cape Cod, Georges' Bank, Nova Scotia, and the New England Coast.

Continuous service afloat has not allowed the compiler time to revise the manuscript for the press, hence the descriptions and sailing directions appear mostly as they were written in intervals of work on board the vessel, from notes taken while running the actual sailing-lines.

It was found impossible to prepare all the intended views of the coast and its harbors for this edition, but they will appear in a subsequent reprint of these notes and sailing directions.

In the use of several styles of type, an attempt has been made to conform to the lettering on Coast-Survey Charts; names being in upright letters for land, bare rocks, etc., but inclined when they apply to bays, channels, or other waters, and sunken dangers. So, also, the relative importance of coast features is partly indicated by difference in the size and form of type, an expedient intended to aid the mariner in scanning rapidly for important facts in any given locality. In passing through the notes he will find:

1st. A general description of the approaches to, and including the harbor for which he is bound.

2d. A general description of the *appearance* of land, etc., on approaching and entering the harbor.

3d. A general description of the dangers in the approaches to, and in the harbor.

4th. Sailing directions for approaching and entering the harbor, with notices of the Tides, Light-Houses, Variation of the Compass, etc.

The volume now presented was compiled from Coast-Survey Charts by J. S. Bradford, Assistant Coast Survey. It includes the results of his continuous personal observation in passing from point to point along the coast, and tests of the sailing-lines; and no fact has been stated without strict reference to previous verification. While submitting the notes in their present form for the reason already given, the desire is strong that they may become as useful as possible to the large body of intelligent men who are interested, as commanders of vessels or otherwise, in our commercial marine. Any additional facts of general interest in the compilation or corrections will, therefore, be gladly received, as will be also any suggestions in regard to the form or arrangement of the matter in a final edition.

It is well known that geological characteristics are traceable to seaward in many places far beyond the shore-line, the rock-bound coast of Maine being commonly beset with islands, reefs, and sunken ledges, as shown by the charts. The geological features of that quarter, including the sea-bottom, have been generalized by Professor Shaler in a few remarks which are appended to this edition of the Coast-Pilot. His conclusions are thoroughly practical, as in a few lines they embody important facts which will be readily apprehended by the intelligent mariner.

CARLILE P. PATTERSON,
Superintendent.

NOTE.

All bearings and courses are magnetic.
All distances are in nautical miles.
All depths are at mean low water.

ERRATA.

The following corrections should be carefully marked with a pen and red ink, through the pages of this copy. In a new edition, soon to issue, these errors and others, of less importance, will be corrected in print:

Page 7, line 8; for "Thatcher Island Lights bearing," read "Thatcher Island Lights bear."
Page 10, line 19; for "most westernmost," read "westernmost."
Page 13, line 25; for "Ball Tusket," read "Bald Tusket."
Page 13, lines 27 and 28; for "Brye Island," read "Bryer Island."
Page 25, line 40; for "Rowen," read "Rouen."
Page 37, line 35; for "Black House Point," read "Block House Point."
Page 40, line 12; for "to the shore of St. Croix River," read "to, and shores of St. Croix River."
Page 58, line 12; for "when," read "as."
Page 58, line 13; for "until past the eastward," read "until to the eastward."
Page 58, line 27; for "and a fixed white light," read "and shows a fixed white light."
Page 60, line 36; for "carry up with," read "lead up to."
Page 66, line 8; for "to its southeastern end," read "at its southeastern end."
Page 69, line 6; for "Day Flats," read "Day Point Flats."
Page 73, line 25; for "clears," read "leads."
Page 76, line 20; for "look right into Buck Harbor," read "Buck Harbor will be fairly open."
Page 78, line 15; for "Base ledges," read "Bare ledges."
Page 84, line 24; for "nothing more than three fathoms," read "nothing less," &c.
Page 84, 2d line from bottom; for "W. ½ W.," read "W. ½ N."
Page 99, line 5; for "lies," read "lie."
Page 111, line 29; for "southernmost of Goose Island," read "southernmost Goose Island."
Page 113, line 27; for "Then," read "They."
Page 117, line 11; for "pass up the middle," read "passes up the middle."
Page 121, line 25; for "Hardwood Ledges," read "Hardwood Island Ledges."
Page 139, line 32; for "and it and this passage," read "and this passage."
Page 140, last line but one; for "from," read "form."
Page 142, line 39; for "come to," read "the next danger is."
Page 144, lines 8 and 9; for "Black Bay," read "Back Bay."
Page 146, line 25; for "horizontially," read "horizontally."
Page 150, line 26; for "next come to," read "the next danger is."
Page 151, line 10; for "carry up with," read "lead up with."
Page 156, line 9; for "islets," read "islet."
Page 156, line 34; for "come next to," read "the next danger is."
Page 160, line 17; for "N. by W. ½ W. nearly," read "N. by W. ½ W., nearly," &c.
Page 167, line 31; for "on the south," read "on the north side."
Page 170, line 33; for "Western Ship Island," read "Western Sheep Island."
Page 171, line 3; for "from," read "on."
Page 173, lines 10 and 11; for "a little to the East of North," read "a little to the northward of the course."
Page 173, line 15; for "bearing them," read "leaving them."
Page 173, line 33; for "or Mount Desert," read "on Mount Desert."
Page 182, line 31; for "with less than five fathoms," read "with not less than five fathoms"
Page 183, line 17; for "Hall Cove," read "Hull Cove."
Page 183, same line; for "Winter Harber," read "Winter Harbor."
Page 184, line 10; for "continued," read "contained."
Page 186, 5th line from bottom; for "to bear," read "bears."
Page 186, 3d line from bottom; for "carry safely up," read "lead safely up."
Page 187, line 14; "for "islands," read "island."
Page 195, line 28; for "to the northward," read "to the eastward of the course."
Page 196, last line; for "Half-Tide Rock," read "Half-Tide Ledge."
Page 205, line 20; for "surmounted," read "surrounded."

Page 206, lines 41 and 42; for "when past Lewis Ledge and in ten and a half fathoms," read "which clears Lewis Ledge; and when in ten and a half fathoms."

Page 207, lines 18 and 19; for "the ledge is past," read "the ledge has been passed."

Page 209, line 16; for Lewis Rock is past," read "Lewis Rock has been passed."

Page 209, line 38; for "passing," read "the course passes."

Page 210, line 17; for "Harber," read "Harbor."

Page 210, line 37; for "to the northeast," read "to the northward of the course."

Page 211, line 34; for "northeastward," read "eastward of the course."

Page 215, line 36; for "Lewis Rock is past," read "Lewis Rock has been passed."

Page 216, line 40; for "the ledge is past," read "the ledge has been passed."

Page 217, line 36; for "making," read "marking."

Page 219, line 40; for "to the northwest," read "to the northward of the course."

Page 223, line 38; for "bold," read "bald."

Page 231, lines 31 and 38; for "Black Cove," read "Back Cove."

Page 238, line 16; for "Past this buoy," read "When past this buoy."

Page 240, line 35; for "Cow and Calf Ledge," read "Cow and Calf Ledges."

Page 240, line 36; for "Past," read "When past."

Page 241, line 6; for "NE. by N. ¼ N. nearly," read "NE. by N. ½ N., nearly," &c.

Page 241, line 39; for "Cow and Calf Ledge," read "Cow and Calf Ledges."

Page 242, line 10; for "pages," read "page."

Page 248, line 23; for "next to the southwestward of," read "next to the southwestward."

Page 249, line 37; omit "and to the northeast."

Page 250, line 2; for "on the southwest," read "to the westward of the course."

Page 251, line 5; for "lie," read "lies."

Page 263, line 12; for "quite a settlement at North-West Harbor," read "quite a settlement, called Deer Isle, at North-West Harbor."

Page 264, line 36; for "sunken rock," read "sunken rocks."

Page 270, line 23; for "Barter Island Ledge," read "Barter Island Ledges."

Page 275, line 20; for "Byer Island," read "Bryer Island."

Page 278, line 8; for "bare rock," read "bare rocks."

Page 278, line 22; for "known as Thoroughfare," read "known as a Thoroughfare."

Page 279, line 22; for "Saddle-Back Rock," read "Saddle-Back Ledge."

Page 279, line 25; for "northwestward," read "northward of the course."

Page 281, line 34; for "from the westward," read "from the eastward."

Page 286, line 27; for "north and west," read "northward of the course."

Page 287, line 38; for "detatched," read "detached."

Page 290, line 44; for "bring up," read "lead up."

Page 293, line 36; for "Pleasent," read "Pleasant."

Page 294, line 35; for "found," read "formed."

Page 299, line 25; for "three curves," read "three-quarters of a circle."

Page 302, line 21; for "Saddle Island," read "Saddle-Back Island."

Page 302, line 28; for "McIntosh Ledge," read "Sunken, or McIntosh Ledge."

Page 307, line 35; for "to the northeast," read "to the eastward of the course."

Page 307, line 44, and on pages 308 and 309; for "Arey Ledge," read "Creed, or Arey Ledge."

Page 309, line 22; for "Leadbetter Islands," read "Leadbetter Island."

Page 309, line 43; for "eastward," read "westward."

Page 311, line 42; for "Gondola," read "Gundell,"

Page 315, lines 2 and 8; for "Seal Cove," read "Seal Harbor."

Page 330, lines 33 and 34; for "when pass into," read "passing it in."

Page 330, line 41; for "pass through," read "to pass through."

Page 332, line 7; for "there is," read "there was formerly."

Page 332, same line; for "serves," read "served."

Page 332, line 9; after "Porterfield Ledge," add as follows: "but has now been superseded by the light-house on."

Page 334, line 29; for "Greystone Beacon," read "gray stone Beacon."

Page 337, line 27; for "vessel," read "vessels."

Page 338, 3d and 4th lines from bottom; here read "When the two spindles at the entrance have been safely passed."

Page 340, lines 6, 11, 15, and 22; for "Frohock," read "Frohawk."

Page 344, line 43; for "Lobster Rock," read "Half-Tide Ledge."

Page 344, line 47; after "anchorage," interpolate the sentence "It is also sometimes called Lobster Rock."

Page 345, line 19; for "Lobster Rock," read "Half-Tide Ledge."

Page 348, line 29; for "carry in," read "there will be."
Page 353, line 40; for "surrounded," read "surmounted."
Page 354, line 41; for "to round," read "vessels may round."
Page 356, line 16; for "Fisherman Island Passage," read "Fisherman Island Channel."
Page 356, line 31; for "Ilesboro," read "Islesboro."
Page 358, last line but one; for "leaves," read "leave."
Page 360, line 24; for "on the eastern bow," read "to the eastward of the course."
Page 360, line 42; for "McIntosh," read "Sunken, or McIntosh."
Page 361, lines 34 and 39; for "West Bay," read "West Penobscot Bay."
Page 362, line 11; for "eastern bow," read "to the eastward of the course."
Page 362, line 28; for "McIntosh," read "Sunken, or McIntosh."
Page 362, line 35; for "East Bay," read "East Penobscot Bay."
Page 363, line 9; for "West Bay," read "West Penobscot Bay."
Page 364, lines 5 and 6; for "Fisherman Island Passage," read "Fisherman Island Channel."
Page 367, lines 11 and 12; for "Hooper Shoal, a very small detached rock," read "Hooper Shoal is a very small detached rock."
Page 372, line 25; for "extend," read "extends."
Page 386, line 44; for "bolow," read "below."
Page 392, line 4; for "channal," read "channel."
Page 399, line 22; for "to the northeast," read "on the north side of the channel."
Page 401, line 1; for "extends," read "extend."
Page 407, line 28; for "above," read "about."
Page 408, lines 26 and 27; leave out "This is the point of junction of the South, Old Hump, and Western Channels"; and for "when steer E. by N. $\frac{3}{4}$ N.," read "Then steer E. by N. $\frac{3}{4}$ N."
Page 415, line 6; for "seven," read "sixteen."
Page 415, line 7; for "beginning at the southernmost," read "the principal ones."
Page 419, line 7; add "This portion of the channel is called The Narrows."
Page 420, line 41; for "Muscongus Island Bar," read "Muscongus Bar."
Page 422, line 42; for "Pemequid," read "Pemaquid."
Page 430, line 41; for "carry," read "lead."
Page 430, line 43; for "passing to the northeastern end," read "passing the northeastern end."
Page 437, last line but one; for "northeast," read "eastward."
Page 438, line 12; for "shoot the passage," read "a vessel may shoot the passage."
Page 438, line 36; for "eastward," read "eastward of the course."
Page 440, line 20; for "come to," read "the course leads to the westward of."
Page 440, lines 21 and 22; omit the words "which pass to the westward of."
Page 445, line 5; for "come to," read "the next danger met with is."
Page 446, line 45; for "Muscongus Island Bar," read "Muscongus Bar."
Page 453, line 19; for "desription," read "description."
Page 455, line 19; for "look along," read "is seen."
Page 460, 7th line from bottom; for "Damariscosta," read "Damariscotta."
Page 462, line 27; for "Seen at that time," read "Seen."
Page 462, line 39; for "Sequin," read "Seguin."
Page 463, line 2; for "Past," read "When past."
Page 468, line 32; for "northwestward," read "eastward of the course."
Page 471, line 19; for "carry," read "bring a vessel."
Page 518, line 18; for "Sabine Head," read "Sabino Head."
Page 518, line 32; for "look up to the northward and eastward into," read "there will be seen to the northeastward."
Page 519, line 37; for "come to," read "the course leads toward."
Page 541, line 1; for "Adkins," read "Atkins."
Page 546, line 29; for "lie at anchor," read "vessels may lie at anchor."
Page 547, last line; for "Simon Garnet," read "Simon's Gurnet."
Page 563, line 26; for "Mariconeag," read "Mericoneag."
Page 565, last line; for "as approaching," read "on approaching."
Page 579, lines 1 and 43; for "Dingley Point," read "Doughty Point."
Page 581, 4th line from bottom; for "Zeke Island," read "Uncle Zeke's Island."
Page 592, line 12; for "Torrey," read "Torry."
Page 593, line 16; for "Torry Buoy," read "Torry Rock Buoy."
Page 597, line 21; for "connect with it," read "connected with it."
Page 599, line 36; for "bare rock," read "bare rocks."

Page 602, line 5; for "come to a low bare point," read "a low bare point will be reached."
Page 605, last line; for "carries," read "leads."
Page 606, lines 5 and 6; for "three hundred and fifty yards S. by W. from the southwestern end of Whaleboat Island," read "the southwestern end of Whaleboat Island bears N. by E., three hundred and fifty yards off."
Page 614, line 22; for "come next to," read "the next danger is."
Page 621, lines 5 and 6; for "there is less," read "there is not less."
Page 622, line 1; for "carries," read "leads."
Page 622, line 24; for "exist," read "exists."
Page 624, line 16; for "pass," read "will appear."
Page 630, 4th line from bottom; for "having passed," read "past."
Page 632, line 7; for "come next to," read "the next danger is."
Page 635, line 22; for "Standiford," read "Staniford."
Page 649, line 11; for "do not approach," read "do not approach it."
Page 653, line 13; for "Bird Point," read "Birch Point."
Page 664, line 9; for "and see Stage Island Monument," read "and Stage Island Monument will appear."
Page 674, line 39; for "As soon as having passed," read "Having passed."
Page 681, line 13; for "and in," read "and the depth will be."
Page 681, 6th line from bottom; for "Roaring Point," read "Roaring Rock Point."
Page 689, last line but one; for "first see," read "the first seen is."
Page 692, line 14; for "on its starboard bow," read "to the westward of the course."
Page 693, 6th line from bottom; for "Philip," read "Phillips."
Page 694, line 1; for "Philip," read "Phillips."
Page 697, last line but one; for "now in," read "and the depth being."
Page 698, 4th line from bottom; for "is the site," read "It is the site."
Page 700, line 11; for "Isle of Shoals," read "Isles of Shoals."
Page 701, line 23; for "five feet," read "three feet."
Page 701, line 26; for "NW. by W. ½ W.," read "NW. ½ N."
Page 701, line 28; after "is not buoyed," read "It is called Speedwell Rock."
Page 708, lines 18 and 19; for "Plum River," read "Plum Island River."
Page 710, line 31; for "come to," read "the course leads toward."
Page 720, 4th line from bottom; for "Annisquam River," read "Annisquam Harbor."
Page 741, line 20; for "come to the entrance," read "the entrance," &c., "is approached."
Page 744, line 14; for "come to," read "the next danger is."
Page 767, line 1; for "as approaching," read "on approaching."
Page 772, line 3; pages 775, 776, and 781; for "Selman Berth," read "Sellman's Berth."
Page 792, line 4, (under light-house table); for "Egg Harbor Light," read "Egg Rock Light.
Page 813, line 1; for "makes," read "marks."
Page 813, lines 14 and 17; for "Glade Flats," read "Glades Flats."
Page 825, line 22; for "Hypocrite," read "Hypocrite Channel."
Page 832, lines 24, 27, and 30; for "Glade Flats," read "Glades Flats."
Page 833, line 7; for "entrance Fort Hill Channel," read "entrance to Fort Hill Channel."
Page 833, line 35; for "enter as soon as past," read "is entered as soon as the vessel is past."
Page 836, line 39; for "pay attention," read "pay no attention."
Page 840, lines 42 and 45; for "Glade Flats," read "Glades Flats."
Page 841, last line; for "when Ram Head Buoy will be past and in ten fathoms," read "when Ram's Head Buoy will have been passed and the depth will be ten fathoms. Then," &c.
Page 850, line 30; for "Glade," read "Glades."
Page 881, line 2; for "carry," read "lead."

ATLANTIC COAST-PILOT.

GULF OF MAINE.

PASSAMAQUODDY BAY AND CAPE SABLE TO BOSTON.

GENERAL REMARKS.

Vessels approaching the coast of New England from the eastward must beware of the two dangerous banks which lie off the coast of Massachusetts, known as *Cashe Ledge* and *George Bank.* The former has four fathoms upon it, and the latter but two fathoms.

CASHE LEDGE.

This dangerous ledge lies east of **Cape Ann,** seventy-nine miles distant. Its geographical position, as determined by Commander (now Rear-Admiral) C. H. Davis, U. S. N., Assistant Coast-Survey, is in

Latitude - - - - - - - -	42° 56′ 00″ N.
Longitude - - - - - - - -	68° 51′ 30″ W.

The shoalest part of this ledge is a flat, white rock, about one hundred yards in diameter, and has on it from four to seven fathoms. It is known as *Ammen Rock.*

Soundings varying from eleven to thirty fathoms are found in a line **N.** by **E.** from *Ammen Rock* for a distance of thirteen miles, and **S.** by **W.** about six miles. The whole length of the shoal between the lines of twenty-five fathoms is sixteen miles.

The following are the bearings and distances of prominent points on the adjacent coasts from *Ammen Rock.*

	Miles distant.
Matinicus Light-House, N. by E. ½ E	51
Monhegan Light-House, N. ½ W	53
Cape Elizabeth Light-House, NW. ⅝ N	69
Cape Ann, (Thatcher Island Light-Houses,) W. ¼ N	78
Boston Light-House, W. ½ S	98
Cape Cod, (Highland Light-House,) SW. by **W.** ¼ W	76
Cape Sable, (south point of NOVA SCOTIA,) E. ⅝ S	145

A vessel leaving **Cape Sable** and steering **W.** ¼ **N.** for **Cape Ann** would cross the south end of the shoal in ten or twelve fathoms. To avoid it steer **WEST** from **Cape Sable** until in latitude 42° 41′ N. and longitude 69° W., when steer **W.** by **N.** ¼ **N.** for **Cape Ann.**

GEORGE BANK.

This very dangerous bank is composed of sand-ridges, some of which have but two fathoms of water upon them. It lies one hundred miles to the eastward of **Cape Cod,** the shoalest part being in

Latitude - - - - - - - - 41° 39′ 30″ N.
Longitude - - - - - - - - 67° 42′ 15″ W.

This spot has two fathoms upon it, according to the latest surveys.

The main body of the shoal is triangular in shape, and is composed of a number of narrow ridges, with good water between them.

The northern point of the shoal is in

Latitude - - - - - - - - 41° 47′ 00″ N.
Longitude - - - - - - - - 67° 46′ 30″ W.

and has four and a half fathoms upon it.

The southern point is in

Latitude - - - - - - - - 41° 34′ 00″ N.
Longitude - - - - - - - - 67° 37′ 00″ W.

and has upon it eight fathoms.

The western point is in

Latitude - - - - - - - - 41° 38′ 00″ N.
Longitude - - - - - - - - 67° 53′ 30″ W.

The shoalest spot (two fathoms) lies on the eastern side of this bank, nearly midway between its north and south ends. Its geographical position is given above. Six miles N. by W. ¼ W. from it is another, with thirteen feet upon it. It is in

Latitude - - - - - - - - 41° 44′ 10″ N.
Longitude - - - - - - - - 67° 48′ 35″ W.

and is three miles to the southward of the north point of the shoal. The above positions make the main body of the bank fifteen miles long in a N. by W. and S. by E. direction, and about twelve miles wide at its widest part, which is near its southern end.

The following are the bearings and distances of prominent points on the coast from the shoalest part of this bank, (two fathoms:)

	Miles distant.
Cape Sable Light-House, N E. by E	139
Matinicus Light-House, N. ½ W	135
Monhegan Light-House, N. by W. ¼ W	143
Seguin Light-House, N. by W. ¾ W	152
Cape Elizabeth Light-House, N W. by N. ¼ N	157
Cape Ann, (Thatcher Island Light-Houses,) N W. ⅛ W	139
Cape Cod, (Highland Light-House,) W N W	108
Monomoy Point Light-House, W. ⅛ N	102
Light-Ship, on Davis South Shoal, W. by S. ½ S	104

Besides the main body of the shoal, which has just been described, there are several shoal spots, with from three to ten fathoms upon them, to be found at intervals over the whole extent of the bank. Of these the most important is *Cultivator Shoal,* which has three fathoms, and lies twenty miles W. ½ N. from the shoalest part of *The Georges.*

The following are the bearings of prominent points from the shoalest part of *Cultivator Shoal:*

	Miles distant.
Matinicus Light-House, S. ¼ W	131
Monhegan Light-House, N. ½ W	136
Seguin Light-House, N. by W. ¼ W	142
Cape Elizabeth Light-House, N N W	145
Cape Ann, (Thatcher Island Lights,) N W. ½ W	122
Cape Cod, (Highland Light,) N W. by W. ¾ W	88
Monomoy Point Light-House, W. ⅝ S	82
Light Ship, on Davis South Shoal, W. by S. ¾ S	87

This shoal was so named from the ship *Cultivator*, which struck upon it when drawing twenty-two and a half feet.

The shoal-ground of *The Georges* forms an extensive bank inside the line of twenty-five fathoms. Inside of this line it is seventy-five miles long in the **N E.** and **S W.** direction; fifty miles wide in the **EAST** and **WEST** direction near the middle of the bank; and sixty miles wide in the same direction at its southern end. Five and a quarter fathoms is found forty-one miles **S W. by W.** from the shoalest spot on the main shoal, (two fathoms;) ten fathoms twenty-eight miles **S W. ¾ W.** from the same spot; nine fathoms thirteen miles **S W.** by **W.** from it; eight fathoms seventeen miles **EAST** from it; nine fathoms fourteen miles **E N E.** from it; and ten fathoms fourteen miles **N.** by **E.** from it, and about seven miles beyond the north point of the bank.

The *five-fathom spot* is in

Latitude - - - - - - - - 41° 11′ 00″ N.
Longitude - - - - - - - - 68° 25′ 00″ W.

and is close to the southwestern extremity of the shoal-ground.

The southernmost *ten-fathom spot* is in

Latitude - - - - - - - - 41° 20′ 00″ N.
Longitude - - - - - - - - 68° 10′ 00″ W.

The nine-fathom spot on the *western side* of the shoal is in

Latitude - - - - - - - - 41° 31′ 00″ N.
Longitude - - - - - - - - 67° 55′ 15″ W.

The eight-fathom spot is in

Latitude - - - - - - - - 41° 43′ 15″ N.
Longitude - - - - - - - - 67° 21′ 00″ W.

The nine-fathom spot on the *eastern side* of the shoal is in

Latitude - - - - - - - - 41° 47′ 10″ N.
Longitude - - - - - - - - 67° 27′ 00″ W.

The ten-fathom spot north of the shoal is in

Latitude - - - - - - - - 41° 54′ 00″ N.
Longitude - - - - - - - - 67° 45′ 00″ W.

The general name *Stellwagen Shoal Ground* has been given to that part of the bank surrounding the main shoal of *George Bank*, on which are situated the shoal spots whose positions are given above; but it is, in reality, *but one great bank*, the part known as *George Bank* being simply the summit of the shoal.

Stellwagen Shoal Ground must not be confounded with *Stellwagen Bank*, which lies between **Cape Ann** and **Cape Cod,** off the entrance to *MASSACHUSETTS BAY.* (See approaches to *BOSTON HARBOR.*)

Georges Bank and *Shoals* were surveyed in 1821, by Captain Isaac Hull, under the direction and at the expense of E. M. Blunt, of New York City. Captain Hull reported as little as *three feet* at low water on the bank, and was of the opinion that at a low run of tides the sand was bare. The sea, however, was too heavy for him to determine the correctness of this opinion. Old fishermen also, familiar with this bank, report that it is occasionally bare.

The following extracts are made from Captain Hull's report of his survey:

"On the eastern edge 'of the shoal,' even in calm weather, (unless it be high or low water,) the tides run with great rapidity, and form considerable breakers when setting to the westward, and a large water-fall when setting to the eastward.

"The breakers on this shoal are very heavy, and when there is sufficient sea to endanger a vessel, they may be seen some miles and heard at a very considerable distance, and as the shoalest part is not more than a cable's length inside, and no danger near it, a vessel might avoid it.

"At anchor at different places and on different days, we determined the set and strength of the tides and; as nearly as possible, their rise and fall. Their rise is from six to nine feet. They set around the compass every tide; setting S E. nearly, at full moon, and running from one to four knots per hour at a mile's distance from the breakers. The mean rate, however, is materially varied by the winds; they set strongest at W S W. and E N E., and which is undoubtedly the strength of the flood and ebb. From these causes and variety in the tides arises a principal danger in approaching the shoals. When under way about the shoals, in a few hours' time we found ourselves drifted far out of our reckonings. * * By allowing for the sets of the tides as ascertained at anchor, the observations and reckonings agreed very nearly. Should any vessel fall in with the shoals, a knowledge of the course and strength of the tides would be of the greatest importance.

"The bottom of the bank is of such a narrow character that it is difficult for a vessel to ascertain her situation by it. We often found a great variety of soundings in a very short distance, such as sands of various colors, and differently mixed, coarse and fine, gravel, pebbles of various colors, stones, sponge, and shells.

"Notwithstanding this variety, some idea of the general character of the soundings may be useful. To the westward of the shoals, and at some distance from them, the bottom is coarse sand and gravel of all colors; to the northwestward, a mixture of white, black, and yellow sand; to the northeastward, chiefly gravel and pebbles; to the eastward, fine white and yellow sand; and in latitude 41° 57′ N. and longitude 68° 40′ W., some white moss; to the southeastward, fine white and yellow sand.

"As the shoals are approached, in whatever direction, the soundings become coarse, and are frequently mixed with shells of different kinds. Near the shoal much of the bottom is pebbles; and to the eastward of the largest and most dangerous shoal there are stones of the size of hen's eggs, with moss and sponge on some of them. Near the southeast point are from fifteen to twenty fathoms; a prevailing character of the soundings is green shells, and chiefly of the species usually called sea-eggs. If a vessel be far enough to the southward to avoid danger, she will have no shells. The quality of the soundings, as far as we were enabled to survey the bank, will be best understood from the chart, where they have been carefully rated.

"The holding-ground is not good. But the vessels employed in the survey, by having a long scope of cable, rode out a considerable gale of wind for twenty-two hours, on the eastern side of the main shoal and to the windward of it. At this time the sea broke very high in ten fathoms of water."

In 1837 this shoal was resurveyed by Lieutenant (now Rear-Admiral) Charles Wilkes, and others, in the U. S. Brig "Porpoise." His survey differs materially from

that of Captain Hull, both in the depth of water found on the shoal and in the position of the shoalest part. Lieutenant Wilkes says:

"The shoalest water found on any part of the bank was two and a half fathoms, or fifteen feet, reduced to low water; and this is only to be found in two small places, viz:

Latitude - - - - - - - - -	41° 40′ 13″ N.
Longitude - - - - - - - -	67° 44′ 10″ W.
Latitude - - - - - - - - -	41° 40′ 33″ N.
Longitude - - - - - - - -	67° 44′ 30″ W.

"The whole of the shoal is composed of hard sand-spits; fine sand on the shoalest places, and coarser as the water deepens, until it becomes large pebbles without sand.

"The rise and fall of tides is seven feet, extremely regular; the first part of the flood setting N NW., the latter part N. by E., and ebb S SE. and S. by W. The flood runs four and a half hours, ebb five and a half hours; greatest velocity two and six-tenths of a mile, from half an hour to two hours in changing, going round with the sun on from NORTH by way of EAST. The wind has but little effect on the velocity. High water at full, and change at 10^h 30^m."

By comparing Lieutenant Wilkes' report with that of Captain Hull, made in 1821, we learn, either that the former did not find the shoalest water on the bank, or that the depth of water varies in different years, as well as the position of the shoal. That the shoal shifts its position from time to time is generally believed by the fishermen.

The variation of the compass on the *Georges*, or in their vicinity, is, for 1875, 13° 3′ W. The annual increase is a little less than 3′.

In coming from the southward for *George Bank*, you will get soundings in latitude 40° 04′ N., if on the S SW. part of the bank. (Should you not get soundings in latitude 40° 30′ N., you may be certain that you are to the eastward of the shoal, and must direct your course accordingly, to clear it. The first soundings will then be in from sixty to seventy-five fathoms.) When steering to the northward the water will shoal gradually to twenty fathoms, when in latitude 41° 20′ N. This depth of twenty fathoms extends for a distance of ten or twelve leagues east or west.

JEFFREY BANK.

This bank, upon which the shoalest sounding yet found is thirty-seven fathoms, lies about seventy miles E SE. of **Cape Elizabeth,** on the coast of MAINE, and a hundred and thirty miles to the westward of **Cape Sable.** It lies about E NE. and W SW., and is about eleven miles long.

The shoalest sounding (of thirty-seven fathoms) is near the western end of the bank.

The following bearings and distances may be useful to shipmasters coming from sea and getting soundings on this bank.

From *Jeffrey Bank*, **Cape Sable,** with **Seal Island Light** in range with it, bears E. by S. ½ S., one hundred and thirty miles distant.

	Miles distant.
Mount Desert Rock Light bears NE	39
Monhegan Light bears N W. ½ N	38
Cape Elizabeth Lights bear W N W	71
Cape Ann (Thatcher Island Lights) bears W. by S	99
Boston Light bears W. by S. ½ S	120
Cape Cod Light (Highland) bears S W. ½ W	104

The eastern end of Jeffrey Bank bears from **Matinicus Light** S E. by S. ½ S., twenty-five miles distant.

The western end of Jeffrey Bank bears from **Matinicus Light** SOUTH, twenty-six miles distant.

JEFFREY LEDGE.

This extensive shoal, nearly forty miles long, is off the coasts of MASSACHUSETTS and NEW HAMPSHIRE, in a NE. and SW. direction, and has from twenty to forty fathoms upon it. Its southern end, five miles from **Cape Ann,** is in latitude 42° 37′ 45′ N., and extends from

Longitude - - - - - - - - 70° 23′ 20″ W.
to Longitude - - - - - - - - 70° 28′ 30″ W.

showing the bank to be over five miles wide at this point. Its southwestern point is four miles and a half E. by S. ½ S. from **Thatcher Island Lights.**

The *northern* end of the ledge is in

Latitude - - - - - - - - - 43° 11′ 00″ N.
Longitude - - - - - - - - 70° 00′ 00″ W.

and from it **Cape Elizabeth Lights** bear N. ¾ W., twenty-five miles distant; **Portsmouth Harbor Entrance** bears WEST, thirty-two miles distant; **Thatcher Lsland Lights** bear SW. ¾ W., forty-two miles distant.

A VESSEL BOUND FROM SEGUIN TO CAPE ANN will cross the tail of *Jeffrey Ledge* close to its southwestern end, meeting the bank in latitude 42° 42′ N., and crossing it in latitude 42° 40′ 30″ N. When she falls in with it, if the course from Seguin has been made good, she will be five miles NE. by E. ¾ E. from **Thatcher Island Lights,** and will have from twenty-eight to thirty fathoms. The bottom, on coming on to the bank, will change from "gray mud" to "stones and broken shells;" and when on the bank it will be "fine gray and black sand." Should the vessel be to the eastward of her course, she will have from thirty-four to forty-five fathoms "blue clay" near the edge of the bank; changing, on striking the shoal, to "mud and fine gray and red sand." Soundings will be in from twenty to forty fathoms, and she will cross the bank, if she continues her course, in from twenty-three to twenty-six fathoms "gray sand" and "gray and black sand."

Such a vessel, bound from **Seguin** to **Cape Ann** in thick weather, getting soundings in from forty to forty-five fathoms "blue clay," on the northwestern edge of *Jeffrey Ledge,* and then changing to thirty and thirty-seven fathoms "mud, fine gray and red sand," will know that she is to the eastward, and **Cape Ann Lights** bear W. by S. ¾ S., from seven to ten miles distant.

If she is to the westward of her course, she will not hit the ledge at all.

A VESSEL BOUND FROM EASTPORT TO CAPE ANN, if she steers a straight course WSW., will meet the ledge in latitude 42° 49′ N. and longitude 70° 14′ W., and will have forty-two fathoms "fine gray and black sand." In crossing it she will have from twenty-eight to thirty fathoms. The bottom will vary from "coarse and fine gray and red sand, with black specks," to "coarse white and yellow sand and black pebbles." She will then drop off into forty-five fathoms "blue clay," and shoal again to thirty fathoms "fine gray and red sand, mixed with mud." This shows that she is crossing the southwestern end of the ledge, and she will leave it, in twenty-nine fathoms, four miles ENE. from **Thatcher Island Lights.**

Should a vessel in thick weather get soundings on the edge of the ledge, in fifty-three fathoms "fine gray and black sand," and change to "fine gray sand and red gravel," she is to the southward of her course, and should steer W. by S. ½ S. for **Thatcher Island Lights.**

A VESSEL BOUND FROM THE BAY OF FUNDY TO CAPE ANN crosses Jeffrey Ledge in latitude 42° 46′ N., longitude 70° 16′ W., in a W. by S. ½ S. direction.

The soundings on the eastern edge will be fifty-three fathoms "fine gray and black sand," and will change to thirty-two fathoms "fine gray sand and red gravel." The soundings on the ledge will vary from twenty-four to thirty fathoms, and when the bank is crossed **Cape Ann Lights** will bear W. by S. ½ S., four miles distant.

A VESSEL BOUND FROM CAPE SABLE TO CAPE ANN will cross the bank in latitude 42° 39′ N., meeting it in longitude 70° 22′ W., and leaving it in longitude 70° 28′ 30″ W. When the bottom changes to "gray" or "dark mud" you are over the bank, and **Thatcher Island Lights** bearing W. ½ N., distant four miles.

Lieutenant Alexander Murray, U. S. N., Assistant Coast Survey, surveyed this ledge in 1858–'59, and had the following depths:

Thatcher Island Lights bearing S W. by W. ½ W., three miles distant, twenty-one fathoms; same lights bearing W. by S. ¾ S., six miles and three-quarters, twenty fathoms; with **Thatcher Island Lights** bearing S W., fifteen miles and three-quarters; and **White Island Light (Isles of Shoals)** N W., fourteen and a quarter miles distant, eighteen fathoms. His distances, however, are only approximate.

BAY OF FUNDY.

The entrance to this great bay lies between **Bryer Island,** a small island off the southwestern end of NOVA SCOTIA, and **Libbey Island,** which lies close in with the entrance to *MACHIAS BAY*, on the coast of MAINE. The geographical position of **Bryer Island** is

Latitude - - - - - - - - -	44° 14′ 57″ N.
Longitude - - - - - - - -	66° 23′ 40″ W.

The position of **Libbey Island** is

Latitude - - - - - - - - -	44° 34′ 05″ N.
Longitude - - - - - - - -	67° 22′ 02″ W.

The distance between the two islands is forty-six miles.

The *BAY OF FUNDY* is deep, and, as a general rule, its shores are bold. The tidal current runs with great velocity, and the frequent changes of weather, the set and changes of currents, and the thick and long-continued fogs are apt to confound the seaman, however experienced he may be or however good his judgment. At the head of the bay the rise of tide is from fifty to sixty feet, the flood coming in, generally, in three immense "*bores*," as they are called, or tidal waves. The currents are often perplexing, and always swift.

Fortunately there are many safe and commodious harbors on the shores of this bay to which vessels may resort in case of necessity, even without a pilot. For accurate and detailed directions for these harbors, we cannot do better than to refer the seamen to the book of directions which accompanies the British chart of these localities.

Near the southwestern end of the Bay of Fundy, and on its north shore, lies the entrance to

PASSAMAQUODDY BAY.

This is an extensive bay opening from the north shore, about thirty miles to the eastward of **Libbey Island.** With the *ST. CROIX RIVER*, which flows into it, it separates the territories of GREAT BRITAIN from the UNITED STATES.

In the entrance to the *BAY OF FUNDY* lies the island of

GRAND MANAN,

belonging to GREAT BRITAIN, which, as it lies so near our own coast and is often resorted to by both coasters and fishermen, demands a short description in this place. It

has several good harbors of refuge. From **West Quoddy Head,** on the main land, its nearest point, which is on the northwestern side, is distant five miles and three-quarters. "The soil is generally considered to be good, and the inhabitants are enabled to raise from it the productions of the neighboring shores." The trees are fir, beech, birch, maple, pine, &c., and are of a good size.

The western shores are very straight and uniform; consisting of cliffs which rise to the height of from one hundred and eighty to four hundred feet above sea level. On this side there are no harbors, with the exception of *Dark Cove,* which lies four miles to the southwestward of the north point of the island called **Bishop Head.** This cove affords shelter only for the smallest vessels, and for them only after two-thirds flood. But there is good water in the cove after having crossed the bar.

Along the western shore of **Grand Manan**, as far as **Southwest Head,** there are three, four, five, and six fathoms close to the land, deepening to thirteen, thirty, and forty fathoms at half a mile off, and thence, rapidly, to forty-five and fifty fathoms at the distance of a mile. The flood-tide setting to the northward, and the ebb setting to the southward, follow the direction of this coast. At spring-tides the velocity of the tidal current ranges from two and a half to three knots an hour.

BISHOP HEAD.

This forms the northern end of **Grand Manan Island.** Its western extremity is called **Long Eddy Point.** The head is abrupt and bold, having, at the distance of a quarter of a mile from shore, a depth of from thirty to forty fathoms. The land behind it rises to a height of three hundred and fifty feet. It is reported that the British government intends to erect a light-house on this head.

The eastern shores of **Grand Manan** are much lower than the western, and are much indented. Many small islands lie off that coast, between and among which are several excellent harbors, where, with a local pilot, the largest vessels may anchor with safety. For descriptions of the various harbors on the eastern side we must again refer to the English book of directions. This work is accurate, and its descriptions are very plain and terse.

MANAN LEDGES.

We copy the description of these dangerous shoals given by the English naval officers who surveyed them. They "consist of the **Black Rock,** the northeasternmost, which is ten feet out at high water; the *Brazils,* which are out only at the low spring-tides; the *Tinker,* or northwesternmost rock, which is dry at mean low water; the *Diamonds,* awash at low spring-tides; *Crawley Shoal,* which has eighteen feet at low water; the *Rams,* or westernmost rock; the *Proprietor,* which is just seen at low water, but has foul ground extending nearly three-quarters of a mile to the southward from it; and the *Old Proprietor,* the southernmost and outermost of these dangers, which is out at half-tide. Over and through the channels among these rocks there is a rapid tidal current of from four to six knots an hour, the flood running to the eastward and northeastward, and the ebb southwestward and westward. For a considerable distance southeastward from **Black Rock** is a very heavy tide-rip, on the ebb, known as *Bull Head Rip.* These ledges should therefore have a wide berth, and strangers should very carefully avoid being drawn into either of the passages among them. To go clear of the southernmost of these dangers keep the southwest head of **Grand Manan** well open to the southward of the south point of Three Islands, bearing **NW.** by **W.** During an easterly wind the tide-rips are impassable."

The *Old Proprietor*, as before observed, is the outermost and most dangerous of the *Manan Ledges.* It dries at half-ebb, covers a space of half an acre at low water,

and, when covered, the tide sets strongly over it. There are from twenty-five to thirty-five fathoms a quarter of a mile to the southward of it. When upon it **Gannet Rock Light-House** will bear W. by S., five miles and two-thirds distant; **Black Rock**, N. by E., three miles and two-thirds; and the south point of **Three Islands**, N W. by W. ½ W., four miles distant. The narrow ridge of foul ground running southward from the *Proprietor*, upon which are from two to four fathoms, is one quarter of a mile to the westward of the *Old Proprietor*.

CLARKE GROUND,

a rocky shoal of six and seven fathoms, over which the ebb creates a heavy rippling, lies a mile and a half N E. by E. ¾ E. from the *Old Proprietor;* and another, called the *Roaring Bull*, whereon is six or eight fathoms, is said to lie three or four miles to the eastward of it. There is usually a heavy and dangerous ripple over this shoal.

THREE ISLANDS,

or the **Three Kent Islands** as they are sometimes called, are low and ledgy. The eastern side of the largest is bold to the rocks, which are at all times visible. About three-eighths of a mile off the northwestern side is a ledge named the *Constable*, dry at low water. Under the lee of these and the **Green Islands**, anchorage may occasionally be obtained in from seven to fourteen fathoms. There is, however, a small spot of three and a quarter fathoms, half a mile off of the middle of the western side of the Three Islands, which must be avoided.

THE MURR LEDGES.

These very dangerous rocks, which obstruct the approaches to the bay under **Grand Manan**, are formed by a number of detached ledges lying to the westward of *Manan Ledges*, and to the southward of the southwest head of **Grand Manan**. They are surrounded and separated by deep water, and, in some cases, wide channels. But no stranger should attempt any of the passages among them. The flood sets to the eastward, and the ebb to the westward, over and among the dangers, with a velocity of three and four knots an hour. The easternmost of the *Murr Ledges* is called *Gannet Rock;* the southernmost, *St. Mary Ledge;* the westernmost, *Long Ledge;* and the northernmost, *Wallace Ledge.*

GANNET ROCK

is a small rock about twenty-five feet above water at high-tide. There are many sunken rocks and ledges about it. It lies about three miles and a half S S W. from the south point of the **Three Islands**. The ledges and sunken rocks in the vicinity always break. *There is a light-house on the Gannet*, which shows a brilliant white light, which flashes three times in every minute. It is visible about twelve miles. The tower is painted in vertical black and white stripes. Its geographical position is

Latitude - - - - - - - - -	44° 30′ 40″ N.
Longitude - - - - - - - - -	66° 46′ 48″ W.

A gun is fired in reply to signals during foggy weather. The light, from its proximity to several very dangerous ledges and shoals, ought not to be run for; it is intended to give timely warning to vessels which are, by the rapid tides in the vicinity and ignorance of their position, in danger of being wrecked.

Vessels should not, except in cases of extremity, attempt to run in between this rock and the *Old Proprietor*, as there are some dangers in the way. The bottom is rocky and the tidal current is very swift.

Gannet Rock Light-House bears from—	Miles distant.
Old Proprietor, W. by S	$5\frac{2}{3}$
Southwest Head of Grand Manan, S E. by S. ½ S	$7\frac{1}{4}$
Wallace Ledge, S E. by E	$4\frac{1}{4}$
St. Mary Ledge, E. by N. ¾ N	$2\frac{3}{4}$
Machias Seal Islands Lights, E. by S. ⅓ S	$13\frac{3}{4}$

ST. MARY LEDGE,

the southernmost of the *Murr Ledges*, is very small, and is bare, except at "high water of spring-tides." All around it and close to are from five to nineteen fathoms. From **Gannet Rock Light-House** it bears W. by S. ¾ S., distant two miles and three-quarters. The depths between it and the *Gannet* vary from twelve to twenty-five fathoms. From *Yellow Ledge*, which is about ten feet above high water, it bears S E. by E. ½ E., three-quarters of a mile distant. There is a *four feet rock* between them, which breaks with a moderate swell.

LONG LEDGE,

the most westernmost of these dangers, lies in a N N E. and S S W. direction, and is a mile and a half long and four hundred yards broad. It is separated from *Yellow Ledge* by a deep channel a third of a mile wide. Its northern part is just uncovered at high water; but on its southern half are patches of from six to fifteen feet, and some which are awash at low water. Quite near its western side are soundings ranging from ten to eighteen fathoms. Between *Wallace Ledge* and the northern end of *Long Ledge* lies a small, bold rock, just visible above water at high spring-tides; it is called *West Ledge*.

WALLACE LEDGE,

the northernmost of the *Murr Ledges*, is bare at half-ebb. It is small, and has from six to twelve fathoms close to it and all around it. When you are on this rock you will be four miles and a quarter N W. by W. from **Gannet Rock Light-House**; three-quarters of a mile N. by E. ½ E. from *West Ledge;* four miles south of the southwestern head of **Grand Manan**; and nine miles and three-quarters E. ⅓ S. from the lights on **Machias Seal Islands.**

There is a clear channel, with from ten to twenty-two fathoms, between *Wallace Ledge* and the southwest head of **Grand Manan**; but between it and **Machias Seal Islands** are four dangerous rocks that must be very carefully avoided. They are named, respectively, *Bull Rock, Middle Shoal, Southeast Ledge,* and *Southeast Shoal.*

BULL ROCK

is a small rock, with two feet at low water, and lies nearly seven miles W. by N. ½ N. from **Gannet Rock Light-House.** There are from nine to twenty-three fathoms all around it, and consequently it may generally be discovered by the breakers. From the southwest head of **Grand Manan** it bears S W. by S., six miles; from **Machias Seal Island Lights** it bears E. by S. ½ S., six miles and three-quarters; and it is three miles to the westward of the westernmost of the *Murr Ledges*, with soundings of from fifteen to twenty-seven fathoms between the two.

MIDDLE SHOAL

is likewise a very small ledge, with deep water all around it. It has eighteen feet at low water. There is generally a rippling of the sea in its vicinity, and in heavy weather it always breaks. It bears from *Bull Rock* N N W., four miles and three-eighths; W. by S.

from **Southwest Head,** a little over five miles; and E N E., five miles and one-eighth from **Machias Seal Island Lights.**

"Between this shoal and **Grand Manan** there is a clear passage; and also between it and *Bull Rock.* But the channel between this shoal and **Machias Seal Island** is obstructed by the *North Rock* and *North Shoal.*

SOUTHEAST LEDGE

has five fathoms upon it, with a rocky bottom. There is quite a tide-rip on it, but it breaks only in heavy weather. From *Yellow Ledge* it bears W. ½ S., six miles and one-third distant; from *Bull Rock,* S W. ½ W., three miles and three-quarters; and from **Machias Seal Island Lights,** S E. ½ S., five miles and three-quarters.

SOUTHEAST SHOAL

is a very dangerous patch, with seven and eight feet upon it at low water. It is small, steep-to, and breaks if there is any sea. It bears S E. of **Machias Seal Island Light-Houses,** a mile and a quarter distant. There are soundings of from fifteen to thirty fathoms between the shoal and the island, except in *one small spot, which has twelve feet upon it.* This spot is a quarter of a mile from the island. The flood runs N E. by N. over this shoal, and the ebb S W. by S., at the rate of three knots an hour."

Although the above descriptions have been given for guidance in cases of emergency, it is strongly urged upon strangers not to attempt to pass through any of these inside channels, but to keep outside, clear of all the above-described dangers.

MACHIAS SEAL ISLAND,

called on our charts simply **Seal Island,** is a small, low, rocky islet about four hundred yards long, and a hundred and fifty yards broad at its widest part. It is about twenty feet above high-water mark. Near the center of the island stand **two white light towers,** one hundred and sixty feet apart, and bearing E S E. and W N W. from each other. **They show two fixed white lights** from a height, respectively, of fifty-four and fifty-eight feet above sea-level. These lights are visible about fifteen miles, and are intended as leading lights for clearing the *Murr Ledges,* and the other dangers to the southward of **Grand Manan.** Their geographical position is

Latitude - - - - - - - -	44° 30′ 07″ N.
Longitude - - - - - - - -	67° 06′ 05″ W.

Vessels standing to the northward, with these lights to the westward, distant about five miles, must go about as soon as the two lights come in range, to avoid the *Murrs.* "A gun is fired every four hours during a fog, as a warning to vessels." This is an entirely insufficient precaution. There should be either a powerful steam-whistle or an air-trumpet on this island, or else the gun should be fired with great frequency.

"**From these light-houses Southeast Shoal** bears S E., one mile and a quarter distant; **Southeast Ledge** S E. ½ S., five miles and three-quarters; **St. Mary Ledge** E. ½ S., ten miles; **Southwest Head** E. by N. ½ N., ten miles and a quarter; **Middle Shoal** E N E., five miles and one-eighth; and **North Shoal** N. ½ E., a mile and five-eighths distant.

"**Three miles and a half WEST of the Seal Island Light-Houses** lies *a rock which has caused the wreck of several vessels.* It was seen by Captain Johnston, of the ship Liverpool, (trading to St. Johns,) in 1834, and is said to be well known to the regular traders and pilots. We propose to name this *Liverpool Rock.*

NORTH ROCK

is about four feet out at high spring-tides. It is situated on the middle of a shoal of twenty-one feet, and bears N E. by N. from the **Seal Island Lights,** two miles and a quarter

distant. The shoal around the **North Rock** is about one-third of a mile in extent, and lies in an E S E. and W N W. direction. Around it the soundings range from six to fourteen fathoms close-to, and there is always a tide-rip in the neighborhood. There are from fifteen to forty-six fathoms in the channel between **North Rock** and the ledge extending from the north end of **Seal Island.**

NORTH SHOAL

breaks in heavy weather; has seven or eight feet on it, and the depths around it vary from nine to twelve fathoms. It is very small. From **Seal Island Light-Houses** it bears N. ¼ E., a mile and five-eighths distant; and from **North Rock** W. by S., a little over one mile distant. Between this shoal and **Machias Seal Islands** the depths range from twenty to fifty fathoms; and between it and **North Rock** they vary from fifteen to twenty-five fathoms. All around and over this shoal there is always a rippling sea.

GRAND MANAN BANK.

"This bank has soundings over it varying from twenty-four to thirty and forty fathoms, and makes a tide-rip of very great extent. The current of flood sets over it in a northeasterly direction, and the ebb sets to the southwestward. The velocity is equal on both sides, being about a mile and a half an hour. Its shoalest part, on which is a depth of twenty-four fathoms, is situated in

Latitude - - - - - - - - - 44° 14′ 30″ N.
Longitude - - - - - - - - 67° 3′ 00″ W.

or fifteen miles and three-quarters S. ¾ W. of **Machias Seal Island Light-Houses.** Around it the depths soon increase from forty to forty-six, sixty, and seventy fathoms.

GENERAL REMARKS
FOR THE GUIDANCE OF VESSELS ENTERING THE BAY OF FUNDY.

"Ships navigating this bay have to encounter an atmosphere almost constantly enveloped in thick fog, tides setting with great rapidity over the rocks and shoals with which it abounds, and a difficulty of obtaining anchorage on account of the depth of water. Under these circumstances, the greatest care and coolness is requisite in order to prevent disaster."

The usual course pursued by vessels from EUROPE on approaching this dangerous bay with a westerly wind is, when off **Cape Sable,** to make the coast of MAINE in the vicinity of the **Schoodic Hills** (which are on the eastern side of the entrance to *FRENCHMAN BAY*) or **Petit Manan Island,** (which lies off *GOULDSBOROUGH BAY.*) The latter has a fine light-house on it. You can pass with greater safety to the westward of **Grand Manan** than to the eastward, and can have shelter, if necessary, in the many harbors on the coast of MAINE.

"Between **Grand Manan** and the coast of **Maine** the passage is free from danger. Vessels beating through generally stand from side to side, particularly in fogs. The soundings vary from twelve to fifty fathoms. The shores on both sides are bold, and the tidal currents regular and strong." It may be well to remark, in this connection, that the fogs often hang close in with the **Maine** coast, between *MACHIAS BAY* and **West Quoddy Head,** extending like a wall about one-third of the way across the *Grand Manan Channel,* while the rest of the passage is entirely clear of fog. Vessels which are clear of it, and are beating through, stand boldly up to the eastern edge of this fog, as though it were the coast-line, and go about as their jib-booms enter the fog. A vessel coasting to the eastward, and caught in one of these fogs close in with the shore, will

often find it to her advantage to stand boldly over toward **Grand Manan**, when, in many cases, she will come out of the fog and find a clear channel to **East Quoddy.**

"When steering between **Grand Manan** and **Bryer Island**, the utmost caution is requisite during thick weather, as vessels are frequently drawn among the islands and ledges to the southward of **Manan** by the flood, which sets directly on them. The most dangerous of these is the *Old Proprietor*, (see page 8,) which at low water is bare for the space of half an acre. When the wind, therefore, veers at all to the southward, you had better make for **Eastport** or **St. John**, or you may secure an anchorage in *Grand Passage* or *St. Mary's Bay;* for it seldom blows from the southward over eighteen hours without bringing on a fog."

The channel between **Grand Manan** and the coast of **Maine** is recommended as the best and safest passage up the *BAY OF FUNDY.* It is decidedly most advantageous with the prevailing winds, which are from the westward.

The direction of the winds here, and on the coast of **Nova Scotia**, is from W SW. to SW., and they are nearly as steady as trade-winds; excepting that during the summer months they are rather more southerly, and accompanied, with little intermission, by fog. It is, therefore, recommended to vessels bound up either shore of the bay not to leave an anchorage without making arrangements for reaching another before dark or the approach of a fog. With a southwest wind it often happens that you are enveloped in it unawares. It is best not to keep at sea during night, if it can be avoided. With a NW. wind the fog is soon dispersed.

The tides are very rapid, but regular; and, although the wind against them alters the direction of the rippling, and sometimes makes it dangerous, it has little or no effect upon the direction of their set. The flood sets from **Cape Sable** to the northwestward, through the *Seal Island* and *Ball Tusket Passages*, at the rate of two or three knots, after which its rate increases to four or five knots. Thence it takes the direction of the shore and flows past **Cape St. Mary**, and then toward **Brye Island.** Between **Brye Island** and the opposite northern coast, and for some distance up the bay to the eastward, the first of the flood sets strongly to the northward, (nearly **NORTH**,) so that it is extremely dangerous for a vessel to run in the night, or during thick weather, from any port of the southern to the northern shore, without making a large allowance for the set of the tidal current and *keeping the lead constantly going.*

GENERAL SAILING DIRECTIONS

FOR VESSELS BOUND FROM THE BAY OF FUNDY TO THE PRINCIPAL PORTS ON THE COAST OF NEW ENGLAND.

I. FROM WEST QUODDY HEAD TO PENOBSCOT BAY.

When abreast of the **Light-Houses on Quoddy Head**, bearing NW. by N., five-eighths of a mile distant, steer SW. ¾ W. until **Little River Light-House** bears W. ½ N. and is about eight miles off. Then steer W. by S. ¾ S. for **Matinicus Rock**; when up with the rock follow the direction for entering the bay.

The distance from **West Quoddy Head** to **Matinicus Rock** is about one hundred and four miles.

Or, when abreast of the Head, and about two miles off, steer W SW. This course will carry you along the coast, and you should make the rock to the northward.

In sailing the above courses make and pass to the southward of the **Lights on Little River Island, Libbey Island, Head Harbor Island, Petit Manan, Baker Island,** and **Saddle-Back Ledge**, and to the northward of **Machais Seal Island Lights** and the **Light on Mount Desert Rock.**

II. FROM WEST QUODDY HEAD TO CAPE ELIZABETH.

Steer W S W. from abreast of **West Quoddy Head** until abreast of **Matinicus Rock**, and then steer W. ¾ N. for **Cape Elizabeth.** When within about five miles of the Cape, follow the direction for approaching and entering **Portland Harbor.** Over these courses the distance from **West Quoddy** to **Cape Elizabeth** is one hundred and sixty-six miles. From **Matinicus Rock** to the cape is sixty-two miles.

In sailing the above courses make and pass to the southward of the following lights: **Little River, Libby Island, Head Harbor, Petit Manan, Baker Island, Saddle-Back Ledge, Matinicus Rock, Monhegan, Seguin,** and **Half-Way Rock,** and to the northward of **Machias Seal Island** and **Mount Desert Rock.**

III. FROM WEST QUODDY HEAD TO CAPE ANN.

From abreast of **West Quoddy Head** steer W S W. for **Cape Ann Lights.** This course will pass about five miles to the southward of **Matinicus Rock**; and if the course is made good, **Thatcher Island Lights** will be directly ahead. The whole distance is two hundred and four miles. After passing **Matinicus Rock Light** no lights will be seen until **Cape Ann** is made.

IV. FROM WEST QUODDY HEAD TO BOSTON.

1. *Outside of* **Mount Desert Rock.**—The course, SW. by W. ¼ W., from **Quoddy Head** passes three miles outside of **Mount Desert Rock.** When abreast of it steer W. by S. ¼ S. for **Boston**; or W. by S. ¾ S. for **Cape Ann.** The distance from **Quoddy Head** to **Mount Desert Rock** is seventy-two miles, and from the **Rock** to **Boston** one hundred and fifty-eight miles, giving a total distance of two hundred and thirty miles.

On the above courses the following lights will be made and passed: **Little River, Machias Seal Island, Libbey Island, Head Harbor Island, Mount Desert Rock, Thatcher Island, Eastern Point, Baker Island,** (**Salem Entrance,**) **Egg Rock,** (**Nahant,**) **Minot Ledge,** and **Boston Light.**

On a clear night **Matinicus Rock Light** may possibly be seen, but the above courses leave it thirteen miles to the northward.

2. *Inside of* **Mount Desert Rock.**—This is a very commonly used passage. It is usually adopted by vessels bound to *Cape Ann*, and the course is W S W. from **Quoddy Head.** When within two miles of the cape lights steer SW. ¼ W. for **Point Allerton,** or SW. by W. for **Long Island Light,** if bound in either by the *Broad Sound* or *Main Ship Channel.* The whole distance from **West Quoddy Head** to **Boston** is two hundred and twenty-five miles.

On the above courses the light-houses on the coast will be made and passed in the following order: **Little River, Machias Seal Island, Libbey Island, Head Harbor Island, Petit Manan, Baker Island,** (**Mount Desert,**) **Mount Desert Rock, Matinicus Rock, Thatcher Island, Eastern Point, Baker Island,** (**Salem Entrance,**) and **Egg Rock.**

V. FROM WEST QUODDY HEAD TO CAPE COD.

For **Highland Light** steer SW. by W. SOUTHERLY, which course passes outside of **Mount Desert Rock** and, if made good, brings you up with the **light on the Highlands.** The distance is two hundred and fifteen miles, and the following lights are passed in order: **Little River, Machias Seal Island, Libbey Island, Head Harbor Island,** and **Mount Desert Rock.**

VI. FROM THE BAY OF FUNDY TO PENOBSCOT BAY.

1. *Eastern Passage, between* **Grand Manan** *and* **Nova Scotia.**—When off the entrance to *ST. JOHN HARBOR*, with **Partridge Island Light-House** bearing N. by E. ¼ E., five miles

distant, and in twenty-two fathoms, steer SW. until **Gannet Rock Light** bears W. by N. ½ N., six miles distant, and then W. by S. ¼ S. for seventy-two miles, to **Mount Desert Rock.** Leave this rock a couple of miles to the northward and steer W. ½ S. until **Matinicus Rock Light** is made, when follow the directions given for *PENOBSCOT BAY.* From **Gannet Rock** to **Matinicus Rock** the distance by the above courses is one hundred and seventy-eight miles.

2. *Manan Channel, between the coast of* **Maine** *and* **Grand Manan.**—From the position given above, off *St. John Entrance* steer W. by S. ½ S. until abreast of **West Quoddy Light**, and then a W SW. course until up with **Matinicus Rock.** The whole distance is one hundred and forty-four miles. Between **St. John** and **Matinicus** make and pass the following lights: **Point Lepreau, the Wolves, Swallow Tail, East Quoddy, West Quoddy, Little River, Machias Seal Island, Libbey Island, Head Harbor, Petit Manan, Baker Island,** and **Mount Desert Rock.**

VII. FROM THE BAY OF FUNDY TO CAPE ANN.

Eastern Passage, between **Grand Manan** *and* **Nova Scotia.**—From the position given above, off *St. John Entrance*, steer SW. until **Gannet Rock Light** bears W. by N. ½ N., six miles distant, and then W. by S. ¼ S. for **Mount Desert Rock.** When abreast of this rock steer W. by S. ¾ S. for **Cape Ann Lights.** From **St. John** to **Gannet Rock** is forty-six miles; from **Gannet Rock** to **Mount Desert Rock** is seventy-two miles; from **Mount Desert Rock** to **Cape Ann** is one hundred and thirty miles. The whole distance from **St. John** to **Cape Ann** is two hundred and forty-one miles.

In the Western or Manan Channel.—Steer W. by S. ½ S. until abreast of **West Quoddy Light**, then steer W SW., and follow the directions given from **West Quoddy** to **Cape Ann.**

VIII. FROM THE BAY OF FUNDY TO BOSTON.

1. *Eastern Passage.*—Steer SW. as before, from *St. John Entrance*, until **Gannet Rock Light** bears W. by N. ½ N., distant six miles, and then W. by S. ¾ S. for **Boston.** From **Gannet Rock** to **Boston** the distance is two hundred and twenty-seven miles.

Or, steer W. by S. ¼ S. from off **Gannet Rock** for **Mount Desert Rock**, and when abreast of it steer W SW. for **Boston.**

Or, when abreast of **Mount Desert Rock**, steer W. by S. ¾ S. for **Cape Ann**, and when abreast of the lights steer SW. ¼ W. for **Point Allerton**, or SW. by W. for **Long Island Light.**

IX. FROM THE BAY OF FUNDY TO HIGHLAND LIGHT, CAPE COD.

1. *Eastern Passage.*—The direct course from the position given above (six miles E. by S. ½ S. from **Gannet Rock**) leads directly over *Ammen Rock.* To avoid this rock steer from the above bearing SW. by W. ¾ W. for one hundred and thirty-four miles. This clears *Cashe Ledge.* When past it, steer SW. by W. for **Highland Light**, which will be made to the westward of your course. From **Gannet Rock** to **Cape Ann** is two hundred and eleven miles.

Vessels using the *Manan Channel*, and bound for **Boston** or **Cape Cod**, must steer W. by S. ½ S. until abreast of **Quoddy Light**, and then follow the directions for the passage between **West Quoddy Head** and the above ports.

The above sailing directions give only outside courses. Coasting vessels rarely sail them, but use the in-shore passages among the islands which fringe the coast of **Maine.** For coasting directions see descriptions and sailing lines between **West Quoddy Head** and the various harbors on the coast of **Maine**, given in another part of this work.

X. FROM CAPE SABLE TO WEST QUODDY HEAD.

When abreast of **Seal Island Light**, bearing N E. by E. ½ E., and about five miles distant, steer N N W. for **Libby Island Light**. The distance between these two light-houses is ninety miles. On this course, when **Machias Seal Island Lights** bear E. ¾ S. and about six miles from **Libbey Island**, steer N E. by E. twenty-four miles through the *Manan Channel*. This will bring you up with the **Head**. It is not considered safe for strangers to attempt the passage between **Grand Manan** and **Nova Scotia**; but the following courses are given:

XI. FROM CAPE SABLE TO EAST QUODDY HEAD.

Outside of Grand Manan.—When abreast of **Seal Island**, as before, steer N N W. forty-eight miles, and then N E. by N. ¾ N. On this last course **Gannet Rock Light** will be made to the northward, nearly seven miles distant **Swallow-tail Light** will also be made on the port-bow, and pass eight miles to the eastward of it. When past the **Swallow-tail** steer **N W. ¾ W.** for **East Quoddy.**

But, it must be borne in mind that this passage, owing to the velocity and conflicting nature of the currents, the frequent fogs and many dangerous obstructions, is in the highest degree unsafe for strangers. To such it is recommended to use the Manan Channel, between **Grand Manan** and the coast of **Maine**, following the directions given above, (VI.) In this connection see also the General Remarks on pages 12 and 13.

XII. FROM CAPE SABLE TO PENOBSCOT BAY.

Vessels from EUROPE bound to *PENOBSCOT BAY* should make **Matinicus Rock Light.** In fine weather they may safely pass between **Seal Island** and *Pollock Rip* by following these directions: When **Cape Sable Light** bears **NORTH**, distant seven miles, steer **W.** by **N.** ½ **N.** until **Seal Island Light** bears N E. by E. ½ E., nine miles distant; when **N W.** by **W.** ½ **W.** will bring you up with **Matinicus Rock.** The whole distance is one hundred and forty-four miles.

Or, when **Cape Sable Light** bears N E. by N. ½ N., distant eleven miles, steer **N W.** by **W.** ½ **W.**, which course will make the **Light on Matinicus Rock.**

In heavy weather, to pass outside of *Pollock Rip* and steer for *Penobscot Bay.*—When **Cape Sable Light** bears **NORTH**, eleven miles distant, steer **W.** by **N.** thirty-three miles, which clears the rip; then steer **N W.** by **W.** for **Matinicus Rock.**

XIII. FROM CAPE SABLE TO CAPE ELIZABETH.

The bearing of **Cape Elizabeth Lights** from the **lights on Cape Sable** is **W.** by **N.** ¾ **N.**; but this course cannot be steered. If intending to go inside of *Pollock Rip* you should, when **Cape Sable Light** bears **NORTH**, distant seven miles, steer **W N W. WESTERLY**, which will carry you up to the lights.

Or, to pass to the southward of the rip, steer **W.** by **N.** as before, from a bearing of **Cape Sable NORTH**, eleven miles distant, and continue this course forty-five miles; then steer **N W.** by **W.** ¾ **W.** for the **Cape Lights.** The whole distance is a little over two hundred miles.

XIV. FROM CAPE SABLE TO CAPE ANN.

When **Cape Sable Light** bears **NORTH**, seven miles distant, steer **W.** ½ **N.** fifty miles, until past *Cashe Ledge*, and then **W.** by **N.** ½ **N.** for the **Cape Lights.** The whole distance by these courses is two hundred and twenty-two miles. The direct course from light to light leads directly over *Ammen Rock*, and the courses above given are laid to avoid it.

XV. FROM CAPE SABLE TO BOSTON.

With **Cape Sable Light** bearing **NORTH**, distant seven miles, steer W. ¼ N. two hundred and forty miles, which will make **Boston Light.** Or follow the course for **Cape Ann**, and when off that cape steer SW. ¼ W. for **Point Allerton**, or SW. by W. for **Long Island Light.**

XVI. FROM CAPE SABLE TO CAPE COD, (HIGHLAND LIGHT.)

When **Cape Sable Light** bears **NORTH**, distant seven miles, steer W. ½ S., which course, if made good, passes a little to the southward of the light, which will be made to the northwestward. The whole distance is two hundred and twelve miles. (See also pages 1 and 6 for references to *Cashe Ledge* and *Jeffrey Ledge*, on the courses of vessels bound from **Cape Sable** to **Boston** and **Cape Ann.**)

PASSAMAQUODDY BAY.

This is a large and deep bay of irregular shape, and separates the BRITISH POSSESSIONS from the UNITED STATES. It lies NW. and SE., between the shores of MAINE and NEW BRUNSWICK, and is sheltered on its southeasterly side by several islands, the largest and most important of which are **Deer Island** and **Campobello,** belonging to Great Britain.

Passamaquoddy Bay is about five miles long and ten wide. It is situated near the western extremity of the *Bay of Fundy*, on its north shore, and the entrance to it is marked by a light-house called **East Quoddy Light.** This is on the extreme northeastern point of **Campobello Island,** and is sometimes called **Campobello Light-House.**

Into the northwestern corner of *Passamaquoddy Bay* empties the *ST. CROIX RIVER*, which separates the province of NEW BRUNSWICK from the State of MAINE. The town of **Calais** is situated on the western bank of this river, thirteen miles above its mouth. The town of **Eastport** is situated on **Moose Island,** a little over a mile west of the **Campobello Shore,** and nearly ten miles below the mouth of the *St. Croix.* It is the most easterly settlement of the UNITED STATES.

ISLANDS IN THE MOUTH OF PASSAMAQUODDY BAY.

CAMPOBELLO ISLAND.

This large and fertile island is nearly eight miles long and about two miles and a half wide at its widest part, (which is opposite **Eastport.**) It lies in a NE. by N. and SW. by S. direction, forming the eastern shores of the harbor of **Eastport.**

The extreme southern end of this island, called **Liberty Point,** is a round, rocky head of peculiar appearance, in reality a small island, lying about fifty yards from shore, and is tolerably bold. The land behind it rises to a considerable height; well wooded.

The northern point of **Campobello Island**, called **East Quoddy Head,** is a high bluff head-land, and runs off into a long point, from which extend in a line a number of rocky islets for the space of half a mile, in an E. by N. direction. Near the extreme eastern point of the island is built the light-house, which is called **East Quoddy Light,** and is a white tower, showing a fixed white light from a height of sixty-four feet above high-water mark. Its geographical position is

Latitude - - - - - - - -	44° 57′ 28″ N.
Longitude - - - - - - - -	66° 54′ 00″ W.

Vessels bound into **Eastport** by the main or middle passage leave this light-house to the southward, and may go within a cable's length of it with safety. Vessels bound

into *Head Harbor* by the *northern* entrance leave it to the northward, and pass between the head and **Head Harbor Island.** This entrance to *Head Harbor* lies between the light-house and the north shores of that island. It is a quarter of a mile wide, and has deep water and good holding-ground. The southern entrance leads along the south and west shores of **Head Harbor Island**, between them and the east shore of **Campobello.** It is not a safe entrance.

From **East Quoddy Light-House, Fish Head** (the easternmost point of **Grand Manan**) bears S. by E. ½ E., distant thirteen miles; the southernmost of the **Wolves**, E S E., seven miles; the northernmost of the **Wolves**, E. ½ S., nearly eight miles; **Point Lepreau**, E. ½ N., nineteen and a half miles; entrance of **Beaver Harbor**, E. by N. ½ N., eighteen miles; the top of **White Horse Island**, NE., about three miles; **Spruce Island**, between N. by W. ½ W. and NE. by E. ½ E., nearly one mile distant; **Black Rock**, NW. by W. ½ W., seven-eighths of a mile; **Casco Island**, W. ½ N., a mile and a quarter.

HEAD HARBOR ISLAND

is a high, woody island, which lies a quarter of a mile S S W. from **East Quoddy Light-House** and the same distance from the east shore of **Campobello.** It is of irregular shape, lies nearly NORTH and SOUTH, and is about half a mile long. With **Quoddy Head** and the eastern shores of **Campobello** it forms a good harbor of refuge, called *Head Harbor*, with from four to ten fathoms of water.

On the eastern shore of **Campobello**, a little over three-quarters of a mile below *Head Harbor*, is *Mill Cove*, a wide and deep cove, affording shelter in westerly winds. It is obstructed, however, by a three feet rock nearly in the middle of the entrance. It has from three to six fathoms at the anchorage.

All the eastern shores of **Campobello** are high, bold, rocky, and wooded. The settlements are on the western shores, opposite **Eastport** and **Lubec.** **Scott Head,** nearly two miles and three-quarters below **East Quoddy Head**, is a high woody hill, bold and steep-to, with black, water-worn, rocky cliffs to seaward. Three-quarters of a mile below this head is *Schooner Cove*, a small cove with six fathoms at the anchorage, and affording shelter in west and northwest winds.

Two miles and one-third southwest of **Scott Head**, and nearly three miles northeast of **Liberty Point**, is **Herring Bay Head,** the northern headland of a large and wide bay, called *Herring Bay.* The head is bluff, steep, and crowned with spruce and fir. The bay is a mile and a quarter wide, and makes in for over half a mile, with good water. It affords good shelter in northerly winds, but is open to seaward. Anchor in from two to eight fathoms, according to your draught.

Owen's Head is half a mile N E. from **Liberty Point.** It is the high wooded land which shows over **Liberty Point** when viewed from the southward. In fact, all of this coast is bold, rocky, and wooded.

On the western side of **Campobello Island** the first point of any importance below **East Quoddy Head** is **Windmill Point.** This is a long point, two miles and a half W S W. of **East Quoddy Light**, and forms the northern point of entrance to a very capacious and well-sheltered harbor, called *Harbor de Lute.*

Windmill Point is of moderate height, and steep, and is crowned with shrub trees and bushes. It is quite bold.

Harbor de Lute is an excellent harbor, much used by coasters, having good water, and being completely sheltered from all winds. Its entrance, between **Windmill Point** and **Bald Head**, is seven-eighths of a mile wide and *perfectly unobstructed.* The arm of the bay which forms the harbor runs to the southward well up into the land, and in all winds affords excellent anchorage.

Bald Head, the southern point of the entrance to **Harbor de Lute**, is a high, precipitous, rocky head, with a few stunted firs dotting its surface. It is very bold, having five fathoms close to the shore.

One mile and one-eighth below **Bald Head** we come to a low, rocky point, covered with a thick growth of spruce and fir. This is **Deer Point,** and is the northern point of the entrance to *Friar Bay.* Just to the northward of it is the settlement of **Dunn's Beach,** and just to the southward, on the north shores of *Friar Bay,* is the village of **Welchpool.**

Friar Bay is a wide cove, and forms an excellent anchorage. It is a mile wide, with a depth of from four to ten fathoms. On the north shore is the English settlement of **Welchpool. Friar Head,** the southeastern headland of this bay, is a high hill, presenting a precipitous, rocky face to the northward and eastward, but sloping gently away to the southward, to the water's edge. The surface is grassy, with two or three fir trees at wide intervals dotting its surface, and a few clinging to the brink of the precipice. At the bottom of this precipice, on the north side, stands a very peculiar looking gray rock, from which the head takes its name. It formerly bore a slight resemblance to the figure of a man wearing a hood, and was called, as now, the **Friar.** The name remains, but a shot from **Fort Sullivan** having knocked the top from the rock, what remains, though sufficiently remarkable, bears little resemblance to a friar. At the southern edge of the hill is a group of houses. **Friar Head,** like all of the headlands of **Campobello,** is very bold.

On the south side of this head is *Snug Cove,* a small and shallow cove of little importance. Both this cove and *Friar Bay* have shingly beaches.

Half a mile below *Snug Cove* is **Mehollan Point,** a long, grassy point of moderate height, presenting sandy, water-worn faces to the southward and westward. There are groups of houses upon it. **Mehollan Point** is the eastern point of the entrance to *LUBEC NARROWS* from the northward. A few hundred yards south of it is **Charley Point,** a low, grassy point, with sandy faces, fenced to the edge of the water. It is fertile and under cultivation. Groups of houses occupy the higher part of the point. Indeed, nearly all of the western shores of **Campobello** are fertile, thickly settled, and present during the summer a beautiful appearance.

On the south side of **Charley Point** makes in a large but shallow cove, called *Deep Cove.* It extends to the southward nearly a mile, to a moderately high, steep, and almost entirely bare point. There are one or two dwellings on its higher grounds, and a couple of fish-houses on the shore at its base. This is **Cranberry Point.** On its southeast side is a shallow cove, called *Little Duck Pond.* Off the mouth of this cove lie a number of islets, called **Duck Islands,** and from these extend ledges in a southerly direction for a quarter of a mile. At low water it is bare from *Little Duck Pond* to these ledges, a distance of half a mile. **Duck Islands** are small, rocky, and crowned with a sparse growth of stunted fir. They are surrounded by fish-weirs.

Half a mile south of *Little Duck Pond* is a long, low, rocky point, called **Duck Point.** It separates *Little Duck Pond* from *Great Duck Pond,* a large but shallow cove, full of shoals, making into the south shores of **Campobello,** west of **Liberty Point.** This cove is nearly a mile wide and half a mile long. **Duck Point** is shoal. The dry flats and ledges extend from it nearly six hundred yards. In fact, all of the south shore of **Campobello** is very shoal; a very narrow channel, with about five feet at low water, being the deepest from Quoddy Head through the Narrows.

DEER ISLAND.

This island is, next to **Campobello,** the largest in *Passamaquoddy Bay.* It is about six miles long and three broad in its broadest part. It extends in a N.E. and S.W. direc-

tion nearly across the whole width of the bay, and lies a little to the northward and a mile and three-quarters to the westward of **Campobello.** Between this island and **Campobello** lies the main entrance to **Eastport Harbor** and *Passamaquoddy Bay.*

Deer Island is irregular in shape, with many curves and indentations on its western shore. Its southern point, called **Deer Point** or **Deer Island Point,** is a long, narrow, and rocky projection, low and bare of trees, which extends to the southward to within half a mile of **Moose Island.** It is very bold, but vessels dare not approach it on the flood-tide, as the tidal current from the main channel meeting that which comes up through *Friar Road* from the *Narrows* causes a whirlpool of such strength as to sink small boats and turn a vessel of one hundred tons completely around.

The shores of **Deer Island** are generally high and rocky. The surface is diversified with high hills, (sometimes wooded and sometimes barren,) and fertile, cultivated valleys between them. The island is pretty thickly settled. Its western shores only will be described, the eastern coast not coming within the province of this work. Off its northern end lie a number of islets, which form, with the eastern coast, the channel into *Passamaquoddy Bay* and the *St. Croix River,* called the *Letite Passage.*

Deer Island lies directly across the mouth of *Passamaquoddy Bay,* and completely protects it from all southerly winds.

On its western shore, about a mile and a half above **Deer Point,** is a fine cove with a smooth beach, called *Cummins Cove.* It affords good anchorage in from two to three fathoms to vessels caught by adverse winds or tides. The entrance is clear, there being no ledges or shoals in the way. This cove may be recognized by the large sand-cliff on its northern side, with a few firs clinging to its perpendicular face. Behind this is a high, steep, rocky head crowned with fir, but bare of all other growth, the surface being mostly bare rock. The shores of this cove are nearly level and well cultivated, and there is here a small settlement.

Cummins Head is a high, steep, rocky head, with stunted firs dotting its surface and sides. It is just above the north point of the entrance to *Cummins Cove.*

Clam Cove is the next above *Cummins Cove,* from which it is a little over a mile distant. This is a large cove, affording secure anchorage in from two to three fathoms, sheltered from all winds. It is an excellent winter harbor. Its north point is a rocky, wooded head, covered with scrubby fir, called **Clam Cove Head.** Its shores are bold. This head forms the northwestern extremity of **Deer Island.**

Beyond **Clam Cove Head** is **Northwest Head,** and on the northern side of this head is an excellent anchorage with water sufficient for large vessels, called *Northwest Harbor,* which affords shelter in all winds. It lies on the north shore of **Deer Island,** and is the only shelter on that side until you come to the northeast point, where a cove is formed between **Northeast Head** and **Pendleton Island,** a small island lying to the northward of the head. The bottom is rocky, however, and it is not so good an anchorage as may be found at *Northwest Harbor.* **Pendleton Island** is nearly two hundred feet high near its southern end; **Northeast Head** is two hundred and fifty feet; and the highest head south of *Clam Cove,* between it and **Deer Point,** is three hundred feet high.

The eastern shores of **Deer Island** are high, steep, and rocky, and are covered with a scattered growth of fir and spruce.

MOOSE ISLAND.

This island, which belongs to the United States, lies southwest of **Deer Island** and to the westward of **Campobello.** Between the latter and **Moose Island** is the large roadstead known as *Friar Road,* the summer harbor of **Eastport,** and between **Moose** and

Deer Islands lies the entrance to the *Deer Island* or *Western Passage* into the *St. Croix River.*

Moose Island is about three miles long and of a very irregular shape. It lies N N W. and S S E. Its western shores are very much cut up by large coves and indentations, and its eastern shore is also somewhat indented. The town of **Eastport** occupies the southeastern end. It is the most easterly settlement in the United States. The northern end of **Moose Island** is called **Kendall Head.** It is a high, bare hill, fringed with a thick growth of scrubby spruce and fir at its eastern end. Here it shows a sandy, water-worn face of considerable height, and ends in a low, rocky, and wooded point. A narrow and very shallow passage leads between the north shore of Moose Island and the main land into *Cobscook Bay* and *Pembroke River.* It is crossed by a bridge which connects the island with the main land.

Just to the southward of **Kendall Head** is *Johnson Cove,* a large and deep cove, affording excellent anchorage, free from the strong currents of the roadstead. It has a smooth, handsome beach, and its shores at its head are low, smooth, and cultivated. Good anchorage is had in this cove at seven fathoms.

Todd Head, the most easterly point of **Moose Island,** lies a mile and a half below **Kendall Head,** and is part of the town of **Eastport.** It is a bluff, precipitous, rocky head, about thirty feet high. There is an earthwork just back of the head.

Dog Island lies a little to the northward of **Todd Head,** just to the southward of *Johnson Cove.* It is a rocky islet, bare of trees, but with a few scrubby bushes upon it. The high land behind it, which forms the southern end of Johnson Cove, appears as a high, sandy bluff fringed with birch, and having its slopes covered with small fir and spruce.

The southern point of **Moose Island** is called **Estes' Head.** It is a bluff, rocky headland, having its summit crowned with small fir. About a mile to the northward of it is a low, rocky point, with a few trees on the back part, called **Stanel Point.** It is on the eastern shore of *Broad Cove.* High land rises behind it, and about three-quarters of a mile to the westward of it is a large, high, and bluff head, with its summit covered with stunted fir. This is **Shackford Head.** On its south side this head shows a low, waterworn face. Between **Shackford Head** and **Estes' Head** lies *Broad Cove,* the real harbor of **Eastport.**

Broad Cove is a large and deep cove, almost entirely unobstructed, and affording excellent anchorage, with good holding-ground in all winds and at all seasons of the year, and sufficient water to float the largest vessels. It is very commodious and safe, and a stranger may enter at any time.

On the north side of **Shackford Head** makes in a deep bight, known as *Deep Cove.* It is, however, of but little importance. Hence, to the northern end of the island, the western shore is deeply indented by large but shallow coves of little importance. The passage between Moose Island and the main land is dry at low-water, and navigation is closed by a large covered bridge, painted white, which connects **Eastport** with the town of **Perry,** on the main. This is called **Eastport Bridge.**

To the westward of **Moose Island** the great *COBSCOOK BAY* makes into the land. Into this bay flow the *PEMBROKE* and *COBSCOOK RIVERS,* which, with their several branches, penetrate the land for fifteen or sixteen miles in every direction, and lead to the towns of **Pembroke, Dennysville,** and **Whiting.** These rivers are shoal, and the navigation dangerous without an experienced pilot. They will be described in their proper places.

INDIAN ISLAND.

This is an island of moderate height lying off the southeast end of **Deer Island**, about half a mile to the southeastward of **Deer Point**. It lies N N E. and S S W.; is about a mile long, and is thickly settled. Its northern end is covered with a growth of spruce and fir trees, but the rest of the island is grassy, and in some places cultivated. There is a small, grassy island, with two houses on it, close to its southern end.

The channel between **Indian Island** and **Deer Island** is called *INDIAN RIVER*. There is not less than eleven fathoms through it, and it is almost entirely unobstructed; but the tidal current runs with great velocity, and it is not safe for strangers to try this passage, on account of the dangerous whirls off **Deer Point**.

Besides the *St. Croix River*, several streams flow into the northern part of *Passamaquoddy Bay*. Of these the most important is the *MAGAGUADAVIC*, which drains the land from *LAKE UTOPIA* (whose outlet it is) to the bay. There is considerable trade to this river. (For description of this portion of *Passamaquoddy Bay* see the book of Sailing Directions accompanying the charts of the British Admiralty.)

EASTPORT HARBOR.

This commodious and excellent harbor is situated at the southern end of *Passamaquoddy Bay*. It has two entrances: the main lying between **Campobello** and **Deer Island**, and the southern, through *Lubec Narrows*, opening between the southern end of **Campobello** and **West Quoddy Head**, the easternmost point of the seacoast of MAINE. The latter entrance is, however, fit only for light-draught vessels. The light-house which marks the main entrance to **Eastport Harbor** is situated on **East Quoddy Head**, which is the northern point of **Campobello Island**. It is a high, bluff headland running off into a long point, from which extend a number of rocky islets in an E. by N. direction for nearly half a mile. Near the extreme eastern point of the outer island is built the light-house, which is called

EAST QUODDY LIGHT-HOUSE.

It is a white, hexagonal tower, surmounted by a red lantern; is thirty-four feet high, and shows a fixed white light from a height of sixty-four feet above the sea. Its geographical position is

Latitude - - - - - - - - - 44° 57′ 28″ N.
Longitude - - - - - - - - 66° 54′ 00″ W.

This light is visible fifteen miles at sea. The keeper's house stands back of the light-house, and is painted white. A flag-staff, upon which is shown the red ensign of England, appears behind the house.

WEST QUODDY HEAD,

upon which is built the light-house marking the southern entrance to *Eastport Harbor*, is a high, wooded head; but the light-house is located on a plateau much lower than the summit, bare of trees, and presenting cliff-like faces to seaward. Two bare reefs of rocks lie off the point.

WEST QUODDY LIGHT-HOUSE

is a brick tower, painted red and white in horizontal stripes. The keeper's dwelling is a white building connected with the tower. A wooden building in front of the light-house contains the apparatus for sounding a steam-whistle. The light-tower is fifty-five feet high, and shows a fixed white light of the third order of Fresnel from a height of one hundred and thirty-three feet above the sea. The geographical position is

Latitude - - - - - - - - 44° 48′ 54″ N.
Longitude - - - - - - - - 66° 57′ 01″ W.

A steam-whistle is sounded in foggy weather, giving blasts of eight seconds' duration at intervals of fifty-two seconds.

The southern entrance to **Eastport** leads between **West Quoddy Head** and **Liberty Point**, the southernmost point of **Campobello**. The channel is narrow and full of shoals, and at the *Narrows*, opposite **Lubec**, the whole passage is but a little over one-eighth of a mile wide. Not more than five feet can be carried through this channel at low water. It is therefore only used by large vessels at the top of the tide.

The summer harbor of **Eastport** is known as *FRIAR ROADS*, and is situated between the western shores of **Campobello Island** and **Moose Island**, upon which is built the town of **Eastport**. It is sufficiently safe in summer weather and very commodious, but the water is very deep, (from twelve to fifty fathoms,) except close to the shores, and the tides run with considerable velocity. It is also exposed to the northeast winds which sweep down the open passage between **Deer Island** and **Campobello Island**, and in a gale the Roads are untenable. In such cases, and in winter weather, vessels make *Broad Cove*, which lies on the south side of Moose Island and forms the real harbor of **Eastport**. It is a large and deep cove, affording excellent anchorage, with good holding-ground in all winds and in all seasons of the year. It is very commodious and safe, and a stranger may enter at any time.

APPEARANCE OF THE APPROACHES TO EASTPORT HARBOR COMING FROM THE EASTWARD THROUGH THE BAY OF FUNDY.

In approaching this harbor from the eastward, and intending to enter by the main channel, the first prominent objects visible are three or four islands known as the **Wolves**. These are rocky islets from sixty to one hundred feet in height, and covered with spruce trees. They are situated about eight miles to the eastward of **East Quoddy Head**, and about five miles to the southward of *Etang Harbor*, on the coast of **New Brunswick**. They are very dangerous, although bold, and are especially dreaded by vessels bound to and from **St. John** and other ports in the *Bay of Fundy*, in thick weather. To assist navigation as much as possible, a light-house has been placed on the southernmost island.

THE LIGHT-HOUSE ON THE WOLVES

is a revolving white light, and is shown from the height of one hundred and eleven feet above the sea. It revolves once in a minute and a half, and is visible in clear weather sixteen miles. It is not safe to pass between the **Wolves** even in fair weather, as there are many rocks and shoals in the passage and the currents are dangerous. From the light-house the entrance to *St. John Harbor* bears **E. ¾ N.**, distant about thirty miles; **Point Lepreau**, **E. by N. ¼ N.**, distant thirteen and one-half miles; the entrance to *Beaver Harbor*, **N. by E. ¾ E.**, nearly seven miles distant; entrance to *Etang Harbor*, **N. by W. ¼ W.**, six and one-half miles; the light-house at the entrance of *Bliss Harbor*, (on the north side of *Letite Passage*,) **NW. by N. ¾ N.**, seven miles; the **White Horse**, **NW. ¼ N.**, six and one-half miles; **East Quoddy Head Light**, **NW. by W. ¾ W.**, a little over seven miles; **Bishop Head, or Long Eddy Point**, (the north end of **Grand Manan**,) **SW. by S. ¼ S.**, eight miles and three-quarters; and **Swallow-tail Light**, **S. by W. ¼ W.**, ten miles and one-half.

From the north end of the northernmost of the **Wolves** the entrance to *St. John Harbor* bears **EAST**, about twenty-six miles distant; **Point Lepreau**, **E. ¼ N.**, eleven miles; the entrance to *Beaver Harbor*, **NORTH**, four and one-half miles; the entrance to *Etang Harbor*, **NW. ¼ N.**, five miles and three-quarters; the middle of *Letite Passage*, **NW. by W. ¾ W.**, seven miles; the **White Horse**, **W. by N. ¼ N.**, a little over seven miles; **East**

Quoddy Head Light, W. ½ N., nearly nine miles; **Bishop Head**, SW. ¾ S., eleven miles and three-quarters; and **Swallow-tail Light**, SW. by S. ¾ S., a little over thirteen miles.

After passing the **Wolves** the shores of **Campobello Island** will appear high, bluff, rocky, and wooded. Approaching the island, **East Quoddy Head** will appear to the westward, and to the northwestward a high, bluff, rocky islet, entirely destitute of trees, and which will show as a white rock, owing to a peculiar white place near its southwestern end. This is the **White Horse**, one of the most remarkable land-marks in approaching this entrance. It bears from the light on the **Wolves** NW. ½ N., six and a half miles distant, and from **East Quoddy Light** NE. ¾ E., about two and a half miles distant. It cannot be mistaken, being bare of trees, while all the islets about it are covered with them. It therefore serves as an excellent land-mark for both this and the *Letite Passage*. The water is deep on its south and west sides, but to the eastward lies *East Rock*, with one foot at low water, about two hundred yards from the eastern end of the island. **Campobello Light-House** open to the northward of the **White Horse** clears *East Rock* on its north side, and **White Island** open south of **White Horse Island** clears the danger on its south side.

North Rock, with one foot of water, lies N. ¾ W., half a mile from the west end of the White Horse, and has deep water close-to all around it.

East Quoddy Head is rocky, precipitous, and covered with a stunted growth of fir and spruce. The light-house is a conspicuous object. It is built upon a rocky islet just clear of the head, and about thirty feet high. The tower is thirty-four feet in height. The light is therefore shown from a height of sixty-four feet above the sea. It is a fixed white light, visible fifteen miles. Leave it to the southward, and a number of small islets on the starboard hand or to the northward, and steer a course about SW., hugging **Campobello** shore. Of these small islands **Spruce Island** is the southernmost as we pass **Quoddy Head**. It is a small, rocky islet covered with a stunted growth of spruce. **White Island**, which lies about a half a mile to the northward of it, is also of moderate height and covered with a thick growth of stunted spruce. **Sand Island**, lying to the westward of **Spruce Island** and close to it, is a low, sandy islet nearly bare, but having one or two houses upon it.

Passing to the southwestward, after rounding **Quoddy Head**, there will be seen to the westward, about a mile off, a rocky island covered with a growth of small fir and spruce. Seen from the eastward it appears as a high, bare, rocky, and precipitous head of peculiar shape. This is **Casco Island**. Its southwestern end is, however, low and sandy. This island is very bold-to on its north and south sides, seventeen fathoms being found within one hundred yards of its shores.

There are, however, two detached ledges nearly equidistant from the west end of the island and close to it; and to clear them to the westward the rule is to bring the center of the **White Horse** between **Spruce** and **Sandy Islands**. *Gull Rock*, also, (see page 26,) lies half a mile E. by N. ¾ N. of its northeast point, and there is a rocky ledge in-shore of that. Before rounding **East Quoddy Head** there appears to be no passage open except the *Letite Passage*—all progress being apparently shut off by the high, bluff, rocky shores of **Deer Island**, which, with the islands of **Pendleton** and **Macmaster** on the north, and **Moose Island** and **Indian Island** on the south, nearly shut off all ingress to *Passamaquoddy Bay*. The eastern shores of **Deer Island** are covered with a scattered growth of stunted fir and spruce. After rounding **East Quoddy Head**, the entrance to *FRIAR ROADS* is immediately opened, and the town of **Eastport** will appear directly ahead; **Indian Island** will appear to the westward, and the course leads directly for the town. On this course there is first passed, on the **Campobello** side, a bluff, precipitous head, whose summit is covered with grass and its sides clothed with stunted

fir clinging to the cliffs. This is called **Wilson Head.** It is just below **East Quoddy**, and on its western side is settled, having houses and groups of houses close to the shore. Off **Wilson Head** there lies, close in with the shore, a peculiar-looking rock called the **Bull Dog.** It is covered at half-flood, and when out of water bears some resemblance to a bull-dog.

On the northeastern side of the channel, after passing **Casco Island**, a small, rocky island of moderate height, and covered with the usual growth of small fir and spruce, is approached. This is **Green Island.** It lies about three-eighths of a mile W S W. of **Casco Island**, and nearly three-eighths of a mile from the **Campobello** shore. There is good water between it and **Casco Island**, but the bottom is broken, and there is some bad rocks in the passage which render it unfit for strangers to attempt.

About a quarter of a mile to the westward of **Green Island** will be seen two large rocks, which are connected at low water, and are variously known as *Sandy Ledge* and **Sandy Island.** About three hundred and fifty yards southwest of *Sandy Ledge* will be seen an island of moderate height and about an eighth of a mile long, called **Pope's Folly.** A small bare rock lies off the southern end of this island; and there is a ledge with fourteen feet water, about an eighth of a mile southeast of the island. **Pope's Folly** lies N N E. and S S W., nearly in the middle of the passage between **Deer Island** and **Campobello.** There is good water on both sides of it. Its western shores are quite bold, but the eastern side is shoaler, and the approach to it is further obstructed by the ledge mentioned above.

On the **Campobello** shore, nearly abreast of **Pope's Folly**, lies *WILSON HARBOR*, which will be noticed as a small but deep cove making in on the south side of Wilson Head. It is of little importance, except as a temporary anchorage for the vessels in light winds or with a head tide. Half a mile below it is **Windmill Point,** which will appear as a long, low, rocky point, covered with grass and bushes. It forms the north side of the entrance to *HARBOR DE LUTE.* There are two small anchorages on its eastern side, called, respectively, *Curry Cove* and *Brick Kiln Cove.* **Windmill Point** is quite bold, but dangerous to approach on high runs of tides unless the current is with you, for the set of flood on spring-tides is at the rate of seven knots an hour.

On the western side of the passage, opposite to **Windmill Point**, is **Indian Island,** before described, (see page 22.) It is an island of moderate height, lying off the southeast end of **Deer Island**, a little less than half a mile from **Deer Point.** Seen from the northeastward, it appears to be covered with a growth of spruce and fir; but as it is passed it will be perceived that this is the case only on the northern end. The rest of the island is grassy, and in some places cultivated. It is well to give **Indian Island** a berth on coming in, as the flood-tide from the *Narrows*, meeting that coming through the main channel, is apt to cause rips and whirls sufficiently strong to embarrass the mariner.

The two small islands lying off the southeast point of **Indian Island** are **Thrumbcap Island** and **Cherry Island.** The former, which is wrongly called **Rowen Island,** is the more northerly of the two, and is a small, round, high, grassy islet, with precipitous rocky faces, and a few spruce clinging to its sides. It lies nearly three hundred yards from the eastern shore of **Indian Island.** There is no passage inside of it, a reef of rocks extending across from **Indian Island.**

Cherry Island lies nearly a quarter of a mile to the southward of **Thrumbcap Island**, and nearly three hundred yards from the southeast point of **Indian Island.** It is a moderately high island, with precipitous rocky faces, and has the usual growth of stunted fir upon it.

Nearly one mile to the southward of **Windmill Point** is the southern point of entrance to *HARBOR DE LUTE.* It is called **Bald Head,** and is opposite the town of **Eastport.** It is one hundred and thirty-six feet high; bluff, bold, and precipitous, and has a few small firs dotting its surface. Five fathoms at low water are found close to the bluff.

The town of **Eastport** is situated on the eastern shore of **Moose Island,** near its southern end. Its wharf-line forms the western shore of *Friar Roads.* The best anchorage in these roads for light-draught vessels is close in with the wharves and exactly opposite to the end of the street leading up to the **Custom-house.** Our experience has been that vessels are apt to foul the anchors in any of these anchorages in *Friar Roads* unless great care is taken and the anchor frequently sighted. For a safe anchorage, *Broad Cove* on the American, or *Harbor de Lute* on the English side is resorted to.

DANGERS IN APPROACHING AND ENTERING EASTPORT HARBOR.

By the Main Entrance from the eastward, through the Bay of Fundy.—If passing to the southward of the **Wolves,** the revolving light will act as a guide to prevent all danger of running upon them. Thence the passage is clear until up with **East Quoddy Head.** But if passing to the northward of these islands, great care must be taken to avoid being set on to the northernmost island in thick weather. The current of ebb sets directly toward the island, and unless you can get hold of **East Quoddy Light** it is not safe in foggy weather to attempt to pass them closely to the northward. A small rock which lies a short distance from the northeastern end of the northernmost of the **Wolves** is called **Molasses Rock.** It is bare, and is not dangerous except in thick weather.

After passing East Quoddy Head the first danger met with is

BLACK ROCK,

sometimes called *GULL ROCK.* There are in reality two rocks, lying north and south of each other and close together. They are always bare, being in fact two rocky islets. **Black Rock** is quite bold, and can always be seen and avoided except in thick weather. **Black Rock** bears from **East Quoddy Light** N W. ¾ W., nearly a mile distant, and from the southern end of **Spruce Island** S W. by W. ¾ W., about five-eighths of a mile.

After passing **Black Rock** there are no dangers in this passage until abreast of **Pope's Folly,** both shores being exceedingly bold and the channel absolutely free from shoals. But about one-eighth of a mile S E. by S. ¼ S. of the southern end of that island lies a ledge called *Pope Shoal,* with fourteen feet of water upon it, (see page 25.) It is not buoyed, but is seldom approached except by vessels beating to windward, as with a fair wind they generally keep the **Campobello** shore.

After passing this ledge there are no dangers whatever, but strangers may stand boldly in to the anchorage in *Friar Roads.* It may be remarked, however, that without a fair wind of considerable strength it will be impossible to enter or leave this passage against tide.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING EASTPORT HARBOR BY THE MAIN CHANNEL.

I. *Coming from the eastward through the Bay of Fundy.*—From **Point Le Preau** to **East Quoddy Head** the course is WEST, and the distance a little over nineteen miles. The soundings are varied from twelve fathoms off **Le Preau** to fifty fathoms off **Quoddy Head.** This course continue until **East Quoddy Light** is brought to bear S E. by

S. ½ S., and about half a mile off, when there will be sixty-six fathoms of water, and SW. by W. ½ W. will lead safely into the anchorage of the town. Not less than fifteen fathoms will be found on these courses. The depth at the anchorage depends on your draught, fair holding-ground being found anywhere from four to fifteen fathoms.

The above courses pass a little over a mile to the northward of the **Wolves**; about a third of a mile to the southward of **Spruce Island**; and nearly six hundred yards to the eastward of **Black Rock**.

But if falling in with the **Wolves** to the southward of them, when abreast of the light on the southernmost island, (and which may be approached close-to,) steer NW. by W. ½ W. for **East Quoddy Head Light**, passing to the northward of it. Then steer W. ½ N. for the middle of **Casco Island** until **Cherry Island** (which is the southernmost islet off **Indian Island**) bears SW. by W. ½ W., when steer SW. by W. ½ W. for the town.

II. *Coming from the southward, through the Grand Manan Channel.*—The eastern shores of **Campobello Island** are quite bold, and may be approached close-to. In case of head winds or tides they afford good temporary anchorage, the principal of which are *Herring Cove, Schooner Cove, Mill Cove,* and *Head Harbor.* From the southward, having passed through the *Grand Manan Channel*, keep along the **Campobello** shore until **East Quoddy Light** bears NW. by W. ½ W., when run for it, passing to the northward of it about an eighth of a mile. When the southernmost point of **Casco Island** bears W. ½ N., steer for it until **Cherry Island** bears SW. by W. ½ W. Now, a SW. by W. ½ W. course will lead safely in. No directions are needed to enter Herring Bay. Its shores are bold, and there are no obstructions. The same remarks apply to *Schooner Cove*, which, however, is much smaller than *Herring Bay*, and does not afford much shelter. The largest vessels may anchor in either cove in moderate weather, the depths varying from six feet to eight fathoms.

Mill Cove, which lies about a mile and an eighth above **Scott Head**, and just to the southward of **Head Harbor Island**, is obstructed by a three feet rock, which lies nearly in the middle of the entrance. It may be safely entered, however, by keeping either the northern or southern shore aboard. The rock is not buoyed. This little harbor affords good anchorage in three and a half fathoms.

Head Harbor, before described, (see page 18,) has two entrances; one on the south side of the island, and the other on the north side, between the island and **Quoddy Head**. Both passages are unobstructed, and, as the shores on both sides are bold, the harbor may be entered with perfect safety by strangers, as there is not less than five fathoms in the channel, and excellent anchorage in the same water at the southwest end of the harbor.

SOUTHERN ENTRANCE TO EASTPORT, THROUGH LUBEC NARROWS.

This passage, which is only used at high water, leads between **West Quoddy Head** and **Liberty Point**, the southernmost point of **Campobello**. The entrance is a little over a mile wide, but the passage diminishes in width until at the *Narrows*, two miles and a half above the entrance, it is only about one-eighth of a mile wide. It is full of shoals, and strangers should not attempt it without a pilot. Good anchorage may be found, by vessels waiting for the turn of tide, in *QUODDY ROADS*, in from three to six fathoms, either under the south shores of **Campobello** or on the north side of **Quoddy Head**; but above the Roads the water is all shoal, and it is dangerous for strangers to attempt to pass.

THE NARROWS, which are about two miles and a half above **Quoddy Head**, are formed by a narrow passage about nine hundred yards long, which leads between **Lubec**

Neck on the west and the shores of **Campobello** on the east, and thence between **Pope's Folly** and **Dudley Island**, and **Treat Island** and **Friar Head,** into *Friar Roads.* The whole distance from the entrance at **Quoddy Head** to **Eastport** is five miles.

In describing this entrance it is presupposed that the mariner comes through the *Grand Manan Channel*, between **Grand Manan** and the coast of **Maine.**

APPEARANCE OF SHORES ON APPROACHING EASTPORT HARBOR BY THE SOUTHERN ENTRANCE, THROUGH LUBEC NARROWS.

On approaching **Eastport** through this passage the first prominent object visible on the Maine shore is the **Light-House**, painted red and white in horizontal stripes. What appears to be a **Bell-tower** stands a little to the eastward of it, and the roof of the keeper's dwelling is just visible over the land. This is **West Quoddy Head Light-House**, and lies on the western side of the entrance to this channel. The Head is high and wooded, with the exception of the summit, which has only dead stumps upon it. The light-house is built on a sort of plateau, also bare, and much lower than the summit. Two bare reefs will be seen lying off the point.

The high, wooded land which appears just to the eastward of the light-house is **Campobello Island,** whose southern point, a peculiarly shaped round head, is called **Liberty Point.** Well to the westward, over the low land west of **Quoddy Head,** a group of houses and a church will appear on distant high land. This is part of the village of **Lubec.**

Lying well out from **Quoddy Head** will appear a very peculiar-looking, high, rocky islet, with two smaller ones to the eastward of it. The larger rock has two knubbles or domes upon it, which render it unmistakable. This is **Sail Rock;** very dangerous in thick weather, and even in clear weather requiring a berth of from one-half to three-quarters of a mile, owing to a whirlpool which exists to the eastward of it. This rock is said to resemble, when seen from a distance, a ship under sail, but we have never been able to perceive the likeness, (see view.) There is a good passage inside of **Sail Rock,** between it and the Head, through which seventeen feet of water may be carried, but it is not advisable for strangers to attempt it.

As **Quoddy Head** is approached with the intention of rounding it and entering the *Narrows*, a peculiar nick in the rock is noticeable on the extremity of the Head, north of the light-house. But this is shut in when abreast of **Sail Rock.** When the range of this rock and the light-house is passed, **Lubec**, with its tall church-steeple, opens out to the eastward. Low islets appear in the range, and extend nearly across the channel. These are, in reality, fish-weirs from the **Campobello** shores, but they present the appearance of islets.

Just above the light-house, the cliffs on **Quoddy Head** are composed of a brownish stratified rock for a few hundred yards, and after that of the usual gray rock. The north side of the Head is high, bold, and bare; and on passing it a wide bay is opened, with cultivated and well-settled shores, extending up to the *Narrows.* This is *QUODDY ROADS*, and is the common anchorage for vessels waiting for tide to go through the *Narrows.*

On the **Campobello** shore lie a number of islets called the **Duck Islands.** Long flats and shoals make off from them, and on these are built the fish-weirs, which extend from the Campobello shore over to the edge of the channel. The **Duck Islands** are small, rocky, and crowned with a sparse growth of stunted fir. The two large but shallow coves which indent the southern shore of **Campobello Island** on the northern side of the roads are called, respectively, *Great* and *Little Duck Ponds.*

The western shores of the roads between the anchorage and **Lubec** are lower, more gently sloping, and are mostly cleared, cultivated, and settled. After passing the anchorage, the course leads to the northward and westward, passing to the westward of a red buoy marked No. 2. This is on the *Lower Middle Ground.* After passing it you steer nearly for a large, square beacon, painted red and white, and having a barrel and spar on top. This leave on your west side, close-to. It is built on *Western Bar.* **Lubec Neck,** which is now seen ahead, is a long peninsula, about a mile and a half in length, running in a northeast direction from the main land. On its extremity is built the town of **Lubec.** The neck is a high, smooth, gently sloping hill, and shows a grassy surface where it is not covered with houses. The most prominent object in the town is the **Baptist church-steeple.** It is exactly in the middle of the highest part of the hill and is the only spire in the town.

The southeastern point of **Lubec Neck** is known as **Leadurny Point.**

The shores of **Campobello** from **Liberty Point** to **Cranberry Point,** two miles above, are rocky and barren, and in most cases thickly wooded with fir trees. **Cranberry Point,** however, is almost entirely bare, and without grass or other vegetation. It is of moderate height, somewhat steep, and has one or two houses on its higher ground and a couple of fish-houses on the shore at its base. On its north side the shore of **Campobello** curves in to the northeastward and then to the northwestward, forming a large but shallow cove opposite to the town of **Lubec.** This is called *Deep Cove.* It is of little importance. Its shores are of moderate height and sandy, with water-worn faces to the westward. Its north point, which forms the eastern shore of the Narrows, is called **Charley Point.** It is a low, grassy point, with sandy faces, fenced to the edge of the water. The land is fertile and under cultivation. Groups of houses occupy the higher part of the point.

Charley Point is the most westerly point of **Campobello,** and is only about three hundred yards from the **Maine** shore. A few hundred yards to the northward of it is another long, grassy point, of moderate height, and presenting sandy water-worn faces to the southward and westward. There are groups of houses upon it. This is called **Mehollan Point.**

The town of **Eastport** is plainly visible when passing through the *Narrows;* but a group of islands lying between **Lubec** and **Moose Island** diminish the width of the channel, which keeps the **Campobello** shore until abreast of **Friar Head.**

Lubec is a beautiful little village, and has a considerable fishing interest. Passing it we open a deep bay which extends to the southward for about a mile and a quarter along the western side of the neck, and behind the town. This is called *Johnson Bay,* and is a very excellent anchorage, with from three to seven fathoms of water and good holding-ground. A good channel exists from **Lubec** across the mouth of this bay, and on the western side of the group of islands above mentioned, into *Broad Cove* or into *Cobscook Bay.*

The fertile and well-settled shores which appear on the western side of *Johnson Bay* are those of **Seward Neck,** which forms the southern point of the entrance to *Cobscook Bay.*

After passing through the *Narrows* the channel leads to the northward, and vessels may pass either between **Dudley Island** and **Mark Island,** or between **Mark Island** and the shores of **Campobello.** The latter channel is, however, much the narrower of the two, although quite safe. **Mark Island** (or **Pope's Folly,** as it is now called) is that small rocky and precipitous islet which lies about six hundred yards to the northward of **Lubec,** and three hundred and fifty yards from the **Campobello** shore. It is covered with a sparse growth of spruce and fir. The channel between **Pope's Folly**

and **Dudley Island** is a quarter of a mile wide, with from six to ten fathoms at low water; while on the other side (that is, between it and **Campobello**) it is not over a hundred and fifty yards between the lines of three fathoms. Either channel may, however, be safely used at high water.

A little over a quarter of a mile to the northwestward of **Mark Island** lies **Dudley Island.** Its southwestern end is high and rocky, but the rest of the island appears more fertile and has a thick growth of low foliage upon its slopes.

Dudley Island lies half a mile from the **Campobello** shore. On its north side it is connected by fish-weirs with a large island, having bare rocky summits and gently sloping shores, which appear to be cultivated. This is **Treat Island.** It is two hundred and fifty yards north of **Dudley Island**; a little over half a mile south of **Estes' Point,** (the southernmost point of **Moose Island**;) and half a mile to the westward of **Friar Head,** which is directly opposite to it. **Treat Island** is nearly half a mile long. There is a small settlement on its southern end, and its eastern face is in many places fertile and cultivated. A three-gun battery is built near its southeastern point, and the barracks and quarters on the hill behind it form prominent objects. The north end of the island is bare, except near the point, where there are a few scattered fir trees.

Snug Cove, on the **Campobello** side, lies between **Mehollan Point** and **Friar Head.** It is a very good anchorage for light-draught vessels.

Friar Head, as seen from the southward, will show a gently sloping, grassy surface, gradually rising to the northward and westward until it terminates in an abrupt rocky precipice. A few low trees are seen here and there on the slopes, and stunted firs cling to the edge of the precipice. The Friar is not seen until abreast of the Head. *Friar Bay,* the large and deep cove which forms the harbor of **Welchpool,** is seen as soon as the Head is passed. There is good anchorage here, in from three to twelve fathoms, in all but northerly winds. The village seen on the north shore of Friar Bay is the English settlement of **Welchpool.**

On the western side we open a wide passage between **Treat Island** and **Estes' Head,** the southernmost point of **Moose Island.** This passage, which is half a mile wide, leads into *Broad Cove* or up into *Cobscook Bay.* If bound into *Broad Cove,* pass through this passage and steer up between **Estes' Head** and a high, bluff, rocky head, showing low water-worn faces to the southward, and which will appear about three-quarters of a mile to the westward of **Estes' Head.** This is **Shackford Head,** and forms the western point of the entrance to *Broad Cove.* Its summit is covered with stunted fir and spruce.

Estes' Head is a bluff, rocky head-land, having its summit crowned with stunted fir. On its eastern side makes in a long but narrow and shoal cove, called *Prince Cove.* Here the wharf-line of **Eastport** begins, and this is the southern end of the town.

DANGERS IN APPROACHING AND ENTERING EASTPORT HARBOR BY THE SOUTHERN PASSAGE, THROUGH LUBEC NARROWS.

In approaching this harbor from the southward, about the time you make the **Light-House** on **Quoddy Head** you will see to the northwestward, well in-shore, *a black nun-buoy.* This is on

MORTON ROCK,

which has four feet at lowest tides, and bears from **Bootman Head** (a high head with two humps on its summit, not to be mistaken) N E. by E. ½ E., distant two miles. The buoy is a black nun of the second class, marked No. 1, and placed in sixteen fathoms,

about thirty yards to the southwestward of the rock. From this buoy **Sail Rock** bears E. by N. ½ N., two miles and a half distant.

After passing **Morton Rock** no dangers are met with until approaching **Quoddy Head**, when a very peculiar-looking rocky islet will appear lying off the Head. This is

SAIL ROCK.

This, which has been already described, (see page 28,) is a rocky islet, with two smaller rocks to the eastward of it, lying about four hundred yards S E. by S. ½ S. from the light-house. A reef of sunken rocks joins it to the two rocks outside of it, but there is a good passage on its eastern side, between it and **Little Sail Rock,** which lies close in with the shore, being about one hundred and twenty-five yards from the light-house. **Sail Rock** cannot be mistaken, on account of the two peculiar knubbles (like domes) upon it. It is a very dangerous obstruction in thick weather, and even in clear weather should receive a berth of from half to three-quarters of a mile, owing to a dangerous whirlpool existing to the eastward of it.

This rock is said to resemble, when seen from a distance, a ship under sail, but we have never been able to perceive the likeness.

From **Sail Rock**, **Liberty Point** (the southern extremity of Campobello) bears N E. by E. EASTERLY, distant about a mile and one-third.

After passing this rock there are no dangers on the westerly side of the entrance until after rounding **Quoddy Head**; but a vessel beating in through the Roads, or on coming from the eastward and keeping the **Campobello** shore best aboard, must beware of a *line of ledges* which lie nearly NORTH and SOUTH off the mouth of *Great Duck Pond.* There are several bare rocks among these ledges, the southernmost of which is called

LIBERTY POINT LEDGE,

and lies nearly three-eighths of a mile W. ½ S. from **Liberty Point** and a quarter of a mile from the nearest shore. From the center of this rock **West Quoddy Light-House** bears about S W. by W. ½ W., and is distant exactly one mile.

Liberty Point Ledge is surrounded by shoal water, and should receive a berth of nearly two hundred yards. There is a passage between it and the point, with good water, but it is not safe for strangers. About one hundred and seventy-five yards northwest of it lies *another small bare rock;* and two hundred yards NORTH of it still another, called **Round Rock,** which is the northernmost of the bare rocks on this reef. There is no passage among them, sunken rocks occupying the whole extent of the ledge. Shoal water extends to the northward from **Round Rock** for about one hundred and fifty yards.

From **Round Rock** the extremity of **Liberty Point** bears E. by S. ½ S., and is distant three-eighths of a mile.

Great Duck Pond is full of shoals, and is not fit for strangers.

On the western side, after rounding **Quoddy Head**, you must not stand too far to the westward inside the Head, as the

WORMELL LEDGES

lie along the north shore of the Head at distances from it varying from an eighth to a quarter of a mile. They lie in a line E S E. and W N W., and are mostly bare at low springs. All of the large bight embraced between **Lubec Neck** and **Quoddy Head** is, in fact, full of shoals, and dry flats extend off to distances varying from three-eighths to seven-eighths of a mile from shore. Inasmuch as the same is true of the eastern side of this passage, (the

ledges and flats extending off in some cases nearly half a mile from the **Campobello** shore,) it will be seen that the channel must be extremely narrow and unsafe. But in fact, during the summer season, fish-weirs which extend out from both shores to the edge of the channel serve as excellent marks to keep vessels off the flats, as their extremities are always on the edge of the deep water.

To avoid *Wormell Ledges* in beating to windward, do not stand to the westward of the northeast point of **Quoddy Head** bearing S E. ½ S. As they are not buoyed, no other directions for avoiding them can be given. After passing them the channel becomes much shallower, and you will see ahead, against the land, **a large, square, black and white beacon, with a spar and barrel on top**, and a little to the eastward of this, and much nearer to you, **a red spar-buoy**. The buoy is on the *Lower Middle Ground,* and the beacon on *Western Bar.*

LOWER MIDDLE GROUND,

which has two feet upon it at extreme low-tide, lies nearly in the middle of the roads, and bears about N N W. from **West Quoddy Head,** distant three-quarters of a mile, and from **Cranberry Point** nearly SOUTH, distant one mile. The buoy is a red spar, marked No. 2, and is placed in good water on the western side of the shoal. The bottom on the shoal is hard sand.

WESTERN BAR.

The square black and white beacon above mentioned is on the eastern end of a long shoal, mostly composed of sand and gravel, which makes out from the **Lubec** shore to the edge of the channel, a distance of about three-quarters of a mile. It is mostly dry at low water. The beacon, which is painted with black and white stripes, is surmounted by a spindle with a cask on top ; the latter being also painted black and white. It is placed in position to mark the extremity of *Western Bar*, and also the turning point of the channel.

From this beacon the middle of **Cranberry Point** bears N E. by E. ¼ E.; the *buoy on Lower Middle Ground* about S S E.; and **Leadurny Point,** N. ¾ E., distant about one mile.

On the eastern shore there are many flats and shoals, but they are mostly marked by fish-weirs. Large ledges extend off from the **Duck Islands** in a southerly direction, but they are always bare at low water, and show themselves at all stages of the tide.

When abreast of the beacon on *Western Bar* the course changes to the northward, and ahead, off **Cranberry Point,** *a conical buoy of a whitish color* will be seen. It is intended for a red buoy, but had not been painted for so long a time when we last saw it that it had bleached to a dirty white. The only use of this buoy is to keep vessels from approaching the fish-weirs too closely. There are no flats here other than those upon which the fish-weirs are built. At this point the channel turns more to the eastward, and you will leave to the westward *a long flat, bare at half-tide,* which makes off from the **Lubec** shore. It is nothing but a continuation of the flats which form *Western Bar*, and is sometimes called *Lubec Flats.* The edge of this flat is not marked, but there is *a black nun-buoy* placed off the northern end of the weir which occupies the north part of the flats. This buoy marks the edge of the channel at this point.

After passing this buoy, the channel turns to the northward again, until approaching the southern entrance to the *Narrows.* Its course through the *Narrows* is about **NORTH** for **Pope's Folly.** There are no obstructions except the bar at their northern end, which has six feet on it.

When fairly through the *Narrows* the channel is clear. Pass on either side of **Pope's Folly,** only remembering not to approach it so closely on its eastern side

as on its western shore. Not more than five feet of water, it must be remembered, can be carried through the southern passage to **Eastport** at low water; it is therefore used by vessels of large draught only at high water, and with an experienced pilot. A pilot can always be obtained at the light-house by making the necessary signal.

In passing along the wharf-line of **Eastport**, if it be low water, vessels of heavy draught must beware of two sunken rocks which lie about one hundred and fifty yards from the wharf-line. The southernmost, called *Page Rock*, lies three hundred and seventy-five yards to the northward of *Shackford Cove*, and has sixteen feet at mean low water. *Margie Rock*, which has fourteen feet, lies two hundred yards to the northward of *Page Rock*. These rocks were first determined in 1872. They are named after the vessels which first struck upon them.

From *Page Rock* **Union Wharf** bears **N N W.**

If bound into *Broad Cove* for anchorage, pass either to the east or west of **Dudley** and **Treat Islands**, according as the wind favors. Passing to the eastward, the channel is clear; but in the western channel there are several dangers to be avoided. The first that will be met with after passing **Dudley Island** is called

PADDY LEDGE,

and is a bare rock lying about three hundred and fifty yards off the **Treat Island** shore and a quarter of a mile north of **Dudley Island**. It is tolerably bold, and forms the southern end of a large ledge lying along the western shore of **Treat Island**, and which is bare at low water. This ledge is about three hundred yards long in a **N.** by **W.** and **S.** by **E.** direction, and besides *Paddy Ledge* has several other bare rocks upon it. The principal of these is

GULL ROCK,

lying about sixty yards to the northward of *Paddy Ledge*, is surrounded by shoal water. There is, however, a good passage, with about four fathoms of water, between this ledge and **Treat Island**. These ledges are not buoyed.

The northwest point of Treat Island is shoal to a distance of nearly a quarter of a mile. At the western extremity of this shoal there is a small islet called

BURIAL ISLAND.

It is a low islet, covered with grass, and has three or four trees on it. There is a lone house here, and a bare rock lies off the northeastern end of the islet which is not named. After passing **Burial Island** there are no dangers in the channel into *Broad Cove.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING EASTPORT HARBOR THROUGH LUBEC NARROWS.

I. *Coming from the eastward on the north side of* **Grand Manan.**—When off **Bishop Head** with **Quoddy Head Light** bearing **W. by N. ½ N.**, a little over seven miles distant, steer for it until **Liberty Point** bears **N. by E. ½ E.**, and until within a mile from the light-house. At this point there will be from twenty-five to thirty fathoms, rocky bottom. The entrance to the roads being now fairly open, steer **N W. ½ W.** for about a mile and a half, on which course there will be not less than four fathoms. This will lead up to the red buoy on the *Lower Middle Ground.* Passing this buoy, if

the tide is low, anchor in the bight north of **Quoddy Head**, in from three to five fathoms, and wait for high water. But if bound up and the tide is favorable, steer **N.** by **W.** ½ **W.** for the white and black beacon on *Western Bar*, carrying up not less than eight feet. Vessels may go close to this beacon, leaving it to the westward, and when abreast of it haul up **N.** by **E.** for the conical buoy off **Cranberry Point.** On this course there will be not less than six feet. Leave the buoy to the eastward close-to, and steer **N E.** ½ **N.**, passing to the eastward of the large fish-weir making off from the **Lubec** shore. On this course the **Lubec** flats are left well to the westward, and there will be not less than seven feet. Continue past the weir, gradually hauling around it until heading **NORTH**, and when **Lubec church-steeple** bears **N N W.** and when abreast of the black nun-buoy off the northern end of the weir, steer **N.** by **W.** about for the eastern end of the **Lubec** wharves. On this course there will be not less than nine feet of water. When abreast of **Leadurny Point** steer through the *Narrows*, heading about for **Pope's Folly.** The course is **NORTH** in the middle of the passage, and there will be from four to seven fathoms until the bar at the northern end of the *Narrows* is reached, which has six feet on it. There is a strong tide-way in the *Narrows.*

When through the *Narrows*, continue the course for **Pope's Folly** until within two hundred yards of it, when, if intending to pass to the eastward of the island, steer **N E.** ½ **N.** for a quarter of a mile, carrying seventeen feet of water, or until the wharf on the south end of **Treat Island** bears **N W.** by **N.** ½ **N.** Now steer **N.** by **E.** ½ **E.** through the roads up to the town. If intending to anchor off the town, keep close in along the wharf-line and anchor in from four to six fathoms, out of the strength of the tide. The best anchorage (as mentioned on page 26) for light-draught vessels is close in with the wharves, and exactly opposite to the end of the street leading up to the custom-house.

If intending to pass between **Dudley Island** and **Pope's Folly**, round the latter to the westward, keeping about a hundred yards from it, and in not less than four fathoms, and steer **N N E.**, past **Dudley** and **Treat Islands**, and anchor as before.

These courses pass to the southwestward of **Liberty Point Ledge**, half a mile distant; to the eastward of **Sail Rock**, half a mile; to the eastward of *Wormell Ledges*, a little over three hundred yards; to the westward of *Lower Middle Ground*, about eighty yards; and to the eastward of *Western Bar*, close-to.

It must be remembered that all of the above courses are supposed *to be made good.*

II. *Coming from the southward through Grand Manan Channel.*—Coming up the middle of the passage, as soon as **Quoddy Head Light** is made, bring it to bear **N.** by **E.** ½ **E.**, and steer for it until within a mile of it, when haul off **N E.** by **E.** so as to pass well outside of **Sail Rock.** When the highest point of the rock is in range with the light-house, or when the latter bears **N W.** by **N.** ½ **N.**, haul up **N E.** by **N.** ½ **N.** and gradually round **Quoddy Head** until the roads are well open. When the light-house bears **W.** ½ **S.** and is a little over half a mile distant, steer **N W.** ½ **W.** toward the red buoy on *Lower Middle Ground*, after coming up with which, proceed as above directed.

Or continue the course **N W.** ½ **W.** until **Quoddy Light** bears **S.** by **E.** ½ **E.**, and then steer **N.** by **W.** ½ **W.**, with the light bearing **S.** by **E.** ½ **E.** This course will lead up to the beacon on *Western Bar.*

Coming along shore from the westward, steer **N E.** ½ **E.**, from off the mouth of *Little River*, until the highest part of **Sail Rock** is in range with the light-house, or until the light-house bears **N W.** by **N.** ½ **N.**, when steer **N E.** by **N.** ½ **N.** and proceed as before directed.

The above courses pass nearly half a mile to the southeastward and about six hundred yards to the eastward of **Sail Rock**, and well to the southward of **Morton Rock.**

III. *To come through the Narrows and enter Broad Cove.*—To enter *Broad Cove* from the *Narrows*, pass either to the eastward or westward of **Dudley** and **Treat Islands**,

according as the wind favors. If to the eastward, continue the N NE. course from abreast of **Pope's Folly** (see page 34) until past the southeast point of **Treat Island.** On this course there is not less than six fathoms. Now gradually haul to the westward, steering about midway between **Buchman** and **Estes' Heads,** (or about N. ¼ E.,) until the northern end of **Treat Island** bears W. by S. ¾ S. Now steer NW. ¾ N. toward **Shackford Head,** passing **Estes' Head** in eight fathoms, and from a hundred to a hundred and fifty yards off; and when the cove is fairly open, and when within a quarter of a mile of the low sand-cliff on the southeast extremity of **Shackford Head,** steer N. ¼ E. into the harbor, and anchor at pleasure. There is not less than six fathoms on the above courses, from **Pope's Folly** to the cove.

Passing to the westward of **Dudley** and **Treat Islands,** when clear of the *Narrows,* steer NW. ¾ N. until past **Dudley,** and bring its northern point to bear E. ⅛ S., and in range with the middle of **Friar Head.** The western point of the island should be about four hundred yards distant, and eight fathoms water will be found. Now haul up N. ¼ E. for the harbor, and continue this course to the anchorage.

Vessels using this passage pass *Paddy Ledge* about four hundred yards to the westward of it, about three hundred and fifty yards to the westward of **Gull Rock,** and an eighth of a mile to the westward of **Burial Island.**

In the *Narrows,* the flood and ebb set nearly in the direction of the passage. Sailing vessels cannot pass through the *Narrows* against the tide, unless with a very strong fair wind.

There are no directions necessary for entering *Johnson Bay.* There are from three to seven fathoms in it at the anchorage, and the ground is good.

It may not be out of place to remark here, that, for vessels which do not wish to come along the coast, an E NE. course from **Matinicus Rock** will carry them to **West Quoddy Head.** This course *made good* passes about two miles off the Head.

LIGHT-HOUSES.

Name.	Latitude.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
E. Quoddy Head Lt.	44° 57′ 28″	66° 54′ 00″	$4^h 27^m 36^s.0$	Fixed.	64 ft.	15
W. Quoddy Head Lt.	44° 48′ 54″	66° 57′ 01″	$4^h 27^m 48^s.1$	Fixed.	133 ft.	17

TIDES.

Corrected Establishment at Eastport, or average time of High Water after Moon's meridian passage	11^h 08^m
Mean Rise and Fall of Tides, or rise of Mean High Water, above the plane of reference	18.1 Ft.
Rise of High Water, Spring Tides, above the plane of reference, average	19.4 "
Fall of Low Water, Spring Tides, below the plane of reference, average	1.2 "
Rise of High Water, Neap Tides, above the plane of reference, average	16.3 "
Height of Low Water, Neap Tides, above the plane of reference, average	1.4 "
Rise of Highest Tide observed, above the plane of reference	23.3 "
Fall of Lowest Tide observed, below the plane of reference	4.1 "
Mean duration of Rise	6^h 03^m
Mean duration of Fall	6^h 22^m

VARIATION OF THE COMPASS.

At **East Quoddy Head** the magnetic variation will be, in 1875, 18° 15′ W., and at **West Quoddy Head** it will be 18° 00′ W.

The annual increase is between 2′ and 2½′.

ST. CROIX RIVER.

Into the northwestern corner of *PASSAMAQUODDY BAY* empties the *ST. CROIX RIVER*, which separates the province of NEW BRUNSWICK from the STATE OF MAINE. This river has good water from its mouth to the Divide, which is about seven miles and a half above. The least water in mid-channel is about five fathoms. The entrance from *Passamaquoddy Bay* is between a long, low, sandy island called **Navy Island**, on the east, and **Mill Point** on the west. The latter is a bold point, about forty-five feet high, forming the north point of entrance to a large but shallow cove called *Mill Cove*. Here the river is about two miles wide, but above **Navy Island** it gradually narrows, retaining an average width of a mile to the Divide.

The course of the *St. Croix* from its mouth to the Divide is about N. ¾ W., and the distance seven miles and a half. At this point it branches—the eastern branch forming what is called *Oak Bay*, continuing in a N. by E. direction for a little over four miles; while the western branch, which forms the main river, turns abruptly to the westward, and runs, with many changes of course, for about five miles and a half, to the town of **Calais**. This town is built on the south bank of the river, thirteen miles above its mouth. Twelve feet may be taken up to the ledge and even up to **Heckman Point**, but the channel is very narrow above the ledge.

The tidal current runs with considerable velocity in the *St. Croix*, so that sailing vessels must always wait for a fair tide or a tow-boat. It is impossible, also, for strangers to go very far above the Divide, on account of the narrowness of the channel, the ledges and flats which obstruct it, and the absence of buoys to properly mark the dangers. Pilots can always be obtained at **Eastport**. Vessels generaly take a tow-boat between the town and the Divide.

The immense lumber business, of which **Calais** is the center, draws thither in the summer season a great number of coasters, most of whom, as above stated, rely upon steam for their safe conveyance to and from the town. A careful description and detailed sailing directions may, however, enable a vessel to save time (should she not be able to get a tow) by sailing up as far as the *Ledge*, and if she be light she may even go up to the town, provided she has an experienced pilot. In 1872, in our schooner, drawing ten feet, we beat through this passage and came safely up to **Calais**; but we would not advise this course to any vessel, unless, as before stated, she be of light draught and have an experienced pilot.

DESCRIPTION OF SHORES
OF THE ST. CROIX RIVER, FROM NAVY ISLAND TO CALAIS.

NAVY ISLAND

is a long, low, sandy island, lying on the eastern side of the entrance, a little over a third of a mile from **St. Andrew Point**. It presents to the southward a white, water-worn cliff about thirty-five feet high. The southern half of the island is entirely bare of trees, but a low, thick growth of spruce occupies about half of the northern part.

The northern point of **Navy Island** is lower than the southern, and is partly cleared and partly dotted with a thin growth of scrubby fir. The island lies NW. and SE., and

is about a mile long. It is sometimes called **St. Andrew Island,** as it forms the western and southwestern side of *St. Andrew Harbor.* It is pretty bold on its southwestern side, but on the harbor side the flats extend nearly over to the main shore, leaving but a narrow passage at low water. The channel to the northwestward of the island is very narrow at low-tides, the flats nearly joining; but at high springs there is a depth of from three to four fathoms. The eastern channel is considered the best, and has been marked and buoyed.

The Village of St. Andrew, which belongs to **New Brunswick,** is built on **St. Andrew Point,** at the base of the great **Chamcook Hills,** whose slopes here for nearly five miles form the eastern shores of *St. Croix.* The town contains about twenty-eight hundred inhabitants, and its principal business is in lumber. The harbor, with from twelve to sixteen feet at low water, is excellent and well sheltered. There is not, however, more than one foot at low water in the channel, and it is in some places very narrow.

The land on **St. Andrew Point** is very gently sloping, and entirely under cultivation; but to the northward of the town the hills increase gradually in height until an elevation of over six hundred feet is reached, at the top of **Mount Simpson,** the highest of the **Chamcook Hills.** At the southeastern end of the town is built the light-house, which is called

ST. ANDREW LIGHT-HOUSE.

It is a low, white tower, thirty-five feet high, standing upon a wharf, and shows a fixed white light, visible about ten miles.

On the northwestern end of *Navy Island Reef* is built a pyramidal wooden beacon, painted white, as a guide to the western entrance to *St. Andrew Harbor.*

On the Western or Maine shore of the St. Croix the land is mostly bold, and the banks steep-to, and it is well settled and cultivated.

Mill Cove, which is opposite to **Navy Island,** is a long and narrow cove of little importance, being dry at low water. There is a small settlement here.

About a mile above *Mill Cove,* and nearly opposite to **St. Andrew,** we come to the village of **Robbinston.** It is a little over eleven miles above **Eastport,** and has considerable trade in lumber and ship-building. The land in this vicinity is of moderate height, slopes gently back from the water's edge, and is nearly all cleared and cultivated.

Exactly opposite to **Robbinston,** *on the eastern bank,* and about a mile to the westward of St. Andrew, is

JOE POINT,

or **Black House Point,** as it was formerly called. It is a high, gently sloping round point, which is mostly grassy, but dotted here and there with scrub fir. There was formerly a block-house upon it.

The land at the base of the **Chamcook Hills** is level and well cultivated.

On the western shore, a mile above **Robbinston,** is

BRICK-YARD POINT,

which is a high clay head with precipitous faces, and is crowned with a thick growth of young birch and spruce. It is sometimes called **Byrne Head.** There is a brick-yard here, close to the shore.

The channel now leads toward two small islands, one lying tolerably close to the west bank, and the other almost exactly in the middle of the river. This latter is three miles and a half above **Robbinston** and fourteen miles above **Eastport.** These are the **Dochet Islands,** and are called, respectively, **Dochet** and **Little Dochet.**

DOCHET ISLAND,

sometimes, though incorrectly, known as **St. Croix Island,** has a light-house upon it, the lantern rising from the southern end of the keeper's dwelling. The island is of moderate height, with precipitous sandy faces, to which, here and there, cling clumps of trees. The light-keeper's dwelling stands near the middle of the island, and is a conspicuous object. The island is shoal in its surroundings, and must receive a good berth, whether you pass on its eastern or western side.

ST. CROIX LIGHT-HOUSE.

This light-house, on **Dochet Island**, is a lantern rising from the keeper's dwelling. Both are painted white. The light is fixed, varied by flashes at intervals of thirty seconds; of the fifth order of Fresnel; shown from a height of seventy-one feet above the the sea, and visible twelve nautical miles. Its geographical position is

Latitude - - - - - - - - - 45° 07′ 43″ N.
Longitude - - - - - - - - 67° 08′ 00″ W.

The main ship channel passes to the eastward of

LITTLE DOCHET ISLAND.

Before we come to **Dochet Island** a small, rocky islet is passed, with three or four fir trees upon it, lying close in with the western shore, about half a mile north of **Brick-yard Point.** This is **Little Dochet Island.** It is about a mile below **Dochet Island** and about a quarter of a mile from the western shore.

The western passage is narrow, and not safe for strangers, having several rocks in it.

On the western shore, nearly opposite to **Dochet Island,** is the settlement known as **Red Beach.** The shores are steeper in this vicinity and not so fertile, being mostly covered with a thick growth of scrubby trees. The trade is in plaster, for the manufacture of which several mills have been erected.

SAND POINT.

On the eastern shore, just above **Dochet,** is a sandy point, presenting precipitous faces toward the river, with stunted fir trees clinging to them in a few places. This is called **Sand Point.** It is not safe to approach, as a long spit extends a quarter of a mile from it toward the channel. The usual course for vessels when by **Dochet Island** is to haul up about **N NW.** for **Devil Head.**

DEVIL HEAD,

the most conspicuous object on the *St. Croix River,* and which can be seen from below **Robbinston,** lies on the west bank of the river and on the south side of the Divide. It is a very steep hill, rising to a height of two hundred and fifty feet. At the river bank it terminates in a bold, bluff head, covered mostly with a growth of small fir and spruce. On the southern side a portion is cleared and has a few houses upon it. It is quite bold, as is also all of the shore between **Red Beach** and the head. Here is formed the Divide, the *St. Croix* turning abruptly to the westward, and a branch running nearly **NORTH** and **SOUTH** for four miles and a half, forming what is called *Oak Bay.* The latter is a long and wide bay, with from two to eight fathoms in it, but of no special importance.

The shores on the eastern side of the river above **Sand Point** rise to a considerable height, varying from four to six hundred feet.

Into the eastern side of *Oak Bay,* near its mouth, empties a long, narrow, and shoal creek, called *Warwig Creek.* The bay itself is easily recognized by a high, wooded hill, which appears in the middle of it.

Opposite **Devil Head**, on the north side of the *St. Croix*, and separating *Oak Bay* from the river, is a grassy point bare of trees and of moderate height, with perpendicular faces. This is

OAK POINT.

Its surface is somewhat flat and under cultivation. A house and barn are visible from the river. This point forms the north point of entrance to the main branch. On the same shore, three-quarters of a mile above **Oak Point,** is a high, precipitous, rocky head, called

RAVEN HEAD.

Its south face is as perpendicular as a wall. The head is covered with a thick growth of fir and other trees.

On the southern side, above **Devil Head,** the shores are diversified, being partly cleared and cultivated and partly wooded, the principal growth being small fir and spruce.

On the north shore, just above **Raven Head,** is found low, grassy land, studded with small trees, and behind this rises a high, bare, white, rocky hill, destitute of either trees or grass. This is called **Brown's Hill,** and is a very remarkable object.

The settlement called **The Ledge** is situated on the shore near **Brown's Hill**, and about one mile above **Oak Point**. The land is here rocky and barren. There are several wharves for the convenience of vessels loading. Here, if vessels are desirous of lying afloat at low water, they must anchor, as above this point they will be obliged to lie aground at low-tides.

It is under no circumstances safe for vessels to go above the **Ledge** without a pilot, as the narrow and dangerous reach called the *Bog Brook Passage* begins just above the settlement. Its course is about SW. and its length three-quarters of a mile.

The Ledge itself, from which the settlement takes its name, is on the southern shore of the river, opposite to the settlement, and is covered only at high water. On its end is built a large wooden beacon supported on four piers. A black spar-buoy marks the point of the flats which lie off this ledge. Above this ledge, on the south shore, the land is mostly low, rocky, and thickly wooded. On the northern shore it is diversified with partly wooded and partly cultivated lands.

Much of the higher land on the northern shore of *Bog Brook Passage* is beautifully cleared and cultivated. The north point at the western end of the passage is low and grassy, with sand faces fringed with trees, mostly birch, called

HECKMAN POINT,

and here the channel turns to the northward and westward, the course being about **W N W.** This point lies on the north bank of the river, about two miles below **Calais.**

After passing **Heckman Point** the southern shore of the river is high, cleared, gently sloping, dotted with orchards, and under beautiful cultivation. The northern shore is rocky, barren, and thickly wooded. On the southern shore, about three-quarters of a mile above Heckman Point, will be seen a thickly wooded point, called

TODD POINT.

It is rather low, with handsome houses upon it, and several wharves extending out toward the channel. Vessels load here with lumber during the winter, when the ice prevents their passage above. At low water the steamer which runs from **Eastport** to **Calais** also stops here, being unable to get up to her wharf.

The suburbs of **Calais** begin about a quarter of a mile above this point, and both this town and its opposite neighbor, **St. Stephen's,** are visible from here.

At **Calais** vessels must run alongside the wharves and lie aground. The wharves are built out almost to the edge of the channel on both sides, the distance across between the ends of the wharves being only from three hundred and fifty to four hundred feet. The river is here very narrow, and the channel still narrower, there being no room for a vessel to swing at low water, and there is great danger of being run into by the tows which are constantly coming up and down. It is, therefore, as above remarked, better to run alongside the wharves.

Calais is connected with **St. Stephen's** by a large covered bridge.

APPEARANCE OF APPROACHES TO THE SHORE OF ST. CROIX RIVER, COMING FROM THE SOUTHWARD FROM THE VICINITY OF EASTPORT.

Vessels bound for this river go through the main channel between **Deer Island** and **Campobello,** pass to the westward of **Indian Island,** round **Deer Point,** and steer up between **Moose** and **Deer Islands.** After passing **Deer Point** there will be seen on the western shore a high hill, bare on its summit, but fringed with a thick growth of scrubby fir and spruce at its eastern end. Here it shows a sandy, water-worn face, which ends in a low, rocky, and wooded point. This is **Kendall Head,** the northeastern extremity of **Moose Island.** The large cove which makes in on its southern side, with a smooth, sandy beach, is *Johnson Cove,* a most excellent anchorage. The shores of this cove at its western end are low, smooth, and well cultivated. Here is good anchorage, in seven fathoms of water, with but little tidal current.

Opposite to **Kendall Head,** on the **Deer Island** shore, will be noticed *another cove,* not so large as *Johnson,* but also affording good anchorage. Its entrance is entirely unobstructed. This is *Cummins Cove.* It may be known by the large sand-cliff on its northern side, with a few firs clinging to the perpendicular cliff. Behind this cliff is a high, steep, rocky head crowned with fir. The rest of the shores of the cove are nearly level and well cultivated. There is a small settlement here.

Passing **Kendall Head,** a wide passage is opened to the westward, between the northern shores of **Moose Island** and the main land. About three-quarters of a mile above its eastern entrance it is crossed by a large, white, covered bridge, which connects **Moose Island** with the main land. This passage leads into *PEMBROKE RIVER,* but is mostly dry at low water.

In the middle of the eastern entrance lies **Treat Island,** a small island about half a mile long, which at low water is joined to **Moose Island** by a dry sand-beach. Its shores are somewhat rocky, and it should receive a berth of a quarter of a mile. Its northern point, which is quite rocky, is called **Mitchell Point,** and is only about one-eighth of a mile from the main shore.

The main land here extends to the southward into a long narrow point, called **Pleasant Point,** on which is a large Indian settlement. The settlement will appear as a cluster of small houses with a church in the foreground, and on a prominent point will be seen a tall flag-staff bearing a white flag with a red cross, and other devices undistinguishable from the channel.

Most of the shores between **Eastport** and **Pleasant Point** have sandy beaches.

About a mile and a quarter above *Cummins Cove,* on the **Deer Island** side, will be seen a wooded and rocky head covered with scrubby fir. This is **Clam Cove Head,** the westernmost point of **Deer Island.** On its south side makes in a large cove called

Clam Cove, which is an excellent harbor, with sufficient water for the largest vessels which resort hither, sheltered from all winds, and is especially fitted for a winter harbor, being free from ice. When abreast of it, on the western shore will appear a large cove called *Gleason Cove,* but sometimes known as *Perry Harbor.* Into it empties a small stream called *Little River,* which leads up to the village of **Perry.** This cove also affords anchorage; from **Pleasant Point** it is distant one mile.

When abreast of **Clam Cove Head** there will be seen, a little to the east of north, and about six miles off, the town of **St. Andrew.** To the westward of it opens the *ST. CROIX RIVER;* to the eastward spreads away the great bay of *PASSAMAQUODDY;* and behind it rise the **Chamcook Hills,** to the bald summit of **Mount Simpson,** six hundred and twenty-seven feet above the sea.

Passing **Clam Cove Head, Northwest Head** is opened, which forms the south side of *Northwest Harbor,* an excellent harbor of refuge, with sufficient water for large vessels, which makes in on the northwestern side of **Deer Island.** From **Northwest Head** the shores of the island stretch away to the northeastward for nearly four miles to **Northeast Head,** which is two hundred and thirty-two feet high, and there is a small harbor inclosed between this head and the island which lies close to it, called **Pendleton Island.**

The **Chamcook Hills** have bald, bare, rocky tops.

On the western shore, a little over one mile above Gleason Cove, is *Frost Cove.* This is a small cove, but has good anchorage off its mouth in from four to six fathoms. About a mile and a half above it is *Gin Cove,* which is merely a small indentation, but has also good anchorage. A little over a mile above *Gin Cove* is *Lewis Cove,* upon the shores of which is the settlement of **North Perry.**

The low, sandy island on the eastern shore, nearly abreast of *Lewis Cove,* between the mouth of the river and the town of **St. Andrew,** is **Navy Island.** It is easily recognized by the water-cliff on the south side. The southern half will appear cleared and the northern half wooded. **Navy Island** forms, with **St. Andrew Point,** the harbor of **St. Andrew.** The white wooded pyramid seen to the westward of it is the **Beacon** on *Navy Island Reef.* Nearly opposite to this, on the **Maine** shore, the deep cove which makes in to the westward, with a settlement on its banks, is *Mill Cove.*

The high, gently-sloping, round point which appears about a mile to the westward of **St. Andrew** is **Joe Point,** formerly called **Black House Point.** It is mostly grassy, but dotted here and there with scrub-fir.

Opposite **Joe Point,** the village which appears on the western shore is **Robbinston.** The high clay head with precipitous faces, about a mile above **Robbinston,** is **Brick-Yard Point,** sometimes called **Byrne Head.**

The small island in the middle of the river, nearly a mile and a half above **Byrne Head,** with a white dwelling surmounted by a light-house appearing nearly in the middle of it, is **Dochet Island,** and the light-house is **St. Croix Light-House.** The small, rocky islet with three or four fir-trees upon it, about half a mile above **Brick-Yard Point,** and close in with the shore, is **Little Dochet Island;** and the high, steep, wooded bluff which appears to the northward of **Dochet Island** is **Devil Head.**

When near **Dochet,** a large settlement will appear on the west bank of the river. This is **Red Beach.** The shores are bold all the way from **Red Beach** to **Devil Head.** On approaching the latter, part of its southern slope will appear cleared, with a few houses upon it.

The grassy point, bare of trees, and with perpendicular faces, which will appear a little to the northward and eastward of this head, is **Oak Point,** the northern point of the Divide; and the wide bay, with the high-wooded hill in the center, which appears on the eastern side of this point, is *Oak Bay.* Here the river turns abruptly to the westward; and on the northern shore, about three-quarters of a mile above **Oak Point,** a high, precipitous, rocky head will be seen. Its southern face is noticeable from the fact that it is as perpendicular as a wall. The head is thickly wooded. This is **Raven Head.** A little beyond it, on the same shore, will be seen the houses and wharves at the settlement of **The Ledge,** and opposite to these the large wooden beacon, on the northern end of the *Ledge.* Back of the settlement will appear a remarkable, high, bare, white, rocky mountain. This is **Brown's Hill.**

Vessels must anchor at the **Ledge** if they wish to lie afloat at low water. Here also begins the *BOG BROOK PASSAGE,* on entering which there will be seen, on the eastern side, about three-quarters of a mile off, a low, grassy point with sandy faces, fringed with trees. This is **Heckman Point,** the northern point of the western end of the passage. When abreast of it the channel turns more to the northward, and a rather low, thickly-wooded point, with handsome houses upon it, will be seen on the western side, about a mile off. This is **Todd Point.** There are a couple of wharves here, where vessels load during the winter.

When up with **Todd Point** the towns of **Calais** and **St. Stephen's** will appear on opposite sides of the river, about a mile above.

DANGERS

IN APPROACHING AND ENTERING ST. CROIX RIVER FROM THE VICINITY OF EASTPORT.

On leaving **Eastport,** bound up the *St. Croix,* the first danger met with is

CLARKE LEDGE,

which is bare at low water, lies about three hundred and seventy-five yards above **Todd Head** and about one hundred yards from shore. It is not buoyed, and always shows itself. About a quarter of a mile above it lies **Dog Island,** close in with the shore. Neither of these would be at all dangerous were it not for the **whirls off Deer Point,** which compel vessels to keep the **Moose Island** shore close aboard to avoid them.

These whirls on spring-tides extend two-thirds of the way across the passage between **Deer Point** and **Dog Island,** and mariners in their anxiety to avoid them are sometimes set upon **Dog Island Point.**

After passing **Dog Island** no dangers are met with until **Pleasant Point** is passed and up with **Frost Head,** the southern point of the entrance to *Gleason Cove.* Here will be seen, on the western hand, *a black spar-buoy.* This is on

FROST LEDGES,

which extend in a northeasterly direction from the head for a distance of nearly three-quarters of a mile. The buoy is marked No. 1, and is placed in fourteen feet of water, on the eastern end of the reef. Vessels must not attempt to pass to the westward of this buoy, as the reef is a dangerous one.

NAVY ISLAND REEF OR NORTHWEST SHOAL.

Passing *Frost Ledges* there are no more dangers until approaching **Navy Island,** when a **pyramidal white beacon** will be seen off the northwest end of that island. This is on

Navy Island Reef, and is a guide for vessels entering or leaving *St. Andrew harbor*. It also serves to keep vessels off the reef when beating to windward in the *St. Croix*.

On approaching **Dochet Island**, *a black spar-buoy* will be seen nearly in mid-river. This is on the southern end of the

MIDDLE GROUND,

and is to be left to the westward by vessels using the main channel, and to the eastward by those using the western channel. The *Middle Ground* is a long ledge, with three feet at lowest tides, and is composed mostly of gravel. The buoy is marked No. 3, is placed in soft muddy bottom in thirteen feet at lowest tides, and may be passed on either hand entering by the eastern or western channel.

The *Middle Ground* lies about a mile and a half S. ½ E. from **Dochet Island**. It is quite an extensive shoal, but is easily avoided while the buoy is in position.

HALF-TIDE LEDGE.

Passing the black buoy on the *Middle Ground*, *a red spar-buoy* will be seen off the southern end of **Dochet Island**. This is on *Half-Tide Ledge*, which lies between a half and three-quarters of a mile to the southward of **Dochet Island**. There is no passage between it and the island. The buoy is marked No. 2, and is placed in seven feet at lowest tides, on the southern end of the rock. When this buoy is in position **Dochet Island Light** bears N. by E. It may be approached within thirty yards.

This rock is bare at half-tide.

Coming up with the northern end of **Dochet Island** there will appear on the western side *a red spar-buoy*. This buoy lies off the northern end of the island, and marks the north point of the ledge which extends off in that direction from it. It may be approached on its north side within a few yards. It is colored red for the western passage.

In the western passage there is *a red spar-buoy* nearly in the middle, which marks a sunken rock off **Dochet Island** called *Dochet Island Sunken Ledge*. It has five feet at low water. The buoy must be left to the eastward.*

SAND POINT SHOAL.

This shoal extends off from Sand Point a distance of a quarter of a mile, and is very dangerous, principally because it is not marked by a buoy. Vessels to avoid it must, as soon as they can clear the red buoy on the northern end of **Dochet Island**, haul up for **Devil Head**, running close to it. A buoy will be recommended to be placed upon this shoal.

After passing **Devil Head** there are no obstructions until the **Ledge** is approached, when *a large wooden beacon* and *a black spar buoy* will be seen ahead to the eastward of it. The beacon is on

THE LEDGE,

is built of timber, and stands upon three piers. It is twenty-six feet high, a little narrower at the top than at the bottom. The ledge extends off from the **Maine** shore of the river opposite to the settlement, and is covered only at high water.

The black spar-buoy to the eastward of the beacon is on

---

* This buoy is not on the Buoy-List. It has probably been placed here by the pilots.

ELLIOTT FLATS,

which extend off toward the channel from the end of the ledge. The buoy is marked No. 5, and is placed in six feet at lowest tides, on the edge of the flats. After passing it there are no dangers until up with **Knight Point,** at the western end of *Bog Brook Passage.* Here will be seen *a black spar-buoy,* which marks

KNIGHT POINT FLATS.

These flats extend off from the point to the edge of the channel, and are bare at low water. The buoy is placed in six feet at lowest tides, and is marked No. 7. This buoy was gone in the summer of 1872. We have no knowledge whether it has been replaced or not.

All of these buoys are taken up in the winter; strangers should, therefore, never attempt to navigate the river in winter without an experienced pilot.

Beyond **Knight Point** there are no buoys. It is not safe for vessels to go above the **Ledge** without a pilot.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING THE ST. CROIX RIVER FROM THE VICINITY OF EASTPORT.

It is best not to attempt to go up the *ST. CROIX RIVER* without a pilot, who can always be found at **Eastport** or on **Campobello.** The usual course is to enter by the main channel, (between **Deer Island** and **Campobello.**) The course in is **S W.** by **W.** ½ **W.** until **Cherry Island** bears **NORTH,** when, if not intending to stop at **Eastport,** steer **N W.** by **W.** ½ **W.** for **Dog Island,** until within a quarter of a mile of it, and **Deer Point** bears **N.** by **E.** ½ **E.** **Kendall Head** will now bear **N W.** by **N.** ½ **N.**; steer for it, unless the tides are springs and the whirls farther to the westward than usual. In this latter case, pass **Dog Island** within two hundred yards, and keep the western shore aboard until past the danger. Under ordinary circumstances, however, the course given above leads clear of the whirls. Continue it until abreast of the middle of *Johnson Cove,* and **Deer Point** bears **S E.** by **E.**, with the southern point of **Indian Island** just open to the southward of it. Now steer **N.** by **W.** past **Kendall Head,** leaving it about three hundred and fifty yards to the westward, and continue this course until abreast of **Gleason Point,** which is the northern point of *Gleason Cove.* Upon these courses there is nothing less than eight fathoms water. Now steer **N.** ½ **W.** for **Dochet Island Light** until nearly up with the black buoy on the *Middle Ground,* passing this to the eastward, and steer **N.** by **W.** ½ **W.** until past the island and clear of the red buoy off its northern end. (This buoy must be left to the southward by vessels using the main ship channel. It is painted red for the use of vessels entering by the western channel, and by them must be left on the starboard hand.) From **Gleason Point** to this buoy there is not less than ten fathoms in the channel.

As soon as clear of this buoy, after passing **Dochet Island** steer for **Devil Head,** rounding it close-to. The course is between **N.** by **W.** and **N N W.** When abreast of the **Head** steer **N W.**, which course will lead up to the **Ledge,** three miles below **Calais.** Here anchor, if desiring to lie afloat at low water. From the red buoy off the north end of **Dochet Island** to the **Ledge** the least water will be two fathoms.

If bound up to town and intending to go alongside the wharves, after passing the black buoy on *Elliott Flats* steer **S W.** through a narrow passage known as *Bog Brook.* The length of this passage is three-quarters of a mile. When fairly through

it, steer W N W. from abreast of **Heckman Point** until up with **Todd's Wharf**, after which keep the middle of the river up to the town. The least water in the channel from the **Ledge** to **Calais** is eight feet, if in the channel on the **St. Stephen's** side; that on the **Calais** side having only about six feet.

It is rarely that vessels do not have to beat either up the river or through the *Bog Brook Passage.* A wind which is favorable through the *Passage* is preferable, even though it necessitates beating to windward throughout the whole length of the river, for the strong current of flood in the river will aid in accomplishing the distance from **Navy Island** to the **Ledge** in a short time; while on the other hand the channel in the *Bog Brook Passage* is so narrow that none but a smartly-working vessel can with safety attempt it. One is scarcely under way on one tack before it is necessary to go about on the other. It is strongly recommended to strangers, however, to take a pilot before attempting the passage of this river. Tug-boats can always be had at **Eastport** and **Calais** for a tow either up or down the river. Most of the coasters avail themselves of these time and money-saving machines.

The courses given above leave *Clarke Ledge* three hundred yards to the westward; **Dog Island,** two hundred yards to the westward; **Deer Point**, a third of a mile to the eastward; *Middle-Ground Buoy*, about fifty yards to the westward; red buoy on *Half-Tide Ledge*, about the same distance to the westward; red buoy on northern point of **Dochet Island**, about twenty yards to the southward; black buoy on *Elliott Flats*, about thirty feet to the southward; and *Knight Point Buoy*, about twenty yards to the southwestward.

The *St. Croix River* at **Calais** is being improved by the Government, and it is proposed to deepen the channels over the bars.

II. *From the anchorage at* **Eastport** steer N. by E. for **Deer Point**, and when abreast of *Clarke Ledges* haul up N. by W. until abreast of **Dog Island**, when steer N W. by N. ½ N. and proceed as above directed.

These courses pass to the eastward of *Clarke Ledge* a hundred and fifty yards, and of **Dog Island** nearly a quarter of a mile.

A vessel coming down the *St. Croix* with a S W. wind, if caught by the flood-tide above **Deer Point**, may go quite close to that point, (unless the whirls are too bad,) and when past it the current of flood through *INDIAN RIVER* will take her on the lee bow, and thus favored she may easily beat up to the anchorage off **Eastport** against the tide. This is often done by coasters whose captains are familiar with the currents, or who have an experienced pilot on board.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
St. Croix R. Light,	45° 07′ 43″	67° 08′ 00″	$4^h\ 28^m\ 32^s$	F. V. F.	30^s	71 ft.	12

TIDES.

No observations of tides in the *ST. CROIX RIVER* have as yet been made by the Coast-Survey. Mariners must, therefore, depend upon the **Eastport** tides and upon local information. If a vessel starts from **Eastport** to **Calais** with a fair wind on the first quarter of the flood, she will carry the current of flood with her all the way. If

she has a head wind, she may start as soon as the tide turns; but if there be a sttong fair wind and she starts at the turn of the tide, she will be apt to run out of it before reaching the Divide.

At *St. Andrew Harbor*, according to the English surveys, it is high water on the days of full and change at 10^h 50^m. The rise and fall of spring-tides is from twenty-four to twenty-six feet; of neap-tides, from twenty to twenty-two feet; and the mean rise and fall of tides, twenty-three feet.

At the anchorages in *Passamaquoddy Bay* the tidal current is scarcely perceptible. It is said that the tide rises twenty-seven feet at the Ledge. The tidal current is very swift.

VARIATION OF THE COMPASS.

The magnetic variation at **St. Andrew Light-House**, in 1875, will be about 18° 15′ W.

COBSCOOK BAY

AND ITS TRIBUTARIES.

This extensive bay, the entrance to which lies between **Estes' Head** and **Seward Neck**, extends into the land about four miles in a westerly direction, where it sends off numerous branches. Its northern branch, called *PEMBROKE RIVER* or *PEMAQUAN BAY*, extends to the northwestward for three miles and a half to the town of **Pembroke**. Its western branch, the *COBSCOOK RIVER*, runs to the westward one mile and a half, where it splits into two branches called, respectively, the *North* and *South Branches*. The *North Branch* runs to the northwestward about five miles, to the town of **Dennysville**. The *South Branch* extends to the southward about five miles, to the town of **Whiting**.

The southern branch of *Cobscook Bay*, called *South Bay*, extends to the southward for six miles to **West Lubec**. There are other branches of little importance; such as *East Bay*, on the northern side, just to the eastward of **Pemaquan**; and *Straight Bay* and *Middle Bay*, branches of the *Cobscook River*, which run to the southward between *South Branch* and *South Bay*.

Of the above branches *Pemaquan Bay* (or *Pembroke River*, as it is now called) is the only one of much commercial importance, or which can be entered without a pilot. Both the *North* and *South* branches of the *Cobscook* are shoal, and of exceedingly dangerous navigation. *South Bay* has good water, but is of little importance. No survey either of the shores or of the channels of *Cobscook Bay* and its branches has as yet been made; but such descriptions and directions as could be obtained by personal examination and information derived from the pilots will be given in this work.

PEMBROKE RIVER.

The entrance to this river is five miles above **Estes' Head.** It lies between **Garnett Head** on the east, and **Leighton Head** on the west. Between these two points it is a little over a mile wide, but rapidly narrows to a width of half a mile, which average width it keeps to **Hersey Head,** two miles above. Above this head the river becomes still narrower, until at the town of **Pembroke** it is a mere creek.

Pembroke is about nine miles above **Estes' Head.** Considerable business is done here both in lumber and iron. The **Pembroke Iron Works** cause some trade in coal, which is brought here for their use. The channel is buoyed from the entrance to the *Southwest Passage*, at **Estes' Head**, up to the town. The latter is situated on the west fork of the "Divide," while the iron-works are on the eastern fork. The town has about twenty-five hundred inhabitants.

DESCRIPTION OF APPROACHES TO, AND SHORES OF PEMBROKE RIVER FROM, ESTES' HEAD TO PEMBROKE.

Vessels bound up this river enter the *Southwest Passage* either by the *Northern Channel* (between **Estes' Head** and **Treat Island**) or by the *Western Channel*, (between **Dudley** and **Rodgers Islands.**) The *Northern Channel*, which is used by those who come into *PASSAMAQUODDY BAY* and *FRIAR ROAD* through the *Main Entrance*, is half a mile wide and quite deep, with bold shores on both sides. The *Western Channel* is used by those who come through the *Narrows.*

When abreast of **Estes' Head**, **Shackford Head** will be seen to the northeast about seven-eighths of a mile distant. This is the western point of the entrance to *Broad Cove.* It is a large, high, bluff head, its top covered with stunted fir. On its southern side a low point makes out, showing a sandy, water-worn face.

On the western side of the entrance, nearly opposite to this head, (from which it bears about SW. nearly three-quarters of a mile distant,) is

COMSTOCK POINT,

a low, sandy point, covered by a bushy growth of trees. It is quite bold to. This point is the easternmost point of **Seward Neck.** Here the shores of the neck make a long curve to the westward, and then to the northward, forming a large cove, with good anchorage, called

SMALL'S COVE.

A low, sandy islet, crowned with small, bushy trees, lies nearly in the middle of the entrance to this cove. It is called **Cooper Island.** From it a long line of ledges extends off to the northward nearly half a mile. These ledges are mostly bare at half-tide, and are known as *Cooper Island Ledges.* They are not buoyed.

At *Small's Cove* there is quite a settlement—in fact, the whole of the shores of **Seward Neck** are thickly settled and well cultivated from **Lubec Mills** to **Gove Point.**

When abreast of **Shackford Head**, a low, grassy island, with two small houses upon it, will be seen ahead and about a quarter of a mile off. This is

GOOSE ISLAND.

It lies about half a mile off the **Moose Island** shore, and on the south side of the entrance to a large but shallow cove on the western shore of that island. This cove is dry at low water. Bad ledges and shoals obstruct its entrance, and it is of no importance. **Goose Island** lies about a mile to the southward of the western end of the passage between **Moose Island** and the main land.

On the western shore, the northern point of **Seward Neck** is called

GOVE POINT.

It is low, and its extremity is covered with spruce, fir, beech, etc. A long, steep, shingly beach skirts the shore for nearly the whole distance between **Small Point** and **Gove Point.** The land is cultivated almost to the water's edge.

This beach is convenient for vessels to haul out and examine their bottoms, and is frequently used for that purpose.

On the eastern shore, about a mile to the northward of **Gove Point**, and bearing from it about N. by W., is

BIRCH POINT,

the southernmost point of the main land on this side. It is high, and has its southeastern slopes cleared and cultivated to the summit, which is crowned with trees. This

summit is known as **Lincoln Head.** To the southeastward it extends into a low, sandy head, covered with grass, and having a solitary hut upon it.

Lincoln Head is easily recognizable by the peculiar cut in the woods which crown its summit. A large barn stands on the southern end of **Birch Point.**

Three-quarters of a mile off the point, in about an E S E. direction, is *Half-Tide Rock,* bare at half-tide.

On the western shore, passing **Gove Point,** a large and deep bay is opened running to the southward. This is called

SOUTH BAY.

It extends to the southward nearly six miles, to the village of **West Lubec.** A small, low, grassy islet, called **Razor Island,** lies in the middle of the entrance. All of the shores of this bay are thickly wooded.

South Bay has plenty of water, but is rarely used, there being as yet no trade upon its shores. A little over three miles above its mouth, and on the western shore, is the site of the *lead-mines* of the **Lubec Mining Company.** There is some slight trade in lumber, we believe.

COBSCOOK RIVER

empties into *Cobscook Bay* about two miles to the westward of **Gove Point** and the same distance W S W. of **Birch Point.** The entrance is between **Leighton Point** on the north, and **Denbow Point** on the south. Four miles above the entrance is what is called *The Falls.* These are situated on the North Branch, and are very dangerous on account of the strong set of the water over them on the flood-tide. The town of **Dennysville** is situated about six miles above *The Falls.* It has some lumber trade, but none but those thoroughly well acquainted with the dangers of the approaches, or furnished with an experienced pilot, dare attempt to go up this river. At **Dennysville** the stream is a mere creek.

The dangers of the navigation of the branches of the *Cobscook River* are such that no insurance company will take a risk on a vessel engaged in this trade.

RED ISLAND.

Just above **Birch Point,** on the northern side of *Cobscook Bay,* lies **Red Island,** about half a mile from the eastern shore. It is rocky, and the rocks are of a peculiar red color, like that of red gravel. The top of the islet has a few stunted bushes upon it. It is very bold, except on its northwestern side, where a ledge, bare at half-tide, makes out for about one hundred yards. About a mile above **Red Island** is the entrance to

EAST BAY,

which makes in to the northward, between **East Point,** on the eastern shore, and **Garnett Head,** which separates this bay from the entrance to *Pembroke River.* There is good water in this bay, and it affords excellent anchorage, but beyond this it is of no importance.

GARNETT HEAD

is a high hill, partly wooded, with most of its slopes under cultivation. Its southwestern point is wooded with small birch and other trees, and is quite steep-to. A house and barn, widely separated, are seen on the cleared portion of the head.

The northern shores of *East Bay* show a grassy head with red cliffs, backed by a handsome grove of trees. The cliffs are of the color of red gravel. This is called **Red Head.**

Above the entrance to *Cobscook River* the western shores of *Cobscook Bay* are gently sloping and all under cultivation.

LEIGHTON HEAD,

or **Leighton Point,** as it is sometimes called, is the western point of the entrance to *Pembroke River*. It is composed of gently-sloping cleared lands, but has only one or two houses on it. It forms the northern point of *Cobscook River* entrance. Northward from this point the western shores of *Pembroke River* are low, smooth, cleared, and cultivated.

COGGINS HEAD,

which lies on the eastern shore, the first head above **Garnett,** presents a bluff face on the water side. There are a few scattered trees upon it. Here are built the lower wharves of the **Pembroke Iron Company,** which are used in winter and by vessels whose draught does not admit of their going up to the works.

COGGINS COVE.

Passing **Coggins Head,** we open a long narrow cove with straight shores, rather steep on the southern side, and lower and more gently sloping on the northern banks. The northern shores are formed by a low, well-wooded head called **Hersey Head.** This cove is called *Coggins Cove*, and sometimes *Hersey Cove*. Here is the common anchorage. It is about seven miles above **Estes Head.**

HERSEY POINT.

Just above **Hersey Head** is **Hersey Point.** It is only about twenty-five or thirty feet in height, but is a very prominent, rocky, and precipitous bluff, dotted with scattered clumps of trees. Its rocks overhang the stream. It is sometimes called **Small's Head.**

On the western shore of the river, opposite to **Hersey Head,** lies **Small's Island.** It is a low islet, partly wooded, with a wharf and a small fish-weir built out from it. The river here is about half a mile wide.

HERSEY UPPER HEAD.

Half a mile above **Hersey Point** is a low, rocky point, covered with a growth of scrub-pine and fir. It is called **Hersey Upper Head.** A ledge makes off from it in a southwesterly direction.

About a mile above **Hersey Point** the river branches at what is called the "*Divide.*" The western branch runs northwestward to the western end of the town of **Pembroke.** The eastern branch runs northeastward up to the **Iron-Works.** The point separating the two at the "*Divide*" is called **Hardy Point.** The landing of the town of **Pembroke** is about a mile and a half above **Hersey Point.** Here vessels lie aground alongside the wharves at half-tide.

APPEARANCE OF APPROACHES TO AND SHORES OF PEMBROKE RIVER ON APPROACHING IT THROUGH THE SOUTHWEST PASSAGE.

On approaching the Southwest Passage, *coming through the Narrows*, pass on either side of **Dudley** and **Treat Islands,** both channels being equally good. To pass to the westward of these islands is, however, the usual course, in which case the high, bluff, rocky headland which will be seen to the northward of **Treat Island,**

with its summit crowned with low fir, is **Estes Head.** The large cove to the westward of the head is *Broad Cove*, whose western point is the high bluff-head crowned with stunted fir and showing a low, water-worn face to the southward. This is **Shackford Head.** The low islet covered with grass, and which has three or four trees upon it, (seen off the northwestern end of **Treat Island,**) is **Burial Island.** The well-cultivated shores on the main land north of *Johnson Bay* are the shores of **Seward Neck.**

On the western side, close in with these shores, and lying nearly due WEST from **Dudley Island,** will be seen a long, narrow island, of moderate height, lying about N W. and S E. Its summit is crowned with a dense growth of small fir and spruce. This is **Rodgers Island.** The small islet about a quarter of a mile to the northward of **Rodgers Island,** presenting a smooth, round appearance, and having a few low trees on top, is **Major Island.** The low, sandy point on the shore of **Seward Neck,** about a mile above **Major Island,** is **Comstock Point.** It is covered with a bushy growth of trees.

The cove making in on the north side of **Comstock Point** is *Small's Cove.* The low, sandy islet, crowned with small, bushy trees, which lies off the entrance, is **Cooper Island,** and the long ledges making off to the northward of it are *Cooper Island Ledges.*

The small, low, grassy island, with two houses on it, which appears nearly in mid-river, about a quarter of a mile above **Shackford Head,** is **Goose Island.** It will be seen in range with a high, gently-sloping hill called **Lincoln Head.** This head is known by a peculiar cut in the woods which crown its summit. This cut makes a wide opening, looking like a road between two walls of trees. Passing **Goose Island,** the narrow passage which runs between **Moose Island** and the main land is opened. It is crossed by a long, covered bridge, painted white.

The low point on the western shore, which forms the northern end of **Seward Neck,** is **Gove Point.** Its extremity will appear covered with a variety of trees, and a long, shingly beach will be seen extending to the southward toward *Small's Cove.* To the northward of **Gove Point,** on the northern side of the bay, the high point whose summit is crowned with trees, but whose southeastern face is cleared and cultivated, is **Birch Point.** Its southeastern extremity is a low, sandy head, covered with grass, and has a solitary hut upon it.

Passing **Gove Point,** a large and deep bay, with heavily-wooded shores, is opened, making in to the southward. This is *SOUTH BAY.* It has good water, but is seldom used. In the distance, up this bay, a narrow opening between two wooded points will be seen. The island forming the western side of this opening is **Hog Island,** and that on the eastern side is **Long Island.** Both of these islands lie in *South Bay.*

The small, low, grassy islet which lies in the middle of the entrance to *South Bay* is **Razor Island.**

Leaving **Gove Point** and continuing the course to the westward, will pass to the westward of a rocky islet which lies just above **Birch Point** and about half a mile from the shore. It is remarkable for the color of the rocks which form its shores, which at a distance look like red gravel. This is **Red Island.** It has a few bushes on its summit, and is quite bold, except on its northwestern side, where a ledge, bare at half-tide, makes out about a hundred yards.

The wide opening on the western shore about two miles to the westward of **Gove Point,** (and which is the first opening met with after passing *South Bay*,) is the entrance to *COBSCOOK RIVER.* The smooth, low, and cleared point on its northern side is **Leighton Point,** which is also the western point of the entrance to *Pembroke River.* The long point on the south side is **Denbow Point.**

Of the two openings to the northward, the eastern one, which runs to the north ward and shows a grassy head, with red cliffs, backed by a grove of trees on its northern side, is *East Bay,* and the head is **Red Head.** The eastern point of the entrance to this bay is called **East Point.** Its western point, which is easily recognizable as a high hill, partly wooded, but with most of its slopes cultivated, is **Garnett Head.** A house and barn, widely separated, stand on the cleared slopes. Its southwestern extremity is well wooded with small birch and other trees. **Garnett Head** forms also the eastern point of the entrance to *Pembroke River*, which is the large opening seen between the head and **Leighton Point**, and just to the westward of *East Bay.*

Not quite a mile above **Garnett Head**, on the eastern bank, appears a bluff head with a few scattered trees upon it. This is **Coggins Head.** Passing it, on the same shore, a long, narrow cove with straight shores will be seen stretching to the northward. This is *Coggins* or *Hersey Cove.* It will be noticeable that its eastern shores are steep, while the western shores are lower, being mainly formed by a low, well-wooded head, called **Hersey Head.** The village of **Pembroke** is seen over the low land at the head of this cove. Anchor at **Hersey Head** if wishing to lie afloat.

The very prominent, rocky, and overhanging bluff, about twenty-five feet high, which is seen just to the northward of **Hersey Head**, is **Hersey Point**, sometimes called **Small's Head.**

On the western shore of the river the small, low, partly-wooded islet, with a wharf and small fish-weir built out from it, is **Small's Island.** It is just opposite to **Hersey Head.**

The low, rocky point on the eastern shore, half a mile above **Hersey Point**, is **Hersey Upper Head.** It is covered with a growth of scrub-pine and fir. About a mile above **Hersey Point** the two branches of the river will be seen. The point separating them is called **Hardy Point.** Up the eastern branch the **Iron-works** and surrounding dwellings will appear, while on the western side will be seen the main portion of the town of **Pembroke.** The principal business of this town is connected with the iron-works; but there is some ship-building and lumber trade.

DANGERS

IN APPROACHING AND ENTERING PEMBROKE RIVER.

I. *From the vicinity of* **Eastport.**—Leaving the anchorage at **Eastport**, bound up the *Pembroke River*, there will be seen, when abreast of **Buckman Head**, *a red spar-buoy* on the western side. This is on

BUCKMAN LEDGE,

which has about two feet at low water, and extends off from the head in a southerly direction about two hundred yards. The buoy is placed in three fathoms, on the south point of the ledge, and is marked No. 2. Passing it, the course leads for **Estes Head,** which may be passed close-to, and *a red spar-buoy* will be seen off the southern face of **Shackford Head.** This buoy is placed to mark the southern extremity of

SHACKFORD LEDGE,

which makes off from the head in a S S E. direction. It is marked No. 4, and is placed in three fathoms, on the southeastern side of the ledge. After passing this buoy, a line of ledges will be seen on the western shore making off to the northward from **Cooper Island.** These are the

COOPER ISLAND LEDGES.

They are mostly bare at half-tide, and extend along the shore of **Seward Neck** for about three-eighths of a mile from **Cooper Island.** They are not buoyed, but a buoy will be recommended to mark them.

Passing these ledges, *another red spar-buoy* will be seen a little over a mile to the northward, off the western end of **Goose Island.** This marks

GOOSE ISLAND LEDGE,

which has three feet at lowest tides, and lies to the westward of **Goose Island,** on the eastern side of the channel. The buoy is placed in eighteen feet water on the *northern* side of the ledge, but a better position would be on the western or channel end of the shoal. Mariners must bear in mind the position of this buoy in beating. When past **Goose Island** the course turns more to the westward, past **Gove Point** on the south, and **Birch Point** on the north, and over toward **Red Island,** and then turns to the northward toward **Garnett Head,** the eastern point of the entrance to *Pembroke River.* On the western shore, south of this head, will be seen *a black spar-buoy.* This is on

CLARKE LEDGES,

which lie about a quarter of the way from the western shore, and are out at half-tide. The buoy is the first black buoy met with in this passage. It is marked No. 1, and is placed in three and a half fathoms, on the eastern end of the ledges.

GANGWAY LEDGE,

which lies SW. by W. from **Garnett Head** and is awash at low water, is also marked by *a black spar-buoy,* which must be left to the westward. This buoy is placed NNE. of the shoal, in five fathoms, and may, therefore, be approached closely.

TWO-HOUR ROCK

is the next danger met with after passing **Coggins Head.** It is out at one-third ebb, and lies on the western shore, a short distance below **Hersey Head.** The buoy is in six feet of water, on the edge of the rock. It is painted black, marked No. 5, and must be left to the westward. There is no passage between this buoy and the shore.

After passing *Two-Hour Rock, a black spar-buoy* will be seen to the northwestward. This is on

THE MIDDLE GROUND,

which has two feet at low water. The buoy marks the western end of the shoal. When in position the **Winter Wharves** bear NNE. After passing this there are no dangers until up with **Hersey Upper Head,** off which *a red spar-buoy* will be seen. This buoy is on the southwestern end of

HERSEY UPPER HEAD LEDGE,

which is covered at half-tide. The buoy is marked No. 8, and is placed in seven feet of water. It must be left to the eastward, and when past it steer up for the eastern or western branch of the river.

On approaching **Hardy Point** *a black spar-buoy* will be seen to the southward of it, which marks the end of

HARDY POINT LEDGE.

This ledge is bare at half-tide. There is no passage between the buoy and the point. Its number is "9."

In the eastern branch, which leads up to the iron-works, the eastern edge of the channel is marked by *a red spar-buoy*, which serves to keep vessels off the flats making out from the eastern shore. There are several buoys above **Hardy Point**, but as it is impossible for vessels to pass above this point without an experienced pilot, and rarely without a steam-tug ahead, (and then only at high water,) mention of them is unnecessary.

All the buoys in the *Pembroke* above the *Middle Ground* are taken up in the winter.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PEMBROKE RIVER FROM THE VICINITY OF EASTPORT.

Pass **Estes Head** close aboard, and when abreast of it steer W. by N., which course continue for about half a mile, or until the sandy face of the south end of **Shackford Head** bears N. ¾ W., when steer NW. ¾ N., (NW. by N. if the tide be flood,) which leads past **Shackford Head** and up with **Gove Point.** On this course, when past **Cooper Island,** the shore of **Seward Neck** must not be approached nearer than five hundred yards, as there are several sand-spits on that side, over which the tide runs violently.

If intending to anchor in *Small's Cove*, as soon as the northern end of *Cooper Ledges* is passed haul right into the cove. There is nothing in the way, and anchor at discretion, in good water.

But if bound up river, continue the NW. by N. course up to **Gove Point,** when steer NNW. for **Red Island,** passing it close-to. Keep close to it to avoid being set up into the *Cobscook River* by the very strong flood-tide, which here runs with great velocity. When abreast of **Eastern Point** (which is the eastern point of entrance to *East Bay*) steer NW. ¼ N. for **Garnett Head,** which pass close-to. Always keep the eastern shore aboard in this vicinity, as the western shore is ledgy and shoal, as may be seen by the black buoys.

When abreast of **Garnett Head** steer NW. by W. ¾ W., and when a little above the head haul up NW. ¼ W. for the black buoy on *Gangway Ledge.* This course will pass to the westward of and close to a long point with a fish-weir on it. Behind this point the land rises to a high, steep hill, with clumps of trees upon it and a group of houses at its base. This is **Coggins Head.**—(See page 49.) Here are built the **Lower** or **Winter Wharves** of **Pembroke.**

Pass to the eastward of the *Gangway* buoy, about one hundred yards distant, and steer NW. ½ N., leaving the black buoy on *Two-Hour Rock* to the westward, and when fairly opposite to **Hersey Head** round to and come to anchor in from three to four fathoms. Above this vessels, even of light draught, cannot go without lying aground at low water. But if intending to go up as far as **Hardy Point,** continue the course up river, passing to the westward of the red buoy on *Hersey Upper Head Ledge.* When up with the black buoy on **Hardy Point,** and bound up to the **iron-works,** steer between that buoy and the red one on the eastern side of the entrance.

DANGERS

IN APPROACHING AND ENTERING PEMBROKE RIVER.

II. *Coming from the southward, between* **Treat Island** *and the* **Main Land.**—To the northward of the *Narrows* there are no dangers in this passage until past **Dudley Island,** near which is

PADDY LEDGE,

a bare rock, lying about three hundred and fifty yards off the **Treat Island** shore and a quarter of a mile NORTH of **Dudley Island.** It is tolerably bold, and forms the southern end of *a large ledge, bare at low water*, about three hundred yards long in a N. by W. and S. by E. direction, and which has, besides *Paddy Ledge*, several other bare rocks upon it. The principal of these is

GULL ROCK,

lying about sixty yards to the northward of *Paddy Ledge*, surrounded by shoal water. There is, however, a good passage, with about four fathoms of water, between this ledge and Treat Island. The ledges are not buoyed.

BURIAL ISLAND.

The northwestern point of **Treat Island** is shoal to the distance of nearly a quarter of a mile. At the western end of this shoal there is a small island, called **Burial Island.** It is low, covered with grass, and has three or four trees upon it. There is a lone house on the islet. A bare rock lies northeast of it, but is not named.

Nearly due WEST from **Burial Island,** on the west side of the channel and about three-eighths of a mile from the shore of **Seward Neck,** there is *a group of ledges, bare at half-tide*, lying to the northeastward of **Major Island,** the northernmost being a quarter of a mile distant and the southernmost about three hundred and fifty yards, without buoys, which always show themselves, and are quite bold-to. The name *Major Island Ledge* has been suggested for them.

The channel between these ledges and **Burial Island** is three-eighths of a mile wide.

After passing **Burial Island** there are no dangers until up with **Shackford Head,** when look out for

SHACKFORD LEDGE,

which makes off from the head in a S S E. direction. A *red spar-buoy* is placed on the southern end of the ledge, in good water. It is marked No. 4. Leaving it to the eastward, the course leads to the northwestward, between **Shackford Head** and **Cooper Island,** and leaves to the westward a line of ledges, called

COOPER ISLAND LEDGES,

mostly bare at half-tide. These ledges extend to the northward from **Cooper Island** for about three-eighths of a mile. Not buoyed.

GOOSE ISLAND LEDGE.

After passing *Cooper Island Ledges*, a red spar-buoy will be seen a little over a mile to the northward, off the western end of **Goose Island.** This marks *Goose Island Ledge*, which has three feet at lowest tides, and lies to the westward of **Goose Island,** on the side of the channel. The buoy is placed in eighteen feet water on the *northern* side of

the ledge, and not to the *westward*, as it should be, and this must be borne in mind when beating to windward.

When past **Goose Island**, the course turns more to the westward, leading toward **Red Island**, and then to the northward, toward **Garnett Head**, the eastern point of the entrance to *Pembroke River*. On the western shore, to the southward of this head, will be seen *a black spar-buoy*. This is on

CLARKE LEDGES,

which lie about a quarter of the way from the western shore and are out at half-tide. This is the *first black buoy* met with in the bay. It is marked No. 1, and is placed in three and a half fathoms, on the eastern end of the ledges.

The dangers in *Pembroke River* above **Garnett Head** are described on pages 52–53.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PEMBROKE RIVER.

III. *From the southward, between* **Treat Island** *and the* **Main.**—When through the *Narrows*, steer N W. ¾ N. until past **Dudley Island**, and bring its northern point to bear E. ¾ S. in range with the middle of **Friar Head.** The western point of the island should be about four hundred yards distant, when haul up N. ¼ E. for the middle of *Broad Cove.* This course continue until **Estes Head** bears E. by N. ¾ N., when steer N W. ¾ N. with **Treat Island** bearing S W. ¾ S. This course will lead past **Shackford Head** and up to **Gove Point.** When past **Cooper Island,** keep about five hundred yards from the shore of **Seward Neck,** as there are several sand-spits lying along that shore, over which the tide runs with great velocity. If intending to anchor in *Small's Cove,* haul into it as soon as the northern end of *Cooper Ledges* is passed. If bound up the river, continue the course N W. by N. or N W. ¾ N., according to tide, until abreast of **Gove Point,** when steer N N W. for **Red Island,** which pass close-to. It is necessary to keep this shore aboard in order to avoid being set up into *Cobscook River* by the very strong flood-tide, which here runs with great rapidity. Continue N N W. past **Red Island** until abreast of **East Point,** when steer N W. ¼ W. for **Garnett Head,** which pass close-to. Keep the eastern shore aboard in this vicinity, as the western shore is ledgy and shoal. When abreast of **Garnett Head,** steer N W. by W. ¾ W., and when a little above the head haul up N W. ¼ W. for the *black buoy* on *Gangway Ledge,* and proceed as directed for the *Pembroke River*, on page 53.

PEMBROKE RIVER is called, on the old county maps, *PEMAQUAN RIVER* from its source in *Pemaquan Lake* to **Hersey Head,** and from **Hersey** to **Garnet Head** it is called *PEMAQUAN BAY.* It is now, however, generally known as *Pembroke River* throughout its entire length.

TIDES.

No vessel should ever attempt to enter the bay or its rivers without a pilot, whose local knowledge of the set and turns of the tides will be all that is needed for safe navigation. It may be as well, however, again to call attention to the strong set of the flood into *Cobscook River*, which compels vessels to keep close to the eastern shore. The tide also runs violently over the sand-spits off **Seward Neck.** The tide-tables of **Eastport Harbor,** on page 35, will serve for the lower portion of this bay.

VARIATIONS OF THE COMPASS.

An approximate value of the magnetic variation for the entrance to *Lubec Narrows*, in 1875, is 18° 45′ W. The annual increase is between 2′ and 3′.

COAST OF MAINE TO THE WESTWARD OF WEST QUODDY HEAD.

From **West Quoddy** the coast has a general course about W. by S. ¾ S. for about five miles to **Bayley's Mistake,** and is for the most part high, rocky, and barren, with precipitous faces to seaward, quite bold-to, except on the south side of **West Quoddy,** where the land is lower and houses are visible just back of the beach.

BAYLEY'S MISTAKE

is a large cove running about N N E. and about a mile long, of no importance as a harbor of refuge except in cases of the greatest necessity. On approaching it from the eastward, **Jim Head,** the eastern point of the entrance, will be seen and recognized as a bold, bluff, and rocky head, with leafless fir and spruce on top.

The harbor will be recognized by a flat mountain with three peaks, which appears nearly in the middle and standing some distance back from the shore. Several houses will be seen at the base of this mountain.

The entrance to *Bayley's Mistake* is between **Jim Head** on the east, and **Balch Head** on the west. The latter is lower than **Jim Head,** more gently sloping, and has a few trees on it.

DANGERS.

In the middle of the entrance to this cove lies a ledge, bare at two hours' ebb, called *Bayley Ledge.* It is the only danger encountered in entering, and is not buoyed.

SAILING DIRECTIONS.

As before remarked, this harbor must not be attempted unless in case of the most urgent necessity. It is only fit for light-draught vessels, and is very rarely used. To enter it, run close along shore until **Jim Head** is made, which steer for, rounding it close-to, and keep to the northward, anchoring when well inside the head.

Into this harbor a depth of four fathoms can be had, but being open to southerly winds it is entirely unsafe for anchorage. In moderate weather, with the wind to the northward, vessels of light draught may run in here to wait for tide. But in heavy southerly weather, unless it be the only chance of saving the ship, the entrance must not be attempted.

HAYCOCK HARBOR.

From *Bayley's Mistake* to *Haycock Harbor* the distance is not quite three-quarters of a mile, and the course about S W. by W. It is improperly called a harbor, as it is a mere cove, affording no shelter except in the calmest weather. In fine weather vessels whose masters are well acquainted with the cove and its dangers sometimes run in, where they lie aground at half-tide. But no one should even attempt to remain in it if there is any likelihood of foul weather.

The water is shoal and the shores high and well wooded. About a mile to the westward of Haycock Harbor is

MOOSE RIVER,

sometimes called *Moose Cove.* It is not fit for a harbor of refuge, and should not be used as such unless in very urgent cases. The entrance is obstructed by ledges, none of which are buoyed. The channel is narrow, and there is no shelter except in north-

erly winds, and the holding-ground is not good. Vessels caught by foul weather in this vicinity can always make *Little River*, six miles to the westward, which is an excellent harbor in all winds.

On approaching *Moose River*, a high, bluff, well-wooded head will be seen on the eastern side of the entrance. This is **Eastern Head.** Its highest point is well back from the shore, and is grassy, with a number of small spruce and fir trees upon it. Its western point is low and rocky.

The western shores are lower than the eastern, and are mostly covered with bushes. There is a small settlement at the head of the river, which has grown up around the mills.

DANGERS.

Long ledges make off from **Eastern Head** to the southwestward for a considerable distance. They are generally called *Eastern Head Ledges*, and are mostly bare at half-tide. They are not buoyed. If they are avoided the harbor may be entered safely.

SAILING DIRECTIONS.

The only rule for entering *Moose River* is to keep the western shore aboard until well past *Eastern Head Ledges*. Anchor when well inside. In fine weather a pilot may generally be obtained by making the usual signal. It is at best a poor harbor, however, and is rarely entered. Five fathoms may be easily taken into it.

From *Moose River* the coast has a general direction S W. ½ W. for nearly four miles, to **Sandy Point,** and thence W. by S. ½ S. for a little over two miles, to the entrance to *Little River*. The shore is generally high, rocky, and barren, and is steep-to.

LITTLE RIVER.

The entrance to this excellent harbor is thirteen miles S W. by W. ½ W. from **West Quoddy Head.** It is very little obstructed, and may be safely entered by strangers if they follow the sailing directions.

Little River runs nearly N W. by W. for about a mile and a half, but is navigable only up to the town of **Cutler**, situated on its northern bank, just above its mouth. It is probably more frequently resorted to as a harbor of refuge than any other entrance between *Englishman Bay* and **Eastport.** It affords excellent anchorage for vessels in all winds. The bottom is stiff gray mud.

It must be remarked that little in the shape of stores or provisions can be obtained here, the residents living mostly on fish, of which they obtain only enough for their own consumption.

Vessels bound to **Eastport** and **St. John** may here obtain good pilots. The coast is well known to many of the inhabitants, who fish along-shore and are acquainted with every inlet and cove.

DESCRIPTION OF SHORES OF LITTLE RIVER.

The entrance to this river is between **Eastern Knubble** on the north, and **Little River Head** on the south. It has two channels—one leading between **Eastern Knubble** and **Little River Island,** called the *Main Channel;* and one between the island and **Little River Head,** called the *Western Channel.* The latter is shoal but has no obstructions.

EASTERN KNUBBLE,

is a high, precipitous, and rocky head, crowned with a few spruce and fir trees. To the

eastward of it there is a high, square, bare, tower-like head, called **Great Head.** This latter head is a good landmark if the coast is made in thick weather and the light-house cannot be seen.

LITTLE RIVER HEAD.

This head, on the southwest side of the entrance, is of moderate height. Its northern bluff is wooded with a small growth of fir, but the rest of the surface has been cleared and the stumps of the trees left standing, which being whitened by exposure present the appearance of headstones in a graveyard. This very peculiar appearance marks the head with certainty. The rocks on its southern and eastern faces have *large white spots* painted on them just below the top of the cliffs. These are for the purpose of enabling vessels making the harbor from the westward to recognize the entrance, when, from the peculiar formation and trend of the shore, no opening can be seen until past the eastward of **Little River Head.** These painted rocks are also useful to vessels coming from the eastward in thick weather, for **Schooner Brook,** which is just to the eastward of the mouth of the river, is so much like the latter in appearance that it would be apt to be mistaken for it in such weather, if it were not for the painted rocks. Vessels have sometimes made this mistake and some have been lost; **Eastern Knubble,** which looks a good deal like **Little River Island,** having been taken for that island and a course shaped for the harbor.

LITTLE RIVER ISLAND.

This island lies in the middle of the entrance to the river. It is a small, rocky island, crowned with a thick growth of stunted fir. On its northwestern side the land is cleared and gently sloping, and in the middle of this cleared space is built the light-house, which is called

LITTLE RIVER LIGHT.

This is a stone tower, painted white, attached to the eastern end of the keeper's dwelling, which is also of stone. The tower is twenty-eight feet high, and a fixed white light of the fifth order of Fresnel, varied by flashes at intervals of a minute and a half, from a height of forty feet above the sea, and is visible eleven miles. This light is not visible on any bearing to the eastward of north.

The geographical position of this light-house is

Latitude - - - - - - - -	44° 39′ 45″ N.
Longitude - - - - - - - -	67° 12′ 05″ W.

FOG SIGNAL.

A white pyramidal structure about two hundred feet S. by E. of the light-house contains *the fog-bell,* which is struck by machinery twice a minute.

The rocks upon this island also have white spots painted upon them. The *main channel* is between **Little River Island** and **Eastern Knubble,** although there is a good channel with eight feet at low water on the southern shore, between the head and the island. (See page 57.)

On the northern bank of the river, nearly abreast of the light-house, a high, steep hill is seen just back of the shore. It is called **The Lookout.**

Just to the westward of **Eastern Knubble** is **Eastern Head,** a high, precipitous head, crowned with trees. The banks of the northern shore of the river are all steep and rocky.

Ackley Point, a little below the town, is a high, rocky, and barren bluff, on which there is one house, painted brown, standing in a grove of low firs.

The southern shores of the river are lower than the northern, covered with bushes, and here and there groups of houses close to the shore-line.

The Town of Cutler is built on the north bank of *Little River*, a little above the light-house. The site is high ground, extending from the shore to the foot of the hills behind. In the *Narrows*, just above the town, are the remains of a mill-dam.

On the *southern side*, just to the westward of **Little River Head**, is another smaller bluff, also rocky, steep, and crowned with fir. This is called **Little Head.**

The *western channel* into this river is unobstructed, and about four hundred yards wide. It has eight feet at low water.

Considerable lumber business is done in **Cutler**, and there is also some ship-building.

APPEARANCE OF APPROACHES TO AND SHORES OF LITTLE RIVER WHEN COMING FROM THE EASTWARD.

The most prominent objects in approaching this entrance from the eastward are the light-house and bell-tower. They will appear on the western side of the entrance as a white tower on the end of a dwelling, also white, standing on a cleared slope backed by trees, and to the southward of it a white, pyramidal tower, much like that at **Portland Head**. On the right hand will be seen a high, rocky point, fringed with a few stunted spruce. This is **Long Point.** To the westward of it, close to the entrance to *Little River*, is seen—first, a high, bare, rocky point, called **Schooner Brook Head**; and next, to the westward, a low, rocky point, forming the eastern extremity of the **Lookout**, and known as **Otter Head.** Behind them, or rather between them, but farther inland, is the square, tower-like form of **Great Head.** The entrance which appears between **Otter Head** and **Schooner Brook Head** is the small cove into which empties *Schooner Brook.* This entrance in thick weather is apt to be mistaken for *Little River.* It has good water for light-draught vessels, but poor holding-ground, and does not afford much shelter. Since the establishment of the fog-bell the danger of getting into this cove for Little River is very materially lessened. It is said that the bell can be heard for a mile; but we are inclined to think this distance exaggerated, as on approaching the harbor in a thick fog we were unable to hear the bell until, in our judgment, we were close up with the island, certainly not over three-quarters of a mile from it.

A little to the westward of **Otter Head**, the high, precipitous, rocky head on the northern side of the main entrance, which is crowned with a few spruce and fir, is **Eastern Knubble,** and the precipitous bluff behind it is **Eastern Head.** On the extreme left of the view will be seen **Little River Head,** which appears as a rocky island whose northern end is covered with a dense growth of stunted fir, and on its southern point *a glittering white spot* shows conspicuously. This is one of the *painted rocks.* (See page 58.)

Coming up with **Little River Island,** the town of **Cutler** will appear on the north shore, above **Eastern Head**; its church and cupola being the most conspicuous objects on the summit of the high land. The high, rocky, bluff point, crowned with low firs, which will be seen just below the town, is **Ackley Point.** The remains of the mill-dam above the settlement appear like fish-weirs.

Opposite to the town will be seen a low, grassy point, fringed with low trees on its western end, called **Cates Point,** and the small cove on its eastern side is *Cates Cove,* sometimes called *Willard Cove.* Beyond the mill-dam the houses of **Little Machias** will be seen in the distance.

DANGERS
IN APPROACHING AND ENTERING LITTLE RIVER.

I. *Coming from the eastward.*—In coming into this harbor beware of

EASTERN HEAD LEDGE,

which is bare only at low spring-tides, and lies off **Eastern Head** about one hundred yards from the northern shore. The ledge runs N W. and S E. and is about fifty yards long. It is not buoyed, but a buoy will be recommended to mark it. If this ledge were properly marked the entrance would be perfectly safe for strangers.

TRANSPORT LEDGE,

which lies in *Cates Cove,* is a foot out at low water, and lies about fifty yards from low-water line, off **Transport Point,** the eastern point of *Cates Cove.* It is not, therefore, in the way, except for vessels using the western passage, and is not buoyed.

These are all the dangers in the approaches to this harbor by the *Main Channel.*

In the *Western Channel,* the only danger at the entrance is

LONG LEDGE,

which makes off from the southwestern shore of the river abreast of **Little River Island.** It is mostly dry at low water. Between this ledge and the head is a small cove, generally known as *Long Ledge Cove.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LITTLE RIVER.

I. *Coming from the eastward.*—Bring the light-house to bear W. ½ S. and steer for it until close-to, when, if bound in *main ship channel,* leave it on the westward, keeping it close aboard to avoid being set on *Eastern Head Ledge.* When past the island, steer directly for the low land at the head of the river, having the church in **Cutler** a little to the northward. Anchor anywhere abreast of the town, but the best anchorage is near its lower end, just above **Ackley Point.** The depth is from four to five fathoms, and the holding-ground is excellent, being composed of stiff gray mud, but the channel is somewhat narrow.

If coming in by the western channel, pass between **Little River Head** and the island, keeping about midway of the passage, and when abreast of the western end of the island gradually haul over to the northern shore. Through this channel eight feet at mean low water can be carried.

The entrance to *Little River* bears N W. by W. ½ W. from **South West Head,** the southern point of **Grand Manan,** distant a little over twelve miles. Vessels coming from that vicinity may, when about a mile and a half to the southwestward of the head, steer N W. ½ W., which, if made good, will carry up with **Little River Light,** when follow the directions given above.

APPEARANCE OF APPROACHES TO AND SHORES OF LITTLE RIVER, COMING FROM THE WESTWARD, ALONG-SHORE.

When off **Little Machias,** (which is about two miles and a half to the westward of *Little River,*) a round, high, bluff head will be seen on the north, showing against the wooded shores beyond it. It is rocky and bare, except on its summit, which is crowned with a thick growth of small spruce. This is **Little River Island.** Just to the southward of it will appear a high, steeply-sloping head, apparently dotted with trees. This is **Little River Head.**

On the eastern side of the entrance tall branchless trees project here and there above the summits, having somewhat the appearance of flag-staffs on the high land.

Approaching the island, a few houses will appear to the westward of it, on the high land on the northern bank of the river. It must be remarked here that no sign of any indentation in the shore is visible from the westward until past **Little River Head.** The western channel will then be opened.

Three or four *peculiar white spots* appear on the rocks on **Little River Island** just below the trees which crown the summit. These have been painted from time to time, by those using this harbor, to enable them to recognize the entrance in thick weather. On passing the head a very peculiar appearance is presented on its northern side. It was formerly thickly wooded, but the trees have been cut down and the stumps left standing, which being whitened by exposure give the head the appearance of a graveyard.

When within about half a mile of **Little River Island**, a *white pyramid* from behind the point will be opened. This is the *bell-tower;* and just to the westward the top of the *light-house* and part of the *tower* will appear. The *tower* and *dwelling* will appear as soon as abreast of the eastern point of the island. A settlement will appear on the high lands at the head of the harbor—a church with a cupola forming a conspicuous object.

The high, precipitous, rocky head which is seen *on the northern side of the entrance,* crowned with a few spruce and fir trees, is **Eastern Knubble,** the northeastern point of the entrance to this river. A little to the eastward of it the high, square, tower-like hill, standing back some distance from the shore, is **Great Head.**

DANGERS

IN APPROACHING AND ENTERING LITTLE RIVER.

II. *Coming from the westward, along-shore.*—There are no dangers in the approaches, the shores being tolerably bold and safe; but on entering the river look out for

EASTERN HEAD LEDGE,

which lies on the eastern shore, about one hundred yards to the southward of **Eastern Head.** It lies NW. and SE. and is about fifty yards long. At low spring-tides it is bare.

If coming in by the western channel, between the **Island** and the **Head,** look out for

LONG LEDGE,

which makes off from the southern shore to a considerable distance, opposite to **Little River Island.** It is mostly dry at low water. When past this, edge over toward the northern shore to avoid

TRANSPORT LEDGE,

which lies in *Cates* or *Willard Cove,* about fifty yards from the low-water line. It is a foot out at low water.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING LITTLE RIVER.

III. *Coming from the westward, along-shore.*—When LIBBEY ISLAND LIGHT bears **N NW.,** distant three miles, steer **NE.** by **E.EASTERLY** until **Little River Island** bears **N NE.** and the southern point of **Deer Island** (on the eastern side of the entrance to *Little*

Machias Bay) bears W. by S. ½ S. Now steer NE. by N. ½ N., nearly for the eastern point of **Little River Island.** Give this point a berth of about one hundred and fifty yards, and, as soon as the light-house and bell-tower are open, haul up gradually until heading NORTH, having the island to the westward of you. When nearly abreast of the light-house, and the river is fairly opened, haul up gradually to NW. and run directly in for the low land at the head of the river, having the church a little to the northward. When abreast of **Ackley Point,** round to and come to anchor. Or, if wishing to proceed farther up, anchor anywhere off the town, with good holding-ground. But remember that the farther up the less water, as the channel shoals rapidly. Off **Ackley Point** the depth is from four to five fathoms.

In passing **Little River Island** give it a berth at all times of one hundred and fifty yards.

The flood-tide along shore sets to the eastward, and the ebb to the westward. The current runs with considerable velocity, so that few vessels can beat against it. On the other hand, a vessel with a favorable tide can make excellent headway, even in a very light head-breeze.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Little River Light	44° 39′ 45″	67° 12′ 05″	$4^h 28^m 48.3^s$	F. V. F.	1^m 30^s	40 ft.	11

VARIATION OF COMPASS.

The approximate variation for the year 1875 is 17° 25′ W., and the annual increase about 2′.

LITTLE MACHIAS BAY.

Two miles to the westward of **Little River Head** lies the entrance to *Little Machias Bay.* Between *Little River* and this bay the coast has a general course about W. ½ N.; but the shore-line is irregular, with several indentations. The land is high, steep, and thickly wooded. The entrance to *Little Machias Bay* is between **Dennison Point** on the east, and **Davis Point** on the west, and is three-quarters of a mile wide; but is much obstructed by islets and ledges, which render the passage unsafe for strangers. The bay runs about N. by E. and S. by W. and is a mile and three-quarters long. It is wider at its head than at its mouth, being a mile and a half wide at its northern end. It is of little importance, as, although it has tolerably good water, its navigation is dangerous owing to the ledges and rocks off its mouth, and it is open to southerly and southeasterly winds. There is a small settlement at its head and along its eastern shore, generally known as **Little Machias.** The shores are mostly rocky and barren; the eastern shore is dotted with houses, but the west bank very thinly settled. Most of the land is wooded with spruce and fir.

DEER ISLAND,

which lies a mile to the eastward of the entrance and close in with the shore, is rocky and wooded with the usual growth. It is about a quarter of a mile long in a NE. and

SW. direction. Its shores are bold. The channel from the eastward passes between the island and the *Black Ledges*, on the western shore.

CAPE WASH,

on the western shore, is a rocky islet, lying close in with **Davis Point,** and has one house on it, near its northern end.

The Old Man is a small islet lying three-quarters of a mile to the southward (SE. by S. ½ S.) from **Cape Wash**, and a mile and a quarter SW. by W. ¾ W. from **Deer Island.** From **Cross Island,** at the entrance to *Machias Bay*, it is a mile and a half distant. All of these islets are bold.

When inside the bay, the best anchorage will be found on the western shore, in a depth of from two to five fathoms; but it is unsafe ground on account of being open to the southeastward.

The Black Ledges lie exactly in the middle of the entrance, nearly midway between **Cape Wash** and **Deer Island,** and are very dangerous. They are out at low water, and may be avoided by keeping either shore close aboard. There is no passage between **Cape Wash** and **Davis Point,** but there is said to be a good channel between the cape and the *Black Ledges.*

Vessels entering *Little Machias Bay* from the eastward should leave **Deer Island** to the northward and eastward and steer up to the northwestward, toward **Dennison Point,** having it a little to the northward until they have passed the *Black Ledges.* When by these, they may alter their course a little to the westward, and when fairly in the bay steer over toward the western shore and anchor according to their draught. These are the only directions that can be given for this bay, which is of no use as a harbor of refuge, and is never entered by strangers. Four fathoms at mean low water can be taken into the bay up to the anchorage. The *Black Ledges* are not buoyed.

MACHIAS BAY.

Just to the westward of *Little Machias Bay* lies a large, high, rocky island, called **Cross Island,** and on the western side of this island is the main entrance to a large arm of the sea, known as *MACHIAS BAY.* It is six miles long and from two and a half to four miles wide. Into its northwestern corner empties *MACHIAS RIVER.* The entrance to this bay is forty-six miles NW. ½ W. from **Bryer Island Light-House,** twenty-four miles NW. by W. ½ W. from **Gannet Rock Light-House,** ten miles and a half NW. ¾ W. from **Machias Seal Island Light-House,** and twenty-one miles W SW. from **West Quoddy Head.**

The entrance to *Machias Bay* is between **Cross Island** on the east, and **Libbey Island** on the west, and is nearly two miles and a half wide. There is, however, a good channel, though unsafe for strangers, between **Cross Island** and the main land to the eastward. The channel leading to this latter passage passes between the **Old Man** and **Cape Wash,** and thence toward **Mink Island,** which is left to the westward, after which the passage is clear. This entrance is called *CROSS ISLAND NARROWS.* It has several bad ledges in it.

The town of **Machiasport** is situated on the western bank of *Machias River*, near its mouth. The city of **Machias** is built upon the south bank of the same river, about four miles above the port. It has a very large lumber trade, some ship-building, and is the county seat of Washington County.

DESCRIPTION OF SHORES
OF MACHIAS BAY AND RIVER TO MACHIAS, INCLUDING ISLANDS AND HARBORS IN THE BAY.

On the eastern side of the main entrance to this bay lies

CROSS ISLAND,

a very remarkable looking island, crowned with a thick growth of sickly and stunted fir. It is a perpendicular wall of dark rock; its sides being so bold-to as to allow of a vessel running alongside anywhere from its eastern to its southwestern end. *Here a large reef makes out*, which runs nearly a mile and a quarter in a westerly direction. **Cross Island** lies EAST and WEST, is two miles long and about a mile and a half wide. Three small islets lie off its eastern shore in a line nearly NORTH and SOUTH of each other. The northernmost, called **Scotch Island,** lies on the south side of the eastern entrance to the *Narrows*. The other two go under the common name of **Double-Headed Island,** being connected at low water. They are all tolerably bold-to.

The northern point of **Cross Island** is called **Quaker Head.** It is of moderate height, and covered with spruce and fir. The western point is known as **Western Head.** It is also wooded, and of moderate height. Between this head and another to the eastward of it a small cove makes into the northern shore of the island. It is called *Northern Harbor*, and affords good anchorage, except in northerly and northwesterly winds.

LIBBEY ISLANDS

are two rocky islands lying N E. and S W. of each other, and at low water are nearly joined by reefs. They lie on the western side of the main entrance. The western and larger island is entirely bare of trees, but has two houses on its summit near its northern end. It is about five-eighths of a mile long, and is quite narrow. The eastern islet, which also marks the eastern side of the western entrance, has a few dead spruce and fir near its northern end, but is otherwise rocky and bare of vegetation.

LIBBEY ISLAND LIGHT-HOUSE

is built on the west end of the island. It is a guide not only to *Machias Bay*, but also to *Mason*, or *Englishman Bay*, to the westward. The light-house is a granite tower, thirty-five feet high. The keeper's dwelling is painted brown. The light is a fixed white light of the fourth order of Fresnel, and is shown from a height of fifty-two feet above the sea. It is visible twelve nautical miles. Its geographical position is

Latitude - - - - - - - - -	44° 34′ 05″ N.
Longitude - - - - - - - -	67° 22′ 02″ W.

This light-house bears from—

	Miles distant.
Southwest Head, (Grand Manan,) W. by N	20
Gannet Rock Light-House, W N W	25
Machias Seal Island Lights, N W. ¾ W	12
Bryer Island Light, N W. ¼ W	46
Seal Island Light, (off Cape Sable,) N W. by N. ¾ N	92
Mount Desert Rock Light, N E. by E. EASTERLY	49

FOG SIGNAL.

There is a fog-bell near the light-house. It is supported by a wooden framework and is struck by machinery.

STONE ISLAND.

Passing in by the main entrance, there will be seen to the westward, about a mile to the northward of **Libbey Island**, a barren, rocky island of moderate height, covered with a thick growth of small fir, except at its southern end, where is a remarkable round, bluff head with a white face, called **Stone Head.** The island is called **Stone Island,** and is on the western side of the western channel.

STARBOARD ISLAND.

Half a mile to the westward of **Stone Island** lies **Starboard Island,** or, as it is frequently called, from the name of its owner, **Brown's Island.** It is rocky and nearly bare. It is remarkable for a high, bare, precipitous face at its northeastern end, which has a few spruce clinging here and there to its sides and summit. It is a little over half a mile from shore, and about twelve hundred yards to the westward of **Stone Island.** Strangers should not attempt to pass between this island and the main land.

Starboard Island has a group of houses and a wharf on its southwestern end. A long sand-spit or shingly reef, which makes off from **Point of Maine** toward the island and extends nearly over to it, forms a good harbor for vessels of light draught in southerly and southeasterly winds.

POINT OF MAIN.

The southern extremity of the main land on the western side of *Machias Bay* is called the **Point of Main.** The land is high, bare, and rocky. A mile and a half to the northward of it is the entrance to

HOWARD BAY,

which will be opened as soon as abreast of **Stone Island.** This is a beautiful cove, perfectly unobstructed, and has deep water; but is, unfortunately, open to southerly and southeasterly winds. It runs about NORTH and SOUTH for three-quarters of a mile to the base of a high, steep, rocky mountain, known as **Howard Mountain.** This hill may be recognized by its perpendicular faces to the eastward and southeastward. At the head of the cove is a beach composed entirely of small, rounded pebbles suitable for ballast. Vessels, if obliged to anchor in this bay, should lie close in under the eastern shore, where there is a turn in the course of the bay into a small cove on the eastern side, making a fair lee in easterly and southeasterly winds.

Howard Point is the eastern point of the entrance to *Howard Bay.* It is high and wooded, as is also all of the shore between the bay and the entrance to *Buck Harbor,* which is a mile and a quarter to the northward. Bare, rocky summits crop out here and there from among the trees.

BUCK HARBOR,

which is an excellent harbor of refuge, with from three to six fathoms of water, lies on the western shore of *Machias Bay,* about a mile and a quarter above **Howard Point** and four miles above **Libbey Island Light.** The entrance to it is between **Buck Head** on the south, and **Bar Island** on the north, and is about three hundred yards wide.

Buck Head is a thinly-wooded head of moderate height, descending on the east to a low, bare, rocky point. If entering the harbor, however, the head on that side will be found very abrupt and bold. A small, rocky islet, destitute of vegetation, lies off the head, about two hundred yards distant, and there is a line of ledges inside of it. The common name of *Buck Head Ledges* is given to all of these ledges.

The northern side of the entrance to *Buck Harbor* is formed by **Bar Island**. It is a high, rocky island, covered with small pine and spruce trees, and has precipitous faces, except to its southeastern end, where it descends gradually to a low, rocky point.

Buck Harbor is an excellent anchorage, except in southeasterly winds, and is much used by fishermen. The entrance between **Bar Island** and **Buck Head** is obstructed only by the ledges above mentioned, which are bold and always show themselves. An excellent anchorage exists on the northern side of **Bar Island**, between it and **Buck Neck.** The latter is a low, cleared, and grassy neck of land at the head of the harbor, and separates the north and south branches of the cove. It is low, nearly bare of trees, under cultivation, and thickly settled. Between this neck and **Bar Island** is formed a beautiful square basin, which has excellent anchorage in all winds in from six to ten feet water. Mariners should note this, as there is nothing to prevent a stranger from entering this place and coming to anchor. Sailing directions for this harbor will be given in the proper place.

YELLOW ISLAND.

Just to the eastward of **Bar Island** is another islet, called **Yellow Island.** It is remarkable for being composed of nearly white rocks. Its eastern end is formed by a high head called **Yellow Head,** which is high and bare, except on top, where grow a few stunted fir trees. Passing the head, there will be opened a larger island to the northward of it, and a little nearer the western shore, called

BARE ISLAND.

It is made conspicuous by two round, bare, rocky heads rising from the sand-beach. The northern head is high and precipitous, the southern is merely a huge boulder. A few stunted fir trees cling around their bases. The rest of the island is low and fringed with rocks, except at its northern end, where there is a grove of small fir. The main channel leads between this island and

CHANCE ISLAND,

which is nearly due east of it and a mile and a half distant. This island lies on the eastern side of the bay, about three-eighths of a mile to the southwestward of the extremity of **Sprague Neck,** on the eastern shore. It is a round, thickly-wooded islet, of moderate height. Long dry ledges run to the southward from its southern end. **Sprague Neck** is a long narrow peninsula of the main land, making out into the bay about a mile. It is thickly wooded and of moderate height. It is two and a quarter miles above **Quaker Head,** and the main land to the southward of it is all thickly wooded. Its western extremity is a low, sandy point, with water-worn faces and scattered trees.

On the western shore of the bay, about half a mile to the northward of **Bare Island,** lie three islets. The largest and westernmost of these is

SALT ISLAND.

It lies three-eighths of a mile from the western shore, and is conspicuous for the high, bare, bluff head at its eastern end. Stunted fir and spruce cling to its sides, and there is a small group of them on the eastern end of the head.

ROUND ISLAND.

Next to the eastward is **Round Island,** which is rocky and of moderate height, covered with a thick growth of spruce and fir. Its eastern end is a round, precipitous head, also thickly wooded.

CHANNEL ROCK,

the southernmost of the three islets, lies to the southwestward of **Round Island.** It is a perfectly bare, rocky islet, about twenty feet high, and marks the turning point in the channel. It is always steered for in coming up the bay. It is quite bold, and may be passed close-to on either hand. The rule is, however, to leave it to the westward. For the convenience of mariners a monument should be erected upon this rock, and this will be recommended to be done.

This rock is sometimes called **Avery Rock.**

Salt Island and **Round Island** are exactly opposite to **Sprague Neck**, the latter being nearly a mile and a half distant from **Round Island.** They also lie on the south side of the entrance to a large cove on the western shore, called

LARRABEE COVE,

which is a fine large cove with high, wooded shores, except on its northern bank, where they are mostly cleared and cultivated. It is two miles above *Buck Harbor*, and affords excellent anchorage, which is commonly used by the coasters bound to and from **Machias.** There are from two to three fathoms at the anchorage.

A remarkable wooded point, called **Birch Point,** forms the northern point of entrance to this cove. It is nearly a mile to the northward of **Salt Island,** and is covered with a thick growth of spruce, birch, and fir, the admixture giving the foliage a peculiar rounding appearance. It slopes gradually to the water.

HOLMES BAY.

Sprague Neck, on the western shore, is the southeastern point of the entrance to a large and wide bay which stretches away to the eastward for three miles. This is *Holmes Bay.* At its mouth it is a mile and three-quarters wide, but it attains to its greatest width just to the northward of the entrance, where it is nearly three miles wide. From this point, however, it gradually diminishes in width until, at the settlement at its head, it is but a little over a quarter of a mile across.

Its northwestern point of entrance is called **Holmes Neck.** It is a low, flat, and cleared point, quite green in summer, and faced by a fine beach. The trees stand somewhat back from the point, but there is a thick growth of them. From the extremity of the point a long flat, bare at low water, makes out.

HOG ISLAND.

About half a mile to the northward of **Sprague Neck**, in *Holmes Bay*, lies **Hog Island,** a low island, crowned with spruce and fir. Its southern end is flat, grassy, and bare of trees. Long ledges make out from its northern side almost over to the north shore. They are bare at half-tide, and are known as *Hog Island Ledges.*

So obstructed is this bay that no sailing directions can be given for it, and it is never used except by the small fishing boats which belong there. Its northern shore is tolerably well settled, and at the head of the bay there is quite a settlement occupying both shores.

Holmes Neck is a little over six miles above the northern **Libbey Island** and about a mile to the northward of **Round Island.** **Birch Point**, on the western shore, separates *Larrabee Cove* from

SANBORN COVE,

a large and deep cove running to the westward, and affording excellent anchorage for coasters in from two to three fathoms. Here begins the *Machias River*, the entrance lying between **Birch Point** and **Holmes Point,** the western end of **Holmes Neck.** The town of **Machiasport** is situated on its western bank, a little over a mile above **Birch Point.** Its suburbs extend to the northern shore of *Sanborn Cove.*

The anchorage will be opened when **Birch Point** is passed, but the village will be seen on the hill-side ahead.

MACHIAS RIVER.

This river flows into the northwestern corner of *Machias Bay.* It is difficult to navigate, and is not safe for strangers without a pilot. Vessels do not go above **Machiasport** unless they have on board some one well acquainted with the river. The principal trade on this river is in lumber.

SANBORN POINT

lies on the western shore, just above **Birch Point.** It has an earthwork upon it which is now dismantled. The fort stands at the southern end of **Machiasport.**

On the eastern bank, above **Holmes Point,** the shore is high and bluff, having sandy, water-worn faces, with birch and fir clinging to their sides, and from twenty to forty feet high. The first point on this side above **Holmes** is

RANDALL POINT,

which is partly cleared and backed by trees, and has one or two houses upon it. Its western end shows a sand-cliff about ten feet high, with a few low scrub upon its edge. There is a small beach along its base. About half a mile above it is

HOOPER POINT,

which is high and sandy, with bluff faces. Its summit is cleared and fenced. One or two small birch cling to its western slope. A long shingly point makes off from it about one hundred yards.

The anchorage at **Machiasport** is good, but the channel between the town and the mouth of the river is narrow and crooked, and runs close to the western shore. All of the eastern shore is flat, and most of the flats are dry at low water. It requires the assistance of a pilot to pass above **Birch Point,** unless the wind be fair and the tide well up.

From **Sanborn Point** the river has a straight reach nearly north and south past **Machiasport,** and up to the *Eastern Branch,* which turns off toward **East Machias.** The distance is a mile and a half, and the river at this point turns abruptly to the westward toward the town of **Machias.**

Woodruff Dike, which is a shallow cove, bare at low water, lies a few hundred yards above **Hooper Point,** opposite to the northern end of **Machiasport.** Its shore is thickly wooded. On its north side is a high, steep, rocky bluff, also thickly wooded, called **Pot Head.** At this head the shore turns away to the eastward into the *Eastern Branch.*

Opposite to **Pot Head,** *on the western shore,* there is a small, low, sandy island covered with grass and bushes. It is called **Feather-bed Island.** At low water it is joined to the shore. Just above it, is a bluff, rocky head of moderate height, crowned with fir, called **Day Head.** The western shore, from **Machiasport** to **Day Head,** is mostly cleared and settled, but not fertile. Beyond the head cleared lands of moderate height extend about half a mile to **Day Point,** a low, grassy point, backed by a thick growth of scrubby trees. All of this shore is very flat, the channel being nearest to the eastern shore.

On the eastern bank, off the northern side of **Pot Head**, a ledge extends about one hundred yards. Here is the *Divide;* the eastern branch making off in a N E. by E. direction toward **East Machias**, and the main river turning to the northwestward around **Day Point**. The channel is about six hundred and fifty yards from the western shore, the flats making off nearly to that distance. *A small black spar-buoy* is placed on the eastern point of *Day Flats*, and after rounding this the course up river is about N W.

The entrance to *Eastern Branch* is between **Rim Point** on the north, and **Pot Head** on the south. **Rim Point** is a low, rocky head. This branch of the river, after passing **Pot Head**, runs about N E. by E. for half a mile, and then, rounding **Rim Point**, turns abruptly to the westward, running about W N W.; then it turns to the northward and gradually to the northeastward, to **East Machias**, which occupies both banks of the stream about two miles above its mouth.

At the town the eastern branch is a mere creek, both narrow and shallow. It is impossible for strangers to navigate it. The channel is so narrow and winding and the turns so short that no intelligible directions can be given.

The land *on the north shore* of *Machias River*, from **Rim Point** to the westward, is of moderate height, partly cleared and cultivated and partly wooded. *On the south shore* it is low meadow-land, backed by woods, from **Day Point** nearly to the bridge. Where the woods come down to the shore in a thick growth, with a scattered group of rocky boulders at the northern end, is **Crocker Point**, a quarter of a mile below the bridge.

The bridge across the river is a mile and three-quarters above **Machiasport**. There is a draw in it sufficiently wide for the largest vessels which use this passage. The channel is nearly in mid-river. After passing this bridge the city of **Machias** will be in sight. Low, flat lands fringe the water-side on both banks above the bridge, backed by higher lands, mostly bare of trees. These are mostly grass-lands.

About a mile above the bridge, *on the northern shore*, is a high, grassy point, with bare ledges cropping out near its southern end. It is mostly composed of grass-land, but has a few scattered trees. The remains of an old house are to be seen on this point, which is called **Marshall Point**. The land on both shores above it are low and partly wooded.

About a mile above the bridge, *on the western shore*, is **Libbey Point**, sometimes called **Meserve Point**. It is low and thickly wooded with spruce, birch, and fir. Both shores are lined with dikes built off to prevent the flooding of the meadow-lands.

Just above **Libbey Point**, but *on the eastern shore*, and about a mile above **Marshall Point**, is **Hoyt Head**. It is high and steep, fringed with trees, but mostly under cultivation. From its base a long dike makes out in a W. ½ N. direction for about a mile. It is called **Fenno Dike**.

On the western shore, a few hundred yards above **Libbey Point**, is a thickly-wooded, rocky head, called **Meserve Head**. Here the low meadow-lands begin and extend nearly a mile to the outskirts of the city. At this point the river branches, the main stream turning to the southwestward toward **Machias**, half a mile above, and the north branch, called *Middle River*, running to the northwestward. The latter is now dry and its bed is a meadow.

The low meadow-lands are backed by thick woods, composed of a variety of trees, and at high water is all covered. The edges of the flat are staked out.

Middle River was formerly crossed by a bridge at its mouth, but this has been built into a solid dike, shutting off all influx from the river. At the western end of this dike begins the town of **Machias**, which occupies both banks of the river. This is

the head of navigation. The river is dammed at the upper end of the city, and the dam is occupied by several mills.

Opposite the town there is a large ledge, out at one-third ebb, which occupies the middle of the channel. As the passage is extremely narrow, the presence of this ledge renders it exceedingly difficult for loaded vessels to pass through, and they frequently strike upon it.

There is here a very large trade in lumber. The city is three miles and three-quarters above **Machiasport** and a little over five miles above **Birch Point.**

APPEARANCE OF APPROACHES TO AND SHORES OF MACHIAS BAY.

I. *Coming from the eastward.*—On approaching this bay the most conspicuous object will be **Libbey Island Light-House,** which will be seen on the southernmost of two low, rocky islands. Of these the northernmost is bare of vegetation and has one or two houses upon it. The one upon which is the light-house has a few dead trees near its northern end. The light-house is of granite and detached from the keeper's dwelling, which latter is painted brown. There is also a fog-bell mounted on a wooden frame.

On the eastern side of the entrance, which is here nearly two miles and a half wide, will be seen a large island, presenting a perpendicular wall of dark rock, crowned with a thick growth of small trees. This is **Cross Island.** The main channel leads between it and **Libbey Island.** Passing **Libbey Island,** there will be seen to the westward, and about two miles off, a remarkable round, bluff head, with a white face. This is **Stone Head,** on **Stone Island.** The large cove which appears to the northward of **Stone Head,** on the western shore of the bay, is *HOWARD BAY,* and the high, steep, perpendicular mountain at the head of that bay is **Howard Mountain.**

Buck Head will appear to the eastward of *Howard Bay* as a moderately high, thinly-wooded head, descending on the east to a low, bare point. The high rocky islet just outside and to the northward of the head is **Bar Island.** It will appear covered with a thick growth of small trees. Between the head and the island is the entrance to *Buck Harbor.*

A little to the eastward of **Bar Island** will be seen a remarkable islet composed of whitish rock. On its eastern end is a high head, on which grow a few small fir trees. This is **Yellow Island,** and the head upon which are the trees is **Yellow Head.**

After passing *Cross Island Ledges,* the channel leads to the northeastward, and a round, thickly-wooded islet will appear on the eastward, lying about three miles above the southwest head of **Cross Island.** This is **Chance Island,** and the thickly-wooded land behind it is **Sprague Neck.** After passing to the northward of **Cross Island** there will be opened a passage to the eastward, between the island and the main land. This is *Cross Island Narrows,* a channel frequently used by fishermen and coasters of light draught who wish to enter *Machias Bay* from the eastward. It is, however, unsafe for strangers.

Approaching **Chance Island,** it will be seen that the course leads directly for a perfectly bare, rocky islet, which is the southernmost of the three islets on the western shore. This is **Channel Rock,** which marks the turning point in the channel leading up to **Machiasport.** The small rocky islet of moderate height, covered with a thick growth of fir, which lies to the northward of this rock, is **Round Island,** and the larger island, which lies nearest to the shore, is **Salt Island.** It is conspicuous for the high, bare, bluff head at its eastern end. These islets lie off the south side of *Larrabee Cove.*

When abreast of **Quaker Head,** (which is the northernmost point of **Cross Island,**) look right into *BUCK HARBOR.* There is nothing in the way in the entrance; but at the head of the harbor there will be seen what appears to be a low, grassy island, thickly settled, and backed by high lands. This is **Buck Neck,** and the best anchorage is between this and **Bar Island.**

When abreast of **Channel Rock,** the course turns slightly to the northward, leaving a large and deep bay to the eastward, called *HOLMES BAY.* In the middle of the entrance to this bay is seen a low island, crowned with a thick growth of spruce and fir. This is **Hog Island,** and the long ledges which make off from it to the northward are the *Hog Island Ledges.* The low, sandy point, with water-worn faces, and covered by a scattered growth of trees, which lies on the southeastern side of the entrance of this bay, is the western end of **Sprague Neck.**

On passing **Channel Rock,** there will be opened on the western shore a fine, large cove, with high, wooded shores, except on its western side, where cultivated lands will be seen. This is *Larrabee Cove.* The low, gently-sloping point on its northern side, covered with a thick growth of trees, is **Birch Point,** the western point of entrance to *Machias River.* In summer the foliage of the trees on this point has a peculiar round appearance, sufficiently remarkable in a region where the principal growth is fir and spruce. The trees are mostly birch, whence the name of the point. The village seen to the northward of **Birch Point,** perched on the high land on the western shore, is **Machiasport.** It is noticeable by its church and church-yard, which occupy the sides and summit of a high hill at the southern end of the town. A large and deep cove on the northern side of Birch Point is *Sanborn Cove,* an excellent anchorage, and the low, flat, cleared point on the eastern bank, opposite to **Birch Point,** is **Holmes Point,** the eastern point of the entrance to *Machias River.*

DANGERS
IN APPROACHING AND ENTERING MACHIAS BAY.

I. *Coming from the eastward through the Main Channel.*—Vessels approaching this harbor from **Cape Sable** or from *St. Mary Bay* must beware of

MACHIAS SEAL ISLAND.

This island is about four hundred yards long, is low and rocky, and about twenty feet high. Upon it are situated the

MACHIAS SEAL ISLAND LIGHT-HOUSES.

These are two white towers a hundred and sixty-five feet apart, and bearing E S E. and W N W. of each other. They show two fixed white lights from a height, respectively, of fifty-four and fifty-eight feet above sea level. These lights are visible fifteen miles. Their geographical position is

Latitude - - - - - - - - -	44° 30′ 07″ N.
Longitude - - - - - - - -	67° 06′ 05″ W.

Vessels standing to the northward, with these lights to the westward and distant about five miles, must go about as soon as the two lights come in range, to avoid the *Murr Ledges.*

FOG SIGNAL.

A gun is fired every four hours during a fog, as a warning to vessels. This is an entirely insufficient precaution. There should be either a powerful steam-whistle or an air-trumpet on this island, or the gun should be fired more frequently.

From **Seal Island Lights**, **Libbey Island Light** bears N W. ¾ W., twelve miles; **the southeast shoal of the Murr Ledges** bears S E., one mile and a quarter; **the Southeast Ledge** bears S E. ½ S., five miles and three-quarters; **St. Mary Ledge** bears E. ¾ S., ten miles distant.

Three and a half miles WEST of these light-houses lies *a rock which has caused the wreck of several vessels.* It was seen by Captain Johnstone, of the ship "Liverpool," trading to St. John, in 1834, and it is proposed to name it *Liverpool Rock.* The pilots could not tell us anything of the depth of water upon it.

There are no dangers on the coast after passing **Seal Island** until **Libbey Island** is reached. Neither are there any between **South West Head** (**Grand Manan**) and the entrance, nor in coming along shore from the eastward. Therefore, the first obstruction to navigation which mariners must specially look out for is

CROSS ISLAND LEDGE,

or *Southwest Ledge,* as it is sometimes called. This makes out in a westerly direction from the southwest point of **Cross Island** for about a mile and a quarter, and for most of that distance is bare at half-tide. It is not buoyed, but a buoy to mark it will be recommended.

After passing this ledge there are no dangers until up with **Howard Point.** Here look out for

SEA-SHORE LEDGE,

which lies off this point at a distance of five hundred yards, and is out at low water. It is not in the way unless a vessel is beating to windward, but should have a spindle or buoy upon it. It is the southernmost of a long line of ledges, most of which are under water, extending along the western shore from **Howard Point** almost to *Buck Harbor.* Over some of these ledges a vessel of light draught might pass, but they would probably bring up a large or loaded vessel.

In 1872 the pilots informed us that there was *a sunken rock, with three fathoms* on it, about a mile E S E. from the southwestern point of **Bar Island.** It is nearly in the channel, but a little to the westward of the sailing lines, and is only dangerous to large and deeply-laden vessels. It has no name.

Another sunken rock is said to exist on the eastern side of the channel, about a mile W N W. from *Northern Harbor,* on **Cross Island,** or nearly in line between that harbor, *Three-fathom Rock,* and **Bar Island**; but the existence of this rock is very doubtful. The pilots could not even tell the depth of water upon it.

After passing *Buck Harbor* the channel is clear to **Channel Rock,** which is quite steep-to, and may be approached closely. A beacon or monument will be recommended to be placed on this rock. When abreast of it, **Round Island** will be seen on the west side, and lying off it *a black spar-buoy.* This is on

ROUND ISLAND FLATS,

which extend about N. by W. from the island to a distance of nearly three-quarters of a mile. When past this buoy, and steering over toward **Birch Point,** there will be seen *another black spar-buoy,* which bears about E S E. from **Birch Point** and marks the *Middle Ground.* Both buoys must be left to the westward. When past the *Middle Ground Buoy,* keep the southwestern shore aboard to avoid the very *extensive flats which make off from the eastern shore.* On these flats vessels very frequently run aground, as the channel is narrow and the edges of the shoals not marked.

BIRCH POINT FLATS.

A red spar-buoy marks the end of what are known as *Birch Point Flats.* The course to avoid them leads directly toward the western shore and almost over to

it, as the flats are very extensive. The point of flats on which this buoy is placed is nothing more than the western end of the *Holmes Point Flats,* and is incorrectly named, as there are no flats off **Birch Point.**

This is the most difficult part of the channel, being extremely narrow and crooked. The flats are, however, soft, and no harm will follow from getting ashore upon them. *Birch Point Buoy* is about a mile NW. by N. from **Birch Point,** and the channel leads between it and the point. After passing it, there are no dangers up to the anchorage at **Machiasport.** If bound up to **East Machias** or to **Machias,** take a pilot. There are only flats in the river, which are very extensive and are not marked. The only exception is the buoy on

DAY POINT FLATS,

which extend off from **Day Point** to the eastward a considerable distance, (about six hundred yards.) This buoy lies off the mouth of the *Eastern Branch,* and was placed in position by the pilots of the tow-boats to enable them to shape their course by the point of the shoal.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING MACHIAS BAY AND RIVER.

I. *Coming from the eastward.*—If coming along shore from **West Quoddy Head,** steer SW. by W. ½ W. from the head, until **Libbey Island Light-House** is made, when steer for it until within two and a half miles, with **Stone Head** bearing NW. ½ W. Now steer NW., with the head a little to the westward. This will avoid *Cross Island Ledge,* which makes off from the southwestern end of **Cross Island** for about a mile and a quarter. When **Libbey Island Light** is opened just to the westward of the northernmost of the two islands, it will bear SW. ¼ W.; **Channel Rock** will then bear NE. by N., and the passage will be clear. Keeping **Libbey Island Light** bearing SW., a NE. course clears right up to the rock. Leave it to the westward close-to, and steer NNE. for **Round Island.** When abreast of the latter, steer N. by W. for the *black spar-buoy on Round Island Flats.* Leave it to the westward, and when past it steer NW. by N. to clear the *black buoy* on the *Middle Ground.* When past this buoy, the course is WNW., keeping the northern shore aboard to avoid the extensive flats making off from the southern shore; when pass to the eastward of the *red buoy* on *Birch Point Flats* and steer N. by E. ½ E. up the middle of the river. Anchor off the wharves. The shores are pretty bold.

At low water two and a half fathoms may be carried up to the anchorage at **Machiasport.**

Vessels bound to **Machias** anchor at the port, and take a tug or a pilot. The course from **Pot Head,** to clear *Day Point Flats,* is N. by E. ½ E. past the buoy, and then NW. for the draw. After passing the draw the course is WNW. **Libbey Point,** thence about NW. to the *Divide;* from the *Divide* to the landing at the town, WSW. From **Machiasport** to the bridge about two fathoms may be taken, but there is not over ten feet in the channel up to **Machias** at low water.

The Ledge has five feet at ordinary high wate

From the vicinity of **Southwest Head,** (**Grand Manan,**) steer W. by N. ½ N. for **Libbey Island Light,** keeping the eastern island close aboard until past *Cross Island Ledge,* when steer N. by E. for **Channel Rock,** and follow the directions given above.

From the vicinity of **Cape Sable,** steer NNW. until **Libbey Island Light-House** is made, which should be seen directly ahead. Continue this course until within about a mile of the light, when haul up to enter the bay, keeping the eastern **Libbey Island**

close aboard. When past *Cross Island Ledge*, haul up for **Channel Rock**, about N. by E., and proceed as before directed.

On the above courses it is necessary to be very careful not to be set on to *Cross Island Ledge*, as the N. by E. course for **Channel Rock** leads very close to the ledge. If this ledge were buoyed there would be no difficulty; but under the circumstances, as the shoal is not marked, it is, perhaps, best to keep the western shore aboard until the light-house is opened from behind the eastern **Libbey Island**, and then steer up for **Channel Rock**.

WESTERN CHANNEL INTO MACHIAS BAY.

The **Libbey Islands**, as before stated, (page 64,) lie in the middle of the entrance to *Machias Bay*. The main channel is on their eastern side, while west of them, between the light-house and the main land, is what is called the *Western Channel*. It is a wide and nearly clear passage, with good water. On its western side lie a number of islands, the principal of which are the **Brothers, Scabby Islands, Ram Island, Foster Island, Stone Island,** and **Starboard** or **Brown's Island.**

This channel is always used by vessels coming from the westward.

In approaching this channel through *Moose-a-bec Reach* the first island met with, after passing **Head Harbor Island**, is

PULPIT ROCK,

which lies to the eastward of **Great Spruce Island,** and in the mouth of *Englishman Bay*. It is a low, bare islet, entirely destitute of vegetation. A little over half a mile to the eastward lie

THE BROTHERS.

These are two rocky islets of moderate height, covered with grass, except on their north side, where there is a scanty growth of fir. They lie EAST and WEST from each other, close together, and there is no passage between them. A mile and a quarter east from **The Brothers** are the

SCABBY ISLANDS.

These are two rocky islets which lie one mile S. by W. from **Point of Main,** about half a mile S W. from **Foster Island,** and a little over a mile and a half W N W. from **Libbey Island Light.** They lie N E. and S W. from each other. The eastern islet is conspicuous for a high, round head, with one or two dead-pines upon it, which at a distance look like masts; otherwise it is bare. The western islet is lower, and has a few dead fir trees on its eastern end. Between these islands and the **Brothers** lies the eastern entrance to *Englishman Bay*.

RAM ISLAND

lies half a mile SOUTH from **Foster Island**, and about a third of a mile to the eastward of **Scabby Islands**. From **Libbey Island Light-House** it is distant one mile, which is here the width of the western entrance to *Machias Bay*. It is a low, rocky islet, with a scanty growth of stunted fir on its western end.

FOSTER ISLAND

lies a little over three-eighths of a mile to the northward of **Ram Island**, and about the same distance from the shore of **Point of Main**. It lies NORTH and SOUTH, and is nearly half a mile long. It is a bare, rocky islet, which has been wooded, but is now cleared and covered only with tree-stumps. It is remarkable for the bleached, gray appearance of these stumps, which look like grave-stones.

STARBOARD ISLAND.

Nearly half a mile to the northward of **Foster Island** lies **Starboard** or **Brown's Island.** It is a rocky islet, almost entirely bare,-and is remarkable for a high, bare, precipitous face at its northeastern end, with a few spruce trees clinging here and there to its sides and summit. It is sometimes called **Brown's Island,** and lies about three-eighths of a mile from the western shore of the bay. A group of houses and a wharf are seen upon its southwestern end. Strangers must not attempt to pass between this island and the main land. A long sand-spit makes off from **Point of Main** in an easterly direction and nearly joins the island, thus forming a sort of cove on its western side, which in southerly and southeasterly winds affords a good anchorage.

STONE ISLAND.

Passing **Libbey Island Light-House,** the course of the western channel leads to the northeastward, leaving **Ram** and **Foster Islands** to the westward; and on the north, about a mile and a half from the light-house and a mile from the northern **Libbey Island,** will be seen **Stone Island.** This is a barren, rocky island of moderate height, covered with a thick growth of stunted fir except at its southern end, where is a remarkable, round, bluff head, with a white face, called **Stone Head.** This head is the part of the island which will show to vessels coming in the western channel. From **Starboard Island** it is distant over half a mile to the eastward; from **Foster Island** it is distant one mile in the same direction; and from **Ram Island,** a mile and a half to the northeastward.

Between **Stone Island** and the northern **Libbey Island** the channel is about a mile wide.

There is also a good passage between **Foster Island** on the north, and **Ram** and **Scabby Islands** on the south; but it is obstructed by a long ledge, mostly bare at low water, which makes off from the southern end of **Foster Island** half way over to **Ram Island.** This is **Foster Island Point.**

DANGERS
IN APPROACHING AND ENTERING MACHIAS BAY.

II.—*Coming from the westward, through Western Channel.*

FOSTER ISLAND LEDGE.

Off the southern end of **Stone Island** there lies a large ledge, bare at one-quarter ebb. It is two hundred and fifty yards from the island, and there is good water inside of it. There should be a buoy or spindle on it for the guidance of vessels using this channel. The name *Foster Island Ledge* is obviously incorrect, as the shoal is in no way connected with **Foster Island.** The rule is, leave it to the westward coming into the bay.

SEA-SHORE LEDGE,

before mentioned, (page 72,) lies off **Howard Point,** at a distance of five hundred yards, and is out at low water. It is the southernmost of a long line of ledges, (most of which are under water,) which extend along the western shore of the bay from **Howard Point** almost up to *Buck Harbor.*

These are all the dangers in the *Western Channel.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING MACHIAS BAY.

II. *Coming from the westward, through Western Channel.*—Coasters, which are the only vessels which enter by this channel, leave **Head Harbor Light** to the northward and steer **N E.** by **E.** for **Libbey Island Light-House**, passing to the westward of it; get it to bear **S W.**, and steer **N E.** for **Channel Rock.** Leaving this rock to the westward, the course is **N N E.** for **Round Island.** When abreast of the latter the course is **N.** by **W.** for the *black spar-buoy on Round Island Flats*, which is to be left to the westward; now steer **N W.** by **N.** to clear the *black buoy* on the *Middle Ground*, and when past this buoy the course is **W N W.**, keeping the western shore aboard to avoid the extensive flats which make off from the eastern side. This course leads up to the *red buoy on Birch Point Flats*, which is to be left to the northward, and **N.** by **E.** ½ **E.** will lead up to the anchorage off **Machiasport.** On the above courses there will be deep water as far up as **Channel Rock,** and two and a half fathoms up to **Machiasport.**

If coming through Moose-a-bec Reach, leave to the northward **Pulpit Rock**, the **Brothers,** and **Scabby Islands.** The course is nearly EAST from **Mark Island** to **Libbey Island Light-House**, and the distance nearly seven miles. When up with the light-house, bring it to bear **S W.** and steer **N E.** for **Channel Rock**, and follow the directions given above.

On the above courses to enter BUCK HARBOR.—When abreast of *Northern Harbor*, on **Cross Island,** look right into *Buck Harbor*, and there are no dangers in the way except *Buck Head Ledges*, the outermost point of which is marked by a small, rocky islet, destitute of all vegetation. (See page 65.) Round this islet and steer up the middle of the passage for **Buck Neck,** and anchor in from three to four fathoms in the outer harbor. Or, wishing to enter the inner harbor, as soon as past **Bar Island** haul over to the northward and anchor in the basin formed between that island and the **Neck.** *Here is good anchorage, safe from all winds*, and a depth of from six to ten feet at low water.

Bear in mind that the northern side of **Buck Head** is very bold and may be approached very closely. The ledges, and the small bare rock outside of them, are also bold on the northern side.

Coming in by the *Western Channel*, and intending to enter *Buck Harbor*, keep at least half a mile off the western shore of the bay between **Howard Point** and the entrance to this harbor to avoid the ledges which line this part of the shore. Of these *Sea-shore Ledge* is the southernmost.

CROSS ISLAND NARROWS.

As before mentioned, (pages 64 and 70,) between **Cross Island** and the main land on the eastern side of *Machias Bay* there is a passage, about half a mile wide, called *Cross Island Narrows.* It is not fit for the use of strangers, but is often resorted to by fishermen and coasters who are well acquainted with its dangers and who wish to enter the bay without rounding **Cross Island.** The entrance to it from the eastward is between **Cape Wash** on the north, and the dry ledge, called the *Old Man*, on the south. There is another passage which is wider, between the *Old Man* and the **Double-Headed Island,** but the former is the one commonly used.

There are several bad ledges in this channel, and nearly in the middle of it, off the northeastern shore of **Cross Island,** lies a rocky islet, called **Mink Island.** The channel leads to the northward of this islet. Between it and **Cross Island** lies what is called

EASTERN HARBOR, which is a good shelter for light-draught vessels in southerly winds, but is open to the northwest.

There is *a rock or ledge on the northeastern side* of the channel, a little to the eastward of **Mink Island.** It is *out at half-tide*, and is not buoyed or named.

A little to the northwestward of **Mink Island** there is *a bad, sunken ledge, with eight feet at low water.* The channel leaves the half-tide ledge to the northward and the latter rock to the westward, and is at this point quite narrow.

To enter Cross Island Narrows: Pass about midway between the **Old Man** and **Cape Wash** and steer up for **Mink Island** until past the half-tide ledge, on the north side of the channel; then haul up to the northward nearly for the northern end of **Chance Island** until through the *Narrows*, and have **Quaker Head** bearing to the eastward of SOUTH, when steer over toward **Bare Island,** being careful to give **Chance Island** a good berth to avoid the long ledges which make off from it to the southward. As soon as **Channel Rock** bears NORTH steer for it, and follow the directions previously given. Four fathoms at low water can be carried through the *Narrows.*

There are several other passages into and out of this bay—as, for instance, one between **Starboard** and **Stone Islands,** and one between **Ram** and **Scabby Islands** and the **Point of Main**; but none of these are fit for strangers.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
					Feet.	
Machias Seal Is'd Lts,	44° 30′ 07″	67° 06′ 05″	$4^h 28^m 24^s.3$	2 Fixed.	54 & 58	15
Libbey Island Light,	44° 34′ 05″	67° 22′ 02″	$4^h 29^m 28^s.1$	Fixed.	52	12

VARIATION OF COMPASS.

The approximate variation of the magnetic needle is, for 1875, 17° 08′ west, and the annual increase about 2′

LITTLE KENNEBEC RIVER.

The entrance to this comfortable little harbor of refuge lies between **Point of Main** on the east, and **Cow Point** on the west. From its mouth to its head the distance is nearly six miles, but the anchorage is only about a mile and three-quarters above the **Point of Main.** It is rarely used, owing to the insufficient knowledge possessed of its approaches by strangers; but the islands which lie off its mouth are bold, and with good directions there is no difficulty whatever in entering it and proceeding up to **Sea-Wall Point.**

DESCRIPTION OF APPROACHES AND SHORES OF LITTLE KENNEBEC RIVER.

Point of Main is the southern extremity of the main land separating *Machias Bay* from this river. It is high, bare, and rocky, and is backed by the usual growth of spruce and fir.

Coming through the inshore passage from the eastward, pass between **Ram Island** and **Foster Island,** leaving the **Scabby Islands** to the southward, and steer up by the **Point of Main,** with **Ram Island** nearly astern; which course will lead to the eastward of a small,

low, rocky island covered with grass, named *Shag Ledge,* lying nearly three-quarters of a mile to the northwestward of, and about half a mile from, **Point of Main.** *The main entrance,* however, is between the **Brothers** and **Scabby Islands,** and is unobstructed up to *Shag Ledge,* which must receive a good berth at high water, for at low water the ledges which make out from it are bare and are quite bold-to.

HICKEY ISLAND.

In the middle of the mouth of *Little Kennebec River* lies a small, low island, partly sandy and partly rocky, and dotted here and there with spruce and fir and a stunted growth of pine. It lies nearly N. by E. and S. by W., and is called **Hickey Island.** A long reef, dry at low water, makes off from its southern end to a distance of two hundred yards. The best water is midway between this island and the main land to the eastward.

FAN ISLAND.

Half a mile to the northward of **Hickey Island** lies **Fan Island,** close to the western shore. It appears as a gray, rocky head, crowned with fir. Base ledges make off from it to the westward.

COW POINT.

The high, wooded lands in the township of **Jonesboro'** stretch away to the westward, from behind **Fan Island** toward *Mason* or *Englishman Bay,* and end in **Cow Point,** a mile and a quarter to the westward of **Fan Island.** This is a thickly-wooded point, of moderate height, and is tolerably bold-to.

The shores on the eastern side of the entrance to *Little Kennebec River* are high, rocky, and bare, with the exception of a few stunted spruce here and there. Just above **Hickey Island** this bank runs into a low point called

PIERCE POINT.

This point, which is the westernmost point of the eastern shore, is about a mile above **Point of Main.** It is low, rocky, and fringed with fir trees. Between this point and **Fan Island** the channel is only a quarter of a mile wide.

SEA-WALL POINT

is so remarkable in its appearance as to serve as a distinguishing mark for the entrance to this river. From off the entrance it looks like a line of yellow rocks, backed by low woods, and is entirely different in appearance from any other part of these shores. On coming close up with it, it will be seen that what appeared at first to be yellow rocks is a wall or rampart of pebbles and boulders. Hence the name.

This point is on the western bank, about a mile and three-quarters above **Point of Main,** and forms the southern side of *Bare Cove,* which is the common anchorage for vessels entering this harbor. It presents, when viewed from seaward, a very curious appearance.

At the head of *Bare Cove* there is a large lobster-packing house and outbuildings. The land is gently sloping, grassy, and crowned with a thick growth of birch and other trees.

HOPE ISLAND

lies on the north side of the cove. It is a round, bluff-looking island, of moderate height, covered with a thick growth of spruce, fir, and birch. Inshore of it lies **Spar Island,** a very small islet, which shows a high hillock in its center covered with scrubby trees, like a crown.

On the eastern shore, nearly opposite to **Sea-Wall Point**, is **Grey's Beach,** a low land, covered with scrub, and faced by a fine beach extending up to **Yo-ho Point,** (about a mile above **Sea-Wall Point.**) The land on this shore is mostly wooded.

MARSTIN MOUNTAIN

is a very remarkable hill, situated on the western shore, about a mile above **Hope Island.** It is distinguished by a peculiar, bare spot, of a yellow color, on its summit, and is crowned with stunted spruce and fir on its western end. The rest of the summit is bare.

This is a very remarkable looking mountain and cannot be mistaken, as the surrounding lands are well wooded and present a striking contrast to its yellow summit, crowned with black fir.

YO-HO POINT,

on the eastern shore, is the northern end of **Grey's Beach**, and is a mile and a half above **Pierce Point** and two miles and a half from **Point of Main.** The channel leads between this point and **Hope Island,** there being no passage between the latter and the western shore. **Yo-ho Point** is of moderate height, rocky, and covered with a thick growth of scrub.

A ledge, bare at half-tide, lies two hundred yards off this point, and there is no passage inside of it. The bottom is soft. It is noticeable that the rocks at the pitch of the point are of a peculiar pinkish appearance.

YO-HO COVE.

Behind **Yo-ho Point** a long and narrow cove makes into the southward, called *Yo-ho Cove.* There are several ledges in it; but for vessels of light draught, whose masters are acquainted with the dangers, it affords good anchorage.

Between **Yo-ho Point** on the south, and **Johnson Point** on the north, is the entrance to *Eastern Branch.* For at **Johnson Point** the river divides; the main stream continuing to the northward, while the *Eastern Branch* takes a course to the northeastward.

JOHNSON POINT,

which separates the two branches, is a smooth, grassy point, of moderate height, fringed with spruce, fir, and a few birch. There is a solitary house on its slope. To the eastward of the point is a high, wooded hill, called **Johnson Mountain.** Off the end of **Johnson Point,** with which it is connected at low water, is a low, thickly-wooded islet, called **Porcupine Island.**

The western shores of the river above **Sea-Wall Point** are high, rocky, and very thickly wooded with a scrubby growth of trees and bushes from abreast of **Hope Island** to

MARSTIN POINT.

This point is just opposite to **Johnson Point,** and on the west bank of the main river. It is a high, bluff, rocky head, whose summit and sides are cleared; but there is a thick growth of scrubby trees at its base. Its southern extremity is low and thickly wooded with a growth of stunted trees and bushes. Behind it rises **Marstin Mountain,** already alluded to.

On the eastern shore of the main river, above **Johnson Point,** the land is thickly wooded with a small growth of various kinds of trees. Nearly a mile above that point is a very peculiar looking clay cliff, called

GOOSE COVE POINT.

It has a growth of scrub clinging to its sides, and extends to the northeastward about four hundred yards, and terminates in a round, bluff boulder. Its surface is diversified with grass-land and trees. Off the northern extremity, at a distance of about one hundred and fifty yards, lies a detached rock, bare at low water, called *Goose Rock*. There is a passage between the rock and the point for vessels of light draught.

GOOSE COVE

makes in on the northern side of the point. It is shallow and of no importance. The river here sends off a second branch to the eastward, which is almost entirely bare at low water, and is unfrequented. The main body of the stream continues to the northward to its head.

On the western shore, about half a mile above **Marstin Point**, the cleared and cultivated lands begin. They are of moderate height, dotted here and there with trees, and present water-worn faces to the eastward.

FOSS POINT.

About a mile above **Marstin Point** the land shoots out into a long, low, rocky point, called **Foss Point**. Here the western shore turns more to the westward, while opposite to it the long cove above described makes in to the eastward, thus forming a second divide. The shores of the main river are gently sloping, partly wooded, and partly cleared and cultivated, with sand-cliffs cropping out here and there; but the stream is very shallow. At the point of division stands

HOLWAY POINT,

which is a remarkable looking clay cliff of moderate height, covered with a growth of scrub. A long sand-bar, bare at half-tide, with scattered boulders upon it, extends from this point in a SW. direction for one hundred and fifty yards.

The most prominent feature in the eastern cove is

SPRUCE COVE POINT,

a long, high, clay cliff, extending in an EAST and WEST direction across the course of the cove. Its surface is covered with scrub and bushes, some of which cling to the perpendicular face of the cliff. It separates *Goose Cove* from *Spruce Cove*, which lies on its northern side.

From this point a long ledge makes out about one hundred and fifty yards, which is barely covered at high water. It is usually known as *Spruce Cove Ledge*.

The shores at the head of the eastern cove are tolerably well cultivated, smooth, and cleared, and a small settlement occupies the shore on both sides.

The cove is of slight importance, as it is almost entirely bare at low water. On the western shore of the river, opposite to **Holway Point**, is

SMITH POINT,

about half a mile above **Foss Point**, and shows a clay head with precipitous faces. The land behind it is smooth, cleared, and well cultivated. A long sand-bar makes off from the point toward **Holway Point**.

Strangers should not attempt to go farther up the river than **Marstin Point**.

EASTERN BRANCH,

or EASTERN KENNEBEC RIVER, makes in between **Yo-ho Point** and **Johnson Point,** (see page 79.) Its course from **Porcupine Island** is N N E. for about half a mile, after which it turns to the eastward. Ten feet at low water may be carried through this branch to its head, but it is now rarely used, as there is only a small trade in wood. Both shores are thickly wooded with spruce, fir, and birch.

Half a mile above **Johnson Point,** where the branch turns to the eastward, lies a small, thickly-wooded islet of moderate height. This is called **Hog Island,** and divides the passage into two channels. On the eastern shore, abreast of it, is a long cove, called *Miller Creek.*

The western channel runs nearly NORTH, leaving **Hog Island** to the eastward, and the high, bare hill, called **Mayhew Mountain,** to the westward, and, rounding the island, turns about N E. by E., joining the eastern channel at the eastern end of **Hog Island.**

The eastern channel is very narrow, and is dry at low water. Leaving **Hog Island** to the westward, it skirts the base of a high, bare, bluff hill on the eastern shore, called **Collins Mountain,** and uniting with the western channel both proceed in a north-easterly direction for about half a mile, between steep and barren banks, to a rocky point covered with bushes. This point is on the eastern shore, and is known as **Larrabee Point.** Here an abrupt turn to the southward leads through a very narrow but deep channel, about seventy-five yards wide, to a dam, which crosses the passage and separates it from a large and wide cove, called *Larrabee Basin.* This dam was the site of mill-works, now deserted, and the basin is nearly all occupied by meadow.

Beyond the entrance to *Larrabee Basin* the shores continue of about the same character, for about a third of a mile, to the head of the branch.

Twelve feet at low water may be carried up as far as **Hog Island,** and ten feet up to **Larrabee Point.**

That portion of *Little Kennebec River* which is contained between **Marstin** and **Johnson Points** on the north, and **Hope Island** on the south, is sometimes known as *Kennebec Bay.*

APPEARANCE OF APPROACHES TO AND SHORES OF LITTLE KENNEBEC RIVER, FROM THE ENTRANCE TO MARSTIN POINT.

In approaching this river by the main channel the course leads between the **Scabby Islands** and the **Brothers.** The former will appear as two low, barren, rocky islets, having only a few dead trees upon them. The eastern islet is remarkable for a high, round head, on the summit of which a few dead pines appear like masts. The western one is lower than the other, and has a few dead fir trees upon its eastern end.

On the western side of the entrance the **Brothers** will appear as two rocky islets of moderate height, with a grassy surface and a scanty growth of fir clinging to their northern sides. The channel between these islets and **Scabby Islands** is a mile and a quarter wide.

The small, low, rocky island covered with grass, which will appear a little over half a mile to the northward of the **Scabby Islands,** is *Shag Ledge.* At low water long reefs of rocks extend off from it. The high, bare, rocky point of land backed by woods, which is seen to the northward of *Shag Ledge* and on the east side of the entrance to the river, is **Point of Main.**

The small, low island, partly sand and partly rock, dotted here and there with stunted trees, is **Hickey Island.** It lies in the middle of the entrance, but the main channel leads to the eastward of it.

The thickly-wooded point of moderate height which appears on the main land, about a mile to the westward of **Hickey Island**, is **Cow Point.** Behind the island, and about three-quarters of a mile to the northward of it, where the entrance appears the narrowest, there will appear a line of yellow rocks, looking like a beach, and backed by low woods. This is **Sea-Wall Point**, before described, and serves as a distinguishing mark for this entrance. At its western end will appear a gray-looking, rocky head, crowned with fir, but on approaching more closely it will be seen that this is an island lying close to the western shore and known as **Fan Island.**

On the eastern shore, above **Point of Main**, the land will appear high, rocky, and bare, except for a few stunted spruce. A little below **Fan Island**, it descends to a low point, fringed with small fir. This is **Pierce Point.**

The lands on the western side of the entrance, between **Sea-Wall Point** and **Cow Point**, are all thickly wooded and of moderate height. Approaching **Sea-Wall Point**, that which at first appeared to be yellow rocks is in reality a mass of pebbles and boulders. On passing it there will be opened a large cove, at the head of which is a "**lobster-packing house**," wharf, and outbuildings. This is *Bare Cove*, and is the common anchorage for vessels seeking a refuge.

The round, bluff-looking islet of moderate height, covered with a thick growth of trees, which lies to the northward of *Bare Cove*, and nearly in mid-river, is **Hope Island,** and the little islet inshore of it, whose peculiar high hump in the center is crowned with scrubby trees, is **Spar Island.**

On the eastern shore, above **Pierce Point**, is **Grey's Beach,** which is backed by low land covered with scrub. The beach extends up to **Yo-ho Point**, which is the rocky point seen on the eastern bank about three-eighths of a mile above **Hope Island.** It is covered with a thick growth of scrub, with well-wooded lands behind it. This point is easily recognized, when abreast of it, by the peculiar pinkish color of the rocks at its northwestern end.

When abreast of **Sea-Wall Point** there will be seen ahead, and on the western shore, a very remarkable summit, which cannot be mistaken. It is of a yellow color, crowned with stunted trees on its western side, the rest being entirely bare. This bare, yellow summit, with the black fir on top, presents a remarkable contrast to the well-wooded hills around it. This is **Marstin Mountain,** which lies to the northwestward of **Marstin Point.** The latter shows as a high, bluff, rocky head, entirely cleared except at its base, where there is a thick growth of scrubby trees. **Marstin Mountain** is plainly visible from outside. This, with **Sea-Wall Point**, forms excellent marks for the guidance of vessels approaching this river or *Englishman Bay* from the eastward.

Opposite to **Marstin Point**, and apparently in the middle of the river, will be seen a smooth, grassy point of moderate height, fringed with trees. A solitary house appears on its slope. To the eastward of this point rises a high, thickly-wooded hill, named **Johnson Mountain,** and the point, **Johnson Point.** The passage to the eastward of it is *Eastern Branch*, and that to the westward is the main river, which latter continues to the northward up to **Holway Point.**

Off the southern end of **Johnson Point** may be seen a low, thickly-wooded islet, called **Porcupine Island.**

When off **Yo-ho Point** the *Eastern Branch* may be recognized by **Hog Island,** (which lies in the middle of the passage, nearly half a mile above **Johnson Point**,) and

the high, bare hills on each side of it. The hill on the eastern side is called **Collins Mountain,** and that on the western side **Mayhew Mountain.**

DANGERS

IN APPROACHING AND ENTERING LITTTLE KENNEBEC RIVER FROM THE EASTWARD THROUGH RAM ISLAND PASSAGE.

This entrance, which is only used by coasters who have come along shore and who are well acquainted with the vicinity, is, nevertheless, a good and safe channel for vessels of light draught. The entrance to it is between **Foster Island** on the north, and **Ram Island** on the south. After passing between these islands the course leads to the northwestward, toward **Hickey Island.** The first danger met with in this course is

SHAG LEDGE,

a low, rocky island, seen nearly ahead when passing between **Ram** and **Foster Islands.** Long reefs of rocks, bare at low water, extend on both sides of this island, which must, therefore, when they are covered, receive a good berth. At low water it is safe to go close to the end of the reef, with not less than three fathoms water.

HALF-TIDE LEDGE.

After passing *Shag Ledges*, *Half-Tide Ledge* is approached, lying about a quarter of a mile off the western shore of **Point of Main.** It is out at three-quarters ebb, and must be left to the eastward. After passing it there are no dangers in the channel, *but from the south end of Hickey Island there makes off a long reef*, which is dry at low water for about two hundred yards, called *Hickey Island Ledge,* and is not in the way unless beating to windward.

The best water in this part of the channel is midway between **Hickey Island** and the main land. There is not less than three fathoms.

SEA-WALL POINT.

After passing this island there are no dangers until up with **Sea-Wall Point,** which must receive a berth to avoid the long bar making off from it to the westward. After passing the point steer directly in to the anchorage, there being nothing in the way.

If bound up the river, beware of

HARVEY LEDGE,

lying on the western side of the channel, a little above *Bare Cove.* It is about one hundred and twenty-five yards from the west bank, and is out at low water. To avoid it, do not go to the westward of **Spar Island,** bearing **N NW.**

DOGFISH ROCK.

On the eastern shore, opposite to *Bare Cove*, and three hundred yards off **Grey's Beach,** lies a rock, out at half-tide, called *Dogfish Rock.* It is bold-to, and shows itself at almost all times of tide. From the "**lobster-packing house**" in *Bare Cove* it bears **E. by N.**

After passing this rock the eastern shore is free from dangers until up with **Yo-ho Point,** the southern point of the entrance to *Eastern Branch.* Here look out for

YO-HO LEDGE.

A large ledge, bare at half-tide, lying two hundred yards to the northwestward of the point. There is a passage for small boats between it and **Yo-ho Point**, with soft bottom; but vessels should not attempt to use this narrow channel, even at high water. The main channel into the *Eastern Branch* leaves *Yo-ho Ledge* to the eastward, and, rounding it to the northward, passes between it and **Porcupine Island**.

Above **Johnson Point** it is difficult to give an intelligible description of the dangers. They are, however, very few; the principal difficulty in the navigation arising from the contracted channel. Nearly all of the points on both sides are bold-to until up with **Goose Cove Point,** off the northern point of which, at a distance of a hundred and fifty yards, lies *a detached rock, bare at low water*, called *Goose Rock.* It is bold-to, and there is a passage for light-draught vessels between it and the point.

Holway Point is also shoal, a long sand-bar with scattered boulders on it making off from the point in a southwesterly direction. It is bare at half-tide for about one hundred and fifty yards.

One-third of the way from **Holway Point** to **Goose Cove Point** there is a detached rock, out at low water, called *Lobster Rock.* From **Smith Point,** also, a long bar makes out, obstructing the passage above **Holway Point**.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LITTLE KENNEBEC RIVER.

I. *Coming from the eastward through Ram Island Passage.*—Pass on either side of the **Libbey Islands**, but, if coming close along shore, pass them to the northward; only observing to keep close to the *northern island* in order to avoid *Cross Island Ledges.* In so doing, nothing more than three fathoms can be carried. After passing these islands, the course is to the *westward*, between **Foster Island** on the *north*, and **Ram Island** on the *south.* Continue to the *westward* until **Libbey Island Light-House** bears SE., when steer N. by W. up the middle of the passage, having **Ram Island** nearly over the stern. This course passes *Shag Ledge* to the eastward and *Half-Tide Rock* to the westward. Continue it until up with **Hickey Island**, which pass to the eastward, keeping in mid-channel; there will not be less than three fathoms. When the southern end of this island is on with the western end of the **Brothers**, and **Cow Point** bears W. ½ N. and the eastern end of the **Brothers** SW. by S. ½ S., steer N. ½ E., keeping in mid-river. Go close to **Fan Island**; but, on approaching **Sea-Wall Point**, give it a berth of five hundred yards, steering about N. by E., and, when abreast of it, steer N. by W. for **Hope Island** until abreast of the **lobster-packing house**, when haul up NW. by W. ½ W., and anchor well in shore, according to draught, in from *two* to *three* fathoms water.

There is comfortable anchorage in this cove in three fathoms at low water, sticky bottom.

Above *Bare Cove* strangers should not attempt to go without a pilot.

II. *By the Main Channel between* **Scabby Islands** *and the* **Brothers**.—There are no dangers in this channel until up with *Shag Ledge*, and those described on page 83 and above are common to all the entrances of the *Little Kennebec.*

When **Libbey Island Light-House** bears EAST, distant two miles and a half, steer N. by E. ½ E. for **Pierce Point**, keeping midway between the islands; passing *Shag Ledge* to the westward, give it a berth to avoid the rocks mentioned above; continue this course until past **Hickey Island**, and bring its southern end on with the western end of the **Brothers**. **Cow Point** will now bear W. ½ W.; now steer N. ½ E., and follow the directions given above.

There are several passages among the islands leading into this river from the westward, but it is not advisable for strangers to attempt them. In case of necessity, *SPRUCE ISLAND HARBOR* or *LAKEMAN HARBOR* can be made with greater safety and equal facility. Coming from the westward, outside of **Head Harbor Island**, *HEAD HARBOR* may be made with perfect safety.

Of the above-mentioned passages among the islands, there is one (the first to the westward of the main entrance) which leads between **Pulpit Rock** and the **Brothers** on the south, and **Great Spruce, Shot, Anguilar,** and **Halifax Islands** on the north, toward **Point of Main**; and there is another which leads from *Englishman Bay*, between **Cow Point** and **Rogue Island.** This latter will be described in its proper place. The former is not safe for strangers.

It may also be remarked that there is a good and nearly unobstructed passage from *Englishman Bay* into *Little Kennebec River*, between **Fan Island** and **Hickey Island.** The only danger is a ledge which makes off from **Hickey Island Point.** This channel is commonly used by the fishermen and lobster smacks.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Libbey Island Light	44° 34′ 05″	67° 22′ 02″	$4^h 29^m 28^s.1$	Fixed.	52 ft.	12

No survey has ever been made of this river, and no tidal or current data can be furnished. The strength of the current, however, interferes but little with the courses in and out, except in the *Ram Island Passage* before hauling up for **Hickey Island.** In the river the current sets generally in the direction of the channel.

VARIATION OF THE COMPASS.

The approximate magnetic variation for 1875 is about the same as **Machiasport,** viz: 17° 05′ W. The approximate annual increase is about 2′.

FROM FAN ISLAND TO THE ENTRANCE TO MASON BAY.

From **Fan Island** the coast has a general course of **WEST** for about a mile and a quarter to **Cow Point,** already described. There are several indentations in the shore-line between these two points.

CALF ISLAND.

About half a mile to the westward of **Fan Island,** and close in with the main shore, lies a small, rocky island, called **Calf Island.** It is situated in the mouth and on the western side of a large cove called *Great Cove.*

CALF POINT.

The western point of this cove is rocky and of moderate height, crowned with spruce and fir, and extends off into a low, rocky point, which is, however, tolerably bold.

GREAT COVE

is an excellent anchorage; the approaches being clear, except for one ledge, which is always bare. No directions are necessary for entering this cove except to keep the

middle of the passage, and if the wind be to the southward, round **Calf Island** and anchor between it and the main. It will be a heavy blow that will disturb this anchorage.

MAC COVE,

on the western side of **Calf Point**, between it and **Cow Point**, is a small cove with woody shores, of no importance, except in northerly winds, as there is no shelter from seaward.

ENGLISHMAN BAY.

This large arm of the sea, which affords excellent anchorage in many places and is easy of approach, lies between **Point of Main** on the east, and **Kelly Point** on the west. Between the two its width is seven miles, but the passage is narrowed by a great number of islands which lie in the entrance, through and among which lead the different channels into the bay.

In this bay there is anchorage for the largest vessels, five and six fathoms being found in the channel as far up as **Great Head.**

Point of Main is the western point of entrance to *Little Kennebec River*, and has been already described. (See page 65.)

KELLY POINT

is the northern point of the eastern entrance to *MOOSE-A-BEC REACH.* It is flat and grassy, of moderate height, and is backed by a bald, bare, rocky head, which on the western side of the point juts out into the water.

The southern point of the eastern entrance to *Moose-a-bec Reach* is formed by the northern shores of **Head Harbor Island,** a large island lying on the western side of the approach to *Englishman Bay*, and about a mile to the southward of **Kelly Point.**

Englishman Bay, from a line joining **Kelly Point** and **Point of Main**, is five miles long, to the entrance to *CHANDLER RIVER*, which empties into the northern part of the bay.

Two lights mark the eastern and western limits of the entrance to this bay. That on the eastern side is on

LIBBEY ISLAND,

which is the westernmost of the two islets of that name lying off the entrance to *Machias Bay.* It is rocky and bare, with the exception of a few dead trees near its northern end. The light-house is built on its western end, and is a granite tower, about two hundred and fifty feet distant from the keeper's dwelling, which latter is painted brown. The tower is thirty-five feet high, and shows a fixed white light of the fourth order of Fresnel from a height of fifty-two feet above sea level. It is visible twelve miles. A fog-bell, struck by machinery, is attached to this light-station.

The geographical position of **Libbey Island Light** is

Latitude - - - - - - - - -	44° 34′ 05″ N.
Longitude - - - - - - - -	67° 22′ 02″ W.

The light-house which guides to the western entrance to *Englishman Bay*, usually known as

HEAD HARBOR LIGHT,

and sometimes **Moose-a-bec Light**, is on **Mistake Island,** which forms the southern side of *HEAD HARBOR.* Mistake Island is of moderate height, with a stunted growth of trees near its western end, but is otherwise bare. The light-house is of brick, whitewashed, and about two hundred and twenty-five feet distant from the keeper's dwelling, which latter is painted brown. A covered way, whitewashed, extends about two-thirds

of the way from the tower toward the dwelling. The tower is forty feet high, and shows a revolving white light of the second order of Fresnel from a height of sixty-five feet above the sea. It revolves once in half a minute. Its geographical position is

Latitude - - - - - - - - - - 44° 28′ 27″ N.
Longitude - - - - - - - - - 67° 31′ 55″ W.

Vessels from the westward make this light and enter *Englishman Bay* by the western channel, between **Rogue Island** and the main land of **Jonesport**. Those from the eastward make **Libbey Island Light** and enter the bay by the eastern channel, between **Scabby Islands** and the **Brothers**. Both passages are good—the former having not less than eight fathoms, the latter about six.

ISLANDS
IN ENGLISHMAN BAY AND ITS APPROACHES.

In making this bay from the eastward the first island met with will be **Libbey Island**, with the light-house on its western end. One mile to the northwestward of the light is **Ram Island**, already described (page 74) as a low, rocky islet, with a scanty growth of small fir trees on its western end. A quarter of a mile to the westward of Ram Island lie the

SCABBY ISLANDS,

which are on the eastern side of the entrance to the bay. They are two small islands lying N.E. and S.W. from each other, and close together. The eastern one is conspicuous for a high, round head, with one or two dead pines looking like masts on its top. Otherwise it is bare. The western islet is lower than the other, rocky and bare, except for a few dead fir trees on its western end. (See also page 74.)

THE BROTHERS.

A mile and a quarter to the westward of the **Scabby Islands** lie the **Brothers**, two rocky islets of moderate height, lying EAST and WEST from each other. The surface is grassy, and they have a scant growth of fir clinging to their northern sides. The eastern channel into *ENGLISHMAN BAY* passes between these islands and the **Scabby Islands**.

SHAG LEDGE.

Half a mile to the northward of the **Scabby Islands**, and the same distance to the southwestward of **Point of Main**, lies a small, rocky island covered with grass, and called **Shag Ledge.** At low water long reefs of bare rocks extend off from it on both sides. This islet also lies on the eastern side of the entrance.

Pulpit Rock, a low, bare, rocky islet, lies about five-eighths of a mile WEST from the **Brothers.**

One mile to the northward of the latter, and on the western side of the channel, lies a group, composed of three small islands, nearly EAST and WEST from each other, the easternmost being one mile and five-eighths to the eastward of **Great Spruce Island,** called

HALIFAX ISLAND.

It is long and low, except at its western end, where it is joined by a sand-bar to a high, rocky head, which has a few dead spruce and pine dotting its surface. The eastern half is covered with a thin growth of scrubby fir. Next to westward of **Halifax** is

ANGUILAR ISLAND.

It is smaller than the former, and covered with a thin growth of scrubby trees. The westernmost islet of the group is in reality two islands, called

SHOT ISLANDS.

They are very small and nearly bare, there being but a few scattered trees on them. They lie N E. and S W. from each other, close together. A little less than half a mile to the westward of them, and a little over a mile to the northward of **Pulpit Rock**, is the eastern end of

GREAT SPRUCE ISLAND.

This and its companion, **Little Spruce Island,** are the southernmost of the group lying in the middle of *Englishman Bay*, and which, with the smaller islands near them, separate the approach into two channels. The northernmost and largest of the group is **Rogue Island.** Between it and the **Spruce Islands** are contained excellent harbors. **Great Spruce Island** is high and rocky and about three-quarters of a mile in diameter. Its shores are partly wooded and partly bare. The southeastern point is high, rocky, and partly wooded, with high land rising behind it. Its eastern point (that which is nearest to the **Shot Islands**) is low and has a few spruce and pine trees upon it. This island is separated from **Little Spruce,** to the westward of it, by a narrow and crooked passage, called *SPRUCE ISLAND GUT.* There is a channel through it for vessels of light draught.

LITTLE SPRUCE ISLAND

is of considerable height, with two high round heads on it, whose summits are covered with a scanty growth of scrubby fir. The sides are bare and bluff, and the water bold, except at the southern end, where a very long and dangerous ledge makes off, called *Little Spruce Island Ledge.* It is bare at low tide, and breaks heavily at all times.

ROGUE ISLAND,

which is the largest island in *Englishman Bay*, lies nearly in the middle, about a mile and a half from each shore. It is a mile and a half wide (from E. to W.) at its widest part, but its shape is so irregular that its length from N. to S. varies from a quarter of a mile to a mile and three-quarters. The shore-line is very much cut up by coves and indentations, some of which form excellent harbors of refuge, and as such are commonly used. From the **Spruce Islands** (to the southward of it) it is separated by a crooked passage from an eighth to a quarter of a mile in width. This passage is called *ROGUE ISLAND NARROWS*, and sometimes *SPRUCE ISLAND NARROWS.* The former is the preferable name. It leads from the westward into *LAKEMAN HARBOR*, or *ROGUE ISLAND HARBOR* as it is sometimes called.

The eastern shores of **Rogue Island** are high and barren. They are woody, except near the southern end, where a large portion has been burnt over and is now bare and desolate. The northeastern point is a high, wooded hill, terminating in a bare, rocky bluff of considerable height. This is called **Great Head,** and is a prominent landmark for vessels entering the bay from the eastward. The northwestern point of this island is called **Squiers Point,** a low, flat, grassy point, backed by thin woods, mostly birch and spruce. There is a long ledge making off from it about a quarter of mile, which is bare at low water. This is *Squiers Point Ledge.*

Between this point and **Great Head** is formed a large and deep cove of regular shape, called *Shorey Cove.* This is a most excellent harbor, sheltered from all winds, with good anchorage in from two to three fathoms, soft bottom. There are no obstructions. Its eastern shore is high and thickly wooded, while the southern and western

shores are partly cleared and under cultivation. On the latter there is a group of farm-houses.

The only danger in *Shorey Cove* is the long reef which makes out from **Squiers Point,** (before mentioned,) to avoid which at high water give the point a berth of five hundred yards. At low water go within one hundred and fifty yards of the end of the bare reef.

Wood, water, and fresh provisions can be readily obtained in this harbor at reasonable prices.

The southwestern point of **Rogue Island** is a high, rocky head, wooded with spruce and scrubby fir. The land between this and **Squiers Point** is high, rocky, and wooded. This point is known as **Parker Head.**

On the south side of the island, directly opposite to *Shorey Cove*, there makes in another large cove, with good water, and well sheltered from all winds, called *Lakeman* or *Rogue Island Harbor*. It may be entered from the westward through *Rogue Island Narrows*, and from the eastward by the passage between **Halifax, Anguilar,** and **Shot Islands** on the south, and **Lakeman Island** on the north. This latter is rocky, of moderate height, and wooded. It lies to the southward of the eastern point of **Rogue Island** and close to it. There is also a passage into *Lakeman Harbor* between **Great Spruce** and the **Shot Islands,** and this latter is the best entrance. It is not safe to pass between **Lakeman** and the eastern point of **Rogue Island.**

About two hundred yards above **Parker Head** a large bar runs out for about a quarter of a mile from shore in a W S W. direction. It is called *Parker Bar.*

SHOPPE ISLAND.

About a mile to the northwestward of **Cow Point,** in the eastern passage, and close in with the eastern shore of the bay, lies a low, thickly-wooded island, called **Shoppe Island.** It is about a quarter of a mile from the nearest land, which is called **Shoppe Point.** There is no passage inside of it.

That portion of *Englishman Bay* north of **Rogue Island** and **Shoppe Point** is called *MASON BAY.* There are a number of islands in it, close in-shore, which will be mentioned in the description of the northern and eastern shores of the bay.

In approaching *Englishman Bay* from the westward, coming by the outside passage, the high lands of *Head Harbor* and **Steel-Coat** or **Steel Harbor Islands** will be made first. Off the southern end of the latter lies

MISTAKE ISLAND.

This is a rocky islet of moderate height, having a stunted growth of trees near its northwestern end and a light-house on its southern end. In the vicinity of the light-house the surface is bare of trees. The light (already described on pages 86 and 87) is of the second order, revolving, and visible thirteen miles.

STEEL-COAT OR STEEL HARBOR ISLAND

is an island of a triangular shape, with the apex to the southward. It lies N. and S. and is about a mile long. It is just to the southward of **Head Harbor Island,** and forms with its northern shore the southern side of *Head Harbor.* It is mostly barren. In many places bare ledges appear on the surface, and where it is woody the growth is thin and stunted. Its southern point, called **Mistake Point,** is low, rocky, and entirely bare. It runs up to the northward into a high head, with sickly spruce and fir upon it.

HEAD HARBOR ISLAND

lies S S W. from **Rogue Island**, about two miles and a half distant. Its northern point lies W. ½ S. from **Libbey Island Light**, seven miles distant. It is large, lies nearly N W. and S E., is a little over two miles long, and a mile wide at its widest part. Its shores are of moderate height, diversified with wooded hills and cleared valleys, and houses dotting its slopes at long intervals. On its southern side it is separated from **Steel-Coat Island** by a wide passage, full of islands, known as *Head Harbor*. This is an excellent anchorage, and is very frequently resorted to as a refuge.

Off the southeastern end of **Head Harbor Island** lies **Man Island,** which forms the eastern point of the entrance to *Head Harbor*. It is remarkable for the **bare, black rocks,** called **Black Head,** at its southwestern end, and for being destitute of all vegetation.

There is also an anchorage between **Mistake** and **Steel-Coat Islands**, called *STEEL-COAT HARBOR*. It is formed by **Mistake** and **Knight Islands** on the west, and **Steel-Coat Island** on the east. There is a good anchorage, and although the passage is narrow it is perfectly safe. There are no obstructions, and both shores are bold-to. These harbors will be referred to in another place.

SEGUIN ISLAND.

Close to the northern shore of **Head Harbor Island** lies a low islet, called **Seguin Island.** It has whitish rocks cropping out here and there over its surface, and two spruce trees standing on the eastern side of its summit. This island lies on the south side of that passage into *Moose-a-bec Reach* which is known as *SEGUIN PASSAGE*. This island must not be confounded with the **Seguin Island** lying off the entrance to *Kennebec River*.

MARK ISLAND.

Half a mile to the northward of **Seguin Island**, and nearly three-quarters of a mile from the northern shore of **Head Harbor Island**, lies **Mark Island.** It is the landmark for making *Moose a-bec Reach* from the eastward. It is high and rocky, and has a large, round head on its western end. It lies EAST and WEST, and when seen from the eastward the high, round head will show above the trees, as if in the middle of the island.

Mark Island is entirely covered with a dense growth of trees. Its shores are very bold, except on it southern side, where it is shoal to a distance of two hundred and fifty yards. This island lies on the north side of the entrance to *Seguin Passage*. By vessels coming along shore, however, it is mostly left to the southward.

BALLAST ISLAND.

One mile and five-eighths to the northward of **Mark Island** lies **Ballast Island,** a small, bare island, with two or three dead spruce trees standing like spars over its surface. It lies nearly in the middle of the western passage into *Englishman Bay*, and half a mile off the western shore of **Rogue Island.** It is low and covered with a scanty growth of grass.

There are also several islets lying close in with the western shores of the bay, but they are of no importance. There is no passage inside of them, and they are so close to shore as to be out of the way of vessels passing in and out.

DESCRIPTION OF SHORES OF ENGLISHMAN BAY.

From **Cow Point** the land as it extends to the northward and westward becomes lower and shows water-worn, sandy faces. The surface is cleared, cultivated, and settled.

The cleared lands are backed by thick woods, separating them from *Little Kennebec River*. To the westward of the sand-cliffs a broad strip of meadow land stretches away to **Shoppe Point**, and extends back to a high and thickly-wooded hill to the northward.

About half a mile to the eastward of **Shoppe Point** is the mouth of a small creek, on the shores of which is a small settlement. This is known as *ENGLISHMAN RIVER*, but is of no importance as a harbor.

SHOPPE POINT

is low, grassy, cleared, and settled. It is recognizable by a group of houses standing about the middle of the point, in range with a grove of black-looking trees on the top. This is the only grove near here, although scattered trees extend back from it to the higher hills. **Shoppe Point** is a mile and one-eighth to the northwestward of **Cow Point**, and with **Shoppe Island**, which lies to the southward of it, forms the eastern side of the entrance to an excellent anchorage, called

POND COVE.

Here the eastern shore of the bay turns abruptly to the northward and runs in that direction one mile and a half to the head of the cove. The harbor is formed by this eastern shore on one side, and a long island, called

POND COVE ISLAND,

on the other. This island lies NORTH and SOUTH and is half a mile long. Its southern end is low, sandy, and covered with scrub. The northern end is the highest, and is covered with a thick growth of trees.

On the eastern shore, about one-third of a mile above **Shoppe Point**, is **Red Rock Point,** which is easily recognized by its rocks of a peculiar red color, crowned with a thick growth of spruce and fir. The land at the head of *Pond Cove* is high and thickly wooded. This cove is an excellent harbor of refuge, and may be safely entered by strangers, if of moderate draught, under any circumstances. Two and three fathoms are found at the usual anchorage. To the westward of it lies the entrance to

GREAT COVE,

which is situated between **Pond Cove Island** on the east, and **Ram Island** on the west, and extends to the head of the bay. **Ram Island** is a round, low islet, thickly wooded, and lies three-quarters of a mile to the westward of **Pond Cove Island** and a little over half a mile from the northern shore of the bay. From **Great Head** it bears nearly NORTH, distant one mile and a quarter.

Great Cove is a beautiful sheet of water, nearly circular in form, affording excellent anchorage, with two and three fathoms water and no obstructions. The banks are thickly wooded, with the exception of a small portion at its head, which shows water-worn faces, is cleared, and has one or two houses upon it. Both *Pond* and *Great Coves* lie in *MASON BAY.*

The northern shore of *Mason Bay* runs in nearly an EAST and WEST direction, is mostly well wooded, and of moderate height. A mile and a quarter to the westward of **Pond Cove Island** is the entrance to

CHANDLER RIVER,

which flows into the bay on its northern side, about midway between its eastern and western ends. This river is only an arm of the bay, and runs nearly NORTH and SOUTH for a little over two miles to the small settlement of **Jonesboro'**. The entrance is

divided by a low and thickly-wooded islet, known as **Fellows Island.** The eastern channel is the narrowest, and is not safe for strangers. It leads between **Fellows Point,** the north point of the island, and **Knips Point,** the eastern point of the entrance to the river. Behind this point is a small cove, with partly-cleared shores showing sandy faces. This is called *Sawyer Cove.*

At low water there is no passage through the eastern channel. The south end of **Fellows Island** is bare and backed by a growth of scrubby fir. A long reef, bare in some places at ordinary high water, makes off from it S. by E. for five hundred yards.

In the middle of the western or main channel into *Chandler River* lies an islet, about fifteen feet high, composed mostly of sand and pebbles, and destitute of all vegetation except a little grass on top. This is **Little Mark Island,** and is to be left to the eastward coming in.

A rocky ledge, scarcely covered at high water, lies near the eastern shore of the eastern channel off **Knips Point.**

The western point of the entrance to *Chandler River* is known as **Newbury Point.** It is low and rocky, and covered with scrubby bushes and a few spruce. It forms also the northern point of the entrance to the *Western Branch of Mason Bay,* which here makes off to the westward for about two miles.

About a third of a mile above **Newbury Point** is **Look Head.** It is high and thickly wooded. Here the two shores of *Chandler River* approach each other, leaving but a very narrow passage between. It is, however, entirely unobstructed, and may be safely passed by keeping in the middle. After passing these *Narrows* (which are nearly half a mile long) the river widens into a sort of bay about half a mile wide. Its western shores and those at its head are mostly cleared, cultivated, and settled.

At the northern end of the *Narrows,* and on the west bank, is **Look Point,** a quarter of a mile above the head of the same name. It has two or three houses on it, and is easily distinguished by the sand-cliffs at its eastern end, at the foot of which lines of stones have been laid as a sort of sea-wall. The surface is under cultivation. Behind the point makes in *LOOK BAY.*

On the eastern shore, abreast of **Look Point,** a long, narrow cove, called *Tenney Cove,* makes in to the eastward. Into the head of this cove a small creek, called *Tenney Creek,* discharges itself. Both banks are wooded.

There are some wooded lands in *Look Bay,* but the shores are mostly cleared and cultivated, and show sandy, water-worn faces. The northern point of the entrance to *Tenney Cove* is low, with a few spruce and small fir trees fringing its surface. It is known as **Board Point.** A long, bare reef extends off from it two hundred yards. On its northern side makes in *Tide Mill Creek,* which runs first to the eastward, then for about three-quarters of a mile to the northward to the mills. The northern side of the entrance to this creek is called **Deep Hole Point.** It is woody, and has water-worn, sandy faces, and takes its name from a deep hole said to exist in this vicinity.

On the western bank, about three-quarters of a mile above **Look Point,** is a low, thickly-wooded point, called **Calton Point.** It is nearly opposite to, but a little above, **Deep Hole Point.** Here the river becomes narrower, with a width of about a quarter of a mile. The channel leads to the westward, the course being about N. ½ W., between cleared and cultivated banks. The western shore is grassy and has a gentle slope. The eastern banks are composed of water-worn, sandy faces, backed by grassy and cultivated lands.

The settlement of **Jonesboro',** about two miles above **Look Point,** is a small hamlet of little importance, standing on cleared, grassy land. There is a probability, however,

of some coasting trade being attracted hither on account of the granite quarry lately opened on the eastern shore. This quarry is situated about half a mile below the town. A long wharf, with the necessary derricks, has been built here for loading the stone vessels.

At **Jonesboro'** the river turns abruptly to the westward, but above this point does not merit any detailed description. It is usually known as *Mill Creek* beyond the settlement. The

WESTERN BRANCH

of *MASON BAY*, as before mentioned, makes in to the westward, between **Newbury** and **Farnsworth Point.** In the middle of its mouth lies **Rodgers Island,** which is thickly wooded. The main channel leads between **Newbury Point** and the northeastern point of this island, called **Rodgers Point.** This is a grassy point of moderate height, covered with trees.

Nearly in the middle of the channel off **Rodgers Island** lies a round rock, awash at high water, called *Seal Rock.*

All of the shores of *Western Branch* are well wooded with scrubby trees. There are no cleared lands or settlements until reaching the head, where the clearings begin. There is a little village or hamlet here, which forms part of the township of **Jonesport.**

At the northern end of the passage between **Rodgers Island** and the western shore lies **Little Hen Island.** It is small and low, covered with scrub and a few trees. Here the flats, which are dry at low water, begin, and above this there is no passage except at high water. The only trade in this part of the bay is in cordwood.

The western shores of Mason Bay have a general course from **Farnsworth Point S S W.** They are diversified with cultivated and cleared lands and thickly-wooded slopes. The land is not very high, and settlements are few. This shore is generally shoal in its approaches, and should receive a berth.

About two hundred yards above **Parker Head** (the southwestern point of **Rogue Island**) a long bar makes out in a W S W. direction about a quarter of a mile. It is quite shoal, and should be buoyed. From the **Jonesport** shore, above **Parker Head,** another long point, covered with boulders, extends for nearly three-quarters of a mile in a S E. by S. direction. This is generally known as *Rodgers Bar.* With *Parker Bar* on the opposite shore it greatly obstructs this passage, as the ends of the two bars overlap, although there is a wide channel between them. It requires considerable care to avoid being set on to one or the other. Proper directions will be given for this passage, but strangers are not advised to attempt it until both bars have been buoyed.

APPEARANCE OF APPROACHES TO AND SHORES OF ENGLISHMAN BAY.

I. *Coming from the eastward.*—In approaching the bay from the eastward, the first noticeable object will be **Libbey Island Light-House,** which will show as a granite tower near a small brown dwelling-house, both standing on the western end of a low, rocky island, which has a few dead trees on its northeastern end. Passing it, **Ram Island** will be seen to the northwestward. This islet will appear low and rocky, with a scanty growth of fir on its western end. Just to the westward of **Ram Island** the two low, barren, and rocky islets, known as the **Scabby Islands,** will be seen. These lie on the eastern side of the entrance. The eastern islet may be known by its high, round head, on the summit of which stand, like masts, a few dead pines. The western islet is lower and has a few dead fir trees on its eastern end.

On the western side of this channel, a mile and a quarter from the **Scabby Islands**, will appear two rocky islets of moderate height, with a grassy surface, and a scanty growth of fir trees clinging to their northern sides. These are the **Brothers.** Between them and the **Scabby Islands**, but in the distance, will appear, first, the entrance to *Little Kennebec River*, and stretching to the westward from that entrance the rocky, wooded shores between **Sea-Wall** and **Cow Point.** This latter will appear as a rocky point of moderate height, covered thickly with trees.

Behind the **Brothers**, and to the westward of them, will be seen the high, wooded shores of **Rogue** and **Great Spruce Islands**; to the southward of the latter, the heavily-timbered shores of **Mark Island**, and the rocky, wooded lands on the northern and eastern faces of **Head Harbor Island.**

Passing now to the westward of **Libbey Island Light** and entering the channel between the **Brothers** and **Scabby Islands**, look up into the entrance to *Little Kennebec River*, which will bear a little to the eastward of NORTH. A little to the right of the entrance, and not more than half a mile distant, is *Shag Ledge*, in range with **Point of Main.** Due NORTH, about a mile and three-quarters, there will be seen a small, low island, dotted here and there with stunted trees, lying nearly in the mouth of the river. This is **Hickey Island.**

On the western side of this channel a high, wooded hill, terminating in a bare, bluff, rocky point of considerable height, will appear. This is **Great Head,** the north-eastern end of **Rogue Island.** The land near the southern end of the island will present a very barren and desolate appearance, having been burned over some years ago. In range with the eastern end of **Rogue Island** will be seen a low islet joined by a sand-bar at its western end to a high, rocky head, which has a few dead spruce upon it. Its eastern part has a thin growth of scrubby trees. This is **Halifax Island.** Just to the westward of it, the thinly-wooded islet, called **Anguilar Island,** will appear; and to the westward of the latter, the islets with a few scattered trees upon them are **Shot Islands.** The wooded shores of *Mason Bay* will be seen in the distance, between **Cow Point** and **Great Head.**

On coming abreast of **Cow Point**, **Shoppe Point** will be recognized on the eastern shore, about a mile above the former. It will appear as a low, cleared, grassy point, with a group of houses on it in range with a group of black-looking trees. The low, thickly-wooded island to the southward of this point is **Shoppe Island,** and to the westward of this is the entrance to *Pond Cove.* **Pond Cove Island** will appear as a thickly-wooded island, low and sandy at its southern end, and covered mostly with scrub. The entrance to **Pond Cove** is easily recognized by the *peculiar red rocks* just above **Shoppe Point**, and, on well opening the cove, a large white building will be seen on the east bank, to which a wharf is attached. This is a "**lobster-packing house.**"

If bound up into *Mason Bay*, when abreast of **Great Head**, **Shoppe Island** will be to eastward; **Pond Cove Island** nearly abeam on the same side; and nearly ahead, but a little on the eastern side, a low, rocky, thickly-wooded islet, called **Ram Island.** Directly ahead, and about a mile and a half off, will be seen a wooded island with a low, bare, rocky point at its southern end. This is **Fellows Island.** To the westward of it, and close over to the western shore, a thickly-wooded island will appear. This is **Rodgers Island.** The principal entrance to *CHANDLER RIVER* lies between these two islands. While abreast of **Great Head** look up into both *Pond Cove* and *Great Cove*—the former embraced between **Shoppe Point** and **Pond Cove Island**, the latter between **Pond Cove** and **Ram Islands.**

Leaving **Great Head** and steering to the northwestward, there will be opened to the westward of the head a large semi-circular cove, formed on the northern side of **Rogue Island**, called *Shorey Cove.* Its shores will appear as follows: The eastern shores high and thickly wooded; the western partly cleared, and having a group of houses on the bank. **Squiers Point,** the western point of the entrance to this cove, will appear as a low, flat, grassy point, backed by open woods. This cove can be entered when past **Great Head**, which is quite bold-to. Excellent anchorage may be had in from two to three fathoms, sheltered from all winds except northerly, and affording a sweep of only two miles even to those. This is one of the best harbors in the bay.

Bound up *CHANDLER RIVER* or *Western Branch*, the course leads between **Fellows** and **Rodgers Islands**, and when between them, pass to the southward and westward of an islet, composed mostly of sand and pebbles, with a little grass on top. This is **Little Mark Island,** and lies nearly in the middle of the entrance.

To enter *CHANDLER RIVER*, now haul to the northeastward, passing to the southward and eastward of a low, rocky point, covered with bushes and a few scrubby spruce, called **Newbury Point.** **Knips Point** will be on the eastern point of the entrance to the river, and must not be approached, owing to a bad ledge lying on the eastern side of the channel off this point. When the river is fairly opened, look up the *Narrows* between **Look Head** (which is the high, thickly-wooded head on the western shore) and the timbered shores on the eastern bank, on the southern side of *Tenney Cove.*

Bound into *Western Branch*, **Newbury Point** will be to the eastward, and **Farnsworth Point** and **Rodgers Island** to the westward. The latter is easily recognized, being thickly wooded and larger than any of the islets in this part of the bay. It lies nearly in the middle of the entrance. Its northern point, called **Rodgers Point**, will be seen as a grassy point covered with trees.

Nearly in the middle of the channel will appear (except at high water) a round rock. This is *Seal Rock,* awash at high water, and must receive a berth of one hundred yards. To the northwestward will be seen a low island, covered with scrub and a few trees. This is **Little Hen Island,** about a third of a mile to the northwestward of **Rodgers Island**, and surrounded by shoal water. Both shores of *Western Branch* will be seen to be thickly wooded, but at the head cleared and settled lands will appear.

DANGERS
IN APPROACHING AND ENTERING ENGLISHMAN BAY.

I. *Coming from the eastward.*—Many coasters and fishermen use the passage which leads along shore, between **Fan** and **Hickey Islands**, up to **Cow Point.** This is an excellent and almost unobstructed passage, the only danger being *the ledge off the northern end of* **Hickey Island.** This ledge is an extension of the island, and is known as **Hickey Island Point.** After passing it there are no dangers; but the main entrance from the eastward is, as before mentioned, between the **Scabby Islands** and the **Brothers.** In this passage, after entering, look out—first, for the reefs off

SHAG LEDGE,

which here make off to the southwestward a considerable distance; but by keeping the middle of the passage they are easily avoided. After passing this ledge do not approach the western side of the channel too closely, to avoid the

COD HEAD,

a small rock, out at low water, which lies a quarter of a mile to the southwestward of

Hickey Island. It is not buoyed. After passing it the channel is clear. It is only necessary to keep clear of the banks on either hand.

Great Head, however, (the northeastern point of **Rogue Island,**) is quite bold, and may be approached close-to.

If intending to anchor in *Shorey Cove*, beware of

SQUIERS POINT LEDGE,

a long reef making out from **Squiers Point** in an easterly direction, and is nearly all out at low water. To avoid it, if the tide is in give the point a berth of five hundred yards. At low water the bare rock may be approached within one hundred and fifty yards.

Bound up *CHANDLER RIVER* there are no obstructions until near **Fellows Island,** when there will be seen to the eastward an islet, composed mostly of sand and pebbles, with a little grass on top, called **Little Mark Island,** and it is to be left to the eastward. After passing it there are no dangers, although the channel is very shoal. It is only necessary to give the points a small berth in passing them, or, in other words, to keep in the middle of the river.

Bound into *WESTERN BRANCH*, look out for

SEAL ROCK,

which lies nearly in the middle of the passage between **Rodgers Island** and **Newbury Point.** This rock is awash at high water. After passing it keep as nearly as possible in the middle of the passage to avoid

RODGERS ISLAND POINT,

a line of bad ledges, awash at high water, which makes off from the northern end of the island about three hundred yards. When clear of these the course leads to the westward, passing to the northward of

MASON BAY LEDGE,

a dangerous rock, covered at high water, lying **W.** by **N.** from the northern end of **Rodgers Island,** at a distance of six hundred yards.

FLAKE BAR.

The passage between **Rodgers Island** and **Farnsworth Point** is exceedingly narrow, the channel being nearly closed by a long sand-spit making off from the main land and known as *Flake Bar.* **Farnsworth Point** is also sometimes called **Flake Point.**

The southeastern point of **Rodgers Island** should not be approached closely, as there is a reef making out from it about a hundred yards, bare at low water.

The southern point of **Fellows Island** has a long reef making out from it in a **S.** by **E.** direction for nearly five hundred yards. It is bare in places at ordinary high water.

Strangers should not attempt the passage into *Western Branch*, which leads between **Rodgers Island** and **Farnsworth Point.** Unless of light draught, vessels should always anchor in *Pond Cove* or *Shorey Cove.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ENGLISHMAN BAY.

I. *Coming from the eastward through Fan Island Channel.*—The course through this channel to clear **Cow Point** is **W. ½ S.**, which may be continued until the passage is fairly open into the bay, when steer **N W. ½ W.** nearly, for **Great Head.** If bound into *Pond Cove*,

when abreast of **Shoppe Island** haul gradually around the island to the northward, and steer N. ½ E., having **Pond Cove Island** on the western side, and **Red Rock Point** on the eastern. Anchor off the factory, in three fathoms water, soft bottom, or run farther up into the cove, according to draught of water. There are no dangers.

Bound into *Great Cove:* Continue the course to the northward for **Ram Island** until the passage between it and **Pond Cove Island** is fairly opened, when steer N. by E. ½ E., and anchor at discretion, in from two to three fathoms. There are no dangers.

Bound into *Shorey Cove:* Continue the course NW. ¼ W. for **Great Head.** Round the head into the harbor, but be careful not to go too near **Squiers Point.** Anchor at pleasure, in from two to three fathoms at low water. The holding-ground is excellent.

Bound up *Chandler River*, take a pilot; but should it so happen that none can be obtained, continue the course to the northward, past **Ram Island**, and enter midway between **Fellows** and **Rodgers Islands**, leaving **Little Mark Island** to the eastward. When about midway between **Newbury Point** and **Fellows Island** turn to the northeastward, steering about NE. between the island and the point until the *Narrows* are fairly open.

The *Narrows* may be safely passed by keeping in the middle, after which the course is nearly N. by E. for **Calton Point**, which pass to the eastward. After passing it there are no directions necessary, except to keep in the middle of the river until up with the quarry wharf. Not more than four or five feet at low water can be carried up to **Jonesboro'**. Only vessels of light draught enter the river.

Bound into *Western Branch:* When between **Fellows** and **Rodgers Islands**, keep the middle of the passage to the westward until past **Rodgers Island Point**, when steer W. ¼ N., heading midway between two high sand-cliffs, with gently-sloping grass-lands between them, which will be seen at the head of the bay. This course clears *Mason Bay Ledge.* Anchor off **Little Hen Island**, unless it be high water. Above this no sailing directions should be given. A pilot must always be taken by strangers wishing to go above *Great Cove.* It rarely happens that one cannot be obtained for *Chandler River* or *Western Branch*, and it is not safe to attempt to enter without one.

II. *To enter from the eastward by the Main Channel.*—After passing **Libbey Island Light-House** keep to the westward until midway between the **Scabby Islands** and the **Brothers.** The course is now NW., which will lead up the middle of the passage. After this follow the directions previously given.

APPEARANCE OF APPROACHES TO ENGLISHMAN BAY COMING FROM THE WESTWARD OUTSIDE OF MISTAKE ISLAND.

As a rule, strangers should always pass to the southward of the islands, between **Petit Manan** and *Head Harbor.* There are dangerous ledges off **Petit Manan**, and the passages among the islands in *Moose-a-bec Reach* are narrow and intricate. Coasters, however, almost invariably use the in-shore passage.

In coming from the westward, after passing **Petit Manan Island**, the first prominent landmark will be the light-tower on **Mistake Island**, and back of it the high, wooded lands of *Head Harbor.* The light-house shows as a white tower on the southern end of the island, which has a stunted growth of trees on it. When within about five miles of the light, pass to the southward of a great number of islands, most of them small and barren. Of these the southernmost one is called **Crumple Island.** It is very remarkable in appearance, looking like a number of round hillocks joining each other. The middle hillock is the highest and has one or two tall trees on it, while that which is next to the southwestward is bare, with the exception of two tall leaning trees on its summit, which form a very conspicuous mark.

To the northward of **Crumple Island** and close to it is **Fisherman Island,** which is low, rocky, and dotted with numerous tall, dead trees, looking somewhat like the spars of shipping. A little farther to the northward is **Browney Island,** which is thickly wooded in the middle, with tall trees projecting here and there above the general outline of woods. The western part of the island is bare of everything excepting numerous dead trees, while the eastern end is a high, bare, rocky head, sloping gently to the shore-line.

The islands to the westward of this group lie in the western entrance to *MOOSE-A-BEC REACH.* They are very numerous. (See *Moose-a-bec Reach.*)

The high, wooded lands next to the eastward of **Fisherman** and **Crumple Islands** are on **Great Wass Island.** This is a large and very irregularly-shaped island, lying NORTH and SOUTH, and about four miles long. Its northern half is usually called **Beal Island.** It lies on the south side of *Moose-a-bec Reach.* **Great Wass Island** is about a mile and a half to the westward of **Head Harbor Island,** but the passage between them is so full of islets, ledges, and sunken rocks as to be entirely unfit for strangers.

When abreast of **Mistake Island** there will be noticed to the northward and eastward what appears to be the eastern end of **Head Harbor Island.** It will show as a high, bare, bluff point, composed of black rocks. This is **Black Head** on **Man Island,** which lies on the eastern side of the approach to *Head Harbor.* When past **Steel-Coat** or **Steel Harbor Island,** (which will appear rocky and covered with a sickly growth of small fir,) look up into *HEAD HARBOR,* and the passage is clear.

Rounding **Head Harbor Island,** *Englishman Bay* will open. The course leads to the northward along the eastern shore of the island, with the **Spruce Islands** toward the western shore. The high lands of **Rogue Island** will appear behind them. **Great Spruce Island,** the easternmost of the two, will appear as a high, rocky island, partly wooded and partly bare. **Little Spruce Island** will be recognized by two high, round heads, whose summits are covered with a scanty growth of scrubby trees.

To the eastward of the **Spruce Islands** numerous rocky islets will be seen, apparently shutting off all approach to the bay on that side. On the western side, and nearly ahead, **Mark Island** will appear—a high, bluff, rocky island, with a large, round head on its western end, and entirely covered with a dense growth of trees. When abreast of it, the eastern passage into *Englishman Bay* is fairly opened, with **Ballast Island** in the middle. This is a small, bare island, with two or three dead spruce trees standing like spars over its surface.

On the eastern side of the passage will be seen the high, rocky, and wooded shore of **Rogue Island.** The channel leads between this and **Ballast Island.**

The eastern entrance to *MOOSE-A-BEC REACH* will be passed to the eastward, which will appear full of islets, and has a large settlement on its northern shore. The settlement is the little village of **Jonesport.**

The western shore of *Englishman Bay* will appear as moderately high land, diversified with cleared and cultivated patches and thick woods. Houses may be seen at long intervals, this coast being very thinly settled. The general course of the western shore is N NE.

DANGERS
IN APPROACHING AND ENTERING ENGLISHMAN BAY.

II. *Coming from the westward.*—After passing the ledges off **Petit Manan Island,** there are no obstructions until near **Mistake Island.** Do not come too close to **Man Island,** as there is *a sunken rock, with a few feet of water on it,* one hundred yards S W. from **Black Head.**

Pass tolerably close to the eastern shore of **Head Harbor Island**, and the same is true of **Mark Island**; but in approaching the latter beware of the very dangerous

EASTERN LEDGES,

lying in the middle of the passage, but on the eastern side of the channel. They are two small ledges, one of which is bare at low water, and lies E NE. and W SW. from each other, with from six to ten fathoms between them. The easternmost ledge, which is dry at low water, is about three hundred yards from the western rock. Both are bold-to.

These ledges bear SOUTH from **Spruce Island Gut**, one mile and three-eighths; E. by N. ½ N. from **Seguin Island**, one mile and a half; and E. by S. ½ S. from **Mark Island**, one mile and an eighth. The channel between these and the islands is very deep and entirely unobstructed. These ledges are not buoyed. After passing them the channel is clear until near the southwestern end of **Rogue Island**, (**Parker Head**,) when look out for

PARKER BAR,

making out from the island a little above **Parker Head**, in a W SW. direction, about a quarter of a mile. It is not buoyed, and must be carefully avoided. Haul to the northwestward to clear it, and when past it again haul to the northeast to avoid

RODGERS BAR,

which makes out from the **Jonesport** shore to a distance of half a mile, and is mostly bare at low water. Neither is this bar buoyed, which renders this channel unsafe without a pilot. Buoys have been recommended on both bars.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ENGLISHMAN BAY.

I. *Coming from the westward, outside of everything.*—Give **Petit Manan Light-House** a berth of five miles, and steer NE. by E. ½ E. until up with **Head Harbor Light**, (sometimes called **Moose-a-bec Light**,) when haul to the northward, giving the light a berth of about a mile. Keep the course past the entrance to *Head Harbor*, and steer to the northward, along the shores of the island, until the eastern end of **Mark Island** bears NW. by N. ½ N., when steer that course until within three-eighths of a mile of the island. This course passes eastern ledges seven-eighths of a mile to the westward, and carries not less than sixteen fathoms of water. Now steer N. ½ E., carrying not less than six fathoms, until past **Ballast Island** and approaching **Parker Head**, when edge off to the westward to avoid *Parker Bar*. When clear of this, steer NE. ½ N. to avoid *Rodgers Bar*. There will not be less than four fathoms.

When up with **Squiers Point**, bound into *Shorey Cove*, round the point to the eastward, (giving it a berth of about five hundred yards to avoid the ledge,) and anchor at discretion, in from two to four fathoms of water.

Bound up *Chandler River*, steer about N N E. until up with **Fellows Island**, after which follow the directions given for the river on page 97.

II. *To pass inside of Simms Rock and enter Englishman Bay.*—*Simms Rock* is a dangerous sunken rock, two miles S. ½ E. from **Petit Manan Light**, and has six feet at lowest tides. A spar-buoy, painted red and black, in horizontal stripes, is placed in eight fathoms on the northeast side of the rock. To go between it and **Petit Manan**, give the island a berth of about one mile, and steer E. ½ N., passing about a mile outside of **Head Harbor Light**. There will be deep water. Round the southeastern end of **Head Harbor Island** and steer to the northward, carrying not less than six fathoms, until

the eastern end of **Mark Island** bears NW. by N. ½ N., when steer for it, and follow the directions given above. The course E. ½ N. leaves *Simms Rock* about a mile to the southward.

III. *Having come through Moose-a-bec Reach, to enter Englishman Bay.*—When abreast of **Mark Island** steer NORTH, carrying not less than six fathoms until up with **Ballast Island**, which pass to the eastward. When past it haul to the westward to avoid *Parker Bar*, and when clear of this danger steer NE. ½ N. to clear *Rodgers Bar*. When up with **Squiers Point**, follow the directions given above for *Shorey Cove* and *Chandler River*.

In beating to windward, keep the view of the sea open to the westward of **Parker Head** and **Little Spruce Island** until past *Parker Bar*, and do not approach the western shore nearer than a mile to clear *Rodgers Bar*.

LAKEMAN HARBOR.

This harbor (see page 89) is situated on the south side of **Rogue Island**, nearly opposite to *Shorey Cove*. It is an excellent harbor of refuge, and is well sheltered from all winds. There are several ways of approach to it from the eastward, and one from the westward, through *Rogue Island Narrows;* but this latter is much obstructed, and dangerous without an experienced pilot. The eastern passages are, first: One between **Lakeman Island** on the north, and **Halifax, Anguilar,** and **Shot Islands** on the south; secondly, one between **Halifax Island** on the north, and the **Brothers** on the south. This latter passage leads to the westward toward **Great Spruce Island**, leaving **Anguilar** and **Shot Islands** to the northward, and **Pulpit Rock** to the southward, and then turns to the northward, running between **Spruce Island Point** and the **Shot Islands** into the harbor. The harbor may also be entered by the passage between **Great Spruce Island** and **Pulpit Rock**. All things considered, however, strangers are advised rather to attempt to make the *Little Kennebec*, *Pond Cove*, or *Shorey Cove*, than this harbor, as the passages among the islands have not been surveyed and there may be dangers which are now unknown.

No sailing directions are necessary for either of these channels, except to keep in the middle of the passage. The harbor cannot be entered at night without an experienced *local* pilot.

HEAD HARBOR.

This comfortable harbor of refuge (see page 90) lies on the south side of **Head Harbor Island**, and is sheltered from southerly winds by **Steel-Coat** or **Steel Harbor Island**. It is a much-used anchorage, being secure from all winds, and is easy of access. The approach from the westward is not safe, as the passage between **Great Wass Island** and **Head Harbor Island** is full of islands and shoals. The main entrance is from the southward, between the southeastern point of **Head Harbor Island** and **Mistake Point**, the southern end of **Steel Harbor Island**.

On approaching it from the eastward or southward the light-house on **Mistake Island** will be the first prominent object noticed. It is on the western side of the entrance. **Mistake Island** is bare, except for a stunted growth of trees near its northwestern end.

Man Island, on the eastern side of the entrance, is remarkable for the high, bare, black, rocky head at its southwestern end. This is **Black Head**.

A very peculiar-looking, long, white, bare, and rocky hill, with a sharp peak in the middle, is seen at the northern end of the harbor on coming in. This is known simply as **The Head**, and gives the name to the harbor.

The shores of **Steel-Coat Island** are rocky and of moderate height, with a growth of sickly trees on them. **Mistake Point** is low, rocky, and entirely bare.

DANGERS.

The only danger in entering *Head Harbor* is *the sunken rock* lying a hundred yards S W. from **Man Island.** It has a few feet on it at low water, and is not buoyed. (See page 98.)

SAILING DIRECTIONS.

To enter this harbor from the eastward, bring the light-house on **Mistake Island** to bear S W. by S., and run for it until opening the middle of the passage bearing NORTH, when steer N. ½ E. up the middle until up with **White Point,** (or **Kelly Point** as it is generally called,) which is the western point of entrance to the *Cow Yard* or *Inner Harbor.* Here anchor, or keep off to the northeastward and run into *Inner Harbor.*

The Cow Yard is a cove of peculiar shape, on the southern side of **Head Harbor Island** Its course is first about N. by E. ½ E. for about three hundred and fifty yards, and then it turns abruptly to the eastward, running nearly E SE. for an eighth of a mile to its head. It is only two hundred and fifty yards wide at its mouth, between **Kelly Point** on the west, and **Killwood Point** on the east, and is narrower as it approaches its head.

Kelly Point is a low, white, rocky point, bare of trees, but backed by a thin growth of spruce and fir. **Killwood Point** is low, bare, and grassy. *To enter the Cow Yard,* when on the N. ½ E. course, abreast of **Money Island,** (the small rocky island, crowned with scrubby fir and birch, lying on the west going in,) steer NORTH, and pass between **Kelly Point** and a bare, rocky islet lying off **Killwood Point.** The channel is midway between the point and the islet. Anchor at discretion. There are from two to four fathoms in this harbor, and it is sheltered from all winds. It is not, however, advisable to enter the *Inner Harbor* unless going to stay some time, or unless the sea is uncomfortable in the anchorage off **Kelly Point,** an occurrence of great rarity.

STEEL-COAT HARBOR.

Between **Steel-Coat Island** on the east, and **Mistake** and **Knight Islands** on the west, there is a narrow passage, with deep water, which leads into what is called *Steel-Coat* or *Steel Harbor.* Both shores are bold, and there are no obstructions in the channel. The harbor itself is wide and perfectly sheltered. A peculiarity of this passage is, that the rocks are marked with names painted upon them. There are no sailing directions necessary for it, other than to run for the light until within a hundred yards of it, and then steer nearly WEST, which course will lead into the passage. After entering the passage keep the middle until out into the harbor, where anchor at discretion, in from two to three fathoms, soft bottom.

LIGHT-HOUSES.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Sea Level.	Distance visible in nautical miles.
		In arc.	In time.				
Libbey Island Lt.	44° 34′ 05″	67° 22′ 02″	$4^h 29^m 28.1^s$	Fixed.	.....	52 ft.	12
Moose-a-bec Light.	44° 28′ 27″	67° 31′ 55″	$4^h 30^m 07.7^s$	Revol'g.	$0^m\ 30^s$	65 ft.	13

TIDES.

In the neighboring port of **Jonesport** a pretty good determination of the times and height of flood and ebb tide has been obtained, and will serve, approximately, for this

bay. The predictions of times and heights of high water at **Jonesport** will be found in the "**Tide Table for the Atlantic Coast,**" published annually by the Coast Survey. The mean rise and fall of tides in *Englishman Bay* is about thirteen feet. The time of high water after full and change is, approximately, $11^h\ 15^m$.

VARIATION OF COMPASS.

The magnetic variation in 1875 is, approximately, 17° 00′ **WEST**, with an annual increase of 2′.

FOG SIGNAL AT LIBBEY ISLAND.

There is a fog-bell on **Libbey Island**, near the light-house. It is struck by machinery.

MOOSE-A-BEC REACH.

Vessels proceeding to the westward along the coast, when abreast of **Libbey Island**, may go outside of the light on **Mistake Island**, and steer **W. by S. ½ S.** to clear **Long Island**, (off *Blue Hill Bay;*) or they may go through *Moose-a-bec Reach.* This is a narrow passage, formed by the main land on the north and a group of islands on the south, of which **Head Harbor, Beal, Norton,** and **Sheep Islands** are the principal.

The reach is full of dangerous ledges; its channels are intricate, and it is not safe for a stranger without full directions. Inasmuch, however, as it is much the shortest of the passages between **Machias** and **Mount Desert**, and affords excellent anchorage in all winds, it is commonly used by coasters.

The length of the reach from **Kelly Point** on the east, to **Moose Neck** on the west, is a little over seven miles. Its width varies, being in some places not over a third of a mile, and in others less than a quarter, while in its widest part it is over a mile in width. There are several channels leading into it. Those from the southward, of which there are three, are only used by vessels desirous of making a harbor, and are not safe for strangers under any circumstances. The passage used by vessels coming along shore enters on the east between **Kelly Point** and **Head Harbor Island**, passes between the main land of **Jonesport** and the northern shores of **Beal** and **Norton Island**, and, threading the intricate channels among the islands to the westward, passes between **Sheep** and **Ram Islands** (through what is called *TABBOTT NARROWS*) to **Cape Split,** the eastern point of the entrance to *Pleasant Bay.* Hence, the way is clear to **Petit Manan**. Or, after passing through *Tabbott Narrows* the course may be laid to the southwestward, leaving **Nash Island** (on which is a light-house) to the northward, and after passing it the course may be shaped for **Petit Manan**.

ISLANDS IN THE REACH.

Coming from the eastward, the first island met with lies in the middle of the entrance and is called

MARK ISLAND.

It is the landmark for vessels bound to the westward through the reach. It lies three-quarters of a mile from the north shore of **Head Harbor Island**; is high, rocky, and entirely covered with a dense growth of trees. On its western end is a large, round head, which, when seen from the eastward, will appear over the trees as if it were in the middle. The shores are bold-to, except on the south side, where there is a ledge extending out an eighth of a mile. The *SEGUIN PASSAGE* leaves this island to the northward, but vessels coming along shore generally leave it to the southward.

SEGUIN ISLAND

lies close to the north shore of **Head Harbor Island.** The passage between it and **Mark Island** is a little over half a mile wide. The islet is low, and has whitish rock cropping out here and there over its surface, and two spruce trees standing on the eastern side of its highest point. It gives the name to the passage, which is mostly used by steamers. Ten feet at low water may be carried through the passage between this island and **Head Harbor Island,** but it is narrow and full of rocks, and is fit only for small boats.

HEAD HARBOR ISLAND,

(see page 90) lies about two miles and a half to the southwestward of the **Spruce Islands.** Its northern point bears W. ¼ S. from **Libbey Island Light,** distant seven miles. It extends nearly NW. and SE., and is a little over two miles long. Its shores are diversified with wooded hills and cleared valleys, and dotted with houses at long intervals.

The next large island to the westward of this is

BEAL ISLAND,

the northwestern part of **Great Wass Island;** it is a large and moderately high island, nearly a mile to the westward of **Head Harbor Island,** and on the southern side of the reach. Its east, west, and north shores are of moderate height and thinly settled. In places on the northwestern side appear water-worn, sandy faces. Its northwest point, called **Beal Point,** is quite low, bare of grass, but has a group of stunted firs standing some distance back. This island is separated from

GREAT WASS ISLAND,

lying between it and **Head Harbor Island,** by a large and wide bay, called *ALLEY BAY.* At low water the two islands are joined, but at high water boats may pass between them through a narrow and rocky passage, called *FLYING PLACE,* which leads into *Alley Bay.* This bay is shallow, but affords good shelter. The bottom is soft, and vessels lie aground at low water without damage.

Great Wass Island is very irregular in shape and about four miles long. Its shores are rocky, of various heights, thinly settled, and generally well wooded. About a mile and a half below its north end it is nearly cut in two by two coves which make in on its east and west sides. It is the largest of the islands in this vicinity. Off its northern end, at a distance of one-third of a mile, is

PIG ISLAND,

of moderate height, mostly bare, with ledges cropping out here and there over its surface. There are also a few stunted spruce. It lies W. by N. and E. by S., and is nearly half a mile long. There is no passage between it and **Great Wass Island** except at high water.

A low islet, lying about SSW. from the southwest point of **Pig Island,** is called **Sawyer Island.** At low water it is joined to the former.

THE VIRGIN'S BREASTS.

In the middle of the passage, after passing **Mark Island,** there are two rocky islets. That to the northward is called **Virgin Island;** that to the southward, the **Nipple.** The common name applied to both of them is the **Virgin's Breasts.** The northern islet has a round, grassy top, and both are surrounded by ledges.

SHEEP AND LITTLE SHEEP ISLANDS.

After passing the **Virgin's Breasts**, the next island met with in the course to the westward is a low, rocky islet, surrounded by ledges, called **Little Sheep Island.** It is three-eighths of a mile E. by S. ½ S. from **Pig Island**, and five-eighths of a mile S S W. from **Kelly Point.** About five hundred yards S. by W. from it lies **Sheep Island,** which is about three hundred and fifty yards long in a N W. and S E. direction, and lies a quarter of a mile to the northwestward of the western end of **Head Harbor Island.** Between **Sheep Island** and the latter is the best channel into the passage between **Head Harbor Island** and **Great Wass Islands.** It leads to the southwestward, toward a low, rocky islet, covered with grass and with a single tree upon it, which lies in the middle of the passage, and is called **One Bush Island.** Strangers, however, must not attempt this passage.

FRENCH-HOUSE ISLAND.

Next to the westward of **Pig Island** is **French-House Island,** also on the south side of the reach. It lies in the mouth of *Alley Bay*, about an eighth of a mile from the **Beal Island** shore and a little over half a mile from **Pig Island.** It is of moderate height, rocky, and has one conspicuous spruce tree upon it. At low water it is connected with **Beal Island** by a reef of rocks.

Passing **Beal Island,** there is opened a very small, bare, rocky island, lying close in with its western shore. It is entirely destitute of vegetation, being a mere ledge, and is called **Barney's Little Island.** Next to the westward, passing through the reach, leave well to the southward a group of islands lying to the westward of **Beal Island,** called, respectively, beginning with the easternmost, **Three Sheep Islands, Norton,** and **Pomp Island.**

THE SHEEP ISLANDS.

These lie about a quarter of a mile to the westward of **Beal Island,** and are a group of three. The easternmost is low and rocky, and has a group of spruce trees on it, in the centre of which stands a lone tree. At low water it is connected with **Beal Island** by ledges and flats. The others are small, bare, rocky, and have only tree-stumps upon them. One hundred and fifty yards to the westward of these islands is

NORTON ISLAND.

It is three-quarters of a mile to the westward of **Beal Island.** It is three-quarters of a mile long and lies N E. and S W. Its shores are low, and composed of yellow, weather-beaten rocks. It is covered with a thick growth of scrubby trees. There is no passage at low water between this island and **Beal Island.**

POMP ISLAND

lies close to the northwestern shore of **Norton Island,** to which it is joined at low water. It extends in a N E. and S W. direction nearly half a mile; is low, rocky, and almost bare. Its northeastern end, which is the highest land on the islet, has a somewhat bluff appearance, and is bare except for clumps of stunted fir dotting the surface here and there. The island was formerly thickly wooded, but the stumps of the trees only remain.

On the north side of the reach, exactly opposite to **Pomp Island** and close in with the main land at **Hopkins Point,** lies

DOYLE ISLAND.

It extends nearly across the mouth of *INDIAN RIVER*, which is the large stream discharging itself into the reach on the western side of **Hopkins Point**. The island is low and wooded except near its eastern end, where the land is cleared and has a house and outbuildings on it. It is separated from **Hopkins Point** by a narrow passage about one hundred and fifty yards wide, called *WHITING PASSAGE*. Two spruce trees, which stand close together on its southwestern point, serve as a distinguishing mark for recognizing the entrance to *Indian River*. There are no other trees on the point.

THE GOOSE ISLANDS,

which lie to the westward of **Doyle Island**, are six in number. They are all low and well wooded, except that one which is next to the southernmost. The latter is a small, low island, with only a few scattered spruce on its flat, grassy surface. The third island of the group is very thickly wooded, and has a hut on its eastern shore near the northern end. The channel into *Indian River* leads to the westward around these islands. A large white boulder on the southern end of the northern island forms a conspicuous object from seaward. The **Goose Islands** are a little over a quarter of a mile to the westward of **Doyle Island**.

HARDWOOD ISLAND.

On the southern side of the channel, nearly opposite to the **Goose Islands**, lies **Hardwood Island.** It is five-eighths of a mile to the westward of **Pomp Island**, lies N N E. and S S W., and is a quarter of a mile long. Seen from the eastward it shows dark-wooded heads at its northern and southern ends, with somewhat lower land between them. The rest of the island appears partly bare, and partly wooded with a stunted growth of trees. Seen from the southward and westward its southern end shows a remarkable white, rocky point, almost bare, and both ends of the island appear to be covered with small trees. This island is surrounded by shoals, but there is a good passage (obstructed, however, by a ledge, with seven feet at low water) between it and **Pomp Island**. There is another good channel on its eastern side, between it and the *Duck Ledges*, which is half a mile wide and has not less than three fathoms in it. The main channel of the reach leads along the northern side of **Hardwood Island** and is quite narrow at this point, being obstructed by a bad ledge, which lies nearly in the middle of the passage. After passing this ledge the channel continues to the westward toward the main land, leaving to the southward the

DUCK LEDGES,

which lie about five-eighths of a mile WSW. from **Hardwood Island**. They consist of three large, bare rocks or ledges, all of which are uncovered at half-tide, and the northernmost is always bare, showing as a white, bare, rocky islet with a sort of grassy cap on top. These ledges should receive a wide berth in every direction, unless passing to the southward of them, where they are comparatively bold, the shoals not extending off farther than an eighth of a mile in that direction.

Next to the westward of the *Duck Ledges*, and a little over a quarter of a mile from the dry ledge, is

SHABBIT ISLAND,

a low, rocky, and wooded island about one-eighth of a mile long. On its southern side it is tolerably bold-to, but should receive a berth of at least three hundred yards from vessels passing to the northward of it.

After passing **Shabbit Island** the channel leads through *TABBOTT NARROWS*, between **Sheep Island** on the north, and **Ram Island** on the south. The passage is not over three hundred and fifty yards wide, and is obstructed by ledges.

SHEEP ISLAND,

lying within one hundred and fifty yards of the main land, and on the north side of the *Narrows*, is a remarkable looking island, being high, rocky, and nearly bare, with the exception of a solitary tree here and there. It is five-eighths of a mile long in an EAST and WEST direction, and is tolerably bold-to. Four feet at low water may be carried between it and the main land.

RAM ISLAND,

on the south side of the channel, lies in a N N E. and S S W. direction, and is about three hundred and fifty yards long. It is tolerably high, rocky, and covered with a very thick growth of trees, giving it a round, bluff, and bushy appearance. The woods are so thick as to appear black.

After passing through the *Narrows* the course continues to the westward toward **Cape Split**, and the first island met with will be left to the southward. It is called

THE LADLE,

a remarkable looking islet, about two hundred and fifty yards long in a N N W. and S S E. direction, and bears a faint resemblance to a ladle upside down. Its southern end is low, bare, and rocky, and the northern end is a high, round head, crowned with stunted fir and spruce, and showing perpendicular faces. This is called the **Bowl of the Ladle.** Next to the westward of it, and an eighth of a mile distant, is

THE POT,

a barren rock, about ten feet above high-water mark. Extensive shoals surround both it and the **Ladle**, and there is no safe passage between them. About half a mile W S W. from the **Pot** lies

THE BIG POT,

a high, bare islet, entirely destitute of vegetation, lying EAST and WEST, and is about one hundred yards long. Its eastern end is high and very steep, with peculiar-looking red and yellow rocks on the summit, while those near the water are black.

Taking the southern passage out of the reach, after passing the *Narrows* steer to the southwestward, leaving the **Ladle** to the westward and running nearly for **Cone Island.** Pass to the westward of

GREEN ISLAND,

which lies about three hundred yards to the southward of **Ram Island** and is surrounded by ledges. It is low, bare, and rocky, with a grassy surface, but no trees.

CONE ISLAND,

lying seven-eighths of a mile to the southward of the **Ladle**, is about eight hundred yards long; is low, grassy, and covered with a scanty growth of spruce and pine; it is tolerably bold, except on its south side, where ledges make off a quarter of a mile, and on its west side, where it is joined, at low water, to

NASH ISLAND,

which is a rocky islet, about three hundred and fifty yards long, and entirely bare. Ledges make to the southward from this island about a quarter of a mile. On **Nash**

Island is the light-house, a guide to *PLEASANT RIVER, CAPE SPLIT HARBOR,* and *MOOSE-A-BEC REACH.* It is a white tower, twenty-eight feet high, connected with the keeper's dwelling by a covered way, and shows a fixed *red* light of the fourth order of Fresnel from a height of forty-seven feet above the sea. It is visible in ordinary weather twelve nautical miles. The geographical position of **Nash Island Light** is

Latitude - - - - - - - - - - 44° 27′ 51″ N.
Longitude - - - - - - - - - 67° 44′ 50″ W.

Cone and **Nash Islands** should both be left to the southward by vessels entering the reach from the westward.

There are many other islands lying in the approaches to *Moose-a-bec Reach* from the southward, which will be described in treating of the channels leading into the passage from that direction. Those above described lie in the main channel and on both sides of it.

DESCRIPTION OF THE MAIN SHORES IN MOOSE-A-BEC REACH.

The northern shores of the reach begin at **Kelly Point**, and from that to the westward are mainly occupied by the village of **Jonesport**, which stretches nearly to **Hopkins Point**, the entrance to *Indian River.*

KELLY POINT

is a flat, grassy point, of moderate height, backed by a bold, bare, rocky head, which on the western side juts into the water. From this point to the westward the shores are mostly cleared and settled, of moderate height, and backed by woods.

One mile to the westward of **Kelly Point** comes the entrance to

SAWYER COVE.

It is a shallow cove, about half a mile long, and a little over a quarter of a mile wide at its mouth. Six feet only can be taken into it at low water. It runs N E. and S W. and forms part of the water front of **Jonesport.** A few hundred yards to the westward of this cove makes in a small creek called *Sawyer Creek.*

From this creek to **Hopkins Point** the shores are of moderate height, with occasional sandy, perpendicular faces, thickly settled, and backed by woods.

HOPKINS POINT

is a low, grassy point, having a very few spruce and fir trees on top. It forms the eastern point of the entrance to *INDIAN RIVER.* **Doyle Island** lies close to it and exactly across the mouth of the river. The main channel into *Indian River* leads along the north shore of this island and the **Goose Islands.**

Moose Island separates *Indian River* from *WEST RIVER.* The western point of the entrance to the latter is called

BICKFORD POINT.

It is barren, rocky, and nearly destitute of trees. There are one or two houses on its extremity, but the general appearance of the land is very desolate. All of the approaches are shoal. To the westward of this the shore forms a deep bight, called

WOHOA BAY,

into which empty three shallow creeks, having a common mouth; they are bare at lowest tides, and are known, respectively, as *Hicks, Long, and Mill Creeks.* The whole bay is full of ledges, very dangerous for vessels even of the lightest draught.

REYNOLDS BAY.

Next to the westward of *Wohoa Bay* is *Reynolds Bay*, both, in fact, forming parts of the same large basin formed by the curve of the shore. It is quite shoal, and affords little shelter. Two small, rocky islets lie off the entrance. A quarter of a mile to the southward of this bay lies

CARRYING-PLACE COVE.

This is a long and narrow cove, bare at low water, which runs in nearly an EAST and WEST direction for three quarters of a mile. It was an Indian carrying-place from *Cape Split Harbor* to the reach. A small, thickly-wooded island, which lies just outside of the entrance, and on the south side, is called **Carrying-Place Island.** It is an eighth of a mile from the shore, which now takes a turn to the southward, running first about S. ½ W. for nearly half a mile, and then about S W. nearly a mile, forming the eastern shores of

MOOSE NECK.

These shores are of moderate height, crowned with woods, but cleared on their eastern slopes. Here and there a house is visible. The shore is tolerably bold, except about midway between *Carrying-Place Cove* and *Tabbott Narrows*, where a small island, called **Bar Island,** lies within two hundred yards of the shore, and shoal water extends about one hundred yards beyond the islet. This island is nearly opposite to **Shabbit Island.**

At the southeastern point of **Moose Neck** begins *Tabbott Narrows;* and here the shore turns abruptly, running nearly WEST for about seven eighths of a mile to the entrance to *CAPE SPLIT HARBOR.* It is barren, rocky, and undulating, with a scanty growth of trees. There is not less than four fathoms into *Cape Split Harbor* and not less than three at the anchorage, and it is perfectly safe for strangers; but there is little shelter in southerly winds.

CAPE SPLIT,

on the western side of this harbor, is a remarkable looking headland; being a high, bare, rocky bluff, except at its southeastern end, where it presents a black, wooded face; and along its southeastern face, where there is a growth of black fir and spruce. There is a very peculiar-looking, round, rocky islet lying off the southwestern shore of the cape. It is crowned with fir and spruce, and has perpendicular faces, while the summit is quite flat; this is called **The Castle.**

DANGERS
IN APPROACHING AND PASSING THROUGH MOOSE-A-BEC REACH.

I. *From the eastward, across the Bar.*—In coming along shore from the eastward make **Mark Island**, and if intending to go in by the northern channel, across the bar, leave this island to the southward, steering toward **Kelly Point.** On this course, when up with the eastern end of **Mark Island**, a *black spar-buoy* will be seen, bearing about W N W, and about three-quarters of a mile off. This is on

BAY LEDGES,

which lie a little over three-quarters of a mile N W. from **Mark Island**, and extend in a line E. ½ N. from **Kelly Point** for nearly a mile. The shoalest water is three feet. Several narrow slues lead among the ledges, but are, of course, fit only for the dory or fishing-boat. The buoy is a black spar, and is marked No. 15. It is placed on the eastern end of the ledge, in about sixteen feet of water.

While the general name *Bay Ledges* is given to the group lying east of **Kelly Point**, a particular ledge, with four feet at mean low water, lying to the westward of buoy No. 15, has received the name of

LEIGHTON LEDGE.

It is a quarter of a mile W. by S. from the black buoy on *Bay Ledges*, and between them there is a narrow passage with fifteen feet at low water, but unsafe for strangers. A black spar-buoy (No. 13) is placed in fourteen feet water on the south side of the ledge. It is nearly opposite to the spindle on *Gilchrist Rock.*

The northern shore of **Mark Island** is quite bold-to.

GILCHRIST ROCK.

About three-eighths of a mile W. by N. from **Mark Island**, and nearly opposite to *Bay Ledge Buoy*, will be seen an iron spindle and cage painted red. This is on **Gilchrist Rock,** a detached ledge on the south side of the channel, and bare at low water. The channel between this spindle and *Bay Ledge* is about a quarter of a mile wide. Passing it there will be seen ahead, and about three hundred and fifty yards off,

THE VIRGIN'S BREASTS,

two small rocky islands, lying N E. and S W. of each other. The northern island has a grassy top, but the other is a mere dry ledge. These islets must receive a small berth to the southward. The northern one is pretty bold-to, but the southern island, called the **Nipple,** should not be approached nearer than two hundred and fifty yards, as there are bad ledges extending to the northward for nearly an eighth of a mile.

When abreast of these islands there will be seen ahead, at distances varying from a half to three-quarters of a mile, *three black and two red spar-buoys*, which appear to be huddled together in a group. It is necessary for the mariner, in endeavoring to thread the intricate channel in which these buoys are placed, to be very careful of his courses, and especially to remember that the southernmost buoy of the group (which is *black*) is not in this channel at all, but is placed to mark *the southern end of Nova Rock*, in the *SEGUIN PASSAGE.* It must not be approached by vessels using this northern passage, but the course must be shaped so as to pass between the *red spar-buoy* to the northward and the middle one of the *three black buoys.* The *red spar*, which is passed to the northward, is on the northern end of

NOVA ROCK,

a very dangerous rock, lying on the south side of this channel; bare at lowest tides; bears from the northernmost of the **Virgin's Breasts WEST**, distant five-eighths of a mile, and from **Kelly Point** (eastern extremity) about S. ½ W., distant a quarter of a mile. The buoy is a *red spar*, marked No. 6, and is placed in about eight feet of water on the north end of the ledge. The channel leads between this and a *black spar-buoy*, lying between fifty and sixty yards to the northward, on

EMM ROCK.

This is a detached rock, with about a foot and a half water at lowest tides, lying about three hundred yards S. by W. ½ W. from the eastern extremity of **Kelly Point.** The buoy is a *black spar*, marked No. 11, and is placed in seven feet water on the southern end of the ledge.

As the channel between this and *Nova Rock* is extremely narrow, great care must be exercised in passing through it. Seven and a half feet may be taken through between these buoys at mean low water, but the channel with this depth is very narrow. As a rule, it is not safe to calculate upon more than six feet across the bar.

Passing *Emm Rock Buoy*, the course leads toward a *black spar-buoy* about a quarter of a mile to the westward, leaving to the southward a *red buoy* on

LITTLE LEDGE,

a bad ledge in the deep-water channel which leads into *Seguin Passage* from the northward, lying an eighth of a mile W. ½ S. from *Emm Rock*, has a foot and a half on it at low water, and is marked by a *red spar-buoy* (No. 2) placed on its northern end. Passing it, *a black spar-buoy* will be seen on the north and east. This is on

MOOSE-A-BEC BAR,

which makes out from the north shore just to the westward of Kelly Point. This bar is dry at lowest tides, and the buoy is placed on its southeastern end in eight feet. It is to be passed to the southward. When abreast of it, *a red spar-buoy* will be seen ahead bearing about WEST, and about three-eighths of a mile off. This is on

SAND LEDGE,

which is bare at half-tide. It lies on the south side of the channel, about three hundred yards from the north shore. In steering so as to pass to the northward, leave a couple of hundred yards to the southward *a wooden spindle surmounted by a cask and painted red.* This is on

SNOW ROCK,

also on the south side of the channel, and about four hundred yards W. ¼ N. from the buoy on *Little Ledge*, and a quarter of a mile E S E. from *Sand Ledge.* The spindle is on the dry part of the ledge, which is near the northern end, and is to be left to the southward.

When abreast of the *red buoy* on *Sand Ledge*, there will be seen, about six hundred yards ahead, *a red and black spar-buoy.* This is on

HORSE LEDGE,

which lies a little over a quarter of a mile S S E. from the eastern point of entrance to *Sawyer Cove*, and about W. by N. ½ N. from the *red buoy* on *Sand Ledge.* The buoy is on the northern end of *Horse Ledge* which is bare at low water, and is usually left to the southward; but it may be left to the northward by giving it a berth of about two hundred and fifty yards, passing through a narrow but deep channel which has another dry ledge on its southern side. The best way, however, is to leave the buoy to the southward. The shoal water extends to the southward from it about an eighth of a mile.

The water is all shoal from the bare rock on the south side of *Horse Ledge* to **Pig Island.** The channel becomes wider after passing that ledge, and between *Sawyer Cove* and **French House Island** it is nearly half a mile wide.

In beating, the main shore may be approached within from one hundred and fifty yards to an eighth of a mile, between *Horse Ledge* and *Cummings Ledge*, (about a mile to the westward,) with not less than twenty-one feet water. But on the south side *give* **French House Island** *a berth of at least four hundred yards*, as long ledges make out from it to a distance of three hundred and fifty yards. In fact, all of the space between **Pig** and **French House Islands** is full of ledges and shoals.

The north shore of **Beal Island** may not be approached nearer than an eighth of a mile if wishing to keep in over three fathoms water. The shoals are abrupt throughout nearly the whole length of the reach, so that it is necessary to be careful in approaching either shore.

CUMMINGS LEDGE

is the next ledge to the westward after passing *Horse Ledge.* It makes off from the **Jonesport** shore a little over half a mile to the westward of **Old House Point**, which separates *Sawyer Cove* from *Sawyer Creek.* The shoal of the ledge has three feet at mean low water, and is about two hundred yards from shore; but the buoy, which is a black spar, is placed on the southern side of the ledge in sixteen feet of water, and an eighth of a mile from shore. It is marked No. 7, and is to be left to the northward.

After passing *Cummings Ledge*, vessels in beating must give the north shore a berth of about three hundred yards, and not approach the south side of the Reach so near as the line between the northern ends of **Beal** and **Pomp Islands**; as the whole space between these islands and **Norton** and the **Sheep Islands** is full of ledges, many of which are dry at low water. Not less than three fathoms will be found within the above limits.

LEDGES BETWEEN DOYLE AND POMP ISLANDS.

Several small shoals, with from thirteen to fifteen and sixteen feet at mean low water, lie almost exactly in the middle of the passage between **Doyle** and **Pomp Islands.** They are not dangerous, except to vessels of large draught and in heavy weather. These ledges lie in a line nearly EAST and WEST, and three-eighths of a mile long. The best water is to the southward of them, although three and three-quarter fathoms can be carried between them and **Doyle Island.** After passing them *a black spar-buoy* will be seen ahead, bearing about W. by N., and lying apparently off the north end of **Hardwood Island.** This is on

FESSENDEN LEDGE,

a large ledge, lying midway between the southernmost of the **Goose** and **Hardwood Islands**, extending in an EAST and WEST direction; is about two hundred and fifty yards wide, three hundred and fifty yards long between the lines of three fathoms, and is bare at low water near the buoy. Soundings of six, ten, and thirteen feet are found on other parts of the ledge. The buoy is placed in sixteen feet on the south side of the bare shoal, and is marked No. 5. It bears from the southernmost of **Goose Island** SOUTH, one eighth of a mile; and from **Shabbit Island** ENE., one mile. This buoy is to be left to the northward.

The north end of **Hardwood Island** must receive a berth of two hundred yards, and the northwest shore of the same island a berth of at least an eighth of a mile, as there are bad ledges lying off those points. Some of these are dry at low water, and one is always bare. The channel is here very narrow, being only an eighth of a mile wide from *Fessenden Ledge Buoy* over to the shoals off **Hardwood Island.** But after passing this island it widens out to the northward and westward, and affords an excellent beating channel, with from four to nine fathoms in it.

DUCK LEDGES.

When to the westward from *Fessenden Ledge*, look out on the south side of the channel *for the shoals north of the Duck Ledges.* These consist of a number of dangerous rocks, most of which are bare at low water, and extend to the northward from the white rocky islet with the tuft of grass on top, which forms the northernmost of the *Duck Ledges.* From this islet to the southern edge of the channel the length of the line of shoals is nearly three-eighths of a mile and its direction about NE. This mass of ledges is nearly six hundred yards wide at its northern end, and, in fact, shoal soundings extend clear to **Shabbit Island**, a distance of half a mile to the southwestward.

Shabbit Island should receive a berth of at least an eighth of a mile from vessels drawing over fifteen feet, and is to be left to the southward and eastward.

Bar Island, on the west side of the channel, and nearly opposite to **Shabbit,** should receive a berth to the westward of at least three hundred yards, as dangerous shoals make off from it about an eighth of a mile. The channel here is half a mile wide between the shoals, and has seven and nine fathoms in it.

Below **Bar Island** the eastern shore of **Moose Neck** is tolerably bold; but at the eastern entrance to *Tabbott Narrows* the shoal water extends out about a quarter of a mile, surrounding **Sheep Island.** The first dangers met with will be seen on approaching the *Narrows*, to be marked by *two spar-buoys, one red and one black*, placed N W. and S E. from each other and close together. The *black buoy* on the north side of the channel is on

TABBOTT LEDGE,

which has four feet at low water, and lies off **Sheep Island,** formerly called **Tabbott Island.** It extends in an easterly direction from the island about an eighth of a mile. The buoy is black, marked No. 1, and placed in sixteen feet on the eastern end of the ledge. It is to be left to the northward.

On the south side of the channel, a little more than a hundred yards from the buoy on *Tabbott Ledge*, lies *a red spar-buoy*, on

RAM ISLAND LEDGE,

lying in the middle of the channel, and has nine feet at mean low water. It is a detached rock, with from five to eight fathoms water all around it, and lies one-eighth of a mile N E. from **Ram Island** and about four hundred yards E. by S. from **Sheep Island.** The buoy is placed on its north side, in good water. It is marked No. 2, and is to be left to the southward.

The channel becomes very wide after passing to the westward of the *Narrows*, and has in it from eight to ten fathoms. The north shore must not be approached too closely until past *Cape Split Harbor*, as there are ledges extending from it to the southward about three hundred and fifty yards. This shore should, therefore, receive a berth of a quarter of a mile from vessels drawing over fifteen feet. **Cape Split** is, however, tolerably bold-to, and on its western side is quite so, eight fathoms being found within a hundred yards.

When up with **Cape Split,** look out for

NORTON LEDGE,

whose southern end will be seen about three-quarters of a mile to the westward, marked by an **iron tripod and spindle** thirty-five feet high, with ball on top, painted black. It must be left to the northward by vessels bound along the coast; but those intending to enter *PLEASANT BAY* may pass to the northward of the ledge by keeping close to **Cape Split.**

Norton Ledge is a long shoal making off from **Norton Island** in a southwesterly direction, and is for the most part bare at half-ebb. The spindle is on the end of the reef. **Norton Island** is a barren, rocky island, of moderate height, and lies in the entrance to *Pleasant Bay*. A good channel exists between it and **Cape Split.**

After passing this ledge, the course leads toward **Petit Manan Island** and clear of the Reach.

SAILING DIRECTIONS
FOR APPROACHING AND PASSING THROUGH MOOSE-A-BEC REACH.

I. *Coming from the eastward, across the bar.*—When the middle of **Mark Island** bears W. ½ S., distant two miles and a quarter, and in eighteen fathoms, steer **WEST**, which course leads safely past the island with not less than seven fathoms water, and up with the *black buoy* on *Emm Rock*, and the *red buoy* on *Nova Rock*, with not less than fifteen feet. Continue this course until up with the *black buoy* on the bar, which pass in seven feet water, and, when abreast of this, steer W. by N. ½ N. until abreast of the *red and black buoy* on *Horse Ledge*, carrying not less than fifteen feet. Pass to the northward of this buoy, and steer W. ½ N. through the Reach. This course leads safely through the main channel between *Fessenden Ledge* and **Hardwood Island**, with not less than twenty-one feet water. Continue it until the white, rocky islet which forms the northernmost of the *Duck Rocks* bears S. ½ E. and **Ram Island** S W. ½ W., with five fathoms water, when S W. by W. will lead safely through *Tabbott Narrows*, with from five to nine fathoms water. As soon as the western end of **Sheep Island** bears N W. by N., with five fathoms water, steer W. ½ N., which will clear *Norton Ledge* in not less than eight fathoms; after which the course may be shaped for **Petit Manan** or **Pond Island**.

The above courses pass half a mile to the northward of *Eastern Ledges;* three hundred and fifty yards to the southward of *Bay Ledge Buoy;* one hundred yards to the northward of *Gilchrist Rock;* one hundred yards to the northward of the *Virgin's Breasts;* to the southward of the *black buoy* on *Emm Rock* and close to it; to the northward of the *red buoy* on *Nova Rock* and close to it; one hundred yards to the southward of the *black buoy* on *Moose-a-bec Bar;* one hundred and twenty-five yards to the northward of the red spindle on *Snow Rock;* one hundred and twenty-five yards to the northward of the *red buoy* on *Sand Ledge;* to the northward of and close to the *buoy* on *Horse Ledge;* and about one hundred yards to the southward of *Cummings Ledge.* Then pass one-eighth of a mile to the southward of the shoal spots south of **Doyle Island**; one hundred yards to the southward of *Fessenden Ledge;* two hundred and fifty yards to the westward of **Shabbit Island**; midway between the *buoys* on *Tabbott* and *Ram Island Ledges;* and three-eighths of a mile to the southward of the spindle on *Norton Ledge.*

Or, intending to pass between the Ladle and Cone Island.—Continue the course S W. by W. for the western end of **Cone Island**, and when within half a mile, and in ten to eleven fathoms water, with the **Ladle** bearing N N W., steer W. ½ N. through the middle of the passage, which is here over a thousand yards wide; this course will carry not less than nine fathoms water. In beating to windward do not approach the **Ladle** nearer than two hundred and fifty yards, and give the north shore of **Cone Island** a berth of an eighth of a mile. Within these limits there will be over three fathoms at mean low water. Seven feet at low water can be carried over the bar at the eastern end of the Reach, and the least water in the channel, after passing the bar, is fifteen feet. Through the *Narrows* from six to nine fathoms may be taken, and thence to **Cape Split** from eight to ten fathoms. Between the **Ladle** and **Norton Island** there is not less than eight fathoms, and between the **Ladle** and **Cone Island** from eight to eleven fathoms. South of **Cone Island** the ground is somewhat broken, and the depths range all the way from five to twenty-one fathoms. In the deeper channels the bottom is soft. The shoals are almost all rocky.

THE SEGUIN PASSAGE.

This passage, which, owing to its windings, is mostly used by steamers, enters from the eastward, between **Mark Island** on the north, and **Seguin Island** on the south.

The least water in it is eleven feet, (just beyond *Channel Rock*,) but it is full of ledges, which render the navigation difficult, though all are marked by buoys. With a wind anywhere between E N E. and S S W. a sailing vessel may safely enter and run this channel from the eastward, and with the wind from W S W. around to NORTH, she may enter and run it from the westward.

THE DEEP-WATER PASSAGE,

which leads into the *Seguin Channel* from the northern or main channel, between *Little Ledge* and *Nova Rock*, has not less than four fathoms in it, and is often used by coastwise steamers. Not less than fifteen feet at low water may safely be taken from the anchorage at **Jonesport** through this and the *Seguin Passage.*

DANGERS

IN APPROACHING AND PASSING THROUGH MOOSE-A-BEC REACH.

I. *From the eastward, through the Seguin Passage.*—All approaches to the Reach from the eastward are equally obstructed by the

EASTERN LEDGES,

(already described, page 99.) These are two dangerous rocks, lying E N E. and W S W. from each other, with good water between them. They bear from **Spruce Island Gut** SOUTH, one mile and three-eighths distant; from **Seguin Island** E. by N. ½ N., one mile and a half distant; and from **Mark Island** E. by S. ½ S., one mile and an eighth distant. The easternmost ledge, which is dry at low water, is about three hundred yards to the eastward of the western rock. Both are bold-to. The channels between these ledges and **Spruce Islands, Mark, Seguin,** and **Head Harbor Islands** are wide, having from fifteen to twenty fathoms water, and are entirely unobstructed. These ledges are not marked in any way. They may be left on either hand in approaching *Moose-a-bec Reach.*

SEGUIN LEDGE.

On approaching *SEGUIN PASSAGE* from the eastward the first danger met with is *Seguin Ledge,* marked by *a red spar-buoy.* The buoy will be seen lying to the northward of **Seguin Island,** with a black spar-buoy a little to the westward. *Seguin Ledge* lies one-eighth of a mile N E. ½ N. from the north end of **Seguin Island,** and from the middle of **Mark Island** bears S. by W., distant a little less than half a mile. From the dry rock of *Eastern Ledges* it bears W. ¾ S., one mile and five-eighths distant. This ledge has three feet at mean low water, and is marked by *red buoy* No. 12, placed on its northern end in five fathoms water. It must be left to the southward.

GANGWAY LEDGE.

The *black buoy* which is seen about two hundred and fifty yards to the westward of *Seguin Buoy* is on *Gangway Ledge.* This ledge has ten feet at mean low water, bears W N W. from *Seguin Ledge,* and is on the western side of the channel. From **Seguin Island** it bears N. ½ W., and is distant three hundred and fifty yards. There is a good channel to the northward, and between it and *Drisco Ledge,* with not less than four fathoms, if a berth of one hundred and twenty-five yards is given the buoy; but the custom is to pass to the southward of it. The *black buoy* is marked No. 13, and is placed on the south side of the ledge, in eighteen feet water. In steering so as to pass between the *red buoy* on *Seguin Ledge* and the *black buoy* on the *Gangway Rock,* head nearly for a red spindle with a ball-shaped cage on top, appearing off the northwest end of **Seguin Island.** This is on

MOOSE ROCK,

a detached rock, covered at high water, lying on the south side of the channel, about three hundred yards NW. ½ W. from **Seguin Island**; a quarter of a mile W. ½ S. from *Seguin Ledge;* and an eighth of a mile SW. by W. ½ W. from *Gangway Ledge.* The spindle is supported by an iron tripod, and the whole structure is thirty-five feet high. It is to be left to the southward, although there is a good channel between it and **Seguin Island.** When abreast of it, *a black spar-buoy* will be seen bearing about NW. and about two hundred and fifty yards off. This is on

DRISCO LEDGES,

two detached rocks lying N. by W. and S. by E. from each other, separated by a deep passage about one hundred yards wide. The northern one, bare at low water, lies about an eighth of a mile to the northward of the buoy, which is placed on the southern side of the southern rock. The southern rock has five feet at mean low water, and bears from **Mark Island Point** SW. by W. ¾ W., five eighths of a mile; from *Gangway Ledge* W. by N. ¾ N., one quarter of a mile; and from *Moose Rock Spindle* NW. ¾ N., about three hundred and fifty yards. The northern rock bears from **Mark Island Point** W. by S. ½ S., five-eighths of a mile; from *Gangway Ledge* NW. by W., nearly three-eighths of a mile; and from *Moose Rock Spindle* NW. by N. ½ N., about six hundred yards. *The buoy is black,* marked No. 11, and is placed in fourteen feet, south of the ledge. It must be passed to the southward, while directly opposite to it, on the south side of the channel, pass the *red spar-buoy* on

SAWYER LEDGE,

which has two feet at lowest tides, and lies two hundred and fifty yards W. ½ S. from *Moose Rock* and one-eighth of a mile S. by W. ½ W. from *Drisco Ledge Buoy.* The channel passes between this and *Drisco Ledge,* and is here one-eighth of a mile wide. When between the two, *a black spar-buoy* will be seen about three-eighths of a mile to the northwestward. This is on

LONG LEDGE,

lying on the north side of the channel, and extending in a nearly EAST and WEST direction about two hundred yards. The western end of the ledge, off which the buoy is placed, bears from the northern of the *Drisco Ledges* W. ½ N., distant one-quarter of a mile, and from the buoy on the southern end of those ledges WNW., nearly three-eighths of a mile. There are from three to five fathoms among all these rocks, but it is not safe for a stranger to attempt to pass among them. The eastern end of *Long Ledge* is awash at low water, while the western end is out at one-quarter ebb. The buoy is marked No. 9, and must be left to the northward. After passing it, the course leads toward *Channel Rock,* and when approaching **Little Sheep Island** give it a berth of at least an eighth of a mile, as there are a great many shoal spots to the northward and eastward. When near **Little Sheep Island** there will be seen, nearly three-eighths of a mile to the northwestward, the *red buoy* on

CHANNEL ROCK.

This rock, with six feet at low water, lies nearly in mid-channel, but on the south side, bearing WNW. from *Long Ledge Buoy,* distant seven-eighths of a mile, and NE. ¾ E. from the eastern end of **Pig Island,** distant a little over six hundred yards. The buoy is placed on the eastern end of the rock, in about two fathoms, and must be left to the westward. When abreast of this buoy, care must be taken to avoid the southern end of

SNOW ROCK,

which has nine feet at low water, and lies on the north side of the channel, nearly opposite to *Channel Rock*. *Snow Rock* extends in a north and south direction between the *Seguin Passage* and the *North Channel*, and its northern end, which is dry at low water, is marked by **a wooden spindle with cask on top, painted red.** In passing through *Seguin Passage* this spindle must receive a berth of not less than one-eighth of a mile.

The course continues to the northwestward, past *Snow Rock*, and (to the northwestward) a quarter of a mile off will be seen *another red buoy*. This is on

SAND LEDGE,

bare at half-tide, and lying on the south side of the main or *Northern Channel*, and on the west side of the *Seguin Channel*, at their point of union. The course to join the *North Channel* turns to the northward so as to leave this buoy to the westward. The buoy is placed on the northeastern side of the ledge and is marked No. 4.

Sand Ledge bears from *Channel Rock* N W. ½ W., distant nearly three-eighths of a mile, and from the spindle on *Snow Rock* W. by N. ½ N., distant one-quarter of a mile. The channel passes between it and **Snow Rock Spindle**, but the best water (fifteen feet) is nearest to *Sand Ledge Buoy*. When past this ledge, enter the main channel and shape the course for the *red and black buoy* on *Horse Ledge*. (See pages 110 to 112 for dangers in *North* or *Main Channel*.)

2. *Bound through Deep-Water Passage.*—When within a quarter of a mile of *Channel Rock Buoy*, turn abruptly to the northward and steer nearly for the wharf on the south shore of **Kelly Point**. On this course there will be to the northeastward, and about three hundred and fifty yards off, *a black spar-buoy*, and to the northwestward, about a quarter of a mile off, *a red spar-buoy*. The former is on the

SOUTHERN END OF NOVA ROCK.

This large ledge, which lies in a N NE. and S SW. direction, is about three hundred yards long, and bare at low spring-tides. Its northern end, marked by a *red spar-buoy*, is on the south side of the *Bar Channel*, and its southern end is on the north side of the *Deep-Water Passage*. The buoy on this end bears from the eastern extremity of **Kelly Point** S SW., about six hundred yards distant, and from **Little Sheep Island** NE. by N. ½ N., nearly three-eighths of a mile. The buoy is marked No. 1, and is placed in eighteen feet water, south of the ledge.

LITTLE LEDGE.

The *red buoy* to the westward is on *Little Ledge*, which lies on the western side of the channel, about three hundred yards to the northwestward of the *black buoy* on *Nova Rock*, having a foot and a half on it at low water, and bears from the eastern extremity of **Kelly Point** SW. ½ S., distant a little over a quarter of a mile. The buoy is on the north end of the ledge, in two fathoms, and is to be left to the westward. It is marked No. 2. When past this buoy, enter the *North Channel*, and the course is to the westward to clear the *black buoy* on the bar and the *red buoy* on *Sand Ledge*.

SAILING DIRECTIONS
FOR APPROACHING AND PASSING THROUGH MOOSE-A-BEC REACH FROM THE EASTWARD.

BY SEGUIN PASSAGE.—Vessels using this passage pass to the southward of **Mark Island.** With the middle of that island bearing N W. by W. ½ W., distant nearly

four miles, and the north end of **Seguin Island** bearing W. ¾ N., four miles distant, steer W N W., carrying not less than thirteen fathoms, until the eastern end of **Mark Island** bears N. by W., and in ten fathoms water. Then steer W. by S. ½ S. nearly, for the **beacon** on *Moose Rock.* This course leads between the *black buoy* on *Gangway Ledge* and the *red buoy* on *Seguin Ledge*, with not less than six fathoms of water. When abreast of the *black buoy* on the *Gangway*, in from three to four fathoms water, change course to W. by N., passing to the northward of the **spindle** on *Moose Rock.* This course leads safely between *Drisco Ledge* and *Sawyer Rock*, with not less than three and a half fathoms of water. Continue in for nearly three-eighths of a mile, or until the southernmost of the **Virgin's Breasts** bears N. by W. ½ W., and in five fathoms water; when N W. by W. ½ W., pass up the middle of the channel to *Channel Rock*, with not less than thirteen feet. Pass to the northward of *Channel Rock Buoy*, and continue the course until the east end of **Pig Island** bears S W. by S. ¾ S. and is a little more than a quarter of a mile distant. On this course there will be eleven feet. Now turn abruptly to the northward and steer N. ½ W., passing the **red spindle** on the northern end of *Snow Rock* to the westward and the *red buoy* on *Sand Ledge* to the eastward. This course leads into the *North Channel*, with not less than fifteen feet water. Continue it until within two hundred yards of the north shore, when steer W. by N. ¾ N. to clear the *red and black buoy* on *Horse Ledge.* On this course the least water is twelve feet. When past *Horse Ledge*, follow the directions given for the main channel.

2. *To enter Seguin Passage and pass through Deep-Water Channel into North Channel.*—When on the course N W. by W. ½ W. for *Channel Rock Buoy*, within a quarter of a mile of the buoy, and **Little Sheep Island** bears S W. ½ S., two hundred and fifty yards distant, with twenty-eight feet water, steer N. ½ E. nearly, for the wharf on the south side of **Kelly Point.** This course leads safely through between *Nova Rock* and *Little Ledge*, leaving the former to the eastward and the latter to the westward, and carrying not less than four fathoms. As soon as past *Little Ledge Buoy*, enter the *North Channel* and steer W. by N. ¾ N. for the *Horse Ledge Buoy.* On this course there will be nothing less than fifteen feet. When up with *Horse Ledge*, follow the directions for the *Main Channel* through the Reach.

There is *another excellent channel* into *Moose-a bec Reach* from the eastward, which is superior to the *Seguin Passage*, but it is not buoyed. The entrance to it is just to the northward of that leading into the *Seguin Passage*, and there is not less than six fathoms in it until it joins the latter near *Channel Rock.* This channel passes to the northward of all the ledges of the *Seguin Passage*, and between *Long Ledge* and the **Virgin's Breasts.** It is not buoyed, and should not be used by strangers unless with a fair wind.

DANGERS.

There are no ledges in the middle of this channel, the dangers lying on both sides. The first of these met with, after passing *Eastern Ledges*, is

SEGUIN LEDGE,

which lies nearly a quarter of a mile to the southward of the sailing lines and has a *red spar-buoy* on its north end. *Seguin Ledge* is an eighth of a mile N E. ½ N. from the north end of **Seguin Island**; from the middle of **Mark Island** S. by W., a little less than half a mile distant; and from the dry rock on *Eastern Ledges* W. ¾ S., a mile and five-eighths distant. It has three feet at mean low water, and must be left well to the southward.

GANGWAY LEDGE

will next be passed, lying on the south side of this channel, and is marked by *a black spar-buoy, placed on its southern side* as a guide to *Seguin Passage,* which must therefore

receive a berth of not less than two hundred yards from vessels using the northern passage, as the ledge lies between them and it. *Gangway Ledge* has ten feet at mean low water; lies WNW. from *Seguin Ledge*, about two hundred and fifty yards distant; and from **Seguin Island** N. ½ W., three hundred and fifty yards distant.

DRISCO LEDGES.

Next to the westward of the *Gangway*, and a little over a quarter of a mile from it, will be seen *a black spar-buoy* on the southernmost of the *Drisco Ledges*, which is also in the *Seguin Passage*. From the buoy the ledges extend to the northward about three hundred and fifty yards, and the northernmost, which is bare at low water, is a dangerous obstruction to the channel now being described. It is not buoyed. From **Mark Island Point** it bears W. by S. ½ S., five-eighths of a mile distant; from *Gangway Ledge* NW. by W., nearly three-eighths of a mile; and from the southernmost of the **Virgin's Breasts** SE. ½ S., a little over three-eighths of a mile distant. When abreast of it, and heading to the westward, *two black buoys* will be seen—one on each bow, and a little over a quarter of a mile distant. The northernmost of these is on *Leighton Ledge*, and the other on the south end of *Long Ledge*.

LEIGHTON LEDGE

is part of the shoal ground lying to the southward of the **Virgin's Breasts**. It has five feet at mean low water, and bears from the southernmost of the two islets S. ½ W., one hundred yards distant. The buoy is in fourteen feet on its southern end, and is to be left to the northward. It is marked No. 13.

LONG LEDGE.

The *black buoy* on the southern side of the channel opposite to *Leighton Ledge* is on *Long Ledge*, and is placed as a guide to *SEGUIN PASSAGE*. *Long Ledge* extends nearly EAST and WEST, and is about two hundred yards long. The buoy is on its southern side, near its western end, and bears from the southernmost of the **Virgin's Breasts** nearly SOUTH, about six hundred yards distant. As the ledge lies between this buoy and the channel, it must receive a berth to the southward of not less than two hundred yards. After passing it the course continues to the westward, and this channel unites with the *Seguin Passage* at its point of union with *DEEP-WATER CHANNEL*.

SAILING DIRECTIONS.

To enter by this channel, when the middle of **Mark Island** bears NW. by W. ½ W., four miles distant, and the north end of **Seguin Island** bears W. ½ N., also four miles distant, steer WNW., carrying not less than thirteen fathoms, until the east end of **Mark Island** bears N. by W., and in ten and a half fathoms, soft bottom. Then steer W. by N. through this channel and into the *Seguin Passage*. On these courses the least water will be four fathoms. When within a quarter of a mile from *Channel Rock Buoy*, in four and three-quarters fathoms, and **Little Sheep Island** bears SW. ½ S., about two hundred and fifty yards off, steer NW. by W. ½ W. to pass through the *Seguin Passage*, or N. ½ E. through *Deep-Water Channel;* after which, follow the directions previously given.

There is a narrow passage, with ten feet at low water, between **Seguin** and **Head Harbor Islands**, but it is entirely unfit for strangers.

PASSAGES
INTO MOOSE-A-BEC REACH FROM THE SOUTHWARD.

Through and among the numerous islands lying on the southern side of *Moose-a-bec Reach* lead several wide and good channels, which may be used by vessels in case of

necessity. They are not buoyed, however, and great care is required to avoid the numerous ledges which obstruct them.

FISHERMAN ISLAND PASSAGE.

The easternmost of these passages leads between **Crumple, Fisherman, Browney, Ram,** and **Norton Islands** on the east, and **Outer Sand, Inner Sand, Drisco,** and **Stevens Islands,** and the *Duck Ledges* on the west. It is in most places quite wide, and has not less than five and a half fathoms throughout its length until abreast of **Hardwood Island,** where a few soundings of sixteen feet will be found. From the entrance to the point at which it unites with the main channel of the Reach this passage is exactly five miles long. It affords good beating-room through most of its length, and is on that account particularly desirable that the ledges in it should be buoyed. This will be recommended.

A stranger wishing to enter this passage may easily recognize it by the appearance of **Crumple** and **Fisherman Islands.**

CRUMPLE ISLAND

looks like a number of round hillocks of various heights joining each other. The central hillock is the highest and has one or two tall trees on its slopes. Next to this, to the southwestward, two tall leaning trees are seen, forming a very conspicuous mark. Near the eastern end of the island rises a small hill with a peculiar-looking clump of trees on its summit.

Crumple Island lies three-quarters of a mile S W. from the south end of **Great Wass Island.**

FISHERMAN ISLAND,

which lies just to the northward of **Crumple Island,** is a low, rocky island, of a peculiarly barren and desolate appearance, dotted with many tall dead trees, which, when seen from the northwestward, with this island and **Crumple Island** in range, look like masts of shipping. There is no safe passage between these islands and **Great Wass,** the channel being narrow, shallow, and full of ledges.

BROWNEY ISLAND.

About half a mile to the northward of **Fisherman Island** will be seen **Browney Island.** It is thickly wooded in the middle, and has tall trees projecting here and there above the general line of woods. Its western end is low, rocky, and bare, with the exception of numerous dead trees. Its northeastern end is a high, bare, rocky head, sloping gently to the water, while its southeastern end is low and covered with bushes and dead trees.

OUTER SAND ISLAND.

On the western side of the entrance, nearly opposite to **Browney Island,** will be seen **Outer Sand Island,** high and grassy, with a scanty growth of spruce and fir. There are many dead trees, like spars, standing at intervals over its surface.

INNER SAND ISLAND

will be seen to the northward of **Outer Sand,** about eight hundred yards from it. It is rocky, of considerable height, and thinly wooded with small spruce and pine trees. There is no passage between the two **Sand Islands.** Just to the northward of **Inner Sand** will be seen

DRISCO ISLAND,

one of the largest islands of this group. It lies N E. and S W., and is a litt'e over half a

mile long. It will appear thickly wooded, with here and there tall trees above the general outline of woods. These three islands, (**Outer Sand, Inner Sand,** and **Drisco,**) if viewed from the entrance, and in mid-channel, will appear nearly in range, or with their ends overlapping; but the above description will enable any one to recognize them.

There is a good passage between **Inner Sand** and **Drisco Islands**, with not less than seven fathoms, but it is obstructed by a bare ledge at its eastern entrance.

LITTLE DRISCO ISLAND

lies off the north end of **Drisco** and about two hundred yards to the eastward. It is rocky and thickly wooded. There is a good passage between the two islands, with not less than four fathoms.

STEVENS ISLAND

lies about six hundred yards to the northward of **Little Drisco**, extends E N E. and W S W., and is about three-eighths of a mile long, of moderate height, rocky, and mostly bare, although a few tall dead trees stand here and there. About one-third of the way from the eastern to the western end a group of four or five spruce and fir trees will appear, and serve as a sufficient distinguishing mark for this island. It is surrounded by shoals.

SEA-DUCK ROCK.

Immediately opposite to **Stevens Island**, bearing about EAST, and almost exactly in the middle of the channel, will be seen a high, bare rock, called **Sea-Duck Rock.** There are from nine to twelve fathoms on all sides of this rock, but it is boldest on its western side. On its eastern side the channel is the widest, however, and has the deepest water. **Sea-Duck Rock** is a little over half a mile EAST from **Stevens Island** and three-quarters of a mile to the westward from the

RAM ISLANDS,

which lie on the eastern side of *Fisherman Island Passage*, and are three in number. They extend in a N N E. and S S W. direction, and are three-quarters of a mile in length over all. The two southern ones are joined at low water and form what is called **Great Ram Island,** which is of moderate height and well wooded. The northernmost of the group, called **Little Ram Island,** is small and rocky, with a bushy clump of black-looking trees at its northwestern end and several small clumps dotting its surface. The rest of the island is thinly wooded with small fir trees.

The **Ram Islands** are a mile and a half north of **Browney Island**; and **Little Ram Island** is about six hundred yards S E. from **Norton Island.**

There is a narrow passage, with fourteen feet water, between this and **Great Ram Island,** and also good water (from three to four fathoms) between **Little Ram** and **Beal Islands.** Strangers should not attempt either passage. Good anchorage may be had between the **Ram Islands** and **Great Wass Islands**, either *on the north side of* **Slate Island,** in from three to six fathoms, soft bottom; in *Slate Cove,* in from twelve to fifteen feet; in *Cummings Cove,* (on the west shore of **Great Wass Island,**) in from two to three fathoms; or in the *Flying Place,* (which separates **Great Wass** and **Beal Islands,**) where there will be from two to four fathoms, soft bottom.

The western shore of **Great Wass Island** is rocky, barren, for the most part thickly wooded, thinly settled, and very little cultivated.

SLATE ISLAND

lies off its western shore at a distance of two hundred and fifty yards. At low water a dry reef connects the two. The island is about seven hundred and fifty yards E. by S.

½ S. from the south end of **Great Ram Island.** It is low and rocky, and dotted here and there with clumps of spruce and single trees. A hut stands on its western end. The island is surrounded by shoals, and must receive a berth to the eastward of two hundred and fifty yards. On its north side is good anchorage in from three to six fathoms, sheltered from all winds.

NORTON ISLAND,

lying six hundred yards NW. by N. from the **Ram Islands,** is the largest of the group sometimes called the **Sheep Islands.** It extends three-quarters of a mile in a NE. and SW. direction, with low shores, composed of yellow, weather-beaten rocks; and is covered with a thick but scrubby growth of trees. Ledges surround this island, especially on its southern side, where shoal water extends to a distance of nearly half a mile.

POMP ISLAND,

lying close in with the northwestern shore of **Norton Island**, is joined to it at low water. It lies NE. and SW., is nearly half a mile long, low, rocky, and almost bare. Its northeastern end has a somewhat bluff appearance, and has small clumps of stunted fir. The island was formerly thickly wooded, but the stumps of the trees alone remain.

HARDWOOD ISLAND.

Due WEST from **Pomp Island**, and a little over half a mile distant, lies **Hardwood Island**; and there is a good channel between the two, by which vessels entering from the southward may pass into the Reach. This island lies N NE. and S SW., and is a quarter of a mile long. Seen from the southward and westward, its south end shows a remarkable white, rocky point, almost bare; and both ends of the island appear to be covered with small trees. *A bad ledge,* with seven feet at mean low water, lies exactly in the middle of the passage between this and Pomp Island. *Hardwood Ledges* lie a quarter of a mile to the southeastward of **Hardwood Island** and the *Norton Island Ledges,* extend three-eighths of a mile from the west shore of that island, thus diminishing the width of the channel to about an eighth of a mile. The passage, therefore, between **Hardwood** and **Pomp Islands** is not recommended to strangers, as none of the ledges are buoyed. The best plan is to keep to the northward, leaving **Hardwood Island** to the eastward and the *Duck Ledges* to the westward.

DUCK LEDGES.

These dangerous rocks, lying about five-eighths of a mile WSW. from **Hardwood Island,** are uncovered at half-tide, with the exception of the northernmost, part of which is always bare and shows as a white, rocky islet with a sort of grass cap on top. These ledges should receive a wide berth in every direction, unless passing along to the southward of them, where they are comparatively bold-to, the shoals not extending farther off than an eighth of a mile.

The *Duck Ledges* lie a little over half a mile to the northward of **Stevens Island,** with a good and unobstructed passage, with from three to seven fathoms between them.

After passing **Hardwood Island,** enter the *Main Channel* of the Reach and steer E. ½ S. to the anchorage off **Jonesport,** or come to anchor to the northwestward of **Hardwood,** in from three to five fathoms, soft bottom.

In *Fisherman Island Passage* and the channel leading from it into *Moose-a-bec Reach* there are many good anchorages, but most of them are not available to strangers, owing to the absence of buoys on the ledges. Between the **Ram Islands** and **Great Wass Island** is, however, good anchorage, as before mentioned, (page 120,) which can always be

made in the daytime, the channel being not less than half a mile wide and unobstructed. When past **Slate Island**, the best anchorage is under the reef which connects it with **Great Wass**, in from three to six fathoms, soft bottom; but anchorage may be made anywhere between the **Ram Islands** and **Wass Island**.

DANGERS IN FISHERMAN ISLAND PASSAGE.

In approaching this entrance the first danger met with is

SEA-HORSE ROCK,

lying about a mile and a quarter to the westward of the southern end of **Fisherman Island**, and is bare at half-tide. About a quarter of a mile to the northeastward of it is

WESTERN EGG ROCK,

a large ledge, three-quarters of a mile to the westward of **Fisherman Island**, bare at half-tide, and lying **NORTH** and **SOUTH**, with a length of eight hundred yards. This ledge is not buoyed, nor is the *Sea-Horse*, and both are dangerous, especially at night.

Western Egg Rock bears from **Nash Island Light** S E. by E. ½ E., nearly five miles distant, and from **Browney Island** S W. ½ W., nearly one mile distant.

STANLEY LEDGE.

On the west side of the passage, one mile and a half from *Western Egg Rock*, lies a bare, rocky islet, called *Stanley Ledge.* It is a little over a quarter of a mile **SOUTH** from **Outer Sand Island**, with which it is connected by sunken reefs, shoal water extending over three hundred yards to the southward from it, and to the eastward about two hundred and fifty yards. It is not buoyed.

BROWNEY ISLAND LEDGES.

Off the west and north sides of **Browney Island**, on the eastern side of the channel, lie the *Browney Island Ledges*, extending N N E. and S S W. nearly three-quarters of a mile, in some places bare at half-tide, in others with from two to fifteen feet upon them. Narrow threads of deep water separate the different ledges of the group from each other. The southernmost ledge is bare at low water, and shoal water extends off from it in a S W. direction nearly half a mile from the island. These ledges are not buoyed. Their north end bears **N. by W. ½ W.** from the northwestern point of **Browney Island**, distant about eleven hundred yards. Vessels endeavoring to make an anchorage under the north shore of Slate Island should therefore give **Browney Island** a berth to the southward of seven-eighths of a mile.

The south end of *Browney Island Ledges* is nearly half a mile **W. by S.** from the western end of that island. Vessels coming in this channel should not, therefore, approach **Browney Island** nearer than three-quarters of a mile.

THE OLD BACHELOR.

About six hundred yards **N E. ½ E.** from the northern end of *Browney Island Ledges* lies a bare ledge, surrounded by shoal water. From the south end of **Ram Island** it bears **S. by E. ½ E.**, five-eighths of a mile distant, and from **Slate Island** **S W. ½ W.**, five-eighths of a mile. It is not buoyed, but in daytime is always visible. It is proposed to call this ledge the *Old Bachelor.*

The southern end of **Ram Island** should not be approached nearer than two hundred and fifty yards by vessels drawing over twelve feet.

On the west side of the channel, exactly opposite to the north end of *Browney Island Ledges*, there is *a great mass of ledges and bare rocks*, lying off **Drisco** and **Sand Islands**. Of these, the most prominent is a rocky islet about twenty feet high, called

BATSON LEDGE,

a little over three hundred and fifty yards long, and always bare. A ledge, bare at low water, lies on its west side, close to it; one, which is out at half-tide, lies a little less than a quarter of a mile to the northward; a kelp ledge, with eleven feet, lies an eighth of a mile to the eastward; and another, with nine feet, lies three-eighths of a mile E. by S. ½ S. All of these are detached rocks, with deep water between them. Between *Batson Ledge* and **Sand Island** there are not less than five fathoms at low water, and not less than seven fathoms in the passage between **Drisco** and **Inner Sand Islands**, when passing north of *Batson Ledge*. None of these passages are available for strangers, however. Such should aim to pass to the eastward of the "*Nine-feet kelp ledge*," to which the name *Corn Ledge* has been given.

SEA-DUCK ROCK,

already described, (page 120,) is the next danger met with in entering by this passage. It is best to pass to the westward of it, as, although the channel is wider between it and the **Ram Islands**, there is danger in that passage from the extensive *Norton Island Ledges*, which extend nearly half a mile from the southwestern end of **Norton Island**. Also, a long ledge makes off from **Sea-Duck Rock** to the southeastward about three hundred and fifty yards, and is, in some places, dry at low water, while the western side of the rock is tolerably bold, and may be approached within one hundred yards, with four fathoms of water. **Sea-Duck Rock** bears from the south end of **Ram Island** NW. by W., distant a little over three-quarters of a mile; from the south end of **Stevens Island** EAST, distant nearly five-eighths of a mile; and from **Hardwood Island** S. ½ E., distant one mile and a quarter.

Stevens Island is shoal on its eastern side to a distance of about six hundred yards, and the ledges are bare in many places at low water. As none of these rocks are buoyed, great care must be taken to avoid them.

After passing **Sea-Duck Rock**, look out on the eastern side of the passage for

NORTON ISLAND LEDGES.

These will be recognized by a bare, rocky islet, lying about a quarter of a mile SW. from **Norton Island**. Shoal water extends from this islet a quarter of a mile to the westward, but is not buoyed. Still farther to the northward, and exactly opposite to *Duck Ledges*, will be seen another bare ledge, lying about three-eighths of a mile N NW. from the rocky islet above mentioned, and a little over a quarter of a mile from the **Norton Island** shore, forming the north end of the *Norton Island Ledges*. There is no passage between it and the southern rock, but it is pretty bold-to on its west side. In beating and standing to the eastward in this vicinity care must be taken not to get into the pocket between the north and south rocks, for there is deep water between them, with no outlet.

DUCK LEDGES,

lying on the west side of the passage, opposite to *Norton Island Ledges*, are very dangerous rocks. Being nearly always bare, they are easily avoided; but are surrounded by a mass of ledges and sunken rocks, rendering a near approach to them

in the highest degree dangerous. Shoal water makes to the northeastward from the larger ledges to a distance of three-eighths of a mile. In passing them through this channel the eastern ledge should receive a berth of about three hundred yards, and the northern ledge (that which is always out, and has the cap of grass upon it, see pages 105, 111, and 121,) should not be approached nearer than three-eighths of a mile. This is the most dangerous as well as the narrowest part of the channel, and vessels which draw over twelve feet should not attempt to pass through unless the tide is up. A bar with only seventeen feet runs clear across the channel, from near the north end of the rocks north of the *Duck Ledges* to **Hardwood Island** on the east side of the passage. As neither the *Duck Ledges* nor **Hardwood Island Ledges** are buoyed, it is exceedingly difficult to keep in the channel unless acquainted with the locality.

HARDWOOD ISLAND LEDGE,

lying on the east side of the channel, is bare at half-tide, and obstructs also the passage between **Hardwood** and **Pomp Islands**. The bare rock lies about four hundred yards S. ½ E. from the south end of **Hardwood Island**, and shoal water extends from it almost to the shore. It is not buoyed. Vessels must not, when past this rock, approach too near the western shore of **Hardwood Island**, as shoal water is found an eighth of a mile from its northwestern end. Twelve feet at mean low water may be carried to within a little over one hundred yards of its southwestern end. In passing it, the rule is to edge away to the westward as soon as past the south end of the island, and keep about four hundred yards from it. By so doing the bar will be crossed in seventeen feet, the best water.

After crossing the bar enter the main channel, and if bound to **Jonesport** steer to the eastward, being careful to pass not less than two hundred and fifty yards to the northward and westward of **Hardwood Island**. In doing so pass to the southward of *a black spar-buoy*. This is on

FESSENDEN LEDGE,

a large ledge lying south of the **Goose Islands**, about in the middle of the passage, (see page 111,) bare at low water near the buoy, which is placed in sixteen feet on its south side, and marked No. 5. Soundings of thirteen and sixteen feet are found on other parts of the ledge. The buoy bears from the southernmost **Goose Island SOUTH**, one-eighth of a mile. It must be left to the northward.

After passing *Fessenden Ledge* follow the directions for the main channel, (page 113.)

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING MOOSE-A-BEC REACH BY FISHERMAN ISLAND PASSAGE.

Bring **Nash Island Light** to bear N W. ½ N., four miles and three-quarters distant, and the south end of **Crumple Island** E. by N. ½ N., about two miles and a half distant; when about off the middle of the entrance steer N N E., having the **Ram Islands** a little to the northeast. Continue this course, on which there will be nothing less than sixteen fathoms, until the northern end of **Browney Island** bears E. by S. ½ S., and the white rocky point of **Hardwood Island** bears **NORTH** a little **EASTERLY**; when in sixteen fathoms, soft bottom, steer N. ½ W., passing to the westward of **Sea-Duck Rock**; to the eastward of **Stevens Island**; to the westward of *Norton Island Ledges;* and between the *Duck Ledges* and **Hardwood Island**. Continue this course until in the *Main Channel*, which will be entered about three hundred and fifty yards to the westward of *Fessenden Ledge*. Bound to **Jonesport**, steer up for the *black buoy* on *Fessenden Ledge;* pass to the southward, and when abreast of it steer E. ½ S. for the anchorage.

On the N. ½ W. course as above there is not less than five fathoms until up with the bar between *Duck Ledges* and **Hardwood Island**, upon which there is seventeen feet, and after passing it there is not less than four fathoms to the anchorage.

The above courses pass nearly half a mile to the westward of **Western Egg Rock**, a little over half a mile to the westward of *Browney Island Ledges*, about seven-eighths of a mile to the eastward of *Stanley Ledge*, a little over a quarter of a mile to the eastward of *Sand Island Ledges*, about three hundred yards to the westward of **Sea-Duck Rock**, a little over a hundred yards to the eastward of *Stevens Island Ledges*, three-eighths of a mile to the westward of *Norton Island Ledges*, a quarter of a mile to the eastward of *Eastern Duck Ledge*, a quarter of a mile to the westward of *Hardwood Island Ledge*, about three hundred yards to the eastward of the ledges northwest from *Duck Ledges*, and about an eighth of a mile to the westward of the shoal water off the northwest end of Hardwood Island.

Wishing to anchor in the anchorage north of **Slate Island**: When the north end of **Browney Island** bears E. by S. ½ S., and the south point of **Hardwood Island NORTH**, a little EASTERLY, as before, and in sixteen fathoms, soft bottom, steer N E., which course will lead nearly midway between **Ram** and **Slate Islands**. On this course there will be nothing less than eight fathoms. As soon as **Slate Island** bears S E., (or, in other words, when it is exactly abeam,) steer E. by S. ⅝ S. toward the **Great Wass Island** shore, and anchor at pleasure, the depth being from three to six fathoms, soft bottom. Or continue the N E. course for the southern end of **Beal Island**, having a high, bare hill, with white ledges cropping out over its surface (**Beal Mountain**) on the north, and when within about one-third of a mile from shore anchor in the mouth of *FLYING PLACE*, in from four to six fathoms, soft bottom. These are the only anchorages fit for strangers.

The above courses pass a little over a quarter of a mile to the northward of the north end of *Browney Island Ledges*, a quarter of a mile to the westward of the *Old Bachelor*, about four hundred yards to the eastward of the shoals off **Ram Islands**, and nearly a quarter of a mile to the westward of those off **Slate Island**.

FLAT ISLAND PASSAGE

is next to the westward of the *Fisherman Island Passage*, its entrance being between **Outer Sand Island** and **Flat Island**. It is a wide and deep channel, leading to the northward, between **Outer Sand, Inner Sand, Drisco, Brown's**, and **Stevens Islands**, the *Duck Ledges* and **Shabbit Islands** on the east, and **Flat, Plummer**, and **Ram Islands** on the west. It is nearly free of dangers, and not less than nine fathoms can be taken through it into the main channel of the Reach. The entrance may be recognized by **Flat Island** on the western side, and **Outer Sand Island** on the eastern.

FLAT ISLAND

lies a mile and a quarter to the westward of **Outer Sand Island** and a mile and five-eighths to the eastward of **Nash Island**. It is a low, rocky islet, about three hundred and fifty yards in diameter, surrounded by ledges. These rocks, called the *Flat Island Ledges*, extend to the northward from the island three-eighths of a mile and to the southward two-thirds of a mile. The island should receive a berth to the northward of not less than a mile, but may be approached within three hundred and seventy to four hundred yards either on its eastern or western side.

OUTER SAND ISLAND,

before described, (page 119,) is a high, grassy island, with a very scanty growth of spruce and fir, and a number of dead trees standing like spars here and there. It is two miles to the westward of **Browney Island**. Next to the northward lies **Inner Sand**

Island; and to the northward from this, **Drisco Island**; both of which have been already fully described, (page 119.) Off the western shore of **Drisco Island** lies a small island, called

BROWN'S ISLAND,

two hundred and fifty yards from **Drisco**, low and rocky, bare, with the exception of a few dead trees standing here and there over its surface, and its shores are bold-to. An excellent channel exists between it and **Drisco Island**, through which not less than seven fathoms may be taken.

PLUMMER ISLAND.

On the western side of the channel, a little above **Brown's Island**, and a mile and a half to the northward of **Flat Island**, lies **Plummer Island**. Seen from the southward and westward it looks like two islands, of moderate height, wooded, and presents a bold, white, rocky face to the eastward. This island lies W NW. and E SE., and is a little over six hundred yards long. On its eastern, northern, and western sides it is tolerably bold-to, and may be approached within a hundred and fifty yards; but on its southern side lies *Plummer Island Ledge*, a quarter of a mile from the shore.

Nearly opposite to **Plummer Island**, on the eastern side of the channel, lies **Stevens Island**, before described, (page 120.) Its western end is shoal to a distance of three-eighths of a mile. Passing to the northward of **Plummer Island**, there will be opened

RAM ISLAND,

appearing a little over half a mile to the westward, on the southern side of *Tabbott Narrows*. It is of moderate height, rocky, and covered with a very thick growth of trees, giving it a round, bushy appearance.

WESTERN DUCK LEDGES.

On the eastern side of the channel, about half a mile to the northward of **Stevens Island**, lie the *Duck Ledges*, the westernmost of which marks the eastern limit of the channel. It is a long ledge, bare at one-quarter ebb, lying NE. and SW., about a quarter of a mile to the westward of the large ledges. A quarter of a mile to the northward of it will be seen

SHABBIT ISLAND,

lying on the eastern side of this channel and on the south side of the main channel, marking the point of union of the two. It is a low, rocky, wooded islet, about an eighth of a mile long. On its south side it is tolerably bold, but it should receive a berth of nearly two hundred yards from vessels passing to the westward.

When abreast of **Shabbit Island** the main channel has been entered, about seven-eighths of a mile above *Tabbott Narrows*.

DANGERS

IN FLAT ISLAND CHANNEL.

The approaches to this channel are clear until near **Flat Island**, off the south end of which extend the dangerous

FLAT ISLAND LEDGES

to a distance of two-thirds of a mile. These consist of a great number of small detached rocks, most of which are bare at low water, and have small slues with from four to seven feet among them. To avoid them, pass to the southward of **Flat Island** not less than a mile. They always show themselves, and are not buoyed.

On the eastern side of the entrance look out for

STANLEY LEDGE,

lying a little over a quarter of a mile to the southward of **Outer Sand Island.** It is bare and rocky, and is connected with **Outer Sand Island** by a line of sunken rocks. The bare rocks should not be approached nearer than a quarter of a mile from either the southward or westward.

There are no dangers in this passage in mid-channel, but only on the sides. In beating, when standing to the westward do not approach **Flat Island** nearer than four hundred yards; and when standing to the eastward give **Outer Sand** and **Inner Sand Islands** a berth of a quarter of a mile. When to the northward of **Flat Island,** and standing to the westward, give that island a berth to the southward of not less than half a mile; and when up with the southern end of **Drisco Island** do not stand to the westward of the eastern end of **Plummer Island,** bearing **N.** by **E.,** for there are many shoal spots, and bare, detached ledges, lying to the southward of **Green Island** at distances varying from a half to five-eighths of a mile. By following the above directions there will never be less than three and a half fathoms water.

PLUMMER ISLAND LEDGE

lies about a quarter of a mile off the southern shore of **Plummer Island,** having about three feet at mean low water, and is not buoyed. To avoid it do not stand to the westward of the eastern end of the island, bearing **N.** by **E.**

Brown's and **Drisco Islands,** on the eastern side of the channel, are both bold-to, but ledges make off from the western end of **Stevens Island** about six hundred and fifty yards, and are in many places bare at low water. The western end of this island should, therefore, receive a berth to the eastward of not less than three-eighths of a mile.

WESTERN DUCK LEDGE,

which is bare at one-quarter ebb, lies about half a mile to the northward of **Stevens Island** and a little over a quarter of a mile to the westward of *Eastern Duck Ledge,* and should not be approached nearer than three hundred yards, as there are sunken rocks to the westward. After passing it, there are no more dangers until the main channel of the Reach is entered.

SAILING DIRECTIONS FOR FLAT ISLAND PASSAGE.

With **Nash Island Light** bearing **NW. ½ N.,** distant three miles and one-eighth, and the southern end of **Browney Island E.** by **N. ½ N.,** distant three miles and one-eighth, steer **N.** by **E.,** which will lead safely through the passage as far as **Shabbit Island.** When abreast of this island, in nine fathoms water and about six hundred yards off, steer **NE.** by **E.** until the northernmost of the *Duck Ledges* (that which is always bare and has the cap of grass upon it) bears **S. ½ E.,** with five and a half fathoms water, when steer **E. ½ S.** for the anchorage off **Jonesport.**

On the above courses there will not be less than nine fathoms as far up as **Shabbit Island;** thence until *Northern Duck Ledge* bears **S. ½ E.,** not less than five; and thence to the anchorage, not less than four fathoms.

Anchorage may be had between **Drisco** and **Stevens Islands,** in from six to nine fathoms, by rounding **Brown's Island** to the eastward, giving it a berth of about one hundred and fifty yards, and steering **E. ½ N.** about, for **Sea-Duck Rock.** Keep the **Stevens Island** shore best aboard, and when past its western end anchor. The bottom is soft.

CONE ISLAND PASSAGE, OR WESTERN ENTRANCE.

There is an excellent entrance to *MOOSE-A-BEC REACH* from the southward, between **Flat Island** on the east and **Cone** and **Nash Islands** on the west, having no dangers; and the only sailing directions necessary are to keep off the shores of the islands. This passage leads into *TABBOTT NARROWS* at their western end. It is over a mile wide at its narrowest point, and has not less than ten fathoms.

CONE ISLAND,

lying on the western side of the entrance, is a little over a mile **NW. ¼ W.** from **Flat Island**; is low, grassy, and covered with a scanty growth of spruce and pine; is tolerably bold-to, except on its southern side, where there are ledges making off a quarter of a mile, and on its western side, where it is joined at low water to **Nash Island**.

NASH ISLAND

is low and rocky, entirely bare, and about three hundred and fifty yards long. Ledges make out from it about a quarter of a mile to the southward. On this island is built

NASH ISLAND LIGHT-HOUSE,

which is a guide to *Pleasant Bay*, *Cape Split Harbor*, and *Moose-a-bec Reach*. It is a white tower, twenty-eight feet high, connected with the keeper's dwelling by a covered way; shows a fixed red light of the fourth order of Fresnel from a height of forty-seven feet above the sea, and is visible, in ordinary weather, twelve miles. Its geographical position is

Latitude - - - - - - - - -	44° 27′ 51″ N.
Longitude - - - - - - - -	67° 44′ 50″ W.

GREEN ISLAND,

lying about a mile and a half to the northward of **Flat Island** and about three hundred yards to the southward of **Ram Island**, in *Tabbott Narrows*, must be left to the eastward by vessels entering by this passage. It is low, bare, and rocky, with a grassy surface, but no trees. **Green Island** is surrounded by ledges, and there is no passage between it and **Ram Island**.

SAILING DIRECTIONS FOR CONE ISLAND PASSAGE.

Coming in from the southward and westward, bring **Nash Island Light** to bear **N. by E.**, one mile and a half distant, with about twenty fathoms water, soft bottom, and steer **NE. ¼ N.**, which course will lead into *Tabbott Narrows* at their western end. There will not be less than ten fathoms until reaching the *Narrows*, after which there will be nothing less than four fathoms to **Jonesport**.

These courses pass a quarter of a mile to the eastward of **Cone Island**, the same distance to the westward of **Green Island**, and midway between **Ram** and **Sheep Islands**.

In beating through *Cone Island Passage*, do not approach **Nash Island** from the southward nearer than three-eighths of a mile, nor the southern end of **Cone Island** nearer than six hundred yards, but stand close to the eastern point of the latter, as it is quite bold-to. In standing to the eastward, **NORTH** of **Flat Island**, give that island a berth of half a mile, and **Green Island** a berth to the northward of nearly five-eighths of a mile, to avoid the shoals lying off those islands. The western shore of **Green Island** should receive a berth to the eastward of two hundred and fifty yards.

Cone Island Passage is an excellent channel, and is frequently used by vessels bound to the westward, after they have passed through *Tabbott Narrows*.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Moose-a-bec Light...	44° 28′ 27″	67° 31′ 55″	$4^h 30^m 07.7^s$	Revolv'g.	65 ft.	13
Nash Island Light ..	44° 27′ 51″	67° 44′ 50″	$4^h 30^m 59.3^s$	F. red.	47 ft.	12

TIDES.

Corrected establishment at Jonesport	$10^h 58^m$
Mean Rise and Fall of Tides	11.7 ft.
Mean Rise and Fall of Spring Tides	12.4 ft.
Mean Rise and Fall of Neap Tides	11.0 ft.
Mean duration of Flood-Tide	$6^h 10^m$
Mean duration of Ebb-Tide	$6^h 15^m$

VARIATION OF COMPASS.

The approximate magnetic variation in *Moose-a-bec Reach* for the year 1875 is 16° 40′ W., and the approximate annual increase 2′.

INDIAN RIVER

empties into *Moose-a-bec Reach* on the west side of **Hopkins Point.** It is an arm of the sea, running about N. by E. and S. by W., and is a little over two miles long; is separated into two streams by a large island called **Moose Island,** which extends nearly the whole length of the river; is about a mile and five-eighths long and a little over half a mile wide. That part of the river to the eastward is called *EAST RIVER*, or *INDIAN RIVER* proper; that to the westward is called *WEST RIVER.* This river is entirely unsafe for strangers to enter. The channel is narrow and crooked, and both branches are full of bare ledges and sunken rocks. There is little or no trade; what there is being carried on by light-draught vessels, whose masters are well acquainted with the dangers. A pilot can always be obtained at **Jonesport** for either river.

DESCRIPTION OF SHORES OF INDIAN RIVER.

Off the mouth of *East River*, and close in with **Hopkins Point**, lies

DOYLE ISLAND.

It is about half a mile long in an EAST and WEST direction, low, and wooded, except near its eastern end, where the land is cleared, and has a house and out-buildings. It is separated from **Hopkins Point** by a passage about one hundred and fifty yards wide, called *WHITING PASSAGE*, which is, however, only fit for small boats. Two spruce trees, standing close together, on the southwestern point of the island, serve to distinguish the entrance to *Indian River*, as there are no other trees on the point.

From three-eighths to five-eighths of a mile to the westward from **Doyle Island** lie the

GOOSE ISLANDS,

six in number, low and well wooded, except the one next to the southernmost, which is

a small, low island, with only a few scattered spruce on its flat, grassy surface. The third islet of the group is very thickly wooded, and has a hut on its eastern shore near the northern end. The channel into *Indian River* lies on the western side of this group, and between **Moose Island** on the north, and **Doyle** and **Goose Islands** on the south. The passage between **Doyle** and **Goose Islands** is too full of ledges to be of use.

BICKFORD POINT,

the western point of entrance to *West River*, is barren, rocky, and nearly destitute of trees. There are one or two houses on its extremity, but the general appearance of the land is very desolate. All of its approaches are very shoal.

MOOSE ISLAND,

when viewed from the southward, presents a low, rocky surface, the summit crowned with spruce and fir and scrubby bushes. There are a few houses on the bank, and its southeastern extremity shows a round knubble of moderate height, crowned with a group of spruce and fir, and presenting a peculiar appearance. Fish-weirs extend off from the shore to the edge of the channel, and ledges, most of them bare at low water, extend nearly half way across the entrance.

The western banks of West River show undulating surfaces, diversified with wooded land and cleared slopes, the latter extending to the water's edge. There are very few houses. The channel, after passing **Bickford Point**, is more free of ledges than that of *East River*. Ten feet at mean low water may be taken about a mile and a quarter above **Bickford Point**.

The shores of East River have the same general character as those of *West River*, but the eastern banks are indented by several coves or creeks. The southernmost of these, called *Hay Creek*, makes into the eastward a little over a quarter of a mile above **Hopkins Point**. *Snare Cove*, a little over two-thirds of a mile to the northward of *Hay Creek*, is a small, semicircular cove of no importance; and just to the northward is *Snare Creek*, which is about thirteen hundred yards long, but is dry at low water. The banks of *East River* are generally low or of moderate height, mostly wooded, but occasionally cleared and thinly settled. The general course of the river is about **N N E.** for nearly two miles, where it joins *West River* at the northern end of **Moose Island**. The passage between this island and the main land to the northward is a little over one hundred yards wide, and is crossed by a bridge. There is a small settlement about half a mile above this, on the banks of the *East River*, called **Indian River Settlement.** Seven feet at mean low water may be taken up this river about a mile and a half above its mouth, but the channel is too narrow and intricate for strangers.

No sailing directions can be given for either branch of *Indian River*. The channels are very narrow and crooked, and are obstructed by numerous and very dangerous ledges, none of which are buoyed. Vessels bound up must take a pilot in the Reach.

CAPE SPLIT HARBOR.

The entrance to this harbor is a little over half a mile to the westward of **Sheep Island**, in *Tabbott Narrows;* is contained between the western shores of **Moose Neck** and **Cape Split**; is a little over a quarter of a mile wide, and has not less than seven fathoms. The harbor is an excellent refuge; is frequently used, and easy of access, especially to vessels coming from the eastward through *Tabbott Narrows*, or from the southward through *Cone Island Passage*. It is a wide cove, almost a mile and a quarter long, with a general course **N N E.** and **S S W.**, widening out above the entrance to nearly three-

quarters of a mile from shore to shore. Three fathoms can be found at the anchorage, and the holding-ground is excellent.

CAPE SPLIT,

forming the western side of the harbor, is a remarkable-looking headland, a high, rocky bluff, bare except at its southwest end, where it presents a black, wooded face, and along its southeast face, where there is a growth of black-looking fir and spruce.

There is a round, rocky islet of peculiar appearance, lying off the southwest shore of the cape, called **The Castle,** crowned with fir and spruce, and has perpendicular faces, while its summit is quite flat.

The shores of **Moose Neck**, forming the east side of *Cape Split Harbor*, are rocky and undulating, with a scanty growth of trees. Both banks are thinly settled and under partial cultivation.

DANGERS
IN APPROACHING AND ENTERING CAPE SPLIT HARBOR.

I. *From Tabbott Narrows.*—Coming from the eastward through *Tabbott Narrows*, and wishing to enter *Cape Split Harbor*, beware of *the ledges lying on the eastern side of the entrance*, three hundred and fifty yards south of **Moose Neck**. These ledges, several of which are bare at low water, lie about half a mile to the westward of **Sheep Island**, and are not marked, but almost always show themselves. They are the only dangers in entering from the eastward.

Cape Split may be approached, in going in, within one hundred yards, with not less than three fathoms, and not less than four fathoms can be carried up to the anchorage.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CAPE SPLIT HARBOR.

I. *From Tabbott Narrows.*—When on the SW. by W. course through the *Narrows*, the west end of **Sheep Island** bears NW. by N., (or is exactly abeam,) with five and a half fathoms, soft bottom; steer NW. by W. ½ W. until the middle of the entrance to the harbor bears NNE.; steer that course, and when up with *Tabbott Cove,* (which is on the east side, about a quarter of a mile above the entrance,) haul into it and anchor according to draught. Here moor NW. and SE., and lie safe from all winds, in not less than three fathoms. But in northerly winds anchor anywhere in the channel after passing the entrance. In SW. or southerly winds the harbor is open, and the best anchorage is in *Tabbott Cove.* On the course from **Sheep Island** to the entrance to *Cape Split Harbor*, there is not less than four fathoms; on the course in, nothing less than six fathoms; and up to the anchorage, not less than three fathoms.

The course from the *Narrows* to the entrance to the harbor passes about one hundred and fifty yards to the southward of the ledges off the western end of **Moose Neck**; and the course in leaves these same ledges about a hundred yards to the eastward, keeping the **Cape Split** shore more aboard, as there are no dangers.

DANGERS
IN APPROACHING AND ENTERING CAPE SPLIT HARBOR.

II. *Coming from the southward, through Cone Island Passage.*—There are no dangers in this passage (for description of which see page 128) until up with

THE LADLE,

about fifteen hundred yards to the northward of **Cone Island.** It is a remarkable-looking islet, about two hundred and fifty yards long, lying NNW. and SSE., and bear-

ing a faint resemblance to a ladle upside down. Its southern end is low, bare, and rocky; and its northern end is a high, round head, crowned with stunted fir and spruce and with perpendicular faces. This head is called the **Bowl of the Ladle.** About three hundred and fifty yards to the eastward of the **Ladle** is a *small rock, bare at low water*, and tolerably bold-to, having not less than four fathoms between it and the **Ladle.** This is the only danger in approaching *Cape Split Harbor* through this channel, and is easily avoided by giving the **Ladle** a berth of a quarter of a mile to the westward.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CAPE SPLIT HARBOR.

II. *From the southward, through Cone Island Passage.*—Bring the east end of **Cape Split** (or the western point of the harbor entrance) to bear N. ¼ E., three miles distant; when abreast of the southern end of *Flat Island Ledges*, and about half a mile to the westward, in sixteen fathoms water, soft bottom, steer N. ¼ E. until the northern end of the **Ladle** bears S W. by W. ½ W., distant three-eighths of a mile, with nine fathoms water, when the middle of the entrance will bear N N E. and that course will lead in.

On the above courses there is not less than nine fathoms up to the entrance of the harbor.

DANGERS
IN APPROACHING AND ENTERING CAPE SPLIT HARBOR.

III. *Coming from the westward.*—To enter this harbor from the westward the usual rule is, after passing **Petit Manan Light-House**, to bring it to bear S W. ¼ W. and steer N E. ¼ E. On this course, when a little over two miles and a quarter from the light there will be seen to the northeastward, and about a mile and a quarter distant, *a red spar-buoy* on

JORDAN'S DELIGHT LEDGE,

formed by a line of reefs about a mile long, extending to the southward from an islet called **Jordan's Delight.** These rocks are all under water, and it is not safe to pass between the buoy and the islet. **Jordan's Delight** is a rocky islet, of moderate height, entirely covered with a dense black growth of trees, lying about seven eighths of a mile to the southward of **Pond Island**, and in the middle of the approaches to *NARRAGUAGUS BAY.* Seen from the westward it shows a bare, precipitous head, backed by trees.

The *red spar-buoy* on *Jordan's Delight Ledge* must be left to the westward.

There is said to be a ledge with eighteen feet at low water, two and three-eighths miles N E. ¼ E. from **Petit Manan Light-House**, called the *Dave Leighton Ground.*

JACKSON LEDGE.

Passing the *red spar* on *Jordan's Delight Ledge*, pass to the northwestward, about a mile and a half, *a red and black nun-buoy* on *Jackson Ledge*, which has twelve feet at low water, lying about four miles E. ¾ N. from **Petit Manan Light-House.** It is not in the way, however, of vessels using this passage unless they are beating.

After passing these ledges the course continues to the northeastward for **Cape Split**, and the first danger met with is called

THE BIG POT,

a high, bare islet, entirely destitute of vegetation, and about one hundred yards long. Its eastern end is high and very steep, with red and yellow rocks on the summit, while

those nearer the water are black. This rock lies one mile N. ¼ E. from **Nash Island**, and about a mile and one-eighth S W. ½ W. from the entrance to *Cape Split Harbor*, is tolerably bold-to, may be approached to within one hundred and fifty yards, and must be left to the eastward.

Three-eighths of a mile EAST from the **Big Pot** lies

THE POT,

a barren rock, about ten feet above high water. Extensive shoals surround it, and it should receive a berth of about an eighth of a mile to the eastward. **The Ladle**, lying one eighth of a mile to the eastward, should not be approached nearer than two hundred yards.

On the northwestern side of the channel, about three-quarters of a mile **NORTH** of the **Big Pot**, there will be seen a **black spindle**, formed by an iron tripod and shaft, thirty-five feet high, with a ball on top, on

NORTON REEF,

or *Norton Ledge* as it is sometimes called. It lies on the eastern side of the entrance to *Pleasant Bay*, two-thirds of a mile to the westward of **Cape Split**, and is bare at low water. The spindle must be left well to the westward.

When up with the eastern end of **Cape Split** give it a berth to the northward of one hundred and fifty yards. Do not approach the eastern side of the entrance nearer than two hundred and fifty yards, to avoid the ledges off the west shore of **Moose Neck**. (See page 131.)

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CAPE SPLIT HARBOR.

III. *Coming from the westward.*—When past **Petit Manan Light-House**, bring it to bear SW. ¼ W., and steer NE. ¼ E. until up with the *red buoy* on *Jordan's Delight Ledge*. Pass to the eastward of this, and steer NE. ½ E. for **Cape Split**, passing to the northwestward of the **Big Pot** and to the eastward of the **spindle** on *Norton Reef*. When the **Pot** bears SSE., three-eighths of a mile distant, with eight fathoms water, soft bottom, steer E. by N. ¾ N., giving the eastern extremity of **Cape Split** a berth to the northward of about one hundred and fifty yards, and carrying not less than seven fathoms, and when in the middle of the entrance steer NNE. into the harbor.

The above courses pass to the eastward of *Jordan's Delight Ledge;* well to the westward of *Jackson Ledge;* three hundred and fifty yards to the westward of the **Big Pot**; three-eighths of a mile to the northwestward of the **Pot**; and five-eighths of a mile to the eastward of the **spindle** *on Norton Reef*. On these courses there will not be less than six fathoms.

PLEASANT BAY AND RIVER

lie on the western side of **Cape Split**, the entrance being between **Ripley Neck** and the **Cape**. Between these two points it is a little over two miles and a quarter wide, but gradually diminishes to a width of a quarter of a mile at the *UPPER NARROWS*, about three miles above, where *PLEASANT RIVER* discharges itself into the bay. The general course of the bay is about NNE. and SSW. Both banks are tolerably high and well wooded, and there are very few settlements.

Into the northern end of *Pleasant Bay* empties *PLEASANT RIVER*, running in about the same direction three miles and a quarter to the town of **Addison**, built on its north bank, where the river makes an abrupt turn to the eastward. **Addison** is six miles and three-quarters above the mouth of the bay. Several islands and islets lie off

the entrance to this bay, and there are many in the bay itself. The channels are intricate and unsafe for strangers, who should always take a pilot at **Cape Split**, or **Millbridge**, or on one of the adjacent islands.

DESCRIPTION OF SHORES AND ISLANDS IN PLEASANT BAY.

CONE ISLAND

lies one mile and five-eighths to the southward from **Cape Split**, is low and grassy and covered with a scant growth of spruce and pine; is tolerably bold-to, except on its south side, where ledges make off a quarter of a mile. It lies on the eastern side of the entrance to *Pleasant Bay*, and is joined at low water to

NASH ISLAND,

an eighth of a mile to the westward. This island is about three hundred and fifty yards long; is low, rocky, and entirely bare. Here is built the light-house, which is a guide to this bay as well as to *Moose-a-bec Reach* and **Cape Split.**

NASH ISLAND LIGHT-HOUSE

is a white tower, twenty-eight feet high, connected by a covered way with the keeper's dwelling, showing a fixed red light of the fourth order from a height of forty-seven feet above the sea. The light is visible in ordinary weather twelve miles, and its geographical position is

Latitude - - - - - - - - -	44° 27′ 51″ N.
Longitude - - - - - - - -	67° 44′ 50″ W.

FLINT ISLAND

lies on the western side of the entrance to *Pleasant Bay*, about one mile and five-eighths to the westward of **Cape Split** and one mile and three-eighths from **Nash Island**; is rocky, and bare of all vegetation except a very scanty growth of stunted fir near its east and west ends; is about five-eighths of a mile long in a **NW.** and **SE.** direction. A little to the westward will be seen a very peculiar-looking islet, called

SHIP-STERN ISLAND.

When viewed from the southeastward it shows as a high, bluff, rocky head, with a thick growth of trees covering its summit. On its southwestern end the rocks are stratified horizontally with black and brown strata, and this appearance, together with the shape of the point, (somewhat like the stern of an old-fashioned ship,) has given the name to the islet.

DYER ISLAND.

About a quarter of a mile to the northward from Flint Island lies **Dyer Island,** a large island, lying nearly **NORTH** and **SOUTH**, and about two miles long; is rocky, of considerable height, diversified with woods and bare, rocky shores, and forms part of the eastern shores of *NARRAGUAGUS BAY*, separating that bay from the approaches to *Harrington* and *Pleasant Bays.*

On the eastern side of the Bay, and about one-third of a mile west of **Cape Split**, lies

NORTON ISLAND,

sometimes called **Dock Island**; a barren islet of moderate height, lying nearly **NORTH** and **SOUTH**, and about half a mile long. From it a long ledge makes off in a southwesterly direction, bare at half-ebb, and has on its end a **black spindle surmounted by a ball.** This ledge is called *Norton Reef or Ledge.* (See pages 112 and 133.)

SHEEP ISLAND

is a low, sandy islet, with trees in black clumps scattered over its surface, lying between **Cape Split** and **Norton Island**; but to the northward,

CAPE SPLIT,

the eastern point of entrance to *Pleasant Bay*, will appear as a high, bald head, with a thick border of black-looking trees fringing its northwestern face, while, on the western side of the entrance,

RIPLEY NECK

is high, rocky, and very thickly wooded, mostly with oak and birch. **Ripley Point,** however, (the southern end of the neck,) is a high, round, rocky head, covered with spruce and fir. A group of islets, known as the

NARROWS ISLANDS,

lie off this shore, near **Ripley Point.** They are nearly all of moderate height, rocky, and well wooded. A small island, called **Potato Island,** lies close to **Ripley Point**; is low, rocky, and has a number of dead trees upon it. Between this and the **Narrows Islands** there is a passage called

THE NARROWS,

leading into *Harrington* and *Narraguagus Bays.* There is sufficient depth in it at high water for vessels drawing eighteen feet, but no stranger should attempt the passage.

On the western shore of the bay, about one mile and a quarter above **Ripley Point,** will be seen a large cove, called

CARRYING-PLACE COVE.

It is of little importance, but offers fair anchorage for vessels drawing twelve feet. The shores at its head are gently sloping, cleared, and cultivated; but the north side is rocky and wooded with scrub, and the south shore shows yellow sand-cliffs about twenty feet high, covered with trees. In many places the face of the cliffs is hidden by a growth of scrub; in others it crops out bold and bare. A couple of rocky islets, covered with scrub, lie in the mouth of this cove, nearest to the north shore.

The eastern side of **Cape Split** is rocky, barren, and wooded, except in one place just above the high land of the cape, where it is low, flat, and grassy, and slopes gently to the edge of the bank, which has low, sandy faces. There is a small settlement on this side of the cape. The bank is faced by a sand-beach, the only one on this shore between **Cape Split** and **Reef Point.** About a mile and a quarter above the extremity of the cape a large and wide cove makes in, nearly E S E., about half a mile long, called

NASH HARBOR.

There is a small settlement at its head. A low, rocky, wooded islet lies in the middle of the entrance, and a smaller one, bare of trees, a little to the northward. The larger islet is called **Nash Harbor Island.** There is a passage on either side of it. The southern point of the entrance to *Nash Harbor*, called **Nash Harbor Point,** is low, rocky, and covered with a thin and scattered growth of spruce and fir. This harbor affords shelter for light-draught vessels at high water, but is almost entirely bare at low water, and those who use it must lie aground.

About three-eighths of a mile above *Nash Harbor*, and nearly two miles above **Cape Split,** another cove will be seen on the eastern shore, called

POETS HARBOR.

It is narrow, runs nearly **EAST** and **WEST**, and is nearly half a mile long. A rocky islet, thickly wooded with birch, spruce, and other trees, lies in the mouth of the cove, close in with the north shore, and until closely approached appears to be part of the main land. This is **Poets Island.** The cove is of no importance, being bare at low water.

In entering *Pleasant Bay* the first island met with on the east side, after passing **Norton Island,** is

EAGLE ISLAND,

a round, rocky islet of moderate height, and having a few stunted fir and spruce trees dotting its surface and fringing its banks. Next to the northward, but closer in with the east shore of the bay, is

SHEEP ISLAND,

a low, rocky islet, covered with scattered groups of spruce and fir. The trees stand in clumps, with bare spots between them. Next to the northward of this is the entrance to *Nash Harbor*, and about three-quarters of a mile above it is an islet called

THE NIGHT-CAP,

grassy, and bare of all trees except two tall spruce trees on its western end, standing close together. It lies nearly midway between the **Narrows Islands** and the entrance to *Nash Harbor*. Nearly half a mile above the **Night-cap** will be seen **a group of three islets**, also in the middle of the bay, known as the

BIRCH ISLANDS.

They are all round, rocky, and covered with a scattered growth of spruce, fir, and birch. The two southernmost lie **EAST** and **WEST** from each other, and the third lies **NORTH** from the other two, and is noticeable for peculiar *red rocks* on its southern end close to the water. The southernmost **Birch Islands** lie abreast of the entrance to *Poets Harbor;* the northernmost islet nearly opposite to, but a little below, the mouth of *Carrying-Place Cove*, on the west shore.

When past the **Birch Islands** two other islets will be reached, rocky, and bare of trees, lying about an eighth of a mile to the northward of the former, called

RASPBERRY AND LITTLE MINK ISLANDS.

The northernmost is **Raspberry,** and the other **Little Mink Island.** Both are nearly round, and bare of everything but a thin growth of moss and grass, lying **N.** by **E.** and **S.** by **W.** from each other, and about three hundred yards apart.

On the western shore of the bay, just above **Raspberry Island**, will be noticed a somewhat remarkable-looking point called

GUARDS POINT.

It is low, wooded with a scanty growth of oak and birch, and presents to the southeastward a remarkable yellow cliff-like face of sand. It cannot be mistaken.

On the eastern shore, nearly abreast of **Raspberry Island**, will be noticed a very remarkable-looking head called

TUMBLE-DOWN-DICK,

a perpendicular wall of gray rock, with trees clinging to the face of the precipice, and the bare rock cropping out here and there in large masses; is heavily wooded, and

about one hundred and fifty feet high. Close in with it lies a small, low, rocky island, covered only with scrub, except on top near its northeastern end, where there is only grass, called **Gibbs Island.** On the north side of **Tumble-down-Dick** is

SEAVEY POINT,

of moderate height, somewhat bluff and steep; cleared, cultivated, and with a house and out-buildings. On its southern side, between it and **Tumble-down-Dick**, a long cove makes in, called *Seavey Cove,* of no importance.

On the west shore, about a quarter of a mile above **Guards Point,** is a low, rocky islet, with only scrub on it, called **Fort Island;** and nearly half a mile above **Guards Point** a long cove makes in, called

RAMSDELL COVE.

A line or row of houses stands on the hill at its head, the two middle ones having red roofs. The cove makes in between two sandy heads with perpendicular faces, which are not named. Good anchorage for small vessels may be had in *Ramsdell Cove.*

On the north side of the entrance lie two islets N W. and S E. from each other. They are low, sandy, and covered with scrub.

On the east shore of the bay, and about a quarter of a mile above **Seavey Point,** there will be seen a very remarkable-looking islet, called

HEMLOCK ISLAND.

Its surface is covered with a kind of dead grass intermingled with scrub, which gives it the appearance of being streaked with yellow and brown. A thin group of stunted trees grows on its southern end. At low water it is joined to the eastern shore. Behind **Hemlock Island** makes in a long and deep cove called *Looks Cove.* Here are the *UPPER NARROWS* and the mouth of *PLEASANT RIVER,* which is here only about a quarter of a mile wide.

A small, low, grassy island, bare of trees, lies about one hundred yards to the northward of **Hemlock Island.**

The eastern shores from **Seavey Point** to **Reef Point,** a little over a mile above, are very thickly wooded, and uninhabited. The river rapidly widens above the *Narrows,* and at **Reef Point** is about five-eighths of a mile wide.

REEF POINT

is a long, level, grassy point, cleared and cultivated, and has sandy, water-worn faces, a house and barn, and is of moderate height.

On the west shore, from *Ramsdell Cove* to **Richards Point,** about three-quarters of a mile above, the banks show sandy faces, and the land, which is flat and grassy, extends back to rocky and barren hills, dotted here and there with spruce and fir trees.

RICHARDS POINT

is a high, grassy head, with sandy, water-worn faces, from fifteen to twenty feet high, its surface flat, cleared, and under cultivation. A farm-house and barn occupy the high ground. On the north side of the point there is a long cove, called

LOWER WASS COVE,

making in to the westward about half a mile, and dry at low water. It is nearly opposite to **Reef Point,** and separated from *Upper Wass Cove,* a quarter of a mile above, by a large headland called

WASS POINT,

a high, grassy head, with a house and barn, and an old lobster-packing house at the water's edge. It is about two miles below **Addison**, and forms the dividing point between *Lower* and

UPPER WASS COVE.

The shores of this cove are all sandy, with water-worn faces, and there is a somewhat remarkable high, sandy cliff, crowned with a small grove of trees, on the south side, near its head. On the north side, at the entrance to the cove, is

REYNOLDS POINT,

a long, flat, sandy point, covered only with grass, and having sandy, water-worn faces.

On the eastern shore of *PLEASANT RIVER*, for about a mile above **Reef Point**, the shores are barren and rocky and dotted with a scattered growth of scrubby fir and spruce. Thence to **Addison** they are mostly cultivated and settled, with occasional groves of small trees between the cleared fields. The cultivated lands are mostly flat or very gently sloping, and extend back to the higher lands, which are barren, rocky, and covered with the usual growth of stunted trees.

On the western shore, half a mile above **Reynolds Point**, is

WHITE'S POINT.

Between the two the banks are low, flat, and sandy, with water-worn faces, and the land extends back to rocky hills crowned with stunted fir. **White's Point** is grassy, bare of trees, and has a small farm-house and barn. On its north side makes in a broad cove called *Dyer Cove*, or sometimes *Dyer Bay*, of no importance, being quite shallow.

When abreast of **White's Point** the village of **Addison** will be seen ahead, and about a mile and three-quarters distant.

DYER COVE.

This large and wide cove or bay lies on the north side of **White's Point** and is about half a mile wide. Its northern point is thickly wooded with birch, oak, and other deciduous trees, which makes it very noticeable, as it is the only point so timbered between *Ramsdell Cove* and the village. The shores are mostly cleared, but are dotted with trees here and there. At its head there is a settlement, with what appears to be a school-house on the high land. This house is white and has a cupola or belfry on top.

From *Dyer Cove* to the northward the west bank of *Pleasant River* is mostly cleared and cultivated. About a mile above the cove the river turns abruptly to the eastward, and on the west and north bank at the turn is situated

THE VILLAGE OF ADDISON.

The principal trade in this village is in lumber and ship-building, vessels of one hundred and fifty and two hundred tons being built here; and even three-masted schooners of three hundred tons and upwards have been launched from the yards. Large schooners may load here at high water, but at low water they must lie aground. The river is only about two hundred and fifty yards wide abreast of the village, and rapidly narrows to only two hundred yards a short distance above.

The course of *Pleasant River* above **Addison** is first about **EAST** for nearly a mile and a half, and then about **N. by E.**, with many windings, to the village of **Columbia**, a little over three miles above. But throughout all of this distance it is a mere creek in width, and is very shallow. **Columbia** is a little over four and a half miles above **Addison**.

A narrow and crooked channel, with six feet at low water, leads up to **Addison Village**. It is not fit for strangers.

GENERAL REMARKS.

PLEASANT BAY is not fit for a harbor of refuge for strangers. Both the bay and river are so full of ledges (none of which are buoyed) that the passage is rendered in the highest degree unsafe, even at high water. Many of these ledges are bare at low water, and others at half-tide; but there are many dangerous sunken ones. The bay has not yet been surveyed, and in the absence of buoys for the ledges it is impossible to give any sailing directions whatever. The general course from the *Upper Narrows* to **Addison** is about **NNE.**

NARRAGUAGUS BAY and *RIVER* on the west, and *CAPE SPLIT HARBOR* on the east, of *Pleasant Bay*, affords sufficiently good anchorage for vessels seeking a refuge. But a comparatively safe anchorage may be obtained on the north side of **Norton Island**; the only danger in the way being *Norton Reef*, (already described, pages 112 and 133,) which, making off from this island in a southwesterly direction, is bare at half-tide, and has a **large iron spindle surmounted by a ball** on its end.

In approaching *Pleasant Bay*, *Harrington River*, *Narraguagus Bay*, or *Pigeon Hill Bay* from seaward, there will be seen to the northward and northwestward a long range of blue hills of different heights, but lying in a continuous chain. These are the **Tunk Mountains.** The most remarkable are **Humpback**, which shows a summit composed of two large humps or hills; and **Burke Hill**, which is the southernmost of the range, and has a nearly flat top, with a steep slope to the southward.

HARRINGTON RIVER.

The entrance to this river lies on the west side of **Ripley Neck**, between it and **Dyer Island.** This and *Flat* and *Back Bays* to the westward have a common entrance between the Neck and the island. *Harrington River* is sometimes called *GREAT NASH RIVER.* Its general course is **NNE.** for five miles to **Hardwood Point,** where it turns to the northward and runs nearly **NNW.** a mile and a quarter, to the village of **Harrington.** The entrance between **Ripley Point** and **Dyer Island** is about three-quarters of a mile wide, but is obstructed by **Strout's Island,** which lies almost exactly in the middle of the passage. The best water is between this island and **Dyer Island,** and it and this passage is commonly used by the coast steamers in entering *Narraguagus Bay* from the eastward. It is known as the *EASTERN PASSAGE.* Twelve feet at low water may be taken through it, but it is not recommended to strangers. Nor can any stranger enter **Harrington River** with safety. There are many flats and sunken ledges, none of which are buoyed, and the channel is narrow and intricate.

The principal trade at **Harrington** is in lumber and ship-building, but the latter is the chief industry. Only six feet at low water can be taken up to **Nash Point,** opposite **Hardwood Point,** and above this there is no passage except at half-flood or high water.

DESCRIPTION OF SHORES OF HARRINGTON RIVER.

In approaching this river from the southward, after passing **Nash Island**, pass to the eastward of **Flint Island** and to the westward of **Norton Island.** About a quarter of a mile to the northward of the former will be seen a long and high island, called

DYER ISLAND,

(see page 134,) lying nearly **NORTH** and **SOUTH**, and is two miles long; is high and rocky,

mostly wooded from the summit to the water's edge, but here and there cleared and cultivated. The slopes are gentle where the cleared lands are seen, but the island is in most places steep. It lies between the entrance to *Harrington River* and *Narraguagus Bay*. A very large reef extends along the **Dyer Island** eastern shore in a nearly **NORTH** and **SOUTH** direction, breaking heavily at half-tide, and is known as *Dyer Island Ledge.*

STROUTS ISLAND.

Off the north end of **Dyer Island**, and exactly in the middle of the passage, will be seen a high, rocky island, wooded at both ends, but cleared in the middle. This is **Strouts Island.** A very dangerous line of ledges, bare at half-tide, lie off its southeastern shore a quarter of a mile distant, and extend in a **NORTH** and **SOUTH** direction for over a quarter of a mile. They are known as *Middle Ledges* or *Strouts Island Ledges.* The best water into the river is between this island and **Dyer Island**, the passage between **Strouts Island** and **Ripley Neck** being too ledgy for safe navigation.

RIPLEY POINT AND NECK.

Opposite to **Strouts Island**, on the eastern shore, is **Ripley Point,** the southern extremity of **Ripley Neck**, a high, round, rocky head, covered with spruce and fir, lying between this entrance and *Pleasant Bay.* The western shore of the Neck shows high lands, mostly thickly wooded, but in places cleared and cultivated. The cleared lands have a gentle slope, but the wooded shores are mostly steep.

FOSTER ISLAND,

on the western shore, about a quarter of a mile to the northward of **Dyer Island** and opposite to **Ripley Neck**, is a long, narrow island, extending in a **NORTH** and **SOUTH** direction, and is a mile and a half long. A good channel, with not less than twelve feet at low water, leads between this and **Dyer Island** into *EASTERN PASSAGE.* It is commonly used by the coast steamers. **Foster Island** is high, rocky, and well wooded. There are very few clearings. The north end is quite low, and thickly wooded to the edge of the shore with a variety of trees.

RAYS POINT

lies nearly due east from the north end of **Foster Island**, half a mile distant, and a mile and three-quarters above **Dyer Island.** It is on the west side of the river, and is the southern extremity of a long narrow peninsula separating *Harrington River* from *BACK BAY;* is low and sandy, covered with grass and a few scrubby bushes, and has a couple of houses standing in a grove of spruce and fir trees. Between it and **Ripley Neck** the passage is a little over half a mile wide.

RIPLEY ISLANDS.

Off the north end of **Ripley Neck**, on the east side, and close in with the shore, lie two small islands called **Ripley Islands,** of moderate height, and very thickly wooded with a variety of trees. The northernmost and larger of the two has a house and outbuildings on its northern end. Passing **Rays Point** to the northward, a long cove or bay, called *FLAT BAY*, will be opened, extending to the northward nearly two miles. To the northeastward *Harrington River* stretches away between high, wooded banks, and the high lands, crowned with thick black woods and dotted with houses on their southern slopes, which will be seen at the head of the river from the site of the village of **Harrington.**

PINNEO POINT.

On the east side of the entrance to *Flat Bay*, and on the west side of *Harrington River*, lies **Pinneo Point**, nearly a mile above **Ripley Island** and a mile and a quarter above **Rays Point**. Seen from the southward, its eastern side appears to be thickly wooded to the edge of the water, while the western half of the point shows a cleared and cultivated field backed by woods, and having several houses. The southern face is a water-worn, sandy cliff, about twenty feet high. In range with it will appear a low, sandy islet, with its surface covered with scrubby bushes and its shores lined with boulders. This is **Chamberly Island.** It lies in the mouth of *Flat Bay.*

On the east shore, on the north side of **Ripley Neck**, a large and wide cove makes in to the southeastward, called

RIPLEY COVE.

It is shallow, affording shelter to vessels of very light draught (four to six feet) only. The cove is about half a mile long, and three-quarters of a mile wide at its mouth, gradually diminishing to three-eighths of a mile at its head. The shores are all wooded; in fact, from **Ripley Neck** to *Timber Cove*, a mile and a half above, the east bank of the river is mostly rocky, wooded, and uncultivated. On the south side of *Timber Cove* there are some clearings and a few houses. The soil has a poor appearance, however.

THE FIVE ISLANDS.

On the western shore, about half a mile above **Pinneo Point**, is a group of five rocky islets, known as above. At low water they are connected by flats and bare ledges with the main land. They are low and covered only with grass and scrub, except that the southernmost has a single spruce on its western end, and also two small sheds. The cove formed on the western side of these islands with the main land is called *Five Island Cove.*

At high water there is a passage for vessels of light draught between the two outer and three inner islands. At low water this passage is bare.

Passing the **Five Islands**, come to

SANDY COVE,

also on the western shore, three-quarters of a mile above **Pinneo Point.** Its shores are low, sandy, and wooded, except at its head, where is a marsh or salt meadow. A rocky islet lies in the middle of the cove. This cove affords no anchorage except to small boats.

On the eastern shore, a mile and a half above the **Ripley Islands**, lies

TIMBER COVE,

almost exactly opposite to *Sandy Cove*, and makes in in a southeasterly direction for nearly three-eighths of a mile. Between **Hardwood Point** on the south and **Coffin Point** on the north it is a little over a quarter of a mile long.

Just to the southward are some clearings and a few houses. The cove itself, however, is of no importance, as it is shallow, affording no anchorage.

A little over half a mile above **Hardwood Point** is

MILL CREEK,

an arm of the bay, running EAST and WEST, and is about three-quarters of a mile long. Small vessels may enter it at high water. Its entrance will be recognized by the thick grove of trees on its south bank and the cleared level field on the north side. This north point of entrance is cultivated, and has a house and barn on it.

On the western shore, about three hundred yards above *Sandy Cove*, lies a sandy islet, covered with a thin growth of birch and other hard-wood trees, called **Cranberry Island.** From the **Five Islands** to about seven-eighths of a mile above *Sandy Cove* the shores have the same general character, being low, sandy, with water-worn faces, and fringed with birch, maple, and other hard-wood trees. Here and there a patch of meadow-grass marks the outlet of a brook.

LILY COVE.

This cove, lying on the western shore, nearly a mile above *Sandy Cove*, is a long, shallow cove, with low, flat, and wooded shores, fringed with meadow-grass, running nearly **NORTH** and **SOUTH**. Its eastern point of entrance is called

OLIVER LORD POINT,

and is wooded thickly with spruce, birch, maple, and other trees, and has a long, low, sandy, water-worn face on the south side. It is a little above *Mill Creek*, on the eastern shore.

On the eastern shore, from *Mill Creek* to **Hardwood Point**, (upper,) a mile above, the banks are flat, with water-worn faces, and the growth is scrubby fir and spruce, growing in thick groves, and extending like spurs between the cleared lands.

HARDWOOD POINT

(to which we propose to give the name of **Coles Point,** by which it is sometimes known) is low, flat, grassy, and fringed with small bushes. Here the river turns nearly **NORTH**, becoming rapidly narrower, and continues one mile and a quarter to **Harrington**. Here it is a mere creek, not more than forty yards wide, and is all flats. On the western shore, nearly opposite to **Coles Point**, is

NASH POINT,

a little over half a mile above **Oliver Lord Point**, and is wooded almost to the edge of the water with a thick growth of birch, maple, and other trees. Its eastern face is sandy and about ten or fifteen feet high. **The Village of Harrington**, although a small place, does considerable business in ship-building, but it cannot be reached by vessels of any size before high water. Six feet may, however, be taken up to **Nash Point** at low water.

DANGERS
IN HARRINGTON RIVER AND ITS APPROACHES.

As none of the ledges in this river are buoyed, it is not safe for strangers. There are many bare and sunken rocks, and a number of mud-flats. Most of the flats are staked out.

DYER ISLAND EASTERN LEDGE

is the first danger encountered—a long reef extending in a **NORTH** and **SOUTH** direction along the eastern shore of **Dyer Island**, and breaking heavily at half-tide. It is not buoyed. Passing it, come to

STROUTS ISLAND LEDGES,

or *Middle Ledges* as they are sometimes called. These are on the eastern side of the entrance, and lie about a quarter of a mile off the southeastern shore of **Strouts Island**. They are bare at half-tide, and extend in a **NORTH** and **SOUTH** direction for a quarter of a mile. There is no buoy, but the ledges always show themselves by breakers.

Passing these ledges, there are no dangers until near **Rays Point**, when look out for

RAYS POINT LEDGES,

making off in a southerly direction from that point, bare at half-tide to a distance of two hundred and fifty yards. Shoal ground extends to the southward one hundred yards from the bare ledges. These ledges are not buoyed, but may be avoided by giving the point a berth of a quarter of a mile to the northwestward.

LEDGES NEAR MILL CREEK.

A little to the southward of *Mill Creek*, on the eastern shore, there is a long ledge making out to a distance of about four hundred yards. Its western end is marked by a stake. Off the south point of the entrance to *Mill Creek* there is another long ledge making out from shore for a quarter of a mile, bare at half-tide, and also marked by a stake.

After passing these ledges the only guides to vessels bound up river are the stakes on both sides of the channel. At low water, however, the flats are mostly bare, and the channel is distinctly seen.

SAILING DIRECTIONS.

No stranger should attempt to pass up this river; but, in case of necessity, in daytime a harbor may be made either under the north end of **Dyer Island**, between that and **Foster Island**, or farther up, between **Foster Island** and **Ripley Neck**. To make this anchorage: When past **Nash Island**, bring it to bear S E. by S. and steer N W. by N., through the passage between **Dyer** and **Strouts Islands**; when past the northern end of the latter, bring a **red spindle**, which will be seen to the westward, off the north end of **Dyer Island**, to bear W. by S. and steer W. ½ S., which will bring up with a *red spar-buoy* outside of the **spindle**. Here there is safe anchorage. Or, when past **Strouts Island**, steer N. by E. ½ E., between **Ripley Neck** and **Foster Island**, heading for **Pinneo Point**. Anchor at pleasure. Not less than twelve feet at low water is found on the above courses.

VARIATION OF THE COMPASS.

The approximate magnetic variation for *Pleasant Bay* and *Harrington River* is, for 1875, 16° 35′ W. The approximate annual increase is 2′.

FLAT BAY AND COLES CREEK.

Flat Bay is a part of *Harrington River* which makes into the northward between **Pinneo Point** on the northeast and **Blasket Point** on the southwest. Between these two points the entrance is a little over a quarter of a mile wide, but is obstructed by **Chamberly Island,** lying off **Pinneo Point**. *Flat Bay* runs nearly N. by E., and is about two miles long. Its average width is about three-eighths of a mile.

PINNEO POINT,

before described, (see page 141,) is the northeast point of entrance. On its southern and southwestern sides it appears as a high, rocky, and well-wooded head, the trees coming down to the edge of the water. **Chamberly Island,** lying to the southwestward, is a low, sandy islet, with its surface covered with scrubby bushes and its shores lined with boulders. The channel is between it and

BLASKET POINT.

This, the south point of entrance to *Flat Bay*, lies on the west shore of *Harrington River*, one mile above **Rays Point**; is sandy, of moderate height, with precipitous faces,

covered with grass, and here and there a lone tree. Behind it makes in a large cove, which is, however, very shallow and of no importance.

When past **Chamberly Island**, *Mill River* will open to the northwestward, and will appear as a large and wide bay, running nearly NORTH and SOUTH, between heavily-wooded shores. A high, bare hill is seen over the land on its eastern side, and low, cleared, gently-sloping lands project like spurs between the clumps of forests. On the west shore of this river will be seen a settlement in the midst of grassy fields which extends to the edge of the water, and is called **Black Bay Settlement**, as it occupies the peninsula between *Mill River* and *Black Bay* and fronts on the latter. The **Tunk Mountains** are seen in the distance.

OAKS POINT.

Three-quarters of a mile above **Blasket Point**, and on the west side of the bay, is a long, low, flat, grassy point, fringed with small oak and birch trees, and having a handsome grove and a group of houses on its highest part. This is **Oaks Point**, and is the northeastern point of entrance to

MILL RIVER.

This river runs into *Flat Bay* about three-quarters of a mile above **Blasket Point**. Its course is to the northeastward for nearly a mile, where it divides; the main fork continuing about NORTH for seven-eighths of a mile to **Camden Mills**, and the eastern branch running about N. by E. for nearly three-quarters of a mile. This eastern branch is called *Coles Creek*. *Camden Mills* are a mile and three-quarters above **Oaks Point**.

The shores of *Mill River* and *Coles Creek* are all well wooded. There are a few houses on the east shore, between **Oaks Point** and the mouth of the creek. Both streams are very shallow, and there is no passage except at high water.

The banks of *Flat Bay* above **Oaks Point** are sandy, with water-worn faces, of various heights, and diversified with wooded and cultivated lands. The western shore is composed almost entirely of a flat plain, with its surface partly wooded with large timber, and partly cultivated and thinly settled.

All of this bay is shallow, the upper part bare at low water. There is no trade except the little depending on the saw-mills on *Mill River*. A long and narrow peninsula, the southern extremity of which is **Rays Point**, separates it and *Harrington River* from

BACK BAY,

a large, shallow bay, of very irregular shape, connected with *Harrington River* by a passage leading between **Rays Point** and **Foster Island**, and with *Narraguagus Bay* to the westward by a passage between **Foster Island** and the main land. Its course is first about N. by E. from abreast of **Rays Point** to **Strouts Point**, and then N E. nearly a mile and a quarter to its head.

RAYS POINT,

already described, (see page 140,) lies nearly EAST from the north end of **Foster Island**, half a mile distant, and forms the east point of entrance to the bay. It is a mile and three-quarters above **Dyer Island**, is low and sandy, covered with grass and a few scrubby bushes, and has a couple of houses standing in a grove of spruce and fir trees.

The north end of **Foster Island** is quite low, and wooded to the edge of the water with a variety of trees.

PARTRIDGE ISLAND,

lying off the entrance to *Back Bay*, about four hundred yards south of **Kemp's Folly**, is a low islet, very thickly wooded.

STROUTS POINT,

on the west bank, five-eighths of a mile above the north end of **Foster Island**, is tolerably high, rocky, and wooded with spruce and fir in clumps, except at its northeastern end, where it is thickly wooded, mostly with fir. Its shores show steep faces, but are shoal in their approaches, shoal ground making off a long distance in the direction of **Foster Island**. There is a rock, bare at high water, about four hundred yards from the point, but the flats extend a considerable distance to the southward of this—the channel lying on the **Foster Island** side. The flats are marked by fish-weirs, which extend to the edge of the channel.

KEMP'S FOLLY,

four hundred yards to the northward of **Partridge Island**, is low and grassy, and is easily distinguished by the handsome clump of birch and maple on its southeastern end. There are not more than a couple of dozen trees in the group, and they stand close together, on the extreme point.

The shores of *Back Bay* above **Strouts Point** are all of moderate height, and thickly wooded. The bay is shoal, having at low water a very narrow and crooked channel, with four feet in it; never used except by the people who live on its banks, and is of no importance.

NARRAGUAGUS BAY AND RIVER.

This large and commodious bay, lying just to the westward of *Pleasant Bay* and *Harrington River*, is forty-three miles from **West Quoddy Head**, twenty miles from **Libbey Island**, and a little over twelve miles from **Head Harbor Island**. Its entrance lies between **Dyer** and **Flint Islands** on the east, and **Pond Island** on the west, and is over two miles wide; its general course is nearly **NORTH** for over four miles, where the *NARRAGUAGUS RIVER* discharges itself into its northwestern corner, and another branch extends in a N N E. direction toward *Back* and *Flat Bays*.

The course of *Narraguagus River* is about **N. by W.** for nearly a mile and three-quarters, to **Millbridge**, situated on its west bank. Here the river is very narrow, and is crossed by a bridge. Seven feet at low water can be taken up to the town, but the channel is not fit for strangers, who must anchor off the **steamboat wharf** just below the mouth of the river. A pilot can always be obtained either at this wharf or on **Pond Island**. Fresh water can be had at this anchorage, as well as at several other points on the river. Wood is plentiful and cheap, and provisions can be obtained at **Millbridge** without difficulty.

DESCRIPTION OF SHORES OF,

AND ISLANDS IN, NARRAGUAGUS BAY AND RIVER.

In approaching this bay from the eastward, after passing **Nash Island**, the most noticeable object will be

POND ISLAND,

upon which is the light-house, a guide to this bay. **Pond Island** appears as a very regularly shaped hill, much like **Green Mountain** (on **Mount Desert**) in shape, but composed of barren rocks, dotted in a few places with trees; is three miles and a half to the westward of **Nash Island** and a little over two miles from **Flint Island**; lies **N. by E.** and **S. by W.**, and is nearly a mile long. Upon its southeastern end is built the light-house, appearing, when seen from the eastward, as two white objects, like the roofs of houses. On the north end of the island there is a house and a barn with a flag-staff

near it. This part is low, level, and grassy, but is not visible until the north end is reached.

The high, bare, rocky hill seen in range with the southern part of **Pond Island** is **Pigeon Hill.**

POND ISLAND LIGHT-HOUSE,

or **Narraguagus Light-house** as it is sometimes called, consists of a red brick dwelling-house surmounted by a white lantern. The lantern is twenty-nine feet above the ground, and shows a fixed white light of the fifth order of Fresnel from a height of forty-five feet above the sea, visible twelve miles. Its geographical position is

Latitude - - - - - - - - - -	44° 27′ 20″ N.
Longitude - - - - - - - - - -	67° 49′ 52″ W.

There is no fog-signal at this light-house. **Pond Island** lies on the western side of the entrance to *Narraguagus*, and on the eastern side of the east channel into *Pigeon Hill Bay.*

After passing **Nash Island**, the first island met with by a vessel bound into *Narraguagus Bay* will be

FLINT ISLAND,

on the eastern side of the entrance, which, when viewed from the eastward, will appear rocky, and bare of all vegetation except a very scanty growth of stunted fir near its east and west ends. It lies nearly **NW.** and **SE.**, and is about five-eighths of a mile long. **Flint Island** is a mile and three-eighths from **Nash Island.** On its western side, and close to it, will be seen

SHIP-STERN ISLAND,

which, when viewed from the southeastward, shows as a high, bluff, rocky head, with a thick growth of trees covering its summit. On its southwestern end the rocks are stratified horizontially with black and brown strata, and this appearance, together with the shape of the point, (somewhat like the stern of an old-fashioned ship,) has given the name to the island.

On the west side of the entrance, about seven-eighths of a mile **SOUTH** from **Pond Island**, lies

JORDAN'S DELIGHT,

a rocky islet of moderate height, entirely covered with a dense growth of black-looking trees, a quarter of a mile long in a **NE.** and **SW.** direction. There is a passage between it and **Pond Island**, but it is not recommended to strangers. To the southward of this islet lies *Jordan's Delight Ledge,* and there is no passage between the two. The ledge is marked by a *red spar-buoy* placed off its southern end, (see page 132.)

When hauling to the northward to enter the bay, after passing **Ship-Stern Island** there will be seen ahead, and about a mile and a quarter distant, a large, rocky, and wooded island exactly in the middle of the bay. This is

TRAFTON ISLAND,

lying about a mile to the northward of **Ship-Stern Island** and the same distance **NE. by N.** from the north end of **Pond Island.** It shows steep, rocky faces, crowned with a dense growth of trees at the east and west ends, but bare in the middle, where peculiar-looking white rocks appear. **Trafton Island** lies nearly **EAST** and **WEST**, and is about half a mile long. From **Dyer Island** it is distant a little over half a mile, and from the mainland on the west shore of the bay three-quarters of a mile, the centre of the island lying almost exactly in the middle of the bay. Close to it, off its southeastern point, there is a low islet, composed of red rocks, crowned with spruce and fir, having no name.

DYER ISLAND,

on the eastern side of the bay, is that long, high island lying a quarter of a mile to the northward of **Flint Island.** It extends about two miles in a nearly NORTH and SOUTH direction, and seen from the southward and westward appears as a rocky island of considerable height, its shores mostly wooded but occasionally bare. There are only two or three settlers on it, most of the island being rocky and barren.

The western shores of *Narraguagas Bay* are formed by the main land in the township of **Millbridge.** This extends to the southward as a long, narrow peninsula, separating this bay from *PIGEON HILL BAY* to the westward, and terminates in

JOE DYER POINT.

This, when viewed from *Narraguagas Bay*, will appear low, rocky, and covered with a growth of fir and spruce. It is a mile to the westward of **Pond Island,** but the passage between them is studded with islets, prominent among which are the **Horse Heads** and the **Douglass Islands.** There are good passages among these islands, but strangers should not attempt them.

North of **Joe Dyer Point** the west shore, to **Chitman Point,** is low and covered with a dense growth of low fir trees.

CHITMAN POINT

is nearly two miles above **Joe Dyer,** and nearly opposite to, but a little above, **Trafton Island.** There is a large smoke-house on the shore, and back of this the land is low, rocky, and thickly wooded. A small, narrow cove, called *Chitman Cove,* makes in behind it to the southward; bare at low water.

About three-quarters of a mile above **Chitman Point** is

BUCHANAN POINT,

also on the west shore. It is low and rocky, and its top is covered with patches of grass and bushes. Passing to the northward, a small stream, called *Buchanan Creek,* is opened, nearly dry at low water. High, rocky banks rise behind it, and on its north side are level, cultivated fields. Here the settled lands begin. Half a mile above **Buchanan Point** a long wharf will be seen on the west shore; this is the **Steamboat Landing,** used by the coastwise steamers when the state of the tide will not permit them to reach **Millbridge.** Communication is had under such circumstances by means of a small steamer of light draught. On the shore at the head of the wharf there is a large lobster-packing house.

It is best for strangers to anchor off this wharf unless of large draught, when the best anchorage is under the north side of **Trafton Island,** in from three to five fathoms, soft bottom.

On the east side of the bay, and about a quarter of a mile above **Dyer Island,** lies

FOSTER ISLAND.

It is a mile and a half long, and extends about N. by E. and S. by W. Its south end will appear low, and has a thick growth of trees to within a few hundred yards of the point. Beyond this the shore rises, and is partly bare and partly wooded with scrub. The north end of the island is quite low, and thickly wooded to the water with a variety of trees.

The passage between **Foster** and **Dyer Islands** is the one commonly used by the coast steamers when leaving the bay bound to the eastward, or coming in to it from that direction. It has twelve to fifteen feet at low water, and is buoyed.

PATTERSON POINT,

or **Ficketts Point** as it is sometimes called, lying at the head of the bay and on the east side of the entrance to *NARRAGUAGUS RIVER*, is two miles and a half to the northward of **Trafton Island** and nearly three quarters of a mile above the **steamboat wharf**; is of moderate height, level, and grassy. Spruce and fir trees dot its surface at intervals. On the east side of this point, between it and **Foster Island**, spreads the *Eastern Branch* of the bay, which leads to *Back* and *Flat Bays* and *Harrington River*. This passage is very shallow and unfit for strangers.

On the west shore, above the **steamboat wharf**, the banks are of moderate height, with grassy tops. The land is mostly under fine cultivation and well settled. There are sandy and clay cliffs in many places, worn by the action of the water. Where the lands have not been cleared the woods are very thick.

On the east shore of the river, above **Patterson Point**, the shore during the summer presents a beautiful appearance, being mostly smooth, level grass-land, dotted with trees like a park, and well settled. The town of

MILLBRIDGE

is built upon the west bank, a mile and a half above **Patterson Point** and four miles and three quarters above **Pond Island**; is situated on a flat, grassy plain, elevated about twenty feet above the tide. The banks have precipitous, sandy faces. It is a beautiful and thriving village, with considerable lumber trade and some ship-building interest. Wood, water, and fresh provisions can always be obtained, and at cheap rates.

Water may also be obtained at the **steamboat wharf**, at **Patterson Point**, (where a brook of excellent water comes into the river,) and about half a mile below the town, on the west shore, where there is another brook. Information of these places can always be obtained from the inhabitants.

DANGERS

IN APPROACHING AND ENTERING NARRAGUAGUS BAY.

I. *Coming from the eastward.*—In approaching this harbor from the eastward there are no dangers, after passing **Nash Island**, until up with the north end of **Pond Island**. Here look out for

POND ISLAND LEDGE,

making off from the north end of **Pond Island**, which has three feet on it at lowest tides. A *black spar-buoy* will be seen on approaching the island, placed in fourteen feet water off the end of the ledge; it is marked No. 3, and must be left to the westward. Passing it and coming up with **Trafton Island**, there will be seen well to the eastward, and off the north end of that island, *a red spar-buoy* on

TRAFTON ISLAND LEDGE,

lying off the northeast end of the island, and dry at half-tide. It is not in the way of a vessel bound in or out with a fair wind. The buoy is placed in fourteen feet water on the western side of the ledge, is marked No. 4, and is to be left to the eastward.

Passing **Trafton Island**, *a black spar-buoy* will be seen nearly a mile ahead, on

LOWER MIDDLE GROUND,

lying off the western shore. The buoy is marked No. 5, and is placed in fourteen feet off the eastern end of the shoal, and about a quarter of a mile from shore. It must be left to the westward; and when past it, *a red spar-buoy* will be seen some distance ahead, on the lower end of

UPPER MIDDLE GROUND,

lying on the east side of the channel, about three-quarters of a mile above the *Lower Middle.* The buoy is on the south end of the ledge in seven feet at mean low water, is marked No. 6, and must be left to the eastward.

Passing this buoy, there will be seen ahead, but nearest to the western shore, *the black spar-buoy* on

LONG POINT LEDGE,

making off from **Long Point**, on the western shore, a little over a hundred yards, and is dry at low water. The buoy is marked No. 7, is placed on the eastern end of the ledge in seven feet at mean low water, and must be left to the westward.

When abreast of the **steamboat wharf** *a red spar-buoy* will be seen ahead, on the eastern side, on

DYER ISLAND LEDGE,

lying off the north end of **Dyer Island** and about **W. ½ N.** from the south end of **Foster Island**, having five feet at lowest tides. The buoy is marked No. 10, and is placed on the northwestern side of the ledge. It was formerly a *red can-buoy.* Leave it to the eastward going to or coming from **Millbridge**, and to the southward if bound out by the *Eastern Passage.*

The flats off **Patterson Point** are marked by a fish-weir, which extends to the edge of the channel. Pass close to the weir—that is, within fifty yards, with two fathoms water. When abreast of this point there will be seen, about a half a mile ahead, **a red spindle** on

HALF-TIDE LEDGE,

lying on the eastern side of the channel, about three hundred yards from shore, bare at half-tide, and there is no passage inside of it. The **spindle**, a wooden spar with cask on top, all painted red, is to be left to the eastward.

Above this ledge the flats extend out from both shores, but are not marked by buoys. At low water the channel is easily traced, as the flats are nearly all bare. Nine feet at low water may be taken up to **Patterson Point**, and seven feet to **Millbridge.**

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING NARRAGUAGUS BAY.

I. *Coming from the eastward.*—Pass half a mile to the southward of **Nash Island**, and steer for **Pond Island Light-House** until within half a mile of the island, and open the town to the westward of **Trafton Island.** Then steer **N W. by N.** past **Trafton Island**, gradually altering the course to the northward so as to give the island a berth to the eastward of a quarter of a mile. When up with the north end of the island, steer **N. by E. ½ E.** for the *black buoy* on *Lower Middle Ground;* and when abreast of this, steer **NORTH** half a mile, and then **N. by W. ½ W.** nearly, for the **steamboat wharf.** This clears the *red buoy* on the south end of the *Upper Middle Ground.* When abreast of it, steer **N. by E.** nearly, for the *black buoy* on *Long Point Ledge.* Leave this to the westward, and continue the course until up with the *red buoy* on *Dyer Island Ledge.* Now steer **NORTH** up the middle of the river. Vessels drawing eight feet should anchor off the fish-weir at **Patterson Point.** Strangers should anchor under the north side of **Trafton Island** or off the **steamboat wharf**, and take a pilot for **Millbridge.** There is good anchorage for large vessels under **Trafton Island**, in from three to five fathoms.

The above courses take twelve feet at low water up to the **steamboat wharf** and nine feet up to **Patterson Point.** They pass to the eastward of *Pond Island Ledge;*

well to the westward of *Trafton Island Ledge;* to the eastward of *Lower Middle Ground;* and to the westward of *Upper Middle Ground;* also to the eastward of *Long-Point Ledge;* and to the westward of *Half-Tide Ledge.*

EASTERN PASSAGE,

BETWEEN DYER ISLAND AND STROUTS ISLAND.

As before mentioned, (on pages 139 and 143,) this passage is used by the coast steamers in entering *Narraguagus Bay* from the eastward, and in leaving it bound to the eastward. The usual course is to come through *Tabbott Narrows*, pass to the southward of **Norton Island**, and then turning to the northward pass between **Dyer** and **Strouts Islands**, and thence between **Dyer** and **Foster Islands** into *Narraguagus Bay.* The passage is not fit for sailing vessels unless with the winds between **EAST** and **SOUTH** if bound in, and between **WEST** and **NORTH** if bound out. Twelve feet at mean low water may be carried through this channel into the bay.

DANGERS IN EASTERN PASSAGE.

After passing the *Narrows*, there will be seen ahead, a little to the north, **a large black spindle** on

NORTON REEF,

or *Norton Ledge* as it is sometimes called, making out in a southwesterly direction from **Norton Island**, and nearly all bare at half-ebb. The spindle is on its southern end; is composed of an iron tripod and shaft, surmounted by a ball, (the whole height being thirty-five feet,) and is to be left to the northward.

After passing *Norton Reef*, the course leads over toward **Dyer Island** and along its eastern shore, and the first danger encountered will be

DYER ISLAND EASTERN LEDGE,

lying off the eastern shore of that island—a long reef extending **NORTH** and **SOUTH**, breaking heavily at half-tide, and is not buoyed. After passing it, next come to

STROUTS ISLAND LEDGES,

or *Middle Ledges* as they are sometimes called, lying on the eastern side of the passage, about a quarter of a mile from the southeast end of **Strouts Island**, bare at half-tide, and about a quarter of a mile long in a **NORTH** and **SOUTH** direction. They are not buoyed, but are always visible. The course in leaves them to the eastward. When past them, there are no dangers until the passage between **Foster** and **Dyer Islands** is open, in which will be seen **a red spindle** and *spar-buoy.* The spindle is on

NORTH POINT LEDGE,

a long reef, lying off the north end of **Dyer Island** and on the south side of this passage. The buoy is on the northern extremity of the same reef, but the spindle is on the dry part. It is not safe to pass between them, but keep to the northward of the buoy. When up with it, *another red spar-buoy* will be seen a short distance ahead, on

DYER ISLAND LEDGE,

having seven feet at mean low water, and lying off the northern end of **Dyer Island**, a little to the westward of *North Point Ledge.* The buoy is marked No. 10; is placed on the northwestern side of the ledge, and must be left to the southward, and the course shaped for *a red can-buoy*, which will then be seen bearing about W. by S. This buoy is

in *Narraguagus Bay*, and is placed in sixteen feet at low water. When up with it consult sailing directions for the bay, (see pages 149 and 150.)

SAILING DIRECTIONS FOR EASTERN PASSAGE.

After passing through *Tabbott Narrows*, steer W. ½ N. to clear **Norton Reef Spindle**, and when past it bring **Nash Island** to bear S E. by S. and steer N W. by N. between **Dyer Island** and **Strouts Island**, passing to the westward of the ledges off the latter and to the eastward of those off the former island. When the passage between **Foster** and **Dyer Islands** is opened, bring the **red spindle** to bear W. by S., and steer W. ½ S. so as to leave the *spar-buoy* near the spindle to the southward. When past this buoy steer W. by S., which will carry up with the *red can-buoy* in *Narraguagus*. When up with this buoy, follow the sailing directions for the bay and river.

Through this passage not less than twelve feet at low water can be carried.

DANGERS

IN APPROACHING AND ENTERING NARRAGUAGUS BAY.

II. *Coming from the westward.*—About seven miles and a half SW. ¾ W. from **Nash Island Light-House**, and fifteen miles W. ¾ S. from **Moose-a-bec** or **Head Harbor Light-House**, lies

PETIT MANAN ISLAND.

From **Baker Island,** off **Mount Desert**, it bears E. by N. ½ N., distant a little over sixteen miles, and from **Mount Desert Rock** NE. ½ N., distant twenty-six miles. It is a group of low, rocky islets, destitute of vegetation, and surrounded by dangerous shoals. These islets lie NW. and SE., exactly off the western entrance to *Pigeon Hill Bay*. On the southernmost is built the light-house, appearing when viewed from the westward as a very tall tower with a group of houses at its base.

PETIT MANAN LIGHT-HOUSE

is a granite tower one hundred and nine feet high, connected with the keeper's dwelling, which is close to it and is painted brown. The tower shows a fixed white light of the second order of Fresnel, varied by flashes at intervals of two minutes, from a height of one hundred and twenty-five feet above sea-level, and in ordinary weather is visible seventeen miles. Its geographical position is

Latitude - - - - - - - - -	44° 22′ 02″ N.
Longitude - - - - - - - -	67° 51′ 51″ W.

FOG-SIGNAL AT PETIT MANAN.

There is at this light-house a steam fog-whistle ten inches in diameter, which gives blasts of eight seconds at intervals of fifty-two seconds.

Petit Manan Island is surrounded by dangerous ledges and shoals at distances varying from two to five miles. On its north side lie the two shoals known as *Inner* and *Outer Bars.* On its west and uth sides are several detached rocks, very dangerous to navigation, but all of them marked by large buoys. Of these, the first one met with in approaching the island and bound into *Narraguagus Bay* is known as

MOULTON LEDGE,

lying four miles W. by N. from **Petit Manan Light-House**; is bare at low water, extends in a NE. and SW. direction about one hundred yards, and soundings between three and

five fathoms extend half a mile to the southward from the bare ledge. A *spar-buoy*, painted red and black in horizontal stripes, is placed in five fathoms about one hundred yards to the southwestward of the ledge, and must be left to the northward.

PETIT MANAN REEF.

Vessels bound east or west may go within from three-quarters to half a mile of **Petit Manan Island** with not less than four fathoms, in which case, after passing *Moulton Ledge*, the first danger met with will be *Petit Manan Reef*. This ledge makes off from the island in a southerly direction, is about half a mile long, and is marked by a *second-class iron-can buoy*, (No. 1,) painted black. The buoy is on the southern end of the ledge in seven and a half fathoms, and is to be left to the northward by vessels using this passage. But it is better for strangers to keep to the southward, outside of all these dangers.

SIMMS ROCK.

This dangerous ledge, having six or seven feet at low water, lies two miles S. ½ E. from **Petit Manan Light-House**, and has from six to eight fathoms of water all around it. The channel between it and *Petit Manan Reef* is about a mile wide, and has not less than six fathoms of water. This rock is marked by a *spar-buoy*, painted red and black in horizontal stripes, placed on the northeastern side of the rock in eight fathoms water, marking the south side of the channel between this ledge and *Petit Manan Reef*. Vessels using this passage pass to the northward of it.

SOUTHEAST ROCK

is the outermost of the rocks to the southward of **Petit Manan**, from which it is distant four miles in a S. by E. direction, having seven feet at lowest tides, and is marked by *an iron can-buoy of the second class*, painted red and black in horizontal stripes, placed in eight fathoms on the north side of the ledge, and is to be left to the southward; or passing to the southward, it must receive a berth of one-third of a mile. When past these rocks, the next danger met with will be

JACKSON LEDGE,

which is not, however, in the way of vessels using this channel unless they are beating to windward. It lies on the eastern side of the passage, about four miles **E. ½ N.** from **Petit Manan Light-House** and a little over three miles to the southward of **Jordan's Delight**, having twelve feet at mean low water and nine feet at lowest tides, and is marked by *a red and black nun-buoy* placed on its northern side, which is to be left to the southward. The

DAVE LEIGHTON GROUND,

said to lie a mile and a half to the westward of *Jackson Ledge*, is also left to the southward by vessels using this passage to *Narraguagus*. It is reported to have eighteen feet upon it, and the bearings and distances given are as follows:

Southeast end of **Boisbubert Island NW. by N. ½ N.**, two miles distant; **Petit Manan Light-House SW. by W. ½ W.**, two miles and a half distant. A buoy will be recommended to mark this shoal ground.

EGG ROCK,

lying on the western side of this channel, off the entrance to *Pigeon Hill Bay*, is not in the way of vessels bound into *Narraguagus* unless they are beating in. It is simply a bare, rocky islet, destitute of vegetation, and about ten feet high. It lies three-quarters of a mile to the southward of **Little Boisbubert Island** and a little over two

miles to the northward of **Petit Manan Light**. From *Jackson Ledge* it bears NW. by W. ¾ W., distant about three miles and a half.

One-third of a mile SSW. from **Egg Rock** lies *The Whale*, bare at one-third ebb. It is not in the way of vessels using this passage, but those who pass on the north side of **Petit Manan** must beware of it.

When within about a mile and a half of **Jordan's Delight**, there will be seen *a red spar-buoy* ahead, on

JORDAN'S DELIGHT LEDGE,

formed by a line of reefs about a mile long, extending to the southward from the island. The rocks are all under water, and it is not safe to attempt to pass between them and the island. **Jordan's Delight**, as already mentioned, (pages 132 and 146,) is a rocky islet of moderate height, entirely covered with a dense growth of black-looking trees, and is seven-eighths of a mile SOUTH from **Pond Island**. The buoy is marked No. 2, is placed in seven fathoms on the southwestern side of the ledges, and is to be left to the eastward by vessels using this passage; or it may be left to the northward by rounding **Pond Island**, leaving it to the westward, and thus enter the bay. It is customary, however, coming from the westward to pass to the northward of **Jordan's Delight**, between it and **Pond Island**. In so doing, the next danger met with will be

POND ISLAND LEDGE,

lying off the north end of **Pond Island**, having three feet on it at lowest tides. *A black spar-buoy*, which will be seen as soon as the northern end of the island is approached, is placed in fourteen feet water off its northern end. It must be left to the westward. Passing it and coming up with **Trafton Island**, there will be seen well to the eastward, and off the north end of that island, *a red spar-buoy*, on

TRAFTON ISLAND LEDGE,

lying off the northeast end of the island, and dry at half-tide. It is not in the way of a vessel bound in or out with a fair wind. The buoy is placed on the west side of the ledge in fourteen feet water, is marked No. 4, and must be left to the eastward. There is good anchorage under the north shores of **Trafton Island** in from three to five fathoms, and strangers can anchor here and take a pilot for **Millbridge**.

The east and west channels unite at this point. (For description of dangers and sailing directions, see pages 148 to 150.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING NARRAGUAGUS BAY.

II. *Coming from the westward.*—1. *Between Petit Manan Reef and Simms Rock:* Give the **light-house** a berth of three-quarters of a mile, passing a quarter of a mile SOUTH of the *black buoy* on the reef, and when the former bears NW. by N. ½ N., steer N. by E. ¾ E. for **Pond Island Light**. When within half a mile of the latter, haul to the eastward around the island, keeping half a mile from it, and when the southeast point of **Pond Island** bears WEST, steer NW. by N. past **Trafton Island**, gradually altering that course to the northward so as to give the island a berth to the eastward of a quarter of a mile. When up with the north end of the island, haul to the eastward, (keeping the same distance from shore,) and anchor under its north shore; but if bound up, steer N. by E. ½ E. toward the *Lower Middle Ground*, and follow the directions given for *Narraguagus Bay*. (See page 149.)

The above courses lead one-quarter of a mile to the southward of *Petit Manan Reef;* a little over a mile to the northward of *Simms Rock;* seven-eighths of a mile to the east-

ward of *The Whale;* the same distance to the westward of the reported position of the *Dave Leighton Ground;* and a mile and a quarter to the westward of *Jordan's Delight Ledge.*

2. *Between Simms Rock and Southeast Rock:* Give **Petit Manan Light-House** a berth to the northward of about three miles, and in passing it the *red and black can-buoy* on southeast rock should be seen, in any ordinary weather, about a mile to the southward, and the *red and black spar-buoy* on *Simms Rock* the same distance to the northward.

As soon as past the range of *Simms Rock Buoy* and **Petit Manan Light**, and **Pond Island Light** bears N. by E. ½ E., steer that course until within half a mile of the island, when haul to the eastward around it, and proceed as before directed.

The above courses pass to the southward of *Simms Rock* about one mile and to the eastward of it nearly half a mile; to the northward of *Southeast Rock* about one mile; to the westward of the *Dave Leighton Ground* about five-eighths of a mile; to the eastward of *The Whale* about a mile; and to the westward of *Jordan's Delight Ledge* about a mile and a quarter.

3. *To pass outside or to the southward of all of the ledges off* **Petit Manan** *and enter Narraguagus Bay:* Do not approach **Petit Manan Light-House** nearer than five miles until to the eastward of the light bearing N. by W.; when **Pond Island Light** bears N. ¾ E. steer for it until within half a mile of it, when haul to the eastward, and proceed as before directed.

These courses pass about a mile to the southward of *Southeast Rock;* about a quarter of a mile to the westward of the *Dave Leighton Ground;* a mile and a quarter to the eastward of *The Whale;* and a mile to the westward of *Jordan's Delight Ledge.*

4. *To pass to the southward of* **Jordan's Delight** *and enter Narraguagus Bay:* Having come by the most frequently-used passage, (that between *Petit Manan Reef* and *Simms Rock*,) when **Pond Island Light** bears N. by E. ¾ E. steer for it until **Petit Manan Light** bears S W. ¾ W., when steer N E. ¾ E. nearly, for **Nash Island Light**, keeping **Petit Manan** over the stern. When past **Jordan's Delight**, and **Pond Island Light** opens to the eastward, steer N. by W., keeping about half a mile from the **Pond Island** shore and a quarter of a mile from **Trafton Island** shore. When up with the north end of the latter, steer N. by E. ½ E. toward *Lower Middle-Ground Buoy*, and proceed as directed for Narraguagus Bay. (See page 149.)

The above courses pass a quarter of a mile to the southward of *Petit Manan Reef;* a mile to the northward of *Simms Rock;* nearly three-eighths of a mile to the northward of the reported position of the *Dave Leighton Ground;* and a quarter of a mile to the southward of *Jordan's Delight Ledge.*

III. *To cross Petit Manan Outer Bar and enter Narraguagus Bay.*—Between **Petit Manan Island** and **Petit Manan Point** (two miles and a half to the northward from it) the water is all shoal. Two passages across these shoals—the northern one with seven feet at lowest tides, and the southern one with ten feet—are called, respectively, *Inner* and *Outer Bar.* The *Inner Bar Passage* is not safe for strangers, and is not buoyed. The *Outer Bar* has a *spar-buoy*, and is used by the coast steamers and such coasters as are familiar with the dangers of these in-shore passages.

The buoy is a spar, thirty-five feet long, painted black and white, and is placed in two fathoms in the middle of the channel. In 1872 this buoy was about sixty yards too far to the westward, and if it has not yet been shifted vessels should be careful not to run directly for it, as they might strike on the south point of the shoal.

In coming from the westward to cross *Outer Bar:* Give **Petit Manan Light-House** a berth to the southward of about a mile; bring **Ship-Stern Island** about a handspike's length open to the northward from *Jordan's Delight*, (on a bearing of nearly N E.,) and steer on that range, which will lead safely over the bar in the best water.

This is the pilots' range for crossing, as the buoy is frequently carried away and oftener out of position. If the range cannot be seen and the buoy is gone, the bar should not be crossed, and can never be crossed in heavy weather, as it breaks heavily from **Petit Manan Point** out to the island.

As a rule, strangers should not attempt to cross *Petit Manan Bar*, but should pass to the southward of the island. The reefs between the island and the point are very dangerous, and should be crossed only in smooth weather and with an experienced pilot.

TABLE OF LIGHT-HOUSES.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Narraguagus Lt...	44° 27′ 20″	67° 49′ 52″	$4^h31^m19.5^s$	Fixed.	.....	45 ft.	12
Petit Manan Lt....	44° 22′ 02″	67° 51′ 51″	$4^h31^m27.4^s$	F. V. F.	2^m 00^s	125 ft.	17

VARIATION OF THE COMPASS.

The approximate magnetic variation for the year 1875 is 16° 25′ W., with an approximate annual increase of 2′.

LIFE-SAVING STATION.

It is the intention of the United States Government (1873) to establish a life-saving station on **Petit Manan Island**, provided with boats, cars, and other apparatus for rescuing the shipwrecked, and for the comfort and shelter of such as shall be saved.

PIGEON HILL BAY,

sometimes called *BOISBUBERT HARBOR*, lies just to the westward of *Narraguagus Bay*, from which it is separated by the long peninsula of the main land which terminates in **Joe Dyer Point**.

The bay is naturally divided into two parts—the *Northern* or *Inner Bay*, which is bounded on the north and west by the township of **Steuben**, on the east by the township of **Millbridge**, and on the south by **Boisbubert Island**, (pronounced "**Bowbear**;") and the *Southern* or *Outer Bay*, which is contained between **Boisbubert Island** on the east and **Petit Manan Point** on the west. The general course of the *Outer Bay* is N N E., and it is about three miles and a quarter long. That of the *Inner Bay* is about N. ½ W. for a little over two miles. The latter is very shallow.

Pigeon Hill Bay is of little commercial importance. There is some fishing interests, but no other trade. The bay is useful as a harbor of refuge, but is somewhat dangerous to approach on account of *Petit Manan Bars*, which close the western entrance to vessels of large draught, and the ledges and shoals which obstruct the passage from the eastward. In case of necessity, however, it may be safely entered from the eastward by large vessels if the directions hereinafter given be carefully followed.

DESCRIPTION OF SHORES OF PIGEON HILL BAY.

In approaching this bay either from the eastward or westward, the most prominent object visible will be

PIGEON HILL,

whence the bay takes its name, appearing as a high, round hill of regular shape, entirely destitute of trees, and about five hundred feet high, covered only with bushes.

The hill rises from **Petit Manan Neck** about three miles above the point. There is at present a large tripod and a staff on its summit, marking the site of one of the Coast Survey stations, visible several miles.

PETIT MANAN ISLAND,

lying off the middle of the entrance, nearly two miles to the southward and eastward of **Petit Manan Point**, has been already described (on page 151) as a group of low, rocky islets, lying in a line nearly NW. and SE., destitute of vegetation, and most of them connected at low water.

On the southernmost and largest islets is built the light-house, which appears, when viewed from either eastward or westward, as a very tall, gray tower, with a group of low houses at its base.

Petit Manan Island bears SW. ¾ W. from **Nash Island Light-House**, distant about seven miles and a half; from **Moose-a-bec or Head Harbor Light-House** W. ¾ S., fifteen miles; from **Baker Island** (off **Mount Desert**) E. by N. ½ N., a little over sixteen miles; and from **Mount Desert Rock** N E. ¼ N., twenty-six miles. It is surrounded by very dangerous ledges and shoals, so that strangers should not approach it from the southward nearer than five miles, and cannot go inside of it at all.

PETIT MANAN LIGHT-HOUSE

is a sea-coast light—that is, it is intended not only as a guide to the harbors of *Pigeon Hill Bay* and *Narraguagus*, but also as a landmark for vessels passing along the coast. It is situated on the south end of the southernmost islet of the group. The light-tower is of granite, one hundred and nine feet high, and is connected with the keeper's dwelling. The latter is a low building, painted brown. The light is fixed, varied by flashes at intervals of two minutes; is white, of the second order of Fresnel; is shown from a height of one hundred and twenty-five feet above the sea, and in ordinary weather is visible seventeen miles. Its geographical position is

Latitude - - - - - - - -	44° 22′ 02″ N.
Longitude - - - - - - - -	67° 51′ 51″ W.

FOG-SIGNAL AT PETIT MANAN.

There is at this light-house a steam fog-whistle ten inches in diameter, which gives blasts of eight seconds at intervals of fifty-two seconds. This is especially useful to mariners on account of the dense and long-continued fogs so frequent in this vicinity, sometimes lasting three weeks without intermission.

Passing **Petit Manan**, come next to

EGG ROCK,

lying nearly in the middle of the entrance, two miles and an eighth to the northward of **Petit Manan Light-House** and one mile to the southward of **Boisbubert**. It is a bare, rocky islet, about ten feet high, entirely destitute of vegetation. One-third of a mile S SW. of it lies *The Whale*, bare at one-third ebb. It breaks constantly.

Nearly opposite to **Egg Rock**, on the west side of the entrance to *Pigeon Hill Bay*, is

PETIT MANAN POINT,

forming the west point of entrance to the bay and separating it from *Dyer Bay* to the westward. It is the southern extremity of **Petit Manan Neck**, which forms the west shore of *Pigeon Hill Bay*. This point is long, low, rocky, and covered with a growth of stunted fir and spruce. At low water it extends out into a long, bare ledge, close around which leads the channel across *Inner Bar*. This channel is good for seven feet at lowest tides.

A little more than three-quarters of a mile above **Petit Manan Point**, on the west side of the bay, is

WOODS POND POINT,

which is low and rocky, having a crown of stunted fir and spruce.

The most of this western shore is rocky and has a forbidding aspect. The soil is fertile, but there is very little of it, and the settlements are few and gradually diminishing. Back of the shore-line the land rises to a condsiderable height near the ridge of the neck, and there are several houses on the summit and slopes.

On the east side of the entrance, and a little above **Woods Pond Point**, begins

BOISBUBERT ISLAND,

(pronounced "Bowbear,") forming the east shore of *Outer Bay;* lies NORTH and SOUTH, and is two miles and a quarter long, with an average width of three-quarters of a mile. Seen from the eastward or southeastward, this island presents an extremely desolate appearance, showing a bare, white, rocky surface, without a vestige of grass or trees, of considerable height, and sloping gradually to the edge of the water.

On approaching its north point it will be seen to be low, and composed altogether of bare rocks, upon which is a group of small houses surrounding a flag-staff. The west shore of the island has some thin patches of soil and is thinly settled. On the south shore there is a large cove called *LITTLE BOISBUBERT HARBOR*, which affords anchorage for vessels of five and six feet draught.

It is, however, pretty well open to southerly and southeasterly winds, although somewhat protected from the former by

LITTLE BOISBUBERT ISLAND,

lying close in with the southwest point of **Boisbubert Island** and on the southwest side of *Little Boisbubert Harbor*. It is a rocky islet, about three-eighths of a mile long, lies nearly NW. and SE., and is covered with a thick growth of spruce and fir standing like a black wall upon it.

On the west shore of the bay, about a mile above **Woods Pond Point**, there is a rock of peculiar shape, standing alone on the very edge of the shore-line, called **The Chair**, from its resemblance to that article; go pretty close to it, within one hundred yards, with not less than two fathoms water. The west bank is here all rocky and desolate. The woods are a very sparse growth of stunted fir and spruce trees.

At **Chitman Point**, abreast of **Pigeon Hill**, and nearly three miles above **Woods Pond Point**, the bay inclines more to the westward, running nearly NORTH for about two miles to its head.

CHITMAN POINT,

a low, round point, lying at the eastern base of the hill, having a single house and barn, is nearly level and partly cultivated. The north end of **Boisbubert** is exactly opposite to it. Passing this north end of **Boisbubert**, (which is low, bare, and rocky, as before described,) open the eastern passage into the bay leading between **Joe Dyer Point** and **Pond Island**. **Joe Dyer Point** is low and rocky, wooded with spruce and fir, and has a large white house and out-buildings on its west side. Three-quarters of a mile to the northward, and nearly a mile above **Boisbubert**, lies

BAR ISLAND,

close to the eastern shore. It is oval in shape, about five-eighths of a mile long, lies nearly NNE. and SSW., and seen from the southward appears very thickly wooded

with a variety of trees. There are, however, some small cleared patches on its eastern side.

There is no passage at low water to the eastward of **Bar Island**—a bar, dry at three-quarters ebb, stretching from the island to the main land. At high water, seven feet may be taken into the mouth of a long cove or creek making into the eastward abreast of the northern half of the island. This cove is called *Bobby Creek.*

The bay is quite shallow on the west side of **Bar Island**, although much wider than the passage to the eastward. Only a few feet can be taken at low water past the island, the usual anchorage being just to the southward of **Pigeon Hill**, so as to shut in the eastern passage behind the north end of **Boisbubert**.

EASTERN PASSAGE,

sometimes called *CURRANT ISLAND PASSAGE*, leads, as before mentioned, between **Joe Dyer Point** on the west and **Pond Island** on the east; and between these two is about three-quarters of a mile wide. Its width, however, rapidly diminishes, until between **Joe Dyer Point** and **Boisbubert** it is only about eight hundred yards in width. The passage is studded with islets and full of ledges, and is entirely unsafe for strangers.

POND ISLAND,

before described, (see page 145,) when viewed from the eastward appears as a very regularly-shaped hill, somewhat like **Mount Desert**, but composed of barren rock, dotted in a few places with trees. Its northern end is seen, however, on approaching it, to be low, level, and grassy, and is occupied by a house and a barn with flag-staff near it. From this end a long ledge, bare at low water, and not buoyed, makes off to the north-eastward.

POND ISLAND LIGHT-HOUSE,

or **Narraguagus Light-House**, (as it is sometimes called to distinguish it from the light at the mouth of the *Kennebec River*,) is built on the southeastern end of the island, and shows, when viewed from the eastward, as two white objects, like the roofs of houses. The lantern rises from the centre of the dwelling-house, which is of brick, unpainted, and shows a fixed white light, of the fifth order of Fresnel, from a height of forty-five feet above the sea, and visible twelve miles. It is a guide to *Narraguagus* and *Pigeon Hill Bays.*

CURRANT ISLAND.

On passing the north point of **Pond Island**, bound through the *eastern passage* into *Pigeon Hill Bay*, there will be seen ahead, bearing nearly **WEST**, and about seven-eighths of a mile off, a low, rocky islet, crowned with a grove of stunted fir trees at its northern end, lying nearly in the middle of the passage, about equally distant from **Boisbubert** and **Joe Dyer Point**. Between the latter and **Currant Island** will be seen

BIG PEA LEDGE,

a low, bare, rocky islet, with a smaller one to the northward called *Little Pea Ledge.* The channel leads between **Currant Island** and *Big Pea Ledge*, and has eighteen feet at low water, but is too dangerous for strangers to attempt to enter.

Along the west shore of **Pond Island**, and between it and **Boisbubert Island**, lie a number of islets and islands, called

DOUGLASS ISLANDS.

They are six in number, rocky, of moderate height, and well wooded. Seen from either the southward or northward, the two southernmost of the group present a peculiar

appearance, which has given them the name of the **Horse Heads.** There is a depth of from four to eight fathoms in the passages among these islands, and between them and **Pond Island**; one of the best anchorages on the coast being found between the westernmost of the two largest islands and **Pond Island**, in eight fathoms water, with good holding-ground, and free from ice in the winter. In easterly gales this anchorage cannot be surpassed, and it is easy of access.

The shores of **Douglass Islands** are steep and rocky, and are crowned with a thick growth of spruce and fir.

After passing **Currant Island** the channel joins the main channel from the southward, which has been before described.

DANGERS

IN APPROACHING AND ENTERING PIGEON HILL BAY FROM THE EASTWARD.

I. *By the Main Channel, between* **Boisbubert** *and* **Petit Manan Neck.**—Coming from the eastward, pass either outside of everything; or, coming through *Moose-a-bec Reach*, pass between **Jordan's Delight** and *Jackson Ledge.* In the former case, the first danger met with on approaching the harbor will be

JACKSON LEDGE,

having twelve feet at mean low water and nine at extreme low tides; lies E. ¾ N. from **Petit Manan Light-House**, distant four miles, and is not buoyed.

It must be left to the northward. When past it the course leads toward **Petit Manan Light**, on nearing which it turns to the northwestward, toward **Petit Manan Point**, and there will be seen on the north, about a mile and a half off, a bare, low, rocky islet, called

EGG ROCK.

It is about ten feet high and destitute of vegetation; lies about three-quarters of a mile S. by W. from **Little Boisbubert Island**, and on its south side is obstructed by a dangerous ledge, bare at one-third ebb, called *The Whale.* This rock lies about a third of a mile outside of **Egg Rock**, breaks at high water, and is not buoyed.

There is a narrow channel between **Little Boisbubert** and **Egg Rock**, by keeping close to the former; but it is not safe for strangers.

WOODS POND POINT.

About one hundred and fifty yards off **Woods Pond Point** there is a rock, out at low water, which is not buoyed; and half a mile above the point lies another, which is out only at extreme low-tide, and is one-quarter of a mile from shore.

BOISBUBERT LEDGE

is on the east side of the channel, and lies off the west shore of **Boisbubert Island**, about three hundred yards from it. It is a detached ledge, bare at half-tide, extends nearly **NORTH** and **SOUTH**, and is very bold and steep-to—the deepest water in the bay being found close to its west side. It is not buoyed. Passing it, the passage is clear until near **Chitman Point**, when it will be necessary to keep the Boisbubert shore aboard to avoid the

LOBSTER ROCKS,

bare at extreme low tides, extending from **Chitman Point** nearly two-thirds of the way across the passage, their eastern end being two hundred and fifty yards from the point. They are dangerous, and are not buoyed.

HALF-TIDE ROCKS.

Off the north end of **Boisbubert** extends a line of ledges in about a N N W. direction, about two hundred and fifty yards, and bare at low water. To the northernmost rock, which is out at half-tide, the name of *Half-Tide Rock* has been given, which has gradually been extended to the whole line of rocks. As the reef is not buoyed, care must be taken when using the *eastern passage* to avoid them. Coming in by the main channel, as soon as past *Lobster Rocks* keep over toward the west shore to avoid *Half-Tide Rock*. This is the worst part of the channel.

Above this, no detailed description can be given.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PIGEON HILL BAY BY THE MAIN CHANNEL.

I. *Coming from the eastward, outside of Jackson Ledge.*—When off **Head Harbor Light-House**, about two miles distant, in thirty-six fathoms water, steer W. ¾ S., with **Petit Manan Light** to the westward. On this course, when the light-house bears N W. by W. ¾ W., nearly four miles off, *Jackson Ledge* is well cleared. Steer for the light until within three-quarters of a mile, when steer N. by W. ½ W. nearly, for **Woods Pond Point**. When past *Egg Rock*, and within seven hundred yards of the point, steer N N E. until nearly up with **Chitman Point**. Give this point a berth to the westward of about three hundred and fifty yards to avoid *Lobster Rocks*, and when past them anchor to the northward of the point, opposite to the house on **Joe Dyer Point**, in from three to three and a half fathoms, soft bottom. The holding-ground is good, and the shelter excellent.

The above courses pass well outside and to the southward of *Jackson Ledge;* a quarter of a mile to the westward of *The Whale;* nearly half a mile to the westward of *Egg Rock;* about three hundred yards to the westward of *Boisbubert Ledge;* and one hundred yards to the eastward of *Lobster Rocks*. They carry nothing less than three fathoms at low water to the anchorage above **Chitman Point**.

DANGERS

IN APPROACHING AND ENTERING PIGEON HILL BAY FROM THE EASTWARD.

II. *Passing north of Jackson Ledge, between it and* **Jordan's Delight**.—Coming from *Moose-a-bec*, after passing **Nash Islands**, the first danger met with will be seen to the northwestward, a little over a mile to the southward of **Jordan's Delight**, marked by a *red spar-buoy*. This is

JORDAN'S DELIGHT LEDGE,

a line of sunken rocks extending about S. by E. from the island for over a mile. There is no passage between the buoy and **Jordan's Delight**, the whole distance being full of rocks. These ledges are very dangerous. The buoy is *red*, marked No. 2, and placed in seven fathoms on the south side of the ledge. It is to be left to the northward and westward. Passing it, the next danger is the

DAVE LEIGHTON GROUND,

lying about two miles S E. by S. ½ S. from the south point of **Boisbubert**, and about two miles and a half N E. by E. from **Petit Manan Light-House**. It is not buoyed. The course leads to the southward, between it and

JACKSON LEDGE,

lying on the south side of this passage, three miles and a quarter S. by E. from **Jordan's Delight**, four miles E. ¾ N. from **Petit Manan Light-House**; has twelve feet at mean low water and nine at extreme low tides; is not buoyed, and is left well to the southward by vessels using this passage.

After passing the *Dave Leighton Ground*, the next danger met with is

THE WHALE,

a dangerous ledge, bare at one-third ebb, lying about one-third of a mile outside of **Egg Rock**, and not buoyed. It breaks heavily at high water, and must be left to the eastward. **Egg Rock** (before described, pages 153, 156, 159, and 162,) is about ten feet high, destitute of vegatation, and rocky. It lies about three-quarters of a mile S. by W. from **Little Boisbubert**, with a narrow channel between them; unsafe for strangers.

WOODS POND POINT.

About one hundred and fifty yards off **Woods Pond Point** lies a *rock*, out at low water, and not buoyed; and half a mile above, another, out only at extreme low tides, and a quarter of a mile from shore.

Boisbubert Ledge and *Lobster Rocks* have been already described, (on page 159.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PIGEON HILL BAY
BY THE MAIN CHANNEL.

II. *Coming from the eastward, between Jordan's Delight Ledge and Jackson Ledge.*—Bring **Nash Island Light** to bear N E. and steer S W., with **Petit Manan Light** a little to the westward; continue this course until within about two miles of the light and the middle of the southern end of **Boisbubert** bears N. by W. ¾ W.; now pass the *Dave Leighton Ground*, and steer N W. by W. ½ W. for **Petit Manan Point**, until **Woods Pond Point** bears N. by W. ½ W. nearly; steer for that point until within seven hundred yards, when steer N N E., and follow the directions for the bay. (See page 160.)

These courses pass to the southward of *Jordan's Delight Ledge* three-quarters of a mile; to the northward of *Jackson Ledge* about the same distance; to the southward of *Dave Leighton Ground* about half a mile; to the southward of *The Whale* about half a mile; to the westward of **Egg Rock** half a mile; and to the eastward of *Woods Pond Point Rock* a quarter of a mile.

Three fathoms and a half can be carried up to the anchorage above **Chitman Point.**

This passage is the one commonly used by coasters.

DANGERS
IN APPROACHING AND ENTERING PIGEON HILL BAY
FROM THE WESTWARD.

I. *Outside of* **Petit Manan Island.**—The first danger met with in coming from the westward, bound into *Pigeon Hill Bay*, is called

MOULTON LEDGE,

having a *red and black spar-buoy* off its southwestern end, in five fathoms water. This ledge is bare at low water, lies four miles W. by N. from **Petit Manan Light-House**, extends in a N E. and S W. direction, and is nearly one hundred yards long. From its southern

end shoal water, from three to five fathoms, extends half a mile to the southward. The buoy may be left on either hand, but it is usual to leave it to the northward, unless bound across the inner bar. Passing it, look out on the south for

SOUTH-EAST ROCK,

having seven feet at lowest tides. It lies four miles S. by E. from **Petit Manan Light-House**, and is marked by an *iron can-buoy* of the second class, painted red and black in horizontal stripes. The buoy is in eight fathoms water, a little over thirty yards to the northwestward of the ledge. There are eight and ten fathoms all round the ledge. Pass to the northward, between it and **Petit Manan**.

SIMMS ROCK,

also on the south side of the channel, is more dangerous than *South-East Rock*, being much nearer to the island. It has about six feet at low water, and lies about two miles S. ½ E. from **Petit Manan Light-House**, with eight fathoms of water all round it. A *spar-buoy*, painted red and black in horizontal stripes, is placed in eight fathoms on the northeastern side of the rock, about fifty yards from it. Pass to the northward, and look out on the north for

PETIT MANAN REEF,

making off from the south end of the island about S. by W. for nearly half a mile, and is quite shoal. An *iron can-buoy* of the second class, painted black, and marked No. 1, is placed in seven and a half fathoms on the southern end of the reef. Pass to the southward, and haul to the northward to enter the bay.

THE WHALE,

on the east side of the entrance, is the next danger, lying about one-third of a mile outside of **Egg Rock**; is bare at one-third ebb, and breaks at high water. There is no passage between this rock and **Egg Rock**.

Egg Rock is a small, low, rocky island, about ten feet high, and destitute of vegetation, lying about three-quarters of a mile S. by W. from **Little Boisbubert**, with a narrow channel between them—only fit for those well acquainted with its dangers. There is no buoy on *The Whale*.

WOODS POND POINT

must receive a berth to the westward of about a quarter of a mile. There is a detached rock, out at low water, about one hundred and fifty yards off the point; and half a mile above lies another, out only at extreme low tides, and a quarter of a mile from shore. Neither rock is buoyed, and care is requisite to avoid them.

BOISBUBERT LEDGE,

lying on the east side of the channel, off the west shore of **Boisbubert**, about three hundred yards distant, is a detached ledge, bare at half-tide, extending nearly **NORTH** and **SOUTH**, and is very bold and steep-to, the deepest water in the bay being found close to its west side. There is no buoy. Passing this ledge, the passage is clear until near **Chitman Point**, when it becomes necessary to keep the **Boisbubert** shore aboard to avoid the

LOBSTER ROCKS,

extending off **Chitman Point** to a distance of two hundred and fifty yards, nearly two-thirds of the way across the passage; bare at extreme low tides, and are not buoyed. When past them, edge over toward the western shore again, especially if the tide be ebb, to avoid

HALF-TIDE ROCKS,

a line of ledges extending in a NNW. direction, from the north end of **Boisbubert** about two hundred and fifty yards. They are bare at low water, except one rock on the extreme northern end of the reefs, which is out at half-tide, and gives the name to the group. They are not buoyed, and are *especially dangerous* to vessels using the eastern passage between **Boisbubert** and **Joe Dyer Point.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PIGEON HILL BAY FROM THE WESTWARD.

I. *Outside of* **Petit Manan Island.**—Bring **Petit Manan Light-House** to bear NE. and run nearly for it, leaving it about six hundred yards to the northward. When past the light and **Woods Pond Point** bears N. by W. ½ W., steer that course until past **Egg Rock** and within seven hundred yards of the point, when steer NNE., and proceed as directed for the bay. (See page 160.)

These courses pass well outside of *Moulton Ledge;* well to the northward of *South-east Rock;* about a mile to the northward of *Simms Rock;* two hundred yards to the southward of the buoy on **Petit Manan Reef**; half a mile to the westward of *The Whale*, and the same distance from **Egg Rock**; a quarter of a mile to the eastward of *Woods Pond Point Rock;* and about three hundred yards to the westward of *Boisbubert Ledge*. They carry no less than three and a half fathoms at low water.

DANGERS
IN APPROACHING AND ENTERING PIGEON HILL BAY FROM THE WESTWARD.

II. *Inside* **Petit Manan Island,** *over the Outer Bar.*—From **Petit Manan Point** to the island a long shoal extends, called *Petit Manan Bar.* Across this bar there are two channels for light-draught vessels, called, respectively, *Inner* and *Outer Bar.* The former is unfit for strangers; the latter, having ten and a half feet at mean low water, is very often used by the coasting steamers and other light-draught vessels. At low spring-tides it has only nine feet.

Intending to cross the bar coming from the westward, the first danger met with is

MOULTON LEDGE,

bare at low water, and marked by a *red and black spar-buoy* placed in five fathoms off its southwestern end; lies four miles W. by N. from **Petit Manan Light-House**; extends in a NE. and SW. direction, and is nearly one hundred yards long. Soundings from three to five fathoms extend from its southern end half a mile to the southward.

The buoy may be left on either hand, but it is usual to pass to the southward, unless bound over *Inner Bar.* After passing *Moulton Ledge*, there are no dangers until up with

PETIT MANAN BAR,

or *Petit Manan Outer Bar*, as this shoal should be called.

As before mentioned, it is all shoal from the point to the island; but the bar is crossed by two channels, suitable for vessels of light draught, the outer bar having nine feet at lowest tides and twenty-one feet at high water. The channel is narrow, and there is a ledge, bare at half-tide, about two hundred and fifty yards from the north end of the island, which must be left to the southward. There are other ledges on the reef which are dangerous, and require great care to avoid them. The passage of either bar is not recommended to strangers.

A *spar-buoy*, painted black and white in perpendicular stripes, marks the best water in the channel across *Outer Bar*. In 1872 this buoy had shifted its position, and was then sixty yards too far to the westward, causing a vessel, which attempted to cross by running for it, to go ashore on the bar. (This is mentioned in order that it may be known that the buoy is apt to drift, and that more attention should be paid to the range for crossing than to the position of the buoy.) When in position the buoy bears from the light-house N. ½ E.

When past the bar, haul up for **Woods Pond Point**, and the first danger met with is

THE WHALE,

(see page 162.) It lies one-third of a mile to the southward of **Egg Rock**, is bare at one-third ebb, and breaks at high water. There is no passage between it and **Egg Rock**, and it is not buoyed.

EGG ROCK,

(see page 159,) is a low, bare, rocky islet, about ten feet high, and destitute of vegetation, lying about three-quarters of a mile S. by W. from **Little Boisbubert**, with a narrow channel between them; only fit for those well acquainted with its danger.

WOODS POND POINT

must receive a berth to the westward of about a quarter of a mile. There is a detached rock, out at low water, about one hundred and fifty yards off the point; and half a mile above lies another, out only at extreme low tides, and a quarter of a mile from shore. *Neither rock is buoyed*, and care is requisite to avoid them.

The other dangers have already been described, (see page 159.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PIGEON HILL BAY
FROM THE WESTWARD.

II. *Inside* **Petit Manan Island**, *over the Outer Bar.*—From **Schoodic Island** steer E. ½ N. for **Petit Manan Light-House**, until within a mile and a half of it; then steer NE., with **Ship-Stern Island** just open to the northward of **Jordan's Delight**. If the buoy on the bar is in place, this range should carry up with it and cross the bar in nine feet at low water, passing about one-third of a mile to the northward of **Petit Manan Island**. On this course, when **Woods Pond Point** bears N. by W. ½ W., or **Petit Manan Light** S. ¼ W., steer for the former, and follow the directions given for the bay.

These courses pass a mile and a quarter SOUTH from *Moulton Ledge;* about three hundred yards to the northward of the *Half-Tide Ledge;* north of **Petit Manan Island**; and half a mile to the westward of *The Whale.*

Bound to *Narraguagus*, continue the NE. course, with **Ship-Stern Island** and **Jordan's Delight** open as before, and when near the latter pass between it and **Pond Island**, and steer into the bay; or, when over the bar steer E. by N. ½ N. to clear *Jordan's Delight Ledge*, and when **Pond Island Light-House** opens to the eastward of **Jordan's Delight** steer about N. by W. for **Trafton Island**, and follow directions for that bay.

DANGERS
IN APPROACHING AND ENTERING PIGEON HILL BAY
FROM THE WESTWARD.

III. *Inside* **Petit Manan Island**, *over the Inner Bar.*—This channel cannot be used without a pilot, and in heavy weather cannot be used at all, as it breaks heavily from the point to *Outer Bar Channel*, and often clear to the island. There is a depth of seven

feet over it at lowest tides, and about nine feet at mean low water. It passes close under **Petit Manan Point.** The first danger met with in crossing the bar is

INNER BAR LEDGE,

bare at half-tide, and about half a mile from the point. It is on the south side of this channel, is not buoyed, and must not be closely approached for fear of

THE OLD BULL,

a dangerous ledge, bare at low water, lying between *Inner Bar Ledge* and **Petit Manan Point**, and about one-third of a mile from the latter. The channel passes to the northward of this ledge, which is not buoyed, and is very dangerous when covered. At low water it is only necessary to keep about midway between the bare ledge and **Petit Manan Point.** In heavy weather an unbroken line of breakers extends from the point one mile and a half to the southward.

The Old Bull always breaks with violence.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PIGEON HILL BAY
FROM THE WESTWARD.

III. *Inside* **Petit Manan Island,** *over the Inner Bar.*—No detailed directions can be given for this passage, which is never used by strangers. None of its dangers are buoyed, and only in fine weather can the bar be crossed at all. The pilots' rule for crossing from the westward is to bring a group of gray-looking houses in *Pigeon Hill Bay* just open to the westward of a remarkable sandy head on the west end of **Boisbubert,** and steer in on that range, leaving the *Old Bull* and *Inner Bar Ledge* both to the southward, and carrying nothing less than seven feet at lowest tides. Neither the group of houses nor the sandy bluff can possibly be mistaken. When over the bar, haul up about **N N E.**, giving the western shore a berth of about seven hundred yards, and follow the directions previously given.

DANGERS
IN APPROACHING AND ENTERING PIGEON HILL BAY BY THE
EASTERN PASSAGE.

This passage, as before mentioned, leads between **Joe Dyer Point** on the north and **Boisbubert Island** on the south; is about seven hundred and fifty yards wide, obstructed by shoals, ledges, and islets, and carries three fathoms at mean low water. It is not safe for strangers. The channel is very narrow and somewhat crooked, and leads between **Currant Island** and *Big Pea Ledge.* The first danger met with in approaching the entrance is

POND ISLAND LEDGE,

making out in a **N E. ½ N.** direction from the north end of **Pond Island** about three hundred yards; is bare in several places at low water, and there is but three feet water just to the westward of the buoy on its north end. This buoy is a *black spar*, (No. 3,) and is placed in two fathoms water on the northeastern end of the reef. It must be left to the southward and the course shaped for **Currant Island.** On this course look out for

BIG PEA LEDGE,

on the north side of the channel, but nearly in the middle of the passage between **Joe**

Dyer Point and **Boisbubert.** It is a low, bare, rocky islet, a few feet above high-water mark. The best water is nearest the **Currant Island** shore.

Having passed between **Currant Island** and *Big Pea Ledge*, look out for

HALF-TIDE ROCKS,

lying in a line **NNW.** from the north end of **Boisbubert**, and bare at low water. The outermost rock, bare at half-tide, is two hundred and fifty yards from the island, and gives the name to the reef. *They are not buoyed.* When past these ledges, steer toward the west shore of the bay, having **Chitman Point** on the southwest, and anchor in three fathoms just to the northward of the point; or wishing to anchor to the southward of **Chitman Point**, look out for

LOBSTER ROCKS,

extending from **Chitman Point** nearly two-thirds of the way across the passage, and bare at extreme low tides. The eastern end of these rocks is two hundred and fifty yards from the point, and *is not buoyed.*

To avoid them, keep the **Boisbubert** shore aboard until past them.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PIGEON HILL BAY BY THE EASTERN PASSAGE.

Strangers must not attempt this passage. When up with **Pond Island**, pass to the northward, giving it a berth of a quarter of a mile to avoid *Pond Island Ledge*, and steer for the north end of **Currant Island**, about **W. by S. ½ S.** **Currant Island** is easily recognized by the grove of stunted fir trees on its northern end. When past **Currant Island**, bring the large lone tree on the north side of the summit on **Pond Island** just open with the north end of **Currant Island**, and steer in on that course, keeping the range, which leads safely into the bay. When, on this course, a large gray house (the most southerly on **Petit Manan Neck**) is brought over **Chitman Point**, the danger is cleared, and thence keep to the northward, or southward, at pleasure. (The gray house mentioned above cannot be mistaken, as it is the highest house in the village, being almost on the summit of the hill.)

The above courses pass one hundred and fifty yards to the northward of *Pond Island Ledge* and about one hundred yards to the northward of *Half-Tide Rocks.*

DANGERS
IN APPROACHING AND ENTERING DOUGLASS ISLAND HARBOR.

I. *From the eastward.*—This safe and commodious harbor lies between **Pond Island** on the east and the **Douglass Islands** on the west. (See page 159.)

There is excellent anchorage, with good holding-ground, in eight fathoms water, free from ice in the winter, and easy of access. To come into it from the eastward, pass between **Pond Island** and **Jordan's Delight** and steer for the middle of **Boisbubert**, passing to the southward of the **Douglass Islands**, and then, turning to the northward, run up between the latter and **Boisbubert.**

On these courses the first danger met with is

SEAL COVE LEDGE.

Seal Cove lies on the east shore of **Boisbubert**, about a mile above the **Southeast Point**, and abreast of it. Two hundred and fifty yards from shore lies a ledge, out at high water, called *Seal Cove Ledge*, running **NORTH** and **SOUTH**, and is to be left to the westward. Passing this, the next danger is on the east side, and is called

DOUGLASS ISLAND LEDGE.

It lies off the north end of the western island, its north point being a little over one-quarter of a mile from the island. There is a channel between it and the north point by keeping the latter close aboard, but no stranger should attempt this.

After passing this ledge the channel leads to the eastward, toward **Pond Island**, and there are no more dangers.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING DOUGLASS ISLAND HARBOR.

I. *From the eastward.*—Pass about midway between **Pond Island** and **Jordan's Delight** and steer for the middle of **Boisbubert**. When within about five hundred yards of the shore of *Seal Cove*, **Joe Dyer Point** will bear N. ½ W., and the passage between the **Douglass Islands** and **Boisbubert** will be fully open. Steer N. ½ W., having **Currant Island** and **Joe Dyer Point** nearly in range, and when about a third of a mile (six hundred yards) to the northward of the west **Douglass Island** steer about E. ½ N. toward **Pond Island**, passing about two hundred yards to the northward of the east **Douglass Island**. Round this island, steer to the southward, between it and **Pond Island**, and anchor at discretion.

The depth is eight fathoms, the holding-ground good, and the shelter in easterly gales perfect.

The above courses pass two hundred yards to the eastward of *Seal Cove Ledge;* one hundred yards to the northward of *Douglass Island Ledge;* and carry over four fathoms all the way.

DANGERS
IN APPROACHING AND ENTERING DOUGLASS ISLAND HARBOR.

II. *From the westward, or from sea.*—In approaching from the westward, outside of **Petit Manan**, the first danger met with is

SIMMS ROCK,

already described, (pages 152 and 162,) which has six feet at low water, and lies about two miles S. ½ E. from **Petit Manan Light-House**, with eight fathoms of water all around it. A *spar-buoy*, painted red and black in horizontal stripes, is placed in eight fathoms on the northeastern side of the ledge and about fifty yards from it. Pass to the northward, and look out on the south for

PETIT MANAN REEF,

making off from the south end of that island about S. by W. for nearly half a mile, and quite shoal. An *iron can-buoy* of the second class, painted black and marked No. 1, is placed in seven and a half fathoms on its southern end. Pass to the southward, and haul up for **Pond Island Light.**

On this course, the first danger met with is

JERRY LEDGE,

lying about a quarter of a mile to the southward of the southeast point of **Boisbubert**, (called **Big Head;**) is awash at low water, and *is not buoyed:* must be left to the westward, and the course shaped for **Joe Dyer Point**. On this course, when near *Seal Cove* beware of

SEAL COVE LEDGE,

lying about two hundred and fifty yards from the shore of the cove, and out at high water. It runs **NORTH** and **SOUTH**, and is to be left to the westward. Passing it, the next danger, on the east side of the channel, is

DOUGLASS ISLAND LEDGE,

lying off the north end of the western island. It is a detached rock, its north point a little over a quarter of a mile from the island, and is not buoyed. There is a channel between this rock and **Douglass Island** by keeping the latter close aboard, but no stranger should attempt this. The ledge must be left to the southward, as the course turns to the eastward toward **Pond Island**, and then to the southward, between that island and the **Douglass Islands**.

Coming from seaward, the first danger met with in approaching **Petit Manan Light-House** is

SOUTH-EAST ROCK,

lying four miles S. by E. from the **Light-House**, and having seven feet at lowest tides. An *iron can-buoy* of the second class, painted red and black in horizontal stripes, is placed in eight fathoms water a little over thirty yards to the northwestward of the ledge. It is left on either hand by giving it a berth, but vessels coming from the southward should pass to the westward. When past it, the *red and black spar-buoy* on *Simms Rock* will soon appear, and must also be left to the eastward.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING DOUGLASS ISLAND HARBOR.

II. *From the westward, or from sea.*—Coming from seaward, steer for **Petit Manan Light** on a course about N. by E. until up with the *black can-buoy* on *Petit Manan Reef.* Pass to the eastward of this; bring **Pond Island Light** to bear N N E. NORTHERLY, and steer for it until abreast of the southeast point of **Boisbubert**, distant half a mile. Now steer N. ½ W. for **Joe Dyer Point**, passing midway between **Boisbubert** and the western **Douglass Island**, and follow the directions for entering the harbor.

The above courses pass a mile and a half to the westward of *South-East Rock;* half a mile to the westward of *Simms Rock;* half a mile to the eastward of *Petit Manan Reef;* and seven hundred yards to the eastward of *Jerry Ledge.* They carry not less than four fathoms. Coming from the westward, pass to the southward of **Petit Manan Island** about a mile on an E. by N. ½ N. course, and when past the buoy on the reef bring **Pond Island Light** to bear N N E. NORTHERLY, and steer for it, following the directions given above.

These courses pass one mile to the northward of *Simms Rock;* half a mile to the southward of *Petit Manan Reef;* and the same distance to the eastward. They carry not less than four fathoms water.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Pond Island, or Narraguagus Lt.	44° 27′ 20″	67° 49′ 52″	$4^h 31^m 19.5^s$	Fixed.	.....	45 ft.	12
Petit Manan Lt.	44° 22′ 02″	67° 51′ 51″	$4^h 31^m 27.4^s$	F. V. F.	$2^m 00^s$	125 ft.	17

VARIATION OF THE COMPASS.

The magnetic variation for the year 1875 is 16° 25′ W., with an approximate yearly increase of 2′.

LIFE-BOAT STATIONS.

It is in contemplation (1873) to establish a life-saving station on **Petit Manan Island**, with life-boats and other apparatus for succoring the crews of wrecked or stranded vessels.

DYER BAY

is a long and narrow arm of the sea, making in a N NE. direction, just to the westward of *Pigeon Hill Bay*. It is separated from the latter by **Petit Manan Neck**, and from *Gouldsboro' Bay*, to the westward, by **Dyer Neck**. At the entrance *Dyer Bay* is a mile and three-quarters wide, (from **Petit Manan Point** to **Dyer Point**,) but rapidly contracts to a width of about twelve hundred yards, which it keeps, with slight deviations, to within a mile and a half of its head.

From **Petit Manan Point** to the head of the bay the distance is six nautical miles.

There is good anchorage, with excellent holding-ground, anywhere above **Sheep Island**, in from three to five fathoms, muddy bottom. The bay is easy of access, although the islets and ledges at the mouth are apt to frighten a stranger. There is, however, a deep and good channel, perfectly safe, which runs close to the *Dyer Bay Ledges*, and may be readily attempted by strangers.

On approaching this *bay* from the vicinity of **Petit Manan Island** a very remarkable high, bare, rocky head will be seen about six miles to the westward. Its outline is cut into steps, and its summit bare of trees. This is **Schoodic Head**, the southern extremity of **Schoodic Neck**, the eastern point of the entrance to *Frenchman Bay*. Behind it, and to the northward, rises the high, bare summit of **Green Mountain**, or **Mount Desert Island**. These two hills (**Schoodic** and **Mount Desert**) are the most prominent landmarks on this part of the coast, and are usually steered for by vessels coming on the coast from seaward, whether they are bound to the eastward or westward.

DESCRIPTION OF SHORES OF, AND APPROACHES TO, DYER BAY.

The eastern point of entrance to this bay is

PETIT MANAN POINT,

the southernmost end of **Petit Manan Neck**; it is low, rocky, covered with a stunted growth of fir and spruce, and extends off at low water into a long, low, rocky ledge, bare of all vegetation. It bears from **Petit Manan Light** NW. by N. ¾ N., two miles and a half distant.

DYER POINT,

the west point of entrance, is a mile and three-quarters NW. from **Petit Manan Point**, and is the southern extremity of **Dyer Neck**, which forms the western shore of the bay. It is low, rocky, covered with a scrubby growth, and has a bare, white summit, on top of which was (in 1872) a large wooden tripod. Several ledges and rocks lie off the point, rendering it dangerous of approach.

On the eastern shore of the bay, about a mile and a half above **Petit Manan Point**, is

YELLOW BIRCH HEAD,

a bare, bluff, sandy head, with precipitous faces, and destitute of trees. A long reef making out from it about a quarter of a mile is in part bare at low water, and has about five feet on its western end. Nearly opposite to the head, on the western shore of the bay, is

STANLEY POINT,

about five-eighths of a mile above **Dyer Point**, and forming the southern point of a narrow cove making to the westward, called *Stanley Cove.* This point is easily recognized; being composed of white rock, bare of all vegetation except clumps of grass and scrub, and slopes gradually to the water. Viewed from seaward, it appears as a round, white, rocky head, entirely bare.

A mile above **Stanley Point**, on the west bank, is

YEATON POINT,

the south point of entrance to *Yeaton Cove.* The latter is a small but shallow cove, making to the westward, and of no importance, as there is no safe anchorage.

On the eastern shore of the bay the land is partly wooded and partly cleared, but in no place fertile or well cultivated. Settlements are very few, a barren and desolate appearance being presented toward the bay. A mile above **Yellow Birch Head**, and nearly opposite to *Yeaton Cove*, a long and very narrow cove makes to the southward, called *Over Cove,* and is of no importance.

PARKER POINT,

on the east shore, nearly two miles to the northward of **Stanley Point** and a little below **Sheep Island**, lies at the southern base of **Eagle Hill;** is low, and covered with a thick growth of birch and other hard-wood trees. A small, shallow cove makes to the westward, on its south side.

EAGLE HILL,

the most prominent landmark in this bay, situated at the head of **Dyer Neck** and on the west shore of the bay, is a round, gently-sloping hill, not quite so high as **Pigeon Hill**, and with a bare, rocky summit. Seen from the southward, it appears covered with low bushes and small trees. Viewed from the eastward, it appears thickly wooded for about half its height, the rest being bare. It is three miles above **Dyer Point**, and lies on the south shore of *Dyer Harbor.*

THE SHEEP ISLANDS

lie nearly opposite to, but a little above, **Parker Point**, and three miles and a half above **Petit Manan Point.** They are about midway between the east and west shores, lie N W. and S E. from each other, and are distinguished as the **Eastern** and **Western Sheep Islands.** The former, much the smaller of the two, is thickly wooded with a dense growth of small fir and spruce. **Western Ship Island** is, on the contrary, covered only with scrub. Seen from the mouth of the bay, the two islands appear low and wooded, the western end of the western island showing as a low, yellow point. It is this head which is steered for in coming up the bay.

From **Dyer Point** to **Eagle Hill** the western shore of the bay is mostly low and well wooded; but it is not steep-to, as a line of sunken kelp ledges lie at some distance from the shore and render it dangerous to approach. The eastern shore, on the contrary, is quite bold in its approaches.

Opposite to the north end of the **Western Sheep Island**, and on the east shore of the bay, will be seen the entrance to a long and narrow cove making in a southerly direction across **Petit Manan Neck**, past the base of **Pigeon Hill**, and nearly reaching *Pigeon Hill Bay*—there being only a narrow isthmus, two hundred yards wide, between the latter and the head of the cove. There is no passage between the **Sheep Islands** and the mouth of the cove, nor is it of any importance, being shallow and unfit for anchorage.

DYER HARBOR,

the usual anchorage in this bay, making in on the north side of **Eagle Hill** a little more than three and a quarter miles above **Dyer Point**, is a large cove, half a mile long and about a quarter of a mile wide, lying in a NW. direction from the western side of the bay, and affords good anchorage in all winds. Its southern point of entrance,

SCHOONER POINT,

lies at the base of **Eagle Hill**; is low, rocky, and covered only with scrub and low bushes. The channel leads between the point and a low, rocky islet, covered with a thick growth of stunted fir and spruce, lying off **Good Point**, but is joined to it by ledges at low water.

The north point of *Dyer Harbor* entrance is

GOOD POINT,

low, rocky, and thickly wooded with a variety of trees. It is three-eighths of a mile to the northward of **Schooner Point** and a mile to the northward of **Sheep Islands**. The north shore of the harbor to the westward of this point begins to show cleared and thinly-settled lands, and the cove gradually contracts its width to its head at *Beaver-Dam Brook*, three-eighths of a mile above.

Vessels of large draught usually anchor under **Good Point** after passing the small wooded island at the entrance, as the southern shore is rather shoal. Vessels of light draught may anchor anywhere, according to their draught.

PINKHAM BAY.

Above *Dyer Harbor* the bay turns to the eastward, running about N NE. for one mile and a quarter to its head, thus forming a long but very shallow bay, (called *PINKHAM BAY*,) full of ledges and flats, and having no passage except at high water.

DANGERS

IN APPROACHING AND ENTERING DYER BAY FROM THE EASTWARD.

On coming up with the entrance to this bay, when past **Petit Manan Island**, there will be seen, on the west side of the entrance, a line of low, rocky islets, lying in a EAST and WEST direction, called

SALLY ISLANDS,

and are six in number, mostly crowned with a thin growth of stunted trees and bushes, and their rocky faces bleached white. The easternmost lies within half a mile of **Dyer Point**, while the most westerly is on the west side of *Gouldsboro' Entrance*. Thus they form an apparent barrier to the entrance to *Gouldsboro' Bay*. The easternmost island, known as

EASTERN ISLAND,

lying just to the westward of **Dyer Point**, is bare except in the middle, where there is a small grove of bushes and stunted fir. Off its eastern end extends a line of bare ledges, known as *Eastern Island Ledges*, or *Dyer Bay Ledges*, in an EAST direction for nearly a mile. These are bold-to on their eastern side, but must not be approached from the southward on account of the sunken rocks in that direction.

THE OLD BULL,

lying off **Petit Manan Point**, is out at low water, and breaks heavily at all times. It lies about a third of a mile from the point, and *is not buoyed*. In heavy weather breakers extend in an unbroken line for a mile and a half from **Petit Manan Point**.

When near **Stanley Point**, do not go too close to the east shore, to avoid

YELLOW BIRCH REEF,

making out from **Yellow Birch Head** about a quarter of a mile, in part bare at low water, and has not more than five feet on its western extremity. *There is no buoy.* Passing it, the eastern shore is bold-to, while the west shore is ledgy and must not be approached closely.

There are no dangers in the bay above this point.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING DYER BAY FROM THE EASTWARD.

Give **Petit Manan Light** a berth of half a mile to the northward and the island the same berth to the eastward, and steer for **Dyer Point**, about N N W. When abreast of **Petit Manan Point**, steer N. ½ E. until up with **Stanley Point**, avoiding the reef off **Yellow Birch Head**; and then N. by E. ½ E. up the bay, leaving **Sheep Islands** to the eastward. When up with the entrance to *DYER HARBOR*, pass midway between **Schooner Point** and the wooded islet off **Good Point**, and anchor under the latter point in from three to four fathoms, stiff clay bottom. Or, instead of entering *Dyer Harbor* anchor anywhere to the northward of the **Sheep Islands**, in from four to five fathoms water, mud and clay.

This harbor affords excellent anchorage in all winds.

The above courses pass the *black can-buoy* on *Petit Manan Reef* close-to, leaving it to the northward; about three hundred yards to the westward of the *Old Bull;* close to the easternmost of the *Dyer Bay Ledges;* and about two hundred yards to the westward of *Yellow Birch Reef.* They carry not less than four fathoms of water.

DANGERS
IN APPROACHING AND ENTERING DYER BAY FROM THE WESTWARD.

MOULTON LEDGE,

bare at low water, lies four miles W. by N. from **Petit Manan Light-House** and three miles SW. by W. ½ W. from **Dyer Point**, extends in a NE. and SW. direction for one hundred yards, and is marked by a *red and black spar-buoy*, placed in five fathoms water off its southwestern end.

Soundings in from three to five fathoms extend to the southward half a mile from this southwest end of the ledge, but on the north side the water is deeper.

The buoy may be left on either hand, but it is usual to pass to the southward. When past it the bay is open, and the next danger is

THE OLD BULL,

(before described, on pages 165 and 171.) It lies about one-third of a mile off **Petit Manan Point**, is out at low water, breaks heavily at all times, and is not buoyed. It is left well to the eastward.

DYER BAY LEDGES,

or *Eastern Island Ledges,* lie on the west side of the entrance, extending to the eastward from **Eastern Island** nearly a mile. They are always out, and are bold-to on their eastern side; but must not be approached from the southward on account of the sunken reefs lying off their south sides. In going in, the easternmost ledge is passed close-to, being left to the westward.

YELLOW BIRCH REEF

is the next danger, and lies on the east side of the channel, making off from **Yellow**

Birch Head in a westerly direction for about a quarter of a mile; is in part bare at low water, and has not more than five feet on its western end. After passing it, the eastern shore is bold-to, while the western is ledgy and must not be approached closely in beating to windward.

Above *Yellow Birch Reef* there are no dangers.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING DYER BAY FROM THE WESTWARD.

Pass **Schoodic Island**, and when up with *Moulton Ledge Buoy* pass to the southward of it, and steer NE. ¼ N. for the eastern end of the *Dyer Bay Ledges.* This course brings **Yellow Birch Head** a little to the EAST of NORTH. When up with the ledges, pass to the eastward and close to them; steer N. ½ E. until up with **Stanley Point**, and then N. by E. ½ E. up the bay, following the directions given above.

These courses pass five hundred yards to the southward and three hundred yards to the eastward of *Moulton Ledge Buoy;* close to *Dyer Bay Ledges*, bearing them to the westward; and about two hundred yards to the westward of *Yellow Birch Reef.* They carry not less than four fathoms.

VARIATION OF THE COMPASS.

The magnetic variation for 1875 is 16° 25′ W., with an approximate yearly increase of 2′.

GOULDSBOROUGH BAY,

next to the westward of *Dyer Bay*, from which it is separated by **Dyer Neck**, is an arm of the sea, making in a nearly NORTH direction; is seven miles long, (including *Steuben Harbor*,) and has an average width of a mile and a quarter to the *NARROWS*, five miles above its mouth.

That part of the bay between the *Narrows* and *Steuben Harbor* is called *JOY BAY*, and is all shoal water.

In approaching from **Petit Manan** the course is about NNW., and there will be seen: First, the long, low, rocky point of **Petit Manan Neck**, bearing about N. by E.; the round, white summit of **Stanley Point** next to the westward, with *Dyer Bay* open between them; and ahead the **Sally Islands**, with **Eastern Island** a little to the north. To the eastward of **Eastern Island**, the bare ledges extending toward **Petit Manan Point** are the *Dyer Bay Ledges.* The high land of **Schoodic Head**, with **Green Mountain** or **Mount Desert**, are seen to the westward, the former being about five miles distant.

The line of islets across the mouth of *Gouldsboro' Bay* are

THE SALLY ISLANDS,

six in number. **Eastern Island** is sometimes counted as one of the group, which, in such case, would number seven. The channel leads between it and the easternmost of the **Sally Islands**, which is about thirty feet high, looks like a cluster of round rocks, and is bare of all vegetation except a scant growth of moss and grass. Next, to the westward, is another rocky islet, somewhat higher, and bare of everything but a few dead stumps and one or two sickly spruce trees. The remaining islets of the group are similar in appearance, being rocky, tolerably high, and bare of all vegetation except a few stunted trees here and there.

The channel between **Eastern Island** and the **Sallies** is about a quarter of a mile wide, and has not less than four fathoms at mean low water.

EASTERN ISLAND,

already described, (page 171,) lies on the east side of the channel and about a quarter of a mile from **Dyer Point.** It is rocky and bare except in the middle, where there is a small grove of stunted fir trees and bushes.

DYER POINT,

the eastern point of entrance to Gouldsboro' Bay, is the southern end of **Dyer Neck**, the long peninsula separating this bay from *Dyer Bay* to the eastward. It is a mile and three quarters **NW.** from **Petit Manan Point**, and seen from the westward is low, rocky, destitute of trees, and has a bare, white summit, (see also page 169.) There is no passage between this point and **Eastern Island.**

When in the middle of the entrance between **Eastern Island** and the **Sallies** the shores of the bay will appear low and wooded, and there will be seen stretching in a line across its head the grand outlines of the **Tunk Mountains,** (a range of handsome hills in the township of **Cherryfield,**) about five miles to the northward of **Steuben.**

The two most prominent hills of the range are **Humpback Mountain,** which shows two round humps, and **Burk Hill,** which is lower than **Humpback**, and has a nearly flat top, with a steep slope to the southward.

Several houses are seen on the low shore at the head of the bay, but as a rule little cultivated land appears.

Above **Dyer Point**, the *eastern shore of the bay* is low and thickly wooded to

SAND COVE POINT,

one mile and a quarter above **Eastern Island**; it is low, woody, and has several large boulders scattered at the edge of the woods. On its north side makes in a small cove of no importance, called *Sand Cove.* Above this there are no noticeable features on the east shore until up with

BIG BEN,

a mile above *Sand Cove* and two and a quarter miles above **Eastern Island.** This is a very remarkable rock, standing in a cleared space among the trees, and when first seen looks like a weather-beaten, unpainted barn. It is, however, a huge, square, gray rock, with perpendicular sides, and is by far the most noticeable feature of the bay.

The **east shores** from *Sand Cove* to **Big Ben** have a general **NORTH** course; are nearly straight, with no indentations, and are low and thickly wooded.

The **west shores**, above **Young Point**, (the western point of entrance,) are more irregular in outlines, somewhat higher than the eastern shores, and generally thickly wooded with a small growth of fir and spruce that from a distance look like scrub and bushes.

Three-quarters of a mile above **Young Point** makes in

WARD COVE,

a large cove, shallow, and of little importance, affording anchorage to vessels of light draught; but above this cove the west shore is nearly as straight as the eastern, and runs in a northerly direction about two miles and a half to

PILOT POINT,

which is low, densely covered with fir and spruce to the water's edge; is nearly three miles and three-quarters above **Young Point**, and forms the south point of the entrance to

WEST BAY, OR GOULDSBOROUGH HARBOR.

This bay is an arm of *GOULDSBORO' BAY*, making in, first to the westward and then to the northward, to the town of **Gouldsboro'**, which occupies its west shore near its

head. It is three miles and a half long in a NORTH and SOUTH direction, and has an average width of three-quarters of a mile; is shallow and unfit for strangers, there being no channel except at high water.

One mile to the westward of **Pilot Point** is

POINT FRANCIS,

and between the two a large but shallow cove, which is not named. **Point Francis** is also low and thickly wooded, like **Pilot Point**, and when seen from the eastward looks like a continuation of the latter. It is the proper southern point of entrance to *Gouldsboro' Harbor*, and behind it (to the westward) there is a long and wide cove, forming the southern part of *West Bay*, known as *GREAT MARSH BAY*. This extends to the southward a mile, but is shallow and of no importance.

JETTEAU POINT,

the north point of entrance to *West Bay*, and about twelve hundred yards to the northeastward of **Point Francis**, is low, rocky, crowned with a stunted growth of fir, and at low water extends into a long, bare ledge.

On the east shore of Gouldsboro' Bay, about a mile above **Big Ben**, nearly opposite to **Pilot Point**, lies

MARSH COVE POINT,

a low, sandy head, covered with birch, and showing a precipitous, water-worn face to the westward. A great number of small boulders are scattered at its base, and it is also remarkable as being the only sandy head between the mouth of the bay and **Rogers Point**. When past it the houses in the village of **Steuben** open from behind the woods on the east shore, showing over the low land of

ROGERS POINT,

the eastern point of the entrance to *JOY BAY;* for above this point the name of *Gouldsboro' Bay* is lost, and the former substituted for it. **Rogers Point** is a long, low, flat, grassy point, with perpendicular, sandy faces, bare of trees except at its west end, where a very few may be seen. A group of three rocky islets, two of them covered with scrub, lie on the north side of the point, in a line NORTH and SOUTH. The two nearest to the shore are called **Money Islands,** and at low water are joined to **Rogers Point**; the third or northernmost is entirely bare, and is known as **Lobster Island.** There is no passage between it and the **Money Islands.**

GARDEN POINT

is on the western shore, a little above **Jetteau Point,** and nearly opposite to **Rogers Point.** It is a low, flat point, with a group of very large willow trees and two or three houses. Seen from a distance the willows have the appearance of orchard-trees. Between this and **Rogers Point** the bay is but three-eighths of a mile wide, forming what is called *THE NARROWS.*

JOY BAY

is a mile and three-quarters long, and has an average width of five-eighths of a mile. At its head it divides—one branch, running to the northeastward, forms *STEUBEN HARBOR;* the other, running first to the westward and then to the northward, is called *JOY COVE.* The shores of the bay are partly wooded and partly cleared and settled, and in most places show perpendicular, sandy faces.

STEUBEN HARBOR

is formed by the eastern branch of *Joy Bay*, and is shallow, affording anchorage only

for vessels of very light draught. Its eastern point of entrance is a sandy bluff, with flat surface, called **Bald Point**; the western point is also a sandy head, with cleared, grassy, level surface, and is called **Burnt Point**. The latter is also the eastern point of entrance to

JOY COVE,

the west branch of the bay, running to the westward, between **Burnt Point** on the north and east, and a sandy head, with perpendicular faces, covered with clumps of birch, and called **Baker Point**. There is no anchorage in the cove, the water being very shallow, except at high water.

The principal anchorage in *GOULDSBORO' BAY* is on the west side, near **Garden Point**, and just below **Rogers Point**. Here from three to four fathoms may be found, with excellent holding-ground in a sort of stiff clay mixed with mud. After riding for twenty-four hours it is often found a work of considerable labor to get the anchor.

DANGERS
IN APPROACHING AND ENTERING GOULDSBORO' BAY.

I. *Coming from the eastward, outside* **Petit Manan Island.**—The first danger met with in approaching **Petit Manan** from the eastward is

SOUTH-EAST ROCK,

which has seven feet at lowest tides, lies four miles S. by E. from the light-house, and is marked by an *iron can-buoy* of the second class, painted red and black in horizontal stripes. The buoy is in eight fathoms water, a little over thirty yards northwestward from the shoal, and there are soundings of from eight to ten fathoms on all sides of the rock. It is usual to pass well to the northward of the buoy, unless bound along the coast.

The next danger encountered is

SIMMS ROCK,

with six feet at low water, which is lying about two miles S. ½ E. from **Petit Manan Light-House**, with eight fathoms of water all around it.

A *spar-buoy*, painted red and black in horizontal stripes, is placed in eight fathoms fifty yards northeast of the rock, and is usually left to the southward by vessels bound into any of the neighboring harbors. When up with it, look out on the north side of the channel for

PETIT MANAN REEF,

marked by an *iron can-buoy* of the second class, painted black. It makes off from the south end of the island about S. by W. for nearly half a mile, and is quite shoal. The buoy is on the south end, in seven and a half fathoms. Pass to the southward of it, and when well past the buoy haul up for the mouth of the bay. On this course, the first danger is

MOULTON LEDGE,

four miles W. by N. from **Petit Manan Light-House**, with a *red and black spar-buoy* placed in five fathoms water off its southwestern end. This ledge is bare at low water, and extends in a N E. and S W. direction nearly one hundred yards. Shoal water extends from it to the southward nearly half a mile. The buoy is to be left to the westward if bound into *Gouldsboro' Bay*. When past it, look out for

DYER BAY LEDGES,

extending in an easterly direction from **Eastern Island** nearly a mile, and must not be

closely approached on their south side, as there are sunken rocks in that direction. The ledges themselves are always out. There is no passage between them and **Eastern Island**. Vessels bound into *Gouldsboro' Bay* pass well to the westward of them.

After passing between **Eastern Island** and the easternmost of the **Salley Islands** there are no dangers in the bay. All that is requisite in turning to windward is to keep off the shores.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING GOULDSBORO' BAY FROM THE EASTWARD.

Pass three-quarters of a mile to the southward of **Petit Manan Light-House**, and when it bears N E. by E. ½ E., about a mile off, steer N N W. which will lead, with not less than four fathoms, between **Eastern Island** and the eastern **Salley Island**, into the bay. When about three-quarters of a mile above the **Sallies**, and off the entrance to *Ward Cove*, steer N. ½ E. nearly, for **Garden Point**, and anchor, at discretion, either off the entrance to *West Bay* or under the western shore between **Garden Point** and **Rogers Point**, in from three to four fathoms, stiff clay and mud. Only vessels of light draught go above the *Narrows*, and they must have a pilot.

DANGERS
IN APPROACHING AND ENTERING GOULDSBORO' BAY.

II. *Coming from the westward.*—After passing **Schoodic Island**, look out for

MOULTON LEDGE,

which is bare at low water, and has a *spar-buoy, with black and red horizontal stripes*, off its southwestern end. This ledge is about two miles to the southward of the **Sallies** and four miles W. by N. from **Petit Manan Light-House**; it extends in a N E. and S W. direction nearly one hundred yards, with shoal soundings (from three to five fathoms) nearly half a mile to the southward from the dry ledge. The buoy may be left either to the northward or southward in coming into **Gouldsboro'** from the westward. It is usual to pass to the southward of it, however. There are no dangers after passing *Moulton Ledge.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING GOULDSBORO' BAY FROM THE WESTWARD.

I. *When past* **Schoodic Island**, get **Petit Manan Point** to bear E. by N. and run for it, *passing inside of Moulton Ledge*, to the northward of it. On this course, when **Petit Manan Light** bears S E. ½ E. and the middle of the passage between **Eastern Island** and the easternmost of the **Sallies** bears N. ½ W., steer the latter course until past the entrance, when steer N N W. for about three-quarters of a mile, until off *Ward Cove;* now steer N. ½ E. for the *Narrows*, and proceed as before directed.

These directions lead to the northward of *Moulton Ledge* nearly three-quarters of a mile, and carry not less than three fathoms of water.

II. *When past* **Schoodic Island**, bring **Petit Manan Light** to bear E. by N., and steer for it until **Petit Manan Point** bears N E. by N. ½ N. and the middle of the passage between **Eastern Island** and the easternmost of the **Sallies** bears N. ½ W. This clears *Moulton Ledge to the southeastward* of it, with **Petit Manan Light** two miles off. Steer N. ½ W. until in the middle of the passage, when N N W. carries the best water to abreast of *Ward Cove.*

Then steer N. ½ E., and proceed as before directed. Or, continue the course N. ½ W. until about three-quarters of a mile above **Sand Cove Point** and in the middle of the bay; then steer N. ½ E., and proceed as before directed.

The above courses pass a mile and a half to the southward of *Moulton Ledge*, and carry nothing less than three fathoms to the anchorage. Directions cannot be given for *Gouldsboro'* and *Steuben Harbors*, as there is no channel except at high water, and that is not fit for strangers.

VARIATION OF THE COMPASS.

The magnetic variation in *Gouldsboro' Bay* for 1875 is 16° 22′ W., with an approximate yearly increase of 2′.

PROSPECT HARBOR.

Two miles W. by S. from **Eastern Island** lies **Cranberry Point,** the eastern point of entrance to *Prospect Harbor*. It is long, low, and rocky, bare of trees, and has patches of scrub here and there. From it a long ledge extends to the southward, breaking heavily, except in very moderate weather. There are several houses on the point, some distance back from the shore.

Prospect Harbor is a large cove, running NORTH and SOUTH, about a mile and a half long, the outer harbor having an average width of one mile. It affords good anchorage in northerly or northeasterly gales, and is much frequented by coasters. Its shores are mostly low, but backed by thickly-wooded lands of moderate height. Coming from the eastward, as soon as the western extremity of **Cranberry Point** bears N. by W. the harbor will be open, and there will be seen at its head a large white house with what appears to be a small cupola on its gable end. This is

PROSPECT HARBOR LIGHT-HOUSE,

built on the end of the keeper's dwelling, and from a distance only so much of it is seen as rises above the roofs, giving it the appearance mentioned above. The **Light-House** is built on **Prospect Harbor Point,** the dividing point at the head of the cove, which separates *Sand Cove* on the east from *Inner Harbor* on the west. It is a granite tower, whitewashed, and joined to the keeper's dwelling; shows a flashing red and white light from a height of forty-five feet above the sea, and is visible eleven miles. The light is of the fifth order of Fresnel, and flashes every thirty seconds. Its geographical position is

Latitude - - - - - - - - - -	44° 24′ 11″ N.
Longitude - - - - - - - - -	68° 00′ 46″ W.

From off **Cranberry Point** the houses in the settlement will appear to the westward of the **Light-House**. A prominent church with tall spire also appears on the west shore; in 1872 this was unpainted, and had a peculiar yellowish appearance on that account.

A good landmark for *Prospect Harbor* is a remarkable long grove of black-looking trees of about equal height, standing on top of the high land just to the westward of the harbor.

PETTY POINT,

the west point of entrance to *Prospect Harbor*, is a mile and three quarters W N W. from **Cranberry Point,** and is low, rocky, and clothed only with low scrub; but the land rises behind it to a considerable height.

DANGERS

IN APPROACHING AND ENTERING PROSPECT HARBOR FROM THE EASTWARD.

The usual course from the eastward is to pass between **Cranberry Point** and a bare ledge called

LITTLE BLACK LEDGE,

nearly covered at high water, lying one mile S. ½ W. from **Cranberry Point**, and S. by E. ¾ E. from the **Light-House**, distant two and a half miles.

Pass to the southward of it, and continue to the westward until the light bears N. ½ E.; or haul to the northward as soon as past it, and pass between it and

BIG BLACK LEDGE,

or ***BIG LEDGE*** as it is sometimes called, a rocky islet, bare of everything, lying S. by E. from the **Light-House**, distant two and a third miles; S W. by S. ¾ S. from **Cranberry Point**, distant nearly one mile; and W. by N. ½ N. from **Little Black Ledge**, distant about one-third of a mile.

The channel between the two is excellent and safe, and is very often used by vessels from the eastward.

One-third of a mile to the westward of **Big Black Ledge** lies the *Old Man;* bare at half-tide, but not in the way of vessels bound in from the eastward. A good channel, with from four to nine fathoms, exists between it and the **Big Black**.

THE OLD WOMAN.

A little over half a mile NW. ¼ W. from **Big Black Ledge** lies a large and dangerous piece of shoal ground, part of which is bare at half-tide, and the rest has from two to twelve feet upon it. The shoal part is sometimes called the *Old Woman*, and sometimes the *Sow and Pigs;* but the former is the name generally used. It lies almost exactly in the middle of the entrance, with equally good water on both sides, but by vessels coming from the eastward it is usually left to the westward. From **Prospect Harbor Light-House** it bears SOUTH, distant nearly two miles, and *it is not buoyed.* When past the *Old Woman*, the passage is clear from shore to shore until up with the entrance to *Inner Harbor*, when look out for

CLARK LEDGES,

bare at one-quarter ebb, making from the west side of the entrance to a distance of over a quarter of a mile from shore. These are very dangerous, (*especially at night,*) and great care is necessary to avoid them. The west shore should receive a berth of at least one-third of a mile, (six hundred yards.)

On the north side of the entrance, do not approach *Prospect Harbor Point* (on which the **Light-House** stands) too closely, as there is a *long ledge making off from it to the southward and westward* for two hundred and fifty yards. It is bare at low water for two-thirds of its length, and is not buoyed.

The best anchorage in *INNER HARBOR* is about six hundred yards to the westward of the **Light-House**, in from three to five fathoms, soft bottom. The whole of the upper part of the cove is a mass of flats and kelp ledges, and a large part of it bare at low water. Vessels of light draught may anchor farther up, according to their draught, (by using the lead carefully,) as the water shoals gradually.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PROSPECT HARBOR FROM THE EASTWARD.

To come from the eastward and enter by the main channel.—Steer W. ½ S. for the middle of **Schoodic Island** until **Prospect Harbor Light** bears NW. by N. ¾ N., when steer for it, which course will lead safely in, with not less than eight and a half fathoms of water, leaving **Cranberry Point** three hundred and fifty yards to the eastward, passing a quarter of a mile to the eastward of **Little Black Ledge**, and nearly half a mile to the eastward of **Big Black Ledge**. When within six hundred yards of the light, steer NW. by W. ¾ W. into *Inner Harbor*, and anchor according to draught. The depth at the usual anchorage is from three to five fathoms, and the holding-ground good.

To come from the eastward and enter between **Big** *and* **Little Black Ledges.**—From about a mile and a half outside of **Eastern Island**, (*Gouldsboro' Entrance*,) steer W. ½ S. for the middle of **Schoodic Island**, until past **Little Black Ledge** and **Prospect Harbor Light** bears N. by W. ½ W.; steer for the light, passing between **Big** and **Little Black Ledges**, and carrying not less than nine fathoms water, and when within about six hundred yards of it steer NW. by W. ¾ W. into *Inner Harbor*, passing to the northward of *Clark Ledge*, two hundred and seventy-five yards distant. Anchor in from three to five fathoms, soft bottom, with the light bearing E. ½ N.

Or, to come from the eastward and enter by the western channel.—Continue the course W. ½ S. for **Schoodic Island** until the light-house bears N. ½ E.; run for it, passing two hundred yards to the westward of the *Old Woman* and nearly six hundred yards to the westward of the *Old Man*, and carrying not less than seven fathoms water, and continue this course until past *Clark Ledges* and *Inner Harbor* is fairly open. Then steer NW. by W. ¾ W. about, for the middle of the cove, and anchor as before.

Strangers are not advised to try the channel between **Big** and **Little Black Ledges**, though there is a depth of twelve fathoms in it.

DANGERS

IN APPROACHING AND ENTERING PROSPECT HARBOR FROM THE WESTWARD.

The coast is pretty clear from **Schoodic** to *Prospect Harbor*, and the first danger met with is

BUNKER LEDGES,

with two feet at mean low water, lying off the mouth of *BUNKER HARBOR*, having no buoy upon them. These are very dangerous ledges, and extend to the eastward nearly seven hundred yards. From **Prospect Harbor Light-House** the shoal of these rocks bears SW. by S. ¾ S., seen over **Petty Point**, and the rule for avoiding them is not to shut the light in behind that point, or not to go to the westward of the light-house bearing NNE.

The channel between these ledges and the *Old Man*, which lies on the east side of the entrance, is a mile wide, and has from seven to fourteen fathoms.

THE OLD MAN,

before described, on page 179, is bare at half-tide, lies on the eastern side of this channel, and bears from *Prospect Harbor Light* S. ¾ E., a little over two and a quarter miles distant; is tolerably steep-to, and always shows itself by breakers. A little over one-third of a mile to the northward is

THE OLD WOMAN,

also described on page 179. It is sometimes called the *Sow and Pigs*, and is partly bare at low water, and in other places has from two to twelve feet. From the *Old Man* it bears N. by W., about six hundred and fifty yards distant; from *Prospect Harbor Light-House* SOUTH, nearly two miles distant; and from **Big Black Ledge** NW ¼ W., a little over half a mile distant. There is a good channel, with from seven to ten fathoms in it, between the *Old Man* and the *Old Woman.*

CLARK LEDGES.

When past the *Old Woman* the channel is clear to *Inner Harbor Entrance*, and may be stretched boldly from shore to shore. When up with *Inner Harbor Entrance*, however, look out for *Clark Ledges*, making from the west shore, opposite to the **Light-House**, to a distance of over a quarter of a mile, and are bare at one-quarter ebb. The west shore should receive a berth of at least one-third of a mile to avoid them.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PROSPECT HARBOR FROM THE WESTWARD.

When past **Schoodic Island**, steer NE. ½ N. until the **Light-House** in *Prospect Harbor* bears N. by E.; then run for it, passing half a mile to the westward of the *Old Man*, the same distance to the eastward of *Bunker Ledges*, and a little over five hundred yards to the westward of the *Old Woman*, and carrying not less than nine fathoms water. This course continue until within four hundred yards of the **Light-House**, when NW. by W. ¾ W. leads into *Inner Harbor*, passing to the northward of *Clark Ledges*, and carrying not less than four fathoms. Anchor in from three to five fathoms, soft bottom, with the light bearing E. ½ N.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Prospect Harbor Lt	44° 24′ 11″	68° 00′ 46″	$4^h 32^m 3.1^s$	Flashing. R. & W.	30^s	45 ft.	11

TIDES.

Corrected Establishment	10^h 57^m
Mean Rise and Fall of Tides	10.8 feet.
Mean Rise and Fall of Spring Tides	11.5 "
Mean Rise and Fall of Neap Tides	9.5 "
Mean Duration of Rise	6^h 13^m
Mean Duration of Fall	6^h 12^m

VARIATION OF THE COMPASS.

The magnetic variations for 1875 is 16° 20′ W., with an approximate annual increase of 2′.

BIRCH AND BUNKER HARBORS.

These little harbors, suitable for light-draught vessels, are small coves making into the westward of *Prospect Harbor*, and are of little importance.

Birch Harbor lies on the west side of **Petty Point**, and *Bunker Harbor* about three-quarters of a mile southwest of it.

BIRCH HARBOR

is a long and narrow cove, making in a W N W. direction about a mile, and affords anchorage in from six to eighteen feet at low water. It is only used by the fishermen who live on its banks, as coasters always run into *Prospect* or *Winter Harbor*. The shores are low and rocky, and have in places a thin fringe of small trees, but are for the most part covered only with scrub and bushes. High lands rise somewhat steeply behind the low banks, especially on the north and west, where the summit of the **Schoodic Hills** is seen. There is a small settlement on its banks.

BUNKER HARBOR,

three-quarters of a mile to the southwestward of *Birch Harbor*, is a small, narrow cove, running nearly N N W. and S S E. and about half a mile long. Its shores partake of the same character as those of *Birch Harbor*—low, rocky, covered with scrub, and backed by the high, steep, rocky lands of **Schoodic**. Anchorage in from two to four fathoms at low water may be found, but the cove is not fit for strangers. There is a small settlement on its shores.

COAST FROM BUNKER HARBOR TO SCHOODIC POINT, ENTRANCE TO FRENCHMAN BAY.

From *Birch Harbor Entrance* the shore runs S. by W. ½ W. about three-quarters of a mile, terminating in a low, rocky point, called

SPRUCE POINT.

The only growth is scrub and low fir. This point is one mile about E N E. from the north end of **Schoodic Island**, and between it and the east shore of the **Schoodic Peninsula** is formed a large semicircular cove, called

SCHOODIC HARBOR,

or sometimes *ROWLAND HARBOR*, in which there is from three to seven fathoms at low water. Its shores are rocky and uncultivated, and the cove itself is rarely used.

There are several dangerous sunken ledges, which *are not buoyed*, but the harbor may be safely entered with less than five fathoms by keeping either shore aboard. Its west shores are formed by the peninsula of

SCHOODIC,

the eastern point of entrance to *FRENCHMAN BAY*. This prominent peninsula, one of the great landmarks on the COAST OF NEW ENGLAND, is a range of high, barren, rocky hills, terminating to the southward in a low, bare, rocky point called **Schoodic Point.** They are composed of bare, yellowish rock, with their slopes cut into very peculiar-looking steps, and a few low trees dotting at wide intervals their eastern sides. A thin scrub growth may also be seen in the crevices of the rock on a near approach; but the general appearance is barren and desolate in the extreme.

These hills are usually made by vessels from EUROPE coming upon our coast, bound either to the northward or southward.

When **Schoodic** is viewed from the eastward, there will appear in range with it a small island called

SCHOODIC ISLAND,

long and narrow, and quite low, lying N N E. and S SW., within half a mile of **Schoodic Point**, with a good passage between them.

The southern part of the island is covered with a thick growth of low spruce and fir, while the northern end is bare except for a few scattered trees here and there, and both shores are bold and steep-to. The passage between **Schoodic** and **Schoodic Island** is obstructed at its northeast end by a bare ledge, called *Schoodic Ledge*, lying a quarter of a mile N. by E. from the north end of the island. It may be left on either hand.

FRENCHMAN BAY

is contained between the main land of **Gouldsboro'** and **Sullivan** on the east, and **Mount Desert Island** on the west; has a general course NORTH and SOUTH; is fourteen miles long, (to **Sullivan**,) about six miles wide at its mouth, (between **Schoodic Point** and **Otter Creek Point**,) and seven miles wide at its widest part, opposite to *TRENTON RIVER*. Within its limits are contained *WINTER or MOSQUITO HARBOR*, *WEST GOULDSBORO' HARBOR*, *SULLIVAN* and *WEST SULLIVAN HARBORS*, *HALL COVE*, and *BAR HARBOR*. *Winter Harber* is one of the best on the coast, and is easily accessible.

The entrance to *Frenchman Bay* is between **Schoodic Point** on the east, and **Otter Creek Point**, the southeast point of **Mount Desert Island**, on the west. There are many islands in the bay and along its shores, and into its northern end empty *TRENTON RIVER*, *SKILLINGS RIVER*, and *SULLIVAN RIVER*, three large but shallow streams of some commercial importance.

Coming from the eastward, bound into *Frenchman Bay*, the most conspicuous object is MOUNT DESERT ISLAND, appearing as a very high mountain, rising with a regular but steep slope to a bare summit two thousand feet above the sea. This summit is known as **Green Mountain.** The island is composed of a great number of peaks, of which this is the highest, but from the eastward none of these are noticeable, being in range with **Green Mountain** or else so situated in the view as to form part of the regular slopes of that mountain. They become visible passing along the eastern shore of the island, or to the westward along its south shore.

When off the entrance, looking up into the bay, a number of islands will be seen stretching in a line across the whole width of the bay, and apparently closing the passage. They are about five miles above the entrance, and lie in a line about E. by S. and W. by N., with excellent and deep channels between them.

On the east side of the entrance to the bay lies the next most prominent object, **Schoodic**, before described, (page 182,) as a range of high, barren hills, with their southern slopes cut into steps, destitute of trees, and terminating to the southward in a low, bare, rocky point, called **Schoodic Point.** When seen from the westward, a few low, scrubby-looking trees appear clinging to the edges of the highest steps.

EASTERN SHORES OF FRENCHMAN BAY.

From **Schoodic Point** the general course of the shore is **NORTH**, for a mile and three-quarters, to the entrance to *Winter Harbor*. In this distance it is indented by two coves of little importance—one, a long, narrow cove, making in on the western side of **Schoodic Point**, and called *Arey Cove;* and the other, nearly a mile above the point, called *Pond Island Cove.* This latter is half a mile wide at its mouth and of irregular shape, but its width at entrance is diminished by a small, low, round, wooded

island, lying near the north shore, called **Pond Island.** The shores from **Schoodic Point** to the entrance to *Winter Harbor* are high, rocky, barren, and steep-to.

Between the two coves just mentioned rises a high, bare, rocky point of a peculiar yellowish appearance, and dotted with trees at long intervals; noticeable from the fact that it hides **Mark Island Light-House**, in the entrance to *Winter Harbor*, until that **light** bears **N. by W.**, when it will open out from behind the point.

WINTER HARBOR,

or *MOSQUITO HARBOR* as it is often called, is a large cove, running about **N. by E.** and **S. by W.**, two miles long, and with an average width of a little over half a mile. Its entrance is a mile and three-quarters above **Schoodic Point**, and is continued between the high, rocky land of **Schoodic** on the east, and a group of islands lying south of

GRINDSTONE NECK,

on the west. The neck is a long peninsula, lying **NORTH** and **SOUTH**, high, steep, rocky, and nearly bare of trees, and forms the western shore of the harbor proper. Several ledges and small barren islets lie off its south end, close to. The southernmost of the islands, forming the western side of the entrance, is called

TURTLE ISLAND,

and is rocky and thickly wooded. At its southern end it is about forty feet high, with bare summit; while at the north end it is eighty feet high. The centre of the island being only twenty feet above sea-level, gives it a saddle-like appearance.

Turtle Island lies **N N W.** and **S S E.**; is three-quarters of a mile long, tolerably steep-to on its eastern side, but obstructed by bad ledges on its south side, which are known as *Turtle Island Ledges,* and are bare at half-tide.

SPECTACLE ISLAND,

though not visible from the southward, owing to its position, lies about one hundred and fifty yards to the northward of **Turtle Island.** It is a small island, of irregular shape, lies nearly **N N E.** and **S S W.**; is three hundred and fifty yards long, and quite low. The southern end has a few trees near its western shore; the northern half is higher and has no trees.

The island is nearly cut in two by a large cove on its eastern side, and is surrounded by ledges out at half-tide. There is no passage either on its north or south side.

MARK ISLAND AND NED ISLAND.

Nearly abreast of **Turtle Island**, and about midway of the entrance to the harbor, are seen two islets, the northernmost being higher than the other, which is quite low, and has a white **Light-tower** on its southern end. Both islets are joined at low water by a ledge of rocks. The northernmost is called **Ned Island**; lies **N. by W.** and **S. by E.**; is four hundred yards long and forty feet high. Between it and **Grindstone Point** is a good passage three hundred and fifty yards wide, with five fathoms water, but obstructed by a dangerous ledge off **Grindstone Point**, called *Grindstone Ledge.*

The southern islet, called **Mark Island,** is quite low and flat, bare of trees, and about three hundred yards long. Near its southern end stands the guide to this harbor, known as

WINTER HARBOR LIGHT-HOUSE,

a white tower, nineteen feet high, connected with a brown dwelling-house by a covered

passage, and shows a fixed white light of the fifth order of Fresnel from a height of thirty-seven feet above the sea. It is visible eleven miles, and its geographical position is

Latitude - - - - - - - - - 44° 21′ 40″ N.
Longitude - - - - - - - - 68° 05′ 16″ W.

There is no fog-signal at this light-house.

Between **Ned** and **Mark Islands** on the east, and **Turtle** and **Spectacle Islands** on the west, there is an excellent channel, with from seven to seventeen fathoms water, leading either into *Winter Harbor* by the passage between **Grindstone Point** and **Ned Island**, or along the western face of **Grindstone Neck**, between it and the small islands to the westward of it, up toward **East Sullivan.** Not less than five fathoms is found in the shoalest part of this passage. (See page 187.)

The western shores of Mosquito or Winter Harbor are formed entirely by **Grindstone Neck**, and are steep-to, free of dangers, rocky, and about one hundred and twenty feet high, with bare ledges cropping out here and there over the surface. The eastern and northern shores are cut up by coves, some of which afford good anchorage.

On the eastern side of the harbor, a little above **Grindstone Point**, is

FRASER POINT,

the southern point of the entrance to a large but shallow cove called *Mosquito Harbor.* The point is low, bare of trees, very gently sloping, and has two or three houses on it, and several wharves on the harbor side for light-draught vessels. The entrance lies between this point and a small island, about twenty feet high, bare on top, but with a few trees near the shore, called **Holmes Island.** From six to twelve feet at low water is found at the anchorage.

About one hundred yards to the northward of **Holmes** lies **Bigger Island,** also about twenty feet high, with a somewhat steep rise on its south side. It is about four hundred yards long in a N W. and S E. direction; its summit is partly bare and in part thinly wooded. It lies close to the main shore, but there is no passage to the eastward of it. A very shallow passage, with three feet at mean low water, exists between this and **Holmes Island.** **Bigger Island** is connected at low water, on its north side, with

BIGGER POINT,

a long and narrow neck of land, twenty feet high at its highest points, but undulating, and for the most part bare of trees. A thin growth appears in the low lands, but the summits are bare. Behind the point a shallow cove extends to the northward three-eighths of a mile, where it terminates in a small stream or brook. About three-eighths of a mile above **Bigger Point**, and on the north shore of the harbor, is the entrance to

HENRY COVE,

a third of a mile long in a NNE. direction, and has an average width of about three hundred yards. In this cove anchorage may be found in from six feet to four fathoms, soft bottom, and it has no dangers. The lead will guide vessels of light draught to the anchorage, as the water shoals gradually to the head of the cove.

WINTER HARBOR COVE,

upon the northeastern shores of which is built the settlement of **Winter Harbor,** makes into the northwestward from the mouth of *Henry Cove.* It is a narrow and shallow cove, three-eighths of a mile long, nearly two hundred yards wide at its mouth, and gradually contracts to its head. The depth is from six to sixteen feet at mean low water,

and the bottom is good. The southwestern shores of this cove are formed by a long and narrow point, called

WINTER HARBOR POINT,

separating it from *Sand Cove* to the westward, and is sometimes called **Sand Cove Point.** It is a long, low, and very narrow neck of land, extending in a SE. direction between the two coves, and is nearly three-eighths of a mile long. Seen from the southward, it appears thickly wooded with spruce and fir; but these woods extend only about half way from the southern end, the northern half of the neck being cleared and grassy.

SAND COVE,

on its western side, is contained between this point and the east shore of **Grindstone Neck**, and is a large and commodious cove, affording excellent anchorage in northerly, easterly, or westerly gales. The holding-ground is good, the depth anywhere from two to six fathoms, and the anchorage roomy and accessible. The cove lies **NNW.** and SSE., is nearly half a mile long, about a quarter of a mile wide, and free from all dangers.

In approaching *WINTER HARBOR* the most prominent landmarks are—first, the **White Light-House** with the brown dwelling close to it on **Mark Island**; and next, *a large, high, wooded island to the northwestward of the light, which shows remarkable perpendicular rocky cliffs streaked with white.* This is **Iron Bound Island,** in *Frenchman Bay*, and is sufficiently remarkable to serve as a certain landmark either for the bay or for *Winter Harbor.*

DANGERS

IN APPROACHING AND ENTERING WINTER HARBOR.

There are no dangers in approaching this harbor, and none in entering until past the **Light-House** and approaching **Grindstone Point,** when it is necessary to give the point a berth to avoid

GRINDSTONE LEDGE,

a dangerous sunken ledge, with less than six feet of water, lying one hundred and fifty yards south of **Grindstone Point**, and extending to the southward a little more than a hundred and fifty yards. Thus its south end is over three hundred yards to the southward of the point. *It is not buoyed.*

Above *Grindstone Ledge* there are no dangers until past **Bigger Island**, when it is necessary to keep off the shore at **Bigger Point** to avoid some dangerous ledges, bare at extreme low water, lying two hundred yards from the shore, a little above the southern extremity of the point. By giving this shore a berth of three hundred yards they will be avoided, and there will be nothing less than four fathoms.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING WINTER HARBOR.

I. Bring the **Light-House** to bear **NORTH** and steer for it, carrying not less than twenty-three fathoms of water until within three-quarters of a mile of the light, in twenty-three fathoms, soft bottom, and the southern point of **Turtle Island** to bear **N W. ½ W.**, a little over half a mile distant. Now, *if bound in to Henry Cove,* steer **N. by E. ½ E.**, which will carry safely up to the entrance with not less than seven fathoms, and to the anchorage with not less than four fathoms. If of light draught, anchorage may be found in from six to sixteen feet nearer the head of the cove.

Bound into Winter Harbor Cove, on the N. by E. ½ E. course: When nearly abreast of **Winter Harbor Point**, with the middle of the entrance bearing N W. ½ N., steer that course up the middle of the cove to the anchorage, in from six to sixteen feet of water, soft bottom.

Bound into Sand Cove: When on the N. by E. ½ E. course the southern extremity of **Grindstone Point** bears W. by S. and in ten fathoms water, steer N. by W., which will lead up the middle safely, with not less than five fathoms, to the anchorage.

Bound into Mosquito Harbor: Keep the eastern or **Schoodic** shore aboard until up with **Fraser Point**; give this point a berth of one hundred and fifty yards; round it to the eastward, and steer E. by S. ½ S., passing about midway between the point and **Holmes Island**. Anchor in from six to thirteen feet, according to draught. Or, on the N. by E. ½ E. course up the harbor: When **Grindstone Point** bears W. by S., (as before,) steer E. by N. ¾ N. about, for the middle of **Holmes Island**. On this course there is not less than six fathoms. Continue it until within two hundred yards of the islands, when steer E. by S. ½ S., gradually hauling to the southward so as to keep in the middle of the passage. The harbor is only fit for vessels of light draught.

Do not fear to stand close to the eastern or **Schoodic** shore, as it is very steep-to, from five to eight and in some places ten fathoms being found a hundred yards from the shore.

In beating in, the only directions necessary are not to go nearer than one hundred yards on the east shore until up with **Fraser Point**; after passing this point, to give **Bigger Island** a berth of two hundred yards to the eastward; and if bound into *Henry Cove*, or *Winter Harbor Cove*, to give **Bigger Point** a berth to the eastward of not less than three hundred yards.

Mark Island may be approached from the eastward to within one hundred and seventy-five yards, and **Ned Island** to within seventy-five yards, with not less than five fathoms. But in standing to the westward, past **Grindstone Point**, give it a berth to the northward of not less than a quarter of a mile to avoid **Grindstone Ledge**, and when up with the ledge do not stand farther to the westward than to bring **Winter Harbor Light-House** to bear S. by W. ¾ W., when there will be five fathoms, hard bottom. Safely stand to within one hundred yards of the east shore of **Grindstone Neck**, with not less than four fathoms water.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Winter Harbor Light...	44° 21′ 40″	68° 05′ 16″	$4^h 32^m 21.1^s$	F.	37 ft.	11

TIDES.

Corrected establishment	$10^h\ 52^m$
Mean Rise and Fall of Tides	10.5 ft.
Mean Rise and Fall of Spring Tides	11.7 ft.
Mean Rise and Fall of Neap Tides	9.3 ft.
Mean duration of Rise	$6^h\ 12^m$
Mean duration of Fall	$6^h\ 13^m$

VARIATION OF THE COMPASS.

The magnetic variation was, in 1867, 15° 56′ W. The approximate annual increase being 2′, gives for 1875 16° 12′ W.

Above *Winter Harbor*, the general course of the eastern shore of *Frenchman Bay* is about N. ¾ W. for a mile and a quarter, along the western face of **Grindstone Neck** to *Deep Cove*, a semicircular cove, full of ledges and bare rocks, and unfit for strangers. Its shores are rocky, wooded, gently-sloping, and of moderate height. From nine to fourteen feet may be found at the anchorage; but there is little shelter, and the holding-ground is not good. Opposite to *Deep Cove* and **Grindstone Neck**, and about a mile from the east shore, lies a large, high, rocky, and wooded island, called

IRON-BOUND ISLAND,

the easternmost of a group of islands stretching in an irregular line across the bay, between **Grindstone Neck** and *Bar Harbor;* dividing it into two parts, known as the *Upper and Lower Bay.* **Iron-Bound Island** is a mile and three-quarters long in a NE. and SW. direction, undulating; its height varying from sixty to one hundred and sixty feet; well wooded and steep, showing at its southwestern end perpendicular bluffs of rocks streaked with white. (See page 186.) It is very bold and steep-to, four and five fathoms being found within sixty yards of its eastern shore. On the north this island is separated, by a passage three hundred and fifty yards wide, called *HALIBUT HOLE*, from

JORDAN ISLAND,

a large, high, and well-wooded island, lying nearly NORTH and SOUTH, and about four hundred yards from the eastern shore at its nearest point. It is nearly a mile long, with a nearly oval shape, and about half a mile wide at its widest part. Near the southern end it attains a height of one hundred and eighty feet at a bare, rocky summit, whence it descends with a gradual slope to its southeastern point, which is low and has a few trees.

A small, low island, with a clump of firs on top, lies close in with the western shore of **Jordan Island**. There is no passage between them.

The eastern shore of *Frenchman Bay*, from *Deep Cove* to **Jordan Island**, runs nearly NORTH; is for the most part well wooded, high, and steep. Opposite to *Jordan Bar* it rises abruptly to a height of one hundred and sixty feet, and then, more gradually, one hundred and forty feet higher, giving a total of three hundred feet as the height of the bare summit five-eighths of a mile back from the shore. The passage between this shore and **Iron-Bound Island** varies in width from one and three-eighths miles at its southern end to less than three-quarters of a mile at its northern, and has from thirteen to eighteen fathoms of water, with very bold shores. But between the south end of **Jordan Island** and the main the passage is only four hundred yards wide, and is closed to large vessels by a bar, over which not more than five feet can be taken at mean low water. This is called *Jordan Bar.*

To the northward of **Jordan Island**, and separated from it by a passage between six and seven hundred yards wide, lies

STAVE ISLAND,

a large, well wooded, and moderately high island, about three quarters of a mile from shore, and a mile and a half long in a NNE. and SSW. direction. Off its northern end, and close in with the shore, lie several rocky islets. Between **Stave Island** on the west, **Jordan Island** on the south, and the eastern shore of *Frenchman Bay* on the east, is a very comfortable and secure anchorage, with not less than four fathoms water, called

STAVE ISLAND HARBOR.

This is an excellent harbor for strangers of whatever draught, being commodious, deep, and easily accessible. There are no dangers whatever; all that is necessary, when bound in, is to enter midway between **Jordan** and **Stave Islands** and choose a suitable berth. The holding-ground is good. After lying at anchor here for twenty-four hours it was found quite difficult to get the anchor.

In going in from the southward and westward, the low islet with a clump of firs on it (before referred to as lying close in with the western shore of **Jordan Island**) must be left to the eastward and southward.

Vessels of light draught may cross the bar between **Jordan Island** and the main land with five feet at mean low water, and thus enter *STAVE ISLAND HARBOR* from the southward; but this passage is not recommended to strangers.

The proper course is to pass to the eastward of **Iron-Bound Island**, between it and **Long Porcupine**, and as soon as the passage between **Jordan** and **Stave Islands** is open steer for it. There is not less than ten fathoms in the passage between **Long Porcupine** and **Iron-Bound Islands**, and both shores are steep-to. Or, pass to the eastward of **Iron-Bound Island**, between it and **Grindstone Neck**, and go through *HALIBUT HOLE*, between **Jordan Island** and the north end of **Iron-Bound**, carrying not less than eleven fathoms water. In this passage the only danger is *The Cod Ledges*, with nineteen feet at mean low water. These ledges lie a quarter of a mile from the east shore of **Iron-Bound Island** and a little above *Deep Cove*, and extend in a N. by W. direction for one-third of a mile.

The eastern shore of *Frenchman Bay*, from abreast of *Jordan Bar*, runs nearly N N E. for about three miles and a half to the entrance to the *HARBOR OF WEST GOULDSBOROUGH.*

This is a large cove of irregular shape, about a mile wide at its mouth, but nearly the whole of its width is occupied by a large island, called **Hog Island,** lying directly across the mouth in a N. by W. direction, and is nearly a mile in length. This island makes the harbor perfectly land-locked, leaving two narrow passages, one on the north and one on the south side of the island.

The north point of the northern entrance (which is the principal one) is called **Ash Point,** and is the southern end of **Ash Neck,** showing as a high, bare, bluff head, with sandy faces, and a thick growth of birch and spruce on its northern end. A few houses appear above the head. **Ash Neck** is of moderate height, undulating, wooded in places, but with its north and south ends nearly bare of trees, grassy, and dotted with groups of houses.

The shores of *West Gouldsboro'* are moderately high, diversified with cleared and thickly-wooded lands, and dotted here and there with groups of houses.

The harbor, though affording good anchorage in about nine feet water, is not safe for strangers to attempt without a pilot, and *STAVE ISLAND HARBOR* and *BASS COVE* or *EAST SULLIVAN HARBOR* are more convenient and accessible.

The approaches to *West Gouldsboro'* and *East Sullivan* are still further protected by a line of islands extending from **Stave Island** northward to **Bean Point,** the southwestern extremity of **Waukeag Neck,** which separates *BASS COVE* from *FLANDERS BAY.* These islands are numerous, and the passages among them intricate, and, although deep and safe for those who are acquainted with them, are not recommended for strangers.

The first island to the northward of **Stave Island** is

CALF ISLAND,

about a mile long in a N N W. and S S E. direction, but quite narrow. Seen from the southward, its southern end appears as a long, green, gently-sloping point, with a house and barn on it, the higher land back of it crowned with a thick growth of fir and spruce, and its extremity terminating in a flat, grassy point, with sandy, water-worn faces, and a thin growth of birch on the end. The houses in **East Sullivan** will appear a little to the eastward, and still farther east **Schoodic** and **Tunk Mountains** will show over the low lands. Two small, rocky islets, called **Little Calf Islands,** lie close to the southwest end. **Calf Island** seen from the northward appears moderately high and thickly wooded, the north end being bold, bluff, and covered with a thick growth of birch.

The southeastern point of **Calf Island** is sufficiently remarkable. It is bare of trees at its very end, but a clump of birch stands a few hundred yards back of it. A long bar, bare at low water, extends off in a line with the direction of the point to a grassy islet, with partly sandy and rocky shores, bare of trees except two or three tall spruce on its southern end. This again is connected by a similar bar with a small, bushy island lying still farther to the southward. These two islets are called **Little Calf Islands.**

PREBLE ISLAND,

lying next to the northward of **Calf Island,** is thickly wooded, rocky, and of moderate height; lies about N W. and S E., and is nearly a mile long. Between this and **Calf Island** is one of the principal entrances to **East Sullivan.** Next to the westward is

RAM ISLAND,

thickly wooded and of moderate height, but small; lying about three hundred yards to the southward of **Bean Point,** and four hundred yards to the westward of **Preble Island.** The eastern passage to **Sullivan** leads to the westward of this island, between it and **Bean Island,** in *Flanders Bay.* A dangerous ledge, two feet out at low water, lies one-third of a mile W S W. from this island, *and is not buoyed.* The best channel lies between this ledge and the island, but vessels may pass to the westward of it by giving it a good berth. It is known as *Sunken Ledge.*

This group of islands—viz: **Stave, Calf, Preble,** and **Bean Islands**—lying off the east shore at distances varying from three-quarters to a mile and three-quarters, forms a complete barrier to westerly and southerly winds, and makes the anchorage between them and the main perfectly safe and quite smooth. Mariners would do well to bear this in mind, if not able to get into *Stave Island Harbor* or **Sullivan.**

BASS COVE,

or *EAST SULLIVAN HARBOR* as it is often called, is the next harbor on the eastern shore above *West Gouldsboro'.* It is contained between the township of **East Sullivan** on the east and **Waukeag Neck** on the west; is of irregular shape; lies nearly NORTH and SOUTH, and is nearly two miles and a half long to its head. The village of **East Sullivan** lies along its eastern shore, on the low, flat plains extending from the foot of **Schoodic Mountains** to the bay. The foot-hills are of moderate height and wooded, and the low-lands are dotted with houses and groves of trees. Both shores are cleared and have a gentle slope. The principal trade is in lumber.

The entrance to *Bass Cove* is between **Ash Point** on the east, and **Eastern Point,** the southeast extremity of **Waukeag Neck,** on the west, and is one mile wide. The channel is, however, somewhat obstructed by ledges, many of which are not buoyed, and it is not considered safe for strangers. There are three entrances—one from *Stave*

Island Harbor, inside of all of the islands; one between **Calf** and **Stave Islands**; and one between **Preble** and **Calf Island**. That between **Calf** and **Stave Islands** is the most commonly used, and is buoyed.

There are many islands in the approaches to *Bass Cove*, the principal of which are **Simpson, Preble, Calf, Junk of Pork**, and **Ash Islands.** Most of them lie in the way of those using the western passage between **Calf** and **Preble Islands.**

SIMPSON ISLAND

is the first met with after passing **Calf Island**, and is always left to the westward, unless bound into *EASTERN POINT HARBOR.* It is rocky and heavily wooded, and low, except at its eastern end, which is a high, wooded bluff, called **Simpson Head.** Next to the northward and eastward is

SULLIVAN ISLAND,

flat and grassy, with sandy faces, and dotted here and there with scrub and low fir. The course passes to the eastward of this island also, bearing to the northward, and leaving to the westward a small island of peculiar appearance, lying off **Eastern Point**, (joined to it at low water,) called

JUNK OF PORK.

It is a bluff, sandy head, with precipitous faces, and its summit is crowned with a few trees. Seen from the southward and westward, it appears as part of the main land, and is a conspicuous mark. Passing it, the next islet is

ASH ISLAND,

lying off **Ash Point**, but on the western side of the channel, the course passing well to the eastward. It is a small, low, rocky island, dotted with spruce and fir, and is sometimes passed close-to; but this passage is not safe for strangers, for there lie to the southward two high, bare rocks, called **Great Ledges,** and from these shoal water and sunken ledges extend to the southward, the principal dangers being *Half-Tide Rock* and *Lobster Rock,* (neither of which were buoyed in 1872.) There is a channel, with twenty-one feet at high water, between *Half-Tide Rock* and the **Great Ledges,** but it is not safe for strangers.

Ash Point, the eastern point of entrance to *Bass Cove*, has already been described (page 189) as the southern end of **Ash Neck**, a high, bluff head, with sandy faces, and a thick growth of birch and spruce on its northern end. A few houses appear over the summit.

The shores of both **Waukeag Neck** and **East Sullivan** are cleared and grassy, have a gentle slope, and are well settled.

DANGERS

IN APPROACHING AND ENTERING BASS COVE OR EAST SULLIVAN HARBOR.

I. *From Stave Island Harbor.*—In this passage there are no dangers until past **Stave** and **Calf Islands** and approaching **Ash Island,** when look out for

HALF-TIDE ROCK,

a very dangerous ledge, out at half-ebb, lying to the southward of **Ash Island** and about **ENE.** from the southeastern point of **Calf Island.** It was formerly marked by a *black*

spar-buoy, (No. 3,) placed in ten feet of water on its southeastern point. This buoy was gone, however, in 1872.

At low water there is a ten-feet channel to the northwestward of this rock, between it and the **Great Ledges**, and at high water vessels drawing eighteen feet may safely pass; but this passage ought not to be attempted without a pilot. The usual course is to pass to the eastward of *Half-Tide Rock;* but, if passing to the westward, beware of

LOBSTER ROCKS,

making off from **Great Ledges** to the southeastward, and having about two feet at mean low water. They are not marked in any way except at low water, when they show themselves.

At high water, about twelve feet may be taken over them. There is no passage between these ledges and **Great Ledges**; but there is one often used between the latter and **Ash Island**, but unsafe for strangers.

When past the **Great Ledges** there are no more dangers.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BASS COVE, OR EAST SULLIVAN HARBOR.

I. *From Stave Island Harbor.*—Keep about midway between **Stave Island** and the **Gouldsborough Shore** until abreast of the middle of **Calf Island**, when there will be seen a white house with barn near it, in **East Sullivan**, just to the eastward of the church. Just shut this house in behind the northwest extremity of **Ash Point**, (easily recognized by the clump of trees on its end, the rest being low and grassy,) and steer on that range until past **Great Ledges**. Then steer N. by W. to the anchorage. The above range clears the *Lobster Rocks.*

The above directions lead to the eastward of *Lobster Rocks* and *Half-Tide Rock*, and carry not less than ten feet at mean low water; and at the anchorage there is from two to three fathoms, with excellent holding-ground.

DANGERS
IN APPROACHING AND ENTERING BASS COVE, OR EAST SULLIVAN HARBOR.

II. *By the main channel, between* **Stave** *and* **Calf Islands**.—The principal dangers in this passage lie in the very entrance, where there is a ten-feet bar, and two *spar-buoys* will be seen ahead, close together. The nearest one is *a black spar*, on

SOUTHEAST POINT,

a long ledge making in a southerly direction from the southeast point of **Calf Island**, and for the most part dry at low water. The *buoy* is in ten feet at mean low water, about one hundred yards to the southeastward of the dry rocks, and is to be left to the northward and westward. The other is a *red spar*, on

STAVE ISLAND MIDDLE GROUND,

a bad shoal off the north end of **Stave Island**, with only a few feet on it at low tide. The buoy is placed in nine feet at lowest tides, on the north end of the shoal, and the channel passes to the northward and between it and the *black buoy* on **Southeast Point**. It is very narrow, and has ten feet at lowest tides. When past these buoys, the next danger is

HALF-TIDE ROCK,

lying to the southward of **Ash Island** and about ENE. from the southeast point of **Calf Island**; is out at half-ebb, and was formerly marked by a *black spar-buoy*, (No. 3,) placed in ten feet water on its southeastern point. (This buoy was gone, however, in 1872.) At low water there is a ten-feet channel to the northwestward of this rock, between it and the **Great Ledges**, and at high water vessels drawing eighteen feet may safely pass. But this passage ought not to be attempted without a pilot, the usual course being to pass to the eastward of *Half-Tide Rock*. Passing to the westward, beware of

LOBSTER ROCKS,

making off from **Great Ledges** in a southeasterly direction, and having about two feet at mean low water. At present they are not marked; but a buoy has been recommended to be placed upon them. There is no passage between these ledges and **Great Ledges**, but there is one between the latter and **Ash Island**, unsafe for strangers, however.

When past *Lobster Rocks* and **Great Ledges**, there are no more dangers.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BASS COVE, OR EAST SULLIVAN HARBOR.

II. *By the main channel, between* **Stave** *and* **Calf Islands.**—Coming from the southeastward or southwestward, bring **Schooner Head**, on the east side of **Mount Desert**, to bear S SW. and steer N NE., which will lead safely to the entrance. Pass midway between the *red buoy* on *Stave Island*, *Middle Ground*, and the *black buoy* on **Southeast Point**, and bring the white house near the church in **East Sullivan** (see page 192) behind the northern extremity of **Ash Point**. Run on that range, which will clear the *Lobster Rocks*, and when abreast of **Ash Island** steer N. by W. for the anchorage.

The above courses pass between **Iron-Bound Island** and **Long Porcupine**; midway between the buoys on the *Middle-Ground* and **Southeast Point**; and about a hundred yards to the eastward of *Half-Tide Rock*. The least water is found between the *Middle-Ground* and **Southeast Point**, where there is ten feet at lowest tides.

The course from *Bar Harbor* to the entrance to **East Sullivan** is E. by N.; the distance, nearly five miles.

The northern channel into **East Sullivan** leads between **Preble** and **Calf Islands**, and is entirely unfit for strangers, though carrying better water than those to the southward. In going in, **Preble Island** should receive a berth of two hundred yards to the northward to avoid a ledge lying about one hundred and fifty yards from the south point of the island; and the course is then NE. by E. ½ E., leaving **Simpson, Sullivan,** and **Junk of Pork Islands** to the northwestward, until up with **Great Ledges**. This entrance is frequently used by coasters and fishermen, who are familiar with the dangers.

EASTERN POINT HARBOR,

contained between the south shores of **Waukeag Neck** and **Ram** and **Preble Islands**, is a most excellent winter harbor, being free from ice and easily accessible. Over three fathoms at low water may be found at the anchorage. It may be entered either between **Ram** and **Preble Islands**, or between **Preble** and **Calf Islands** by the *East Sullivan Passage*. The channel between **Ram** and **Preble Islands** is the best, as it is entirely unobstructed.

Coming into this harbor from the westward, it is only necessary to look out for *Sunken Ledge*, lying WSW. from **Ram Island** about a third of a mile. It is out two

feet at low water; *is not buoyed*, and may be passed on either hand. Coming from *Sullivan Entrance*, it is usual to pass between this ledge and the island. **Ram Island** is quite steep-to. The best entrance to *Eastern Point Harbor* from the southward is between **Calf** and **Preble Islands**, as there is no danger except the ledge south of the latter, which is easily avoided.

NORTH SHORES OF FRENCHMAN BAY.

FLANDERS BAY, or *SULLIVAN HARBOR*, an arm of *Frenchman Bay*, making to the northward from the north shore, is the first indentation to the westward of *Bass Cove*, and is contained between **Franklin** and **Sullivan** on the east and **Hancock** on the west, the entrance lying between **Waukeag** and **Crabtree Necks**. The course of this bay is first N N E. about three miles to **Sullivan**, then about N W. by N. nearly three miles, through the narrows of *Franklin Bay*, to *Egypt Bay*. Thence to **Franklin** the distance is about three miles; but the course of the bay constantly changes, forming nearly a semicircle. No stranger can pass above **Sullivan** without a pilot, as there are dangerous rapids, known as *The Falls*, just opposite that town.

Sullivan lies on the east bank, about three miles above the entrance, and the harbor is formed by a long cove making to the eastward along the south front of the village, and affording well-sheltered anchorage, with not less than three fathoms. Approaching this harbor from the southward, the courses lead through and among the group of islands mentioned on page 188 as extending in a line across *Frenchman Bay* from **Grindstone Neck** to *Bar Harbor*. A description of them will, therefore, be necessary. **Iron-Bound Island** is the most easterly of the group, and has been already fully described on page 188. Next to the westward lies

LONG PORCUPINE ISLAND,

large, high, and rocky; its northwestern end terminating in a huge, bold, bluff head, with perpendicular rocky faces descending into the sea.

The southeastern end is much lower. There are no trees, except a very thin growth of stunted fir and spruce scattered at wide intervals over the surface.

Long Porcupine lies about N N E. and S S W., and is about a mile long. There is a good passage on each side of it, that between it and **Iron-Bound** being the widest and best. About a quarter of a mile to the westward lies

LITTLE THRUMBCAP,

a little, rocky island, crowned with a few trees, lying on the west side of the western channel, and close to another and much larger island to the westward, known as

RUM KEY,

high, rocky, and thinly wooded except at its northern end, where there is a mass of large dead trunks and a few thin and stunted spruce and fir near the edge of the bluffs. It lies nearly EAST and WEST, and is over a quarter of a mile in diameter. A remarkable feature is the streak of white rocks stretching in a line, about ten feet above high water, along its southern face. Above this streak the rocks are gray, and below it, brown. It is not safe to pass between **Rum Key** and **Little Thrumbcap**; but there is an excellent channel to the westward, between **Rum Key** and

SHE PORCUPINE ISLAND.

Lying about half a mile to the westward, near the western shore of the bay, is a high, rocky island, rising to a peak in the middle, and is crowned with a growth of stunted fir and spruce. This island is sometimes called **Little Porcupine.** About three-quarters of a mile to the southward of it lies

ROUND PORCUPINE ISLAND,

sometimes called **Great Porcupine,** the first of these islands met with coming from the southward along the western shore, and is about two and three-quarters miles above **Schooner Head.** Its appearance is that of a high, round, nearly bare island, with precipitous, rocky faces; and on its southern face is a broad patch of white rocks, presenting a remarkable appearance. A thick growth of birch, spruce, and maple is seen on its northeastern end, clinging to its sides and summit.

Next to the westward of **She Porcupine** is

HARBOR ISLAND, OR BAR HARBOR ISLAND,

lying close in with the shore, on the north side of *Bar Harbor;* of moderate height, rising to a high, round head at its western end, and is thickly covered with a dense growth of birch, maple, and other trees. In going up to **Sullivan** do not approach this island, but pass between **Rum Key** and **She Porcupine**, a deep channel with room to tack, and no obstructions.

Sullivan Harbor (as before mentioned) lies on the east side of *Flanders Bay.* The entrance to this bay is between **Ram** and **Preble Islands** on the east and **Crabtree Neck** on the west. **Ram Island** (as before described, see page 190) is a small, thickly-wooded island, of moderate height, lying about three hundred yards to the southward from **Bean Point**, (the western point of **Waukeag Neck.**) **Preble Island** lies about four hundred yards to the southeastward of it; is thickly wooded, rocky, of moderate height, and nearly a mile long.

CRABTREE POINT,

the western point of entrance to *Flanders Bay*, and the south point of **Crabtree Neck,** is thickly wooded, of moderate height, and is also the eastern point of the entrance to *SKILLINGS RIVER* and **Trenton.**

BEAN ISLAND.

Approaching the bay from the southward, a very peculiar-looking island will appear a little to the northward. This is **Bean Island,** lying off **Bean Point,** and is to be left to the eastward. It is long and low. Seen from a distance it looks like a white, sandy islet, but is in reality rocky, with a grassy surface. At the eastern end it makes in a sort of head, fringed with trees, and scattered trees here and there on its summit; but the rest of the island runs low and bare, and is but little above high-water mark. The peculiar white appearance of this island makes it an excellent mark for the entrance to **Sullivan**, as there is nothing like it in the bay.

About midway between **Bean Island** and **Waukeag Neck** lies a dry ledge, called **Bean Island Ledge,** a detached rock, always out, and may be passed on either side with not less than three fathoms; but it is best not to go nearer to it than one hundred yards.

Both shores of the bay are of moderate height and rise gently back to wooded summits. In many places they are cleared and cultivated, in others rocky and barren. The village of **Sullivan** on the east shore, and **Hancock** on the west, are both plainly visible from the entrance.

GRANT POINT.

About a mile above **Crabtree Point,** on the west shore, will be seen a rocky head of moderate height, fringed with a thin growth of birch, and forming the extremity of a long, rocky point. This is **Grant Point.** There is a cove on each side of it capable of

affording shelter. That to the southward of the head is called *JELLISON COVE;* that to the northward, *GRANT COVE.* The latter affords good anchorage in two to three fathoms. This part of the channel is somewhat obstructed.

The harbor of **Sullivan** is formed by a long cove making to the eastward from the bay, about two miles and a half above **Bean Point,** affording good anchorage in from two to three fathoms, but the channel is narrow. Vessels, however, often anchor in the bay, where it is wider and has more water. On the west shore, opposite to the town and a little above the entrance to the inner harbor, is

MARTIN POINT,

low, sandy, with water-worn faces, and a single spruce tree on its end; is the southwest point of entrance to a narrow passage leading to *Franklin Bay,* and called *THE FALLS.* The stream of ebb runs over the rocks in this passage with tremendous velocity, forming a dangerous rapid, and barring navigation, even for vessels of light draught, except at high water. To shoot the falls vessels run up into the mouth of the passage, then luff into the wind and allow the current to carry them over. The northeastern point of entrance to the falls, called

EASTERN HEAD,

sometimes **Hodgkins Point,** is a high, bluff, sandy head, with precipitous faces, and has a large boulder at its base. Near the top the cliff is fringed with a thin growth of trees. The surface slopes back inland from the head with a gentle descent and has a smooth, grassy surface.

Above **Sullivan** it is not safe for strangers to go. The distance from *Bar Harbor* to **Bean Island** is about seven miles.

DANGERS
IN APPROACHING AND ENTERING FLANDERS BAY AND SULLIVAN HARBOR.

The first danger met with in entering this bay lies off **Crabtree Point,** and is called

CRABTREE LEDGE,

having six feet at low water, and lying to the eastward from the point about a third of the way over to **Bean Island.** At present it is not marked, but a *black spar-buoy* has been recommended for its eastern end. In passing, leave it to the westward.

When up with **Grant Point** *a red spar-buoy* will be seen ahead, a little to the eastward, and about half a mile off. This is on

HALF-TIDE LEDGE,

a dangerous rock on the east shore, a little below the town, and bare at half-ebb. The buoy is placed in three fathoms at low water, about thirty yards to the northwestward of the rock, and is to be left to the eastward. It is just above **Ingalls Island.**

Nearly opposite to *Half-Tide Ledge,* on the west side of the channel, is a ledge, dry at high water, called **Grant Ledge;** and off the east end is

LOW-WATER ROCK,

a small ledge, bare at low water, and sometimes marked by *a black spar-buoy.* (This buoy was gone in 1872, and we have no information that it has been replaced.) When the buoy is absent, keep nearest to *Half-Tide Rock.*

BENNETT LEDGES,

lying a quarter of a mile above **Grant Ledge**, are always out. They lie close in with the western shore, and are surrounded by shoal water, but are not dangerous except to vessels beating to windward.

MARTIN LEDGES

extend in a S S E. direction from **Martin Point**; are bare at high water; and have shoal water and sunken ledges between and among them.

There was formerly a *spar-buoy* here, but the top has been broken off, so that it does not watch.

The Falls are being deepened by the United States Engineers by blowing out the most dangerous rocks; and it is contemplated by this means not only to deepen the channel, but to diminish the force of the current so as to render the passage perfectly safe.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING FLANDERS BAY AND SULLIVAN HARBOR.

Keep the western shore of *Frenchman Bay* aboard until up with **Round Porcupine**; pass to the eastward of it, between **Rum Key** and **She Porcupine**. When in this passage, the course for the entrance to the bay is N. ½ E. for **Bean Island**, and thence to the anchorage N E. by N ¾ N. Not less than three fathoms may be taken on the above courses, which pass to the eastward of *Crabtree Ledge;* to the westward of *Half-Tide Rock;* to the eastward of *Low-Water Rock;* well to the eastward of *Bennett Ledges;* and to the eastward of *Martin Ledges.*

Coming from **East Sullivan**, *to enter this harbor.*—When clear of **Great Ledges**, steer SW. by W. ½ W., which will lead up to the entrance to *Eastern Point Harbor*, passing to the southward and eastward of **Junk of Pork**, **Ash Island**, **Sullivan Island**, and **Simpson Island**, and to the northwestward of **Calf Island**. When abreast of the north head of **Calf Island**, round it to the westward, and pass between it and the south point of **Preble Island**, giving the latter a berth of two hundred yards to avoid the ledge. (See page 194.) When fairly through this passage, steer WEST, past **Preble** and **Ram Islands**; and when up with the latter, steer NW. by N., past **Bean Island**. Keep the **Ram Island** shore aboard to avoid *Sunken Ledge*, (see page 190,) and leave **Bean Island** and **Dry Ledge** either to the eastward or westward about one hundred and fifty yards; and when abreast of the island steer NE. by N. ¾ N. to the anchorage.

This passage is only fit for small vessels, and must not be attempted by strangers without a pilot.

SKILLINGS RIVER.

Lying next to the westward of **Sullivan**, the entrance being between **Crabtree Neck** and **Trenton Point**, is a somewhat shallow stream, of little importance, and must not be entered without a pilot. At its mouth, between **Crabtree Point** and **Trenton Point**, it is over two miles wide; but this width rapidly diminishes until, about two miles above its mouth, it is only half a mile wide. Above **Mosely Point**, however, about two miles and three-quarters above the mouth of the river, it again widens into a sort of bay of irregular shape, and about a mile and a half wide.

There is no settlement on the shores of *Skillings River*, and no trade except a small local trade carried on by the few inhabitants. Sailing directions cannot be given, as but little is known of it otherwise than that there is said to be good anchorage for small vessels in the large cove on the west side of the river, just north of **Trenton Point**, called

RACCOON COVE.

This is a large cove, of irregular shape, lying about W NW. and E SE., and nearly a mile and a half long. A small island, called **Raccoon Island,** lies nearly in the middle of the entrance.

TRENTON RIVER,

making in on the south side of **Trenton Point,** between it and **Mount Desert Island,** is really not a river, but a strait, connecting *Frenchman* and *Blue Hill Bays,* and separating **Mount Desert** from the main land. It is about eight miles long from **Trenton Point,** its east point of entrance, to **Oak Point,** its west point, and varies in width from a mile and a half at its east and west ends to half a mile wide at **Haynes Point,** just to the westward of the bridge. The river is very shallow, and entirely unfit for strangers. The villages of **West Trenton, Trenton Point,** and **East Trenton** occupy its north bank, and **Eden,** on **Mount Desert Island,** occupies the south shore. **Trenton Point,** as its name implies, occupies the point of that name at the eastern end of the strait. The harbor is formed by a wide but shallow cove making into the north shore nearly two miles to the westward of **Trenton Point,** and of little importance. The western point of entrance to it, called **Old Point,** is three miles to the westward of **Trenton Point,** and forms, also, the eastern point of entrance to *JORDAN RIVER,* upon the east bank of which is built **East Trenton.**

A little over a mile to the westward of the entrance to *Trenton River,* and on the **Mount Desert** side, lies *SALISBURY COVE,* along the shores of which is built the village of **Eden.** There is anchorage in this cove for vessels of light draught.

Jordan River is about three miles and a half long, runs first about NORTH for a mile and a half, and then NNE. to its head; is nearly a mile wide at its mouth, but the average width is about three-eighths of a mile. There is little trade, and the place is unfit for strangers to navigate. At low water there is but little water in *Trenton River* or any of its branches.

One mile and a half to the southwestward of the mouth of *Jordan River* the passage is apparently closed by what appears to be a large island, almost entirely filling the space between the north and south shores. In reality there are two islands, called **Thompson Islands,** and they are joined to the main land on the north, and **Mount Desert Island** on the south, by bridges. About three-eighths of a mile to the westward of **Thompson Islands** is **Haynes Point,** on the north shore, the eastern point of entrance to a large but shallow cove, called *GOOSE COVE,* on which is built **West Trenton.** It is a little over a mile long and about five-eighths of a mile wide, but is of very little commercial importance. Exactly in its mouth, and nearly in the middle of the reach, lies **Alley Island,** low, smooth, and grassy, with two or three houses. It is about three-quarters of a mile long in a NORTH and SOUTH direction, and of an oval shape.

A little over two miles to the westward of **Alley Island** is **Oak Point,** the north point of the west entrance to *Trenton River,* and the east point of entrance to *UNION RIVER BAY* leading up to **Ellsworth.** **Oak Point** is low, rocky, and dotted with clumps of trees. To the southward, one mile and a half, lies the south point of the west entrance, called **Bartlett Point,** the northeast point of **Bartlett Island,** a large, thickly-wooded island in *Blue Hill Bay.*

Most of the **Mount Desert** shores in *Trenton River* are thickly wooded.

There is good anchorage for vessels of light draught between **Bartlett Island** and **Mount Desert,** but strangers must not attempt to pass through.

No sailing directions can be given for *Trenton River* other than to get a pilot at *Southwest Harbor*, *Bar Harbor*, or **Sullivan**. Without a pilot the passages must not be attempted. It is now rarely used, except by small fishermen bound to **East Trenton** and **Trenton Point** from the eastward, or to **West Trenton** from the westward.

WEST SHORES OF FRENCHMAN BAY.

The western shores of the bay are formed by the east side of

MOUNT DESERT ISLAND.

a very large, mountainous island, lying nearly N N E. and S S W., and about fourteen miles long. It is of an oval shape, about ten miles wide at its widest part, rugged, rocky, and traversed by many deep and narrow ravines separating the different hills. Most of its shores are wooded; but its most conspicuous peak, **Green Mountain,** when seen from the eastward appears bare and barren, with ledges cropping out here and there over the surface. This bare mountain, nearly two thousand feet high, rises with an extremely regular slope, and is surmounted by a single house, which is visible at a considerable distance.

Mount Desert Island lies between *Frenchman* and *Blue Hill Bays*, (as above mentioned;) it is composed of many peaks, most of them wooded, and all of them steep. Of these the principal are, beginning at the east side, **Newport, Rebo, Green, Bubble, Sargent, Brown, Robinson,** (the last two on opposite shores of *Somes Sound*,) **Flying, Beach,** and **Western Mountains.**

On its north side is *SALISBURY COVE*, the **Harbor of Eden;** on its east side, in *Frenchman Bay*, are *HULL COVE* and *BAR HARBOR;* on its south side, *OTTER CREEK*, *SEAL COVE*, *BRACY COVE* or *LONG POND HARBOR*, *NORTH-EAST HARBOR*, *SOUTH-WEST HARBOR*, *SOMES SOUND*, and *BASS HARBOR;* and on the west side, the harbors of *BACK COVE*, *GOOSE COVE*, and *SEAL COVE*. Of these, the only ones of any importance are, *BAR HARBOR* on the east shore, and *SOMES SOUND*, *NORTH-EAST*, *SOUTH-WEST*, and *BASS HARBORS* on the south shore.

The eastern side of this island (forming the west shore of *Frenchman Bay*) is mostly formed by **Newport Mountain,** and is very steep and precipitous, clothed thickly with wood nearly to the summit.

A little over two miles to the northward of **Otter Creek Point**, the southeast point of **Mount Desert Island**, is a very remarkable headland, called

SCHOONER HEAD.

It is a spur at the base of **Newport Mountain**, and appears as a high, bare, perpendicular rocky head, on the eastern face of which is a large white figure, which at a distance looks like a schooner with her three lower sails set, (hence the name.) This is a very remarkable landmark. Three miles and a half above lies

BAR HARBOR,

formed by the eastern shore of **Mount Desert** and **Harbor** and **She Porcupine Islands**, lying **NORTH** and **EAST** from it. Anchorage in from four to five fathoms, with good holding-ground, may be had; but it is a poor harbor in easterly or southerly gales. There are no dangers inside, and very few in the approaches.

This place has of late years become of considerable importance as a watering-place, and quite a settlement has grown up on its shores, with a number of large hotels and many beautiful cottages; but there is no commerce whatever, and it is rarely used by coasters even as a refuge.

To enter *BAR HARBOR*, steer along the east face of **Mount Desert Island** until up with **Schooner Head**; when abreast of this, there will be seen on the northwest, lying well in with the shore, a small, low, rocky island, entirely bare of vegetation except two or three sickly spruce near its western end. This is **Whale-Boat Island.** Its surface is rounding, composed of bare rocks; is bold-to, and may be passed on either hand, but the rule is to pass to the eastward of it.

When past **Whale-Boat Island**, the course leads to the northward toward a high, bare, precipitous, rocky island, nearly two miles and three-quarters above **Schooner Head**, showing a peculiar white spot on the rocks of its southern face. This is **Round Porcupine Island,** (before described on page 195,) and it may be passed on either hand, but the rule is to pass to the eastward. When past this island there are no dangers, and vessels may stand for the harbor without fear.

Not quite a mile to the northward of **Round Porcupine** will be seen **She Porcupine** and **Bar Harbor Island.** The former will appear as a high, bare, bluff, rocky head, dotted with stunted fir and spruce. The latter is a rocky island, covered with a dense growth of bushy trees, lying next to the westward of **She Porcupine**, and forming the north and east sides of **Bar Harbor**.

DANGERS.

In approaching this harbor there are no dangers except in the passage between **Round Porcupine** and the **Mount Desert** shore, where there is a bare, rocky ledge, out at all times of tide, called **Porcupine Dry Ledge.** It is tolerably bold-to, and can be passed on either side by giving it a berth of about one hundred yards.

SAILING DIRECTIONS.

Keep the **Mount Desert** shore aboard, *if coming from the westward*, until up with **Schooner Head**, when **Round Porcupine** will be seen ahead, appearing as a high, precipitous, rocky island, with a peculiar white patch on its south face. Bound up by the usual channel, pass to the eastward of this; and when past it **Bar Harbor** will be plainly visible, about a mile off, bearing **N W.** **Harbor Island**, thickly wooded with bushy-looking trees, will show on the east side of the entrance. Steer boldly into the harbor, about midway between the island and the **Mount Desert** shore; use the lead freely, and anchor as soon as the water shoals to four or five fathoms, off the **steamboat wharf.** The holding-ground is good, but the harbor is only useful in northerly or westerly gales.

Coming from the eastward.—Bring **Round Porcupine** to bear from **N W.** to **W N W.** and steer for it, passing to the eastward, and follow the directions given above for entering the harbor.

To pass to the westward of **Round Porcupine** *and enter Bar Harbor.*—When past **Schooner Head**, still keep the **Mount Desert** shore aboard, steering for **She Porcupine Island**, easily recognized as the first island to the westward of **Round Porcupine**, and looking like a bluff, rocky head, dotted with small fir and spruce. Passing behind **Round Porcupine**, leave **Dry Ledge** to the eastward or westward, only giving it a berth of about one hundred yards, and steer about **N W.**, following the directions given above.

The course from *East Sullivan Entrance* to *Bar Harbor* is **W. by S.**; from *Sullivan Entrance*, **Bean Island** to *Bar Harbor*, it is **S. ½ W.**

HULL COVE.

About two miles and a half to the northwestward from *Bar Harbor* lies *Hull Cove*, frequently used as an anchorage; a small and unimportant harbor, with three fathoms at mean low water; good holding-ground, and is a little over a mile and a half below the entrance to *Trenton River*.

There are no dangers in the approaches to *Hull Cove.* To enter it from the southward, bring **Long Porcupine Island** to bear NE. by N. and steer for it, passing to the westward, between it and **She Porcupine.** When past the latter island, haul to the westward about NW. by W. for *Hull Cove,* and anchor about a quarter of a mile from shore. The least water found in following the above directions is three fathoms, and there are no dangers except a dry rock, which leave to the northeastward. It is not named.

There is deep water, from eight to twenty fathoms, in the wider parts of *Frenchman Bay,* both above and below the **Porcupine Islands,** affording an excellent beating-channel. The bay has not, as yet, been surveyed, and a careful hydrographic examination will probably develop new and important features in its character as an anchorage and harbor of refuge.

SOUTH SHORE OF MOUNT DESERT ISLAND.

The general course of the south shore of the island is about EAST and WEST from **Otter Creek Point** to *Southwest Harbor;* the shores very high, steep, and thickly wooded—the woods in some places extending one-third of the distance to the summits. There are several small and some large and excellent harbors on this shore, most of them easily accessible, and comparatively free from dangers. Of these, the most easterly, and, consequently, the first one met with in coming from the eastward, is

OTTER CREEK HARBOR,

lying on the west side of **Otter Creek Point,** or **Young Point** as it is sometimes called, and is formed by a long and narrow cove making in about NNE. at the south base of **Newport Mountain,** and about a mile long. Passing it, a cleared, grassy, and gentle slope will appear at the head of the cove, upon which is situated a small settlement, and there are generally a number of small fishing vessels anchored in the cove. On the west side of the entrance a number of huts are seen on the outside beach.

Otter Creek is a very useful harbor for small vessels, but has not enough water for large ones; is untenable in southerly winds, as the sea heaves directly in; but one of its greatest advantages to strangers is that there are no obstructions, and vessels drawing six feet and less may steer boldly in as soon as they are past **Otter Creek Point.**

SEAL COVE,

lying one mile and a half to the westward of *Otter Creek,* is not safe for strangers, being ledgy and having but from two to three fathoms water. There are two or three low islets in its mouth and a few houses on its shores, whose owners generally have two or three fishing boats anchored in the cove in fine weather. In southerly gales these boats are hauled out, the harbor being then unsafe, although somewhat protected by **Little Cranberry Island.**

LONG POND HARBOR,

or *BRACY COVE,* lies next to the westward of *Seal Cove,* distant only about one-third of a mile. It is a small cove, connected at its north end by a narrow gut with *Long Pond,* a small and shallow pond, upon the shores of which is built a hamlet known by the name of the **Pond.** This little harbor is situated at the base of **Bubble Mountain,** in a narrow ravine separating it from **Green Mountain** to the eastward, and an excellent mark for it is a two-humped mountain standing in the gap between the two above mentioned.

It is called **Dog Mountain**, and does not present this appearance unless viewed from the southward. When this mountain is in the middle of the **Gap** between **Green** and **Bubble Mountains**, *Long Pond Harbor* is open and may be safely run for.

In going in, the *rule is to keep the eastern shore aboard.* Avoid the western shore, as off the southwest point of entrance lies a ledge, bare at half-tide. Keeping the northeast shore aboard, steer N W. by N., which will lead safely in. Or bring a peculiar-looking red house at the head of the cove to bear N W. and steer N W. by N., as before. There are no obstructions other than the ledge off **Southwest Point**, just mentioned. A number of small vessels are usually to be seen anchored in the harbor, and there are a few houses visible, among them the prominent red house mentioned above.

Long Pond only affords shelter in northerly and easterly winds, and then only to light-draught vessels. In southerly winds there is no shelter. It has from one to two fathoms at low water.

Next to the westward of this harbor, and at distances of a mile and two miles, respectively, lie the excellent anchorages known as *NORTH-EAST* and *SOUTH-WEST HARBORS.* But for a proper description of these it is necessary to mention and describe the various outlying islands off the south shore of **Mount Desert Island**, guarding the approach.

ISLANDS OFF SOUTH SHORE OF MOUNT DESERT.

Of these there are six, namely: **Baker, Great** and **Little Cranberry, Sutton, Bear,** and **Greening Islands**; but the most important are the four first named, which, lying along the south shore, protect the passage between them and it from the sea in southerly winds, and thus afford great accommodation to coasters; besides, between the two **Cranberries**, and also between **Great Cranberry** and **Mount Desert Island**, are two harbors, excellent as anchorages for vessels of light draught.

BAKER ISLAND AND LIGHT-HOUSE.

Baker Island is the most easterly of the group, and altogether the most prominent on account of the **Light-House** upon it, which is a guide to *South-West* and *North-East Harbors*, and along the coast.

This **Light-House** is a white tower thirty-seven feet high, connected with a brown dwelling-house, and situated near the middle of the island. The light is fixed, varied by white flashes, and is shown from a height of one hundred and five feet above the sea; is of the fourth order of Fresnel, and visible fifteen miles. The flashes take place at intervals of one minute and a half.

The geographical position of **Baker Island Light** is:

Latitude - - - - - - - - - 44° 14′ 27″ N.
Longitude - - - - - - - - 68° 11′ 56″ W.

and is very useful as a guide to *CRANBERRY ISLAND HARBOR*, which is contained between **Little Cranberry Island** on the east and **Great Cranberry** on the west, and is much frequented.

Baker Island is round, about five-eighths of a mile in diameter, of moderate height, and thickly wooded except on its northwest side, where there are some houses on a cleared space. It is joined at low water to **Little Cranberry Island** by a long bar or reef, which is, however, covered at high water. This bar forms the eastern breakwater to *Cranberry Harbor.*

Baker Island is seventeen miles W. by S. ½ S. from **Petit Manan Light-House**; sixteen miles N. ½ E. from **Mount Desert Rock Light-House**; and forty miles N E. by E. ½ E. from **Matinicus Rock Light**, at the entrance to *Penobscot Bay.*

LITTLE CRANBERRY ISLAND

lies three-quarters of a mile to the northward of **Baker Island**, with which, as before remarked, *it is connected by a bar dry at low water.* It is of very irregular shape, lies nearly **ESE.** and **WNW.**, and is about a mile and a quarter long, with low shores, mostly thickly wooded, but in places cleared, cultivated, and settled. The settlements are mostly at the west end, the rest of the island being thickly wooded. The harbor is contained between this and the **Great Cranberry**, and has from two to four fathoms at low water.

GREAT CRANBERRY ISLAND

is very irregular in shape, lies nearly **NORTH** and **SOUTH**, and is a mile and three-quarters long. Its shore-line is much indented, especially upon the eastern side, where a long, irregularly-shaped and shallow cove makes in, called *THE POOL.* In this (which runs nearly **NORTH** and **SOUTH**, and is sheltered on the east by a long, low, sandy point, dotted here and there with trees) from two to four feet may be found at low water.

At its southeast end this island approaches within a quarter of a mile of **Little Cranberry,** but there is no passage between them from the southward, a four-feet bar crossing from one to the other. This southeast point, which is low, flat, and bare, is called **Dead Man Point.**

The northwest end of the island is called **Sperlin Point,** showing a nearly flat, grassy surface, about ten or fifteen feet high, backed by trees, with a clump or grove of dark-looking trees on its extreme point. A large white church-steeple shows above the trees, and is a very prominent mark. **Bunker Head** lies on the south shore of this island, just to the westward of **Dead Man Point,** and is a high head, bare of trees, somewhat steep on its south side, and tolerably bold-to.

Great Cranberry is mostly thickly wooded, but in places, especially on the east side, is well settled and cultivated. The wharf-line of the settlement is along the west shore of the *Pool*, access being thus easily had by *Cranberry Island Harbor* either east or west.

SUTTON ISLAND,

lying about three-quarters of a mile to the northward of **Great Cranberry Island** and about the same distance from the **Mount Desert** shore, stretches across the mouth of *Cranberry Island Harbor*, thus protecting it from northerly winds.

It is a little more than a mile long, lies nearly **EAST** and **WEST**, is rocky, of moderate height, and wooded with spruce and fir except near the middle, on the north shore, where there is a small clearing, with house and barn, and at the west end, where level, grassy land extends into a low point, upon which stands a small clump of stunted trees. This island is bold-to except on its eastern end, which should not be approached nearer than one-eighth of a mile on account of some dangerous ledges, out at low water, lying off the shore.

Nearly half a mile to the northward of **Sutton Island**, and almost directly opposite to the mouth of *North-East Harbor*, lies

BEAR ISLAND,

upon which is built the **Light-House** which guides to that harbor. It is of an oval shape, about four hundred yards long; lies about four hundred yards from the **Mount Desert** shore; is of moderate height, rocky, and bare of trees except at its west end. This west end terminates in a high, steep, round bluff, with grassy surface, and fringed with a grove of spruce and fir trees clinging to its sides. The **Light-House** is called

BEAR ISLAND LIGHT-HOUSE;

is of red brick, attached to a dwelling of the same color, and is surmounted by a white lantern. It is twenty-two feet high, and shows a fixed white light of the fifth order of Fresnel from a height of ninety-seven feet above the sea, visible thirteen miles on an ordinarily clear night.

The geographical position of this **Light-House** is

Latitude - - - - - - - - -	44° 16′ 59″ N.
Longitude - - - - - - - -	68° 16′ 12″ W.

GREENING ISLAND,

lying in the mouth of *Somes Sound*, about a mile to the westward of **Bear Island** and seven-eighths of a mile from **Sutton Island**, forms part of the north shores of *South-West Harbor*, the entrance being between it and **King Point**, on the south shore. Seen from the eastward it appears low and sandy, with a grassy surface, backed by a thick growth of trees. These trees occupy the whole of the middle of the island, extending from its north to its south end. Part of the extreme western point is also cleared, has a grassy surface, and two or three fish-houses upon it.

Greening Island, lying N W. and S E., is very irregular in shape, about three-quarters of a mile long, and tolerably bold-to on its northeastern side, where lies the entrance to *Somes Sound*. There is no passage into the sound to the westward of the island except for vessels of light draught.

NORTH-EAST HARBOR

lies just to the eastward of *Somes Sound*, the entrance being only five-eighths of a mile from **Gilpatrick Point**, usually considered the eastern point of entrance to the sound. It is a somewhat narrow cove, running NORTH and SOUTH, and a little over three-quarters of a mile long, but affords anchorage in from two to three fathoms, with good holding-ground. About three-eighths of a mile above the entrance it widens out into a shallow cove about six hundred yards wide, having from three to six feet of water. The shores of the harbor are mostly low and thickly wooded; the only prominent feature being at the eastern point of the entrance, which is low, thickly wooded with a variety of trees, and shows a remarkable white sand-beach where it joins the higher lands.

DANGERS
IN APPROACHING AND ENTERING NORTH-EAST HARBOR FROM THE EASTWARD.

As *South-West Harbor* is much the better and safer anchorage of the two, vessels will never attempt to enter *North-East Harbor* except in coming from the eastward or southeastward. So doing, when off the coast the **Light-House** will first be seen on

MOUNT DESERT ROCK,

which lies sixteen miles S. ¾ W. from **Baker Island**; twenty-seven miles S W. ¾ S. from **Petit Manan Island**; and fifty-five miles W. by S. ¾ S. from **Machias Seal Island**.

The **Rock** is a small, barren islet, elevated about fifteen feet above the sea. The **Light-House** is known as

MOUNT DESERT LIGHT-HOUSE,

and is a granite tower sixty feet high, standing near the keeper's dwelling, also of granite, but is whitewashed. The light is fixed, white, and of the third order of Fres-

nel; is shown from a height of seventy-five feet above the sea, and is visible fourteen miles. Its geographical position is

Latitude - - - - - - - - - 43° 58′ 07″ N.
Longitude - - - - - - - - 68° 07′ 42″ W.

The fog-signal at this Light-House is a bell struck by machinery.

COLUMBIA LEDGE,

having three fathoms, (according to Captain Owen, R. N., who surveyed it,) lies S W. by S. from **Mount Desert Rock**, about twelve hundred yards distant. Inside of it there are twenty-two fathoms, while outside and close to the rock are found seventeen, eighteen, twenty, twenty-five, thirty, and thirty-five fathoms water.

Passing **Mount Desert Rock**, there are no dangers until past **Baker Island**, when, if beating, do not stand too close to **Little Cranberry Island**, to avoid

HARDING LEDGE,

with three feet at mean low water, lying four hundred yards from the east end of **Little Cranberry**, with no passage between it and the island. This ledge is marked by a *black spar-buoy*, No. 1, placed in five fathoms on the east end of the ledge. It bears **N. ½ W.** from **Baker Island Light**, distant a mile and a quarter. When up with it, a **square beacon** will be seen bearing about **N N W.** and about a mile and a half off, on

BUNKER LEDGE,

a small, bare ledge, surmounted by others, out at low water and half-tide, lying five-eighths of a mile from the **Mount Desert** shore, and nearly in the middle of the *Eastern Passage.* There is equally deep water on both sides of this rock, and it may be passed on the south side in thirteen fathoms by giving it a berth of three hundred and fifty yards; but on the north side it should receive a berth to the southward of at least a quarter of a mile to avoid a detached rock lying on this side. The **beacon** is of **gray stone**, and stands on the dry part of the ledge. From it **Bear Island Light** bears **W N W.**, two miles distant.

LEWIS ROCK

is a detached rock, with six feet at mean low water, lying nearly four hundred yards to the northward from **Bunker Monument**, and is consequently not in the way of vessels passing along the south side of *Bunker Ledge.* But coming from the eastward, along the **Mount Desert** shore, leave it to the southward. As a guide to this passage, it is marked by a *black spar-buoy* placed on its north side close to the shoal of the rock.

BOWDEN LEDGE,

off the western point of entrance to *Seal Cove*, is the first danger met with to the westward of *Bunker Ledge.* It has two feet at mean low water, lies about three hundred yards from shore, and is marked by a *red spar-buoy*, No. 2, placed in five fathoms on the southeastern side of the shoal, bearing **N W. ½ W.** from **Bunker Monument**, distant about seven-eighths of a mile; and from the buoy **Bear Island Light** bears **W. by N.**, distant nearly a mile and a quarter. Passing this buoy, another *red spar-buoy* will appear half a mile to the westward, on

LONG POND SHOAL,

another detached ledge, with five feet at mean low water, lying nearly in mid-channel and off the mouth of *Long Pond* or *Bracy Cove.* From **Bunker Monument** it bears **W N W.**, distant nearly a mile and a half; from *Bowden Ledge* it bears **W. ½ N.**, distant a little over half a mile; and from it **Bear Island Light** bears **W. by N. ½ N.**, distant twelve hun-

dred yards. The buoy is marked No. 4, and is placed in twenty-one feet on the south side of the rock, and is to be left to the northward, although there is a good passage with four fathoms between it and the **Mount Desert** shore.

There is no passage between **Bear Island** and **Mount Desert** except for vessels of very light draught. As soon as up with the light on this island, the harbor is open and the course leads to the northwestward, toward a *red spar-buoy* lying nearly in the middle of the entrance, on

NORTH-EAST HARBOR LEDGE,

bare at low water, and having six fathoms of water all around it. The buoy is placed about WEST from the bare rock, in three fathoms water, and bears from **Bear Island Light** NW. ½ W., about six hundred yards distant, and is to be left to the eastward; but a good passage, with five fathoms, exists between it and the northeast shore. When past this buoy there are no dangers in the channel, and it is only necessary to caution vessels in beating not to stand too far to the eastward after passing this buoy, as there is *a sunken ledge*, with four feet at low water, an eighth of a mile from the eastern shore, *which is not buoyed.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING NORTH-EAST HARBOR.

I. *From the eastward, by Mount Desert, Eastern Pass.*—From **Schoodic Point** steer W. ½ S., with not less than twelve fathoms, up to *Bunker Ledge.* When the monument is seen, shape the course so as to pass about three hundred and fifty yards to the southward of it. When it bears NE. by N. ½ N., and **Baker Island Light** is just open to the eastward of **Little Cranberry Island** on a bearing of S. by E., there will be thirteen fathoms, rocky bottom, and **Bear Island Light** will bear NW. by W. ½ W.; steer for it, carrying not less than seven fathoms, until within half a mile of the light and past *Long Pond shoal-buoy,* when gradually edge to the southward so as to pass a little over three hundred yards south of **Bear Island.** A W. ½ N. course will lead safely past the island, with not less than seven fathoms. When the light bears NE. by N. ½ N., about three hundred yards distant, and when in eleven fathoms, steer NW. ½ N. for about six hundred yards, or until it bears ESE.; then a **NORTH** course leads, with not less than nineteen feet, up the middle of the harbor, when anchor at discretion, in from six feet to three fathoms, good holding-ground.

These courses pass a little over three hundred yards to the southward of *Bunker Ledge;* six hundred yards south of *Bowden Ledge;* an eighth of a mile south of *Long Pond Ledge;* the same distance south of **Bear Island**; and about one hundred and fifty yards to the westward of *North-East Harbor Ledge.*

II. *To pass north of Bunker Ledge and enter North-East Harbor.*—Keep the **Mount Desert** shore aboard until the **Monument** on *Bunker Ledge* bears **WEST**, distance one mile and a half, when steer W. by N. for **Bear Island Light**, carrying not less than ten fathoms water. On this course continue until the **Monument** on *Bunker Ledge* is in range with **Baker Island Light** on a bearing of S. ½ E.; when past *Lewis Ledge,* and in ten and a half fathoms, rocky bottom, steer **WEST**, heading between **Greening** and **Sutton Islands**, and carrying no less than nine and a half fathoms; and when off the entrance to *Bracy Cove,* (or *Long Pond Cove,*) in nine and a half fathoms, hard bottom, with **Bear Island Light** bearing NW. by W. ½ W., steer W. by N. ½ N., with nothing less than eight fathoms water for about seven-eighths of a mile, or until **Bear Island Light** bears NE. by N. ½ N., three hundred yards distant; then steer NW. ½ N., and follow the directions for the harbor.

It may be remarked that the **WEST** course mentioned above leads clear of all dangers into *South-West Harbor.*

The above courses pass a little over three hundred and fifty yards to the northward of the north end of *Bunker Ledge*, and nearly three-eighths of a mile **NORTH** of the **Monument**; an eighth of a mile to the northward of *Lewis Rock;* four hundred yards to the southward of *Bowden Ledge;* three hundred and fifty yards to the southward of *Long Pond Ledge;* an eighth of a mile to the southward of **Bear Island**; and one hundred and fifty yards to the westward of *North-East Harbor Ledge.*

III. *To come from the southward or from sea and enter North-East Harbor.*—Bring **Baker Island Light** to bear **NORTH** and run for it, but gradually edge to the eastward on approaching the island so as to pass half a mile to the eastward. When abreast of the light steer **N NW.**, which course will lead, with nothing less than fourteen fathoms, direct for **Bunker Ledge Monument.** On this course, when **Bear Island Light** bears **NW.** by **W. ½ W.**, in fourteen fathoms, rocky bottom, and a quarter of a mile from the **Monument**, steer for **Bear Island Light**, and follow the directions given for this passage under (I.)

These courses pass four hundred yards to the eastward of *Harding Ledge Buoy*, and a little over three hundred yards to the southward of the **Monument** on *Bunker Ledge.*

At night time, when **Baker Island Light** is shut in behind **Little Cranberry Island**, *Bunker Ledge* is to the eastward. Or, when that light bears S. by E. ½ E., the ledge is past.

Anchorage in from eight to twelve fathoms may be found to the westward from **Bear Island Light**, having it bearing from E. to E NE., and about three-eighths of a mile off.

SOUTH-WEST HARBOR

lies just to the southward of the entrance to *Somes Sound*, and is formed by a cove making in a westerly direction on the **Mount Desert** shores and by **Greening Island**, the latter protecting it from northerly and northeasterly winds. Thus formed, the harbor is somewhat over a mile and a quarter long in an E S E. and W N W. direction, and has an average width of six hundred and fifty yards. The anchorage is excellent, the shelter good, and from two to nine fathoms is found, with soft bottom, thus affording accommodations for the largest vessels.

There are several passages leading into this harbor—one on the north and another on the south side of *Bunker Ledge;* one between **Little Cranberry** and **Sutton Islands**; and one (fit only for vessels of less draught than twelve feet) between **Great Cranberry** and **Mount Desert Islands.** All are fit for the largest vessels except the last named.

GREENING ISLAND,

already described, (see page 204,) lies on the north side of this harbor, extending in a **NW.** and **S E.** direction, and is three-quarters of a mile long. Seen from the eastward, it appears low and sandy, with grassy surface, backed by thick woods; from the westward or harbor side, it shows gentle, grassy slopes, partly cultivated, and also backed by woods. The centre of the island is thickly wooded.

The south side of the entrance to *South-West Harbor* is formed by the southeastern point of the entrance to the cove above mentioned, called

KING POINT.

It is low, partly composed of rock and partly shingle, and is backed by a thick but stunted growth of spruce and fir. A thin and scanty growth is seen also in places near the end of the point.

CLARKE POINT,

the north point of entrance to the cove, is easily recognized by the large steamboat

wharf, on which is also built a packing-house for putting up lobsters. It is a little over a quarter of a mile to the westward from **Greening Island**, and there is a good passage between them, with fifteen feet at low water, leading to the northward into *Somes Sound*. Unsafe for strangers, as *the rocks in it are not buoyed.*

The settlement occupies both shores of the cove as well as its head. It is of no commercial importance, but is quite a watering place. The hotels form conspicuous marks in coming in from the eastward.

DANGERS

IN APPROACHING AND ENTERING SOUTH-WEST HARBOR FROM THE EASTWARD.

I. *By Mount Desert Eastern Passage, north of Lewis Rock and Bunker Ledge.*—The most of the dangers in this passage are common to the approaches of this harbor, *North-East Harbor*, and *Cranberry Island Harbor*. The first met with by those using the north channel is

LEWIS ROCK,

a detached rock, with six feet at mean low water, lying nearly three-eighths of a mile off the **Mount Desert** shore and four hundred yards to the northward from **Bunker Ledge Monument**. A *black spar-buoy*, not numbered, is placed on its north side, close to the shoal of the rock, and is to be left to the southward.

BUNKER LEDGE

lies a very little to the southeastward of *Lewis Ledge*, and the shoal water surrounding it extends to the south side of this passage. It is a mass of shoal ground, extending in a N N E. and S S W. direction, about a quarter of a mile long, and is composed of dry ledges, ledges bare at low water, and sunken rocks. On the dry part of the ledge, near its southern end, is built a square beacon of gray stone. From this beacon, which is called **Bunker Ledge Monument**, **Baker Island Light** bears S. ¾ E. and **Bear Island Light** W N W. (See page 205.)

When past *Lewis Rock*, a *red spar-buoy* will be seen to the westward, bearing about W. by N. or W N W., on

BOWDEN LEDGE,

with two feet at mean low water, lying off the western point of entrance to *Seal Cove*, about three hundred yards from shore. The buoy is in five fathoms on the southeastern side of the shoal, is marked No. 2, and bears N W ¾ W. from **Bunker Ledge Monument**, seven-eighths of a mile distant.

Bear Island Light bears from this buoy W. by N., distant nearly a mile and a quarter. (See page 204.)

LONG POND SHOAL.

When up with the buoy on *Bowden, another red spar-buoy* will be seen, bearing about W N W.; and half a mile off, on *Long Pond Shoal*, another detached ledge, with five feet at mean low water, lying nearly in mid-channel off the mouth of *Long Pond* or *Bracy Cove*. From **Bunker Monument** it bears W N W., distant nearly a mile and a half; from *Bowden Ledge* W. ¼ N., distant a little over half a mile; and from it **Bear Island Light** bears W. by N. ¼ N., distant twelve hundred yards. The buoy is marked No. 4, and is placed in twenty-one feet on the south side of the rock. Leave it to the northward. (See page 205.)

When past *Long Pond buoy* there is nothing in the way until past the east point of **Greening Island**, then look out for

GREENING LEDGE,

lying off the south shore of the island, near its western end, having a foot and a half at mean low water, being bare at spring tides. The shoal of this ledge is a little over two hundred yards from the shore of **Greening Island**, and there is no passage between it and the island. This ledge is marked by a *red spar-buoy*, (No. 8,) placed in three fathoms water on the south end of the shoal. It serves both for *South - West Harbor* and the passage between **Greening Island** and **Clarke Point** into *Somes Sound.* There are no dangers after passing this ledge.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SOUTH-WEST HARBOR FROM THE EASTWARD.

I. *By Mount Desert Eastern Passage, north of Bunker Ledge.*—Keep the **Mount Desert** shore aboard until the **Bunker Ledge Monument** bears WEST, distant one mile and a half, when steer W. by N. for **Bear Island Light**, carrying not less than ten fathoms water. When the **Monument** on **Bunker Ledge** is in range with **Baker Island Light**, on a bearing of S. ¾ E., *Lewis Rock* is past, and there is ten and a half fathoms water, rocky bottom. Steer WEST, which course will lead, with not less than seven and a half fathoms, to the entrance to *South - West Harbor.* When in nine fathoms, soft bottom, the east point of **Greening Island** bears NE. a quarter of a mile off, and the **Steamboat Wharf** on **Clarke Point** bears N W. by W. ½ W., distant three-quarters of a mile, steer W. by N ½ N. to the anchorage, carrying not less than four fathoms to the usual anchoring-ground and not less than eight feet to the head of the cove.

If of very large draught, (say twenty-four feet and over,) when, as above, the **Steamboat Wharf** on **Clarke Point** bears N W. by W. ½ W. steer for it, and anchor abreast of *Greening Ledge buoy*, in nine fathoms, soft bottom, and a quarter of a mile from the wharf.

The above courses pass about three hundred and fifty yards to the northward of the north end of *Bunker Ledge*, and nearly three-eighths of a mile north of the **Monument**; an eighth of a mile to the northward of *Lewis Rock;* four hundred yards to the southward of *Bowden Ledge;* a quarter of a mile to the southward of *Long Pond Shoal;* a little over a hundred yards to the northward of the west end of **Sutton Island**, (in eight fathoms water;) and from one-eighth of a mile to fifty yards to the southward of the *buoy on Greening Island Ledge.*

DANGERS
IN APPROACHING AND ENTERING SOUTH-WEST HARBOR FROM THE EASTWARD.

I. *By the Mount Desert Eastern Passage, south of Bunker Ledge.*—The dangers in this passage are the same as those for the *North Channel*, with the exception of *Lewis Rock*, which, as passing to the southward of the **Monument**, is not in the way. It is not necessary, therefore, to repeat, but merely to refer to pages 208 and above for a description of them.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SOUTH-WEST HARBOR FROM THE EASTWARD.

II. *By the Mount Desert Eastern Passage, south of Bunker Ledge.*—From **Schoodic Point** steer W. ½ S., which will lead, with not less than twelve fathoms, up to *Bunker Ledge.* When the **Monument** is seen, shape the course to pass about three hundred and fifty

yards to the southward of it; and when it bears N E. by N. ½ N. and **Baker Island Light** is just open to the eastward of **Little Cranberry Island** on a bearing of S. by E., there is thirteen fathoms, rocky bottom; and when **Bear Island Light** bears N W. by W. ½ W. steer for it, carrying not less than ten fathoms, until the eastern end of **Sutton Island** bears S. ½ E., when there will be nine and a half fathoms, hard bottom; steer WEST until up with the entrance to *South-West Harbor*, when W. by N. ½ N. will lead safely in.

III. *To pass to the southward of Sutton Island and enter South-West Harbor.*—Pass half a mile to the southward of **Bunker Ledge Monument**, and when **Baker Island Light** is just open to the southward of **Little Cranberry Island** on a bearing of S. by E., there will be fourteen fathoms, rocky bottom; steer W. ½ N., which course will lead along the northern shore of **Little Cranberry**, and between it and **Sutton Island**, with not less than four fathoms. When abreast of the middle of **Sutton Island**, and **Long Point** (the northeast point of **Great Cranberry**) bears S. ½ E., about five-eighths of a mile distant, steer N W. by W. ½ W., which course will lead, with not less than nine fathoms, up to the entrance to *South-West Harbor*. There are no dangers except two or three small spots, with sixteen feet at mean low water, lying off the entrance to *Cranberry Island Harbor*.

On the above courses, to enter Cranberry Island Harber.—On the W. ½ N. course, when the eastern extremity of **Sutton Island** bears N. ½ W. and **Long Point** S W., there will be six fathoms. Steer for the point until within a third of a mile of it and the wharf in *Hadlock Cove* bears S E. by E. ½ E., when there will be four fathoms water almost exactly in the middle of the entrance; either anchor, or steer S. by W. toward the head of the harbor, and anchor according to draught. Good anchorage is found in from nine to eighteen feet, well sheltered from all winds. Vessels of very light draught frequently run into *THE POOL* by passing between **Long Point** and the cleared point, with two houses on it, forming the southern side of the entrance to the *Pool*. Here they either run alongside the wharves and lie aground, or anchor in the middle and lie aground there; but care is necessary to avoid the numerous ledges with which the bed of the *Pool* is obstructed. Only two feet at low water may be taken in, and the passage is only used by small fishermen.

DANGERS
IN APPROACHING AND ENTERING SOUTH-WEST HARBOR.

IV. *Coming from the westward, by the Cranberry Island Passage.*—Approaching by this passage, it must be remembered that not more than fourteen feet at low water can be carried through it, that being the best water on *Cranberry Island Bar*.

The usual course is, when up with **Long Island**, to steer about N N E. until past **Gott Island**, and as soon as **Bear Island Light** bears N E. by N. ½ N. to steer for it. On this course there will soon be seen to the northeast *a black can-buoy*, and *a red spar* to the east. The former is on the eastern point of

LONG LEDGE,

making off from the **Mount Desert** shore in a southeasterly direction over half a mile. Two bare rocks, called **The Knubble,** rise from about the middle of this ledge, which is bare at low water to a distance of over three-eighths of a mile from shore. The *buoy* is *a can* of the second class, marked No. 1, and placed in three fathoms water on the southeastern point of the ledge, and is to be left to the westward.

BUNKER'S WHORE LEDGE.

The *red spar-buoy* seen to the eastward is on the western end of *Bunker's Whore Ledge,* a large, detached ledge, with deep water on all sides, lying three-quarters of a mile W. by S. ½ S. from **Race Point,** (the southwestern extremity of **Cran-**

berry Island,) and due EAST from the *buoy on Long Ledge*, distant five-eighths of a mile. It is bare at half-tide, and very dangerous. The *buoy is a red spar*, marked No. 2, placed on the western side of the ledge in twenty feet water, and bears from **Baker Island Light W. ½ N.**, nearly four miles distant. A channel, through which not less than seven fathoms may be taken, exists between this ledge and **Great Cranberry Island**, but the rule is to pass to the westward of the buoy.

Continuing the course toward **Bear Island Light**, when past *the red buoy on Bunker's Whore* there will be seen ahead, about two-thirds of a mile off, *two spar-buoys* nearly in range with each other. The nearest, *a red buoy*, is on

CRANBERRY ISLAND LEDGE,

a small, detached ledge, with four feet of water, lying about five hundred yards from the **Cranberry Island** shore and about two-thirds of a mile to the northward of the *buoy* on *Bunker's Whore Ledge.*

The *buoy* is marked No. 4, placed on its southwestern side in eighteen feet of water, and must be left to the eastward. About an eighth of a mile to the northward is *a black spar-buoy*, on the southeastern end of

FLYNN LEDGE,

making off from **Sea-Wall Point,** sometimes called **Flynn Point,** about S S E. for half a mile, and has five feet at low water upon it close to the buoy. This *buoy* is marked No. 3, and is placed in eighteen feet water. The channel here makes an abrupt turn to the eastward, passing between this and *Cranberry Island Ledge*, and is only about an eighth of a mile wide. When past *Flynn Ledge*, it again turns abruptly to the northward, crossing the bar in fourteen feet water.

The only danger met with on this course is

HIGH HEAD SHOAL,

having ten feet at mean low water; lies about three hundred yards off **High Head** and a little over three-eighths of a mile **N E. ½ N.** from *Flynn Ledge Buoy.* It is not marked in any way.

When past **High Head**, cross

CRANBERRY ISLAND BAR,

stretching from **Great Cranberry Island** to the **Mount Desert** shore, having fourteen feet upon it, the best water being nearly in the middle, but rather nearer to the **Mount Desert** shore.

There is no buoy, those who use this passage generally taking a pilot. When over the bar, *a red spar-buoy* will be seen to the northeastward, on

COW LEDGE,

bare at low water, and lying three hundred yards to the westward of **Sperlin Point,** (the northwestern extremity of **Cranberry Island,**) and on the north side of the entrance to *Preble Cove.*

The *buoy* is marked No. 6, is placed on the western side of the ledge in twelve feet water, and is to be left to the eastward. *There is no passage* between this buoy and **Cranberry Island.**

When past *Cow Ledge*, there are no more dangers until *South-West Harbor* is entered, when look out for

GREENING LEDGE,

lying off the south shore of **Greening Island**, near its western end, and bare at low spring tides. A *red spar-buoy*, No. 8, is placed in three fathoms water on the south side of the shoal, and serves both for *South-West Harbor* and the passage between **Clarke Point** and **Greening Island** into *Somes Sound.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SOUTH-WEST HARBOR.

IV. *Coming from the westward, through Cranberry Island Passage.*—When up with **Long Island,** (which is off the entrance to *Blue Hill Bay,*) steer NNE., leaving the **Duck Islands** to the eastward and the **Calf Islands** to the westward; and when abreast of **Gott Island,** (which leave to the westward,) bring **Bear Island Light** to bear NE. by N. ½ N. and steer for it, passing about midway between the *red buoy on Bunker's Whore* and the *black buoy on Long Ledge*, and carrying not less than six fathoms water. When abreast of the *red buoy on Cranberry Island Ledge*, steer NE. by E. ½ E. for a little over an eighth of a mile, passing midway between this buoy and the *black buoy on Flynn Ledge.* When the latter is a little abaft the beam and **Sea Wall Point** bears NW. by N. ½ N., steer N. by E. NORTHERLY, which course will lead across the bar in not less than fourteen feet water, and up with the entrance to the harbor. When the **steamboat wharf** on **Clarke Point** bears NW. by W. ½ W. steer for it, and anchor in nine fathoms south of *Greening Ledge Buoy.* Or, on the course for the **steamboat wharf,** when the eastern point of **Greening Island** bears NE. half a mile off, and in nine fathoms water, soft bottom, steer W. by N. ½ N., carrying not less then four fathoms to the usual anchoring ground and not less than eight feet to the head of the cove.

The above courses pass one-third of a mile to the eastward of the *buoy on Long Ledge;* about three hundred yards to the westward of the *buoy on Bunker's Whore Ledge;* about a hundred and fifty yards to the westward, and then one hundred yards to the northward, of the *red buoy on Cranberry Island Ledge;* one hundred yards to the southward and eastward of *Flynn Ledge;* two hundred and fifty yards to the westward of *High Head Shoal;* a quarter of a mile to the westward of *Cow Ledge;* and fifty yards or one-eighth of a mile to the southward of the *buoy on Greening Ledge*, according as steering for **Clarke Point Wharf**, or using the course W. by N. ½ N. to the usual anchorage.

SOMES SOUND

is an arm of the sea extending into the shores of **Mount Desert Island** in a northerly direction about four miles and a half. Its shape is irregular and its width varies, being less than a quarter of a mile wide a little above **Manchester Point**, and widest at its head, (between *Broad* and *Sargent Coves,*) where it is three-quarters of a mile wide. It has very deep water, and is almost entirely unobstructed; but its navigation by sailing vessels requires care and prudence, as it is subject to sudden gusts and heavy flaws from the mountain gorges, which are apt to throw a vessel down with scarcely a moment's warning.

The general course of the *Sound* is N. by E. and S. by W., between high, steep, rocky shores, in many places almost perpendicular, formed by the slopes of **Brown Mountain** on the east and **Flying** and **Robinson Mountains** on the west. Both shores are, for the most part, thickly wooded.

At the head of the *Sound*, and on its western shores, is *SOMES HARBOR*, a large cove of irregular shape, lying nearly NE. and SW., and a little over a mile long. On its northwestern bank stands the little village of **Somesville,** where there is some trade in lumber and ship-building. There is good anchorage in *Somes Harbor*, in from

two to five fathoms, but vessels cannot approach the wharves except at high water, as the whole of the western side of the cove is full of shoals. In the mouth of *Somes Sound* lies

GREENING ISLAND,

before described, on pages 204 and 207, as forming part of the north shores of *South-West Harbor*. It divides the entrance to the *Sound* into two channels, the main channel passing along the eastern face. Seen from the eastward, it appears low and sandy, with a grassy surface, backed by thick woods, while its western side shows cleared, gentle slopes, principally grass-lands, also backed by trees. The island lies NW. and SE., is irregular in shape, about three-quarters of a mile long, and on its northeastern side is tolerably bold-to.

In the channel between **Greening Island** and **Gilpatrick Point** is found from seven to fourteen fathoms water.

GILPATRICK POINT,

the eastern point of entrance, is low, partly cleared, has one or two houses, lies about five-eighths of a mile to the westward of *North-East Harbor*, and forms the western side of a small and shallow cove called *Gilpatrick Cove*. It is tolerably bold-to. A little over a quarter of a mile to the northward is

MANCHESTER POINT,

also cleared and cultivated; has one or two houses near its southern end, and is backed by thick woods. On its southern side makes in a small cove, dry at low water, called *Manchester Cove*.

CLARKE POINT,

the western point of entrance to *Somes Sound*, lies opposite to **Greening Island**, with a passage between them about a quarter of a mile wide. It is easily recognized by the large **steamboat wharf** on its southern end, on which is also built a **lobster-packing house**. Three-quarters of a mile above it is a shallow cove called *Norwood Cove*, and a little over half a mile above this is another, known as *Fernald Cove*. On the north side of *Fernald Cove*, and a mile and a quarter to the northward of **Clarke Point**, is

FERNALD POINT,

a long, smooth, grassy, and nearly level piece of land, making out from the base of **Flying Mountain**. It is entirely bare of trees, well cultivated, and has a house and barn. This point is nearly opposite to, but a little above, **Manchester Point**. Between the two the *Sound* is only about four hundred yards wide; this portion being generally called *THE NARROWS*.

From **Clarke Point** to **Fernald Point** the western shores are diversified with woods and cleared lands, and are thinly settled round the bases of the mountains.

On the eastern side of the Sound, above **Manchester Point**, the shore-line is nearly straight for over two miles, running in a N. by E. direction, with no indentation of importance. It is composed of steep, wooded slopes, with nearly level, cleared, and cultivated fields between them, and is in most places very bold-to, especially at the base of **Brown Mountain**.

The western shores above **Fernald Point** are somewhat more regular than the eastern, and are very bold-to, especially at the base of **Robinson Mountain**, where twenty-five fathoms water is found within one hundred yards of the shore.

Five-eighths of a mile to the northward of **Fernald Point** is a circular cove, called *Valley Cove*, with bold shores, affording excellent anchorage in from two to eight fathoms, soft bottom.

Robinson Mountain, not quite half a mile to the northward of Valley Cove, is high and very steep, almost entirely bare of trees, and presents precipitous rocky cliffs on its eastern side rising abruptly from the water.

On its southern side there is a small brook, forming a cascade by its precipitous descent, convenient for ships to water.

From the eastern spur of this mountain the shore-line turns abruptly and runs in a N. by W. direction for a mile and a half, steep, rocky, and uncultivated. The *Sound* gradually widens until at its head it is three-quarters of a mile wide, and both shores are indented by coves. A mile and a half above **Robinson Mountain** is a small cove, with anchorage for small vessels, called *Broad Cove,* and about midway between the mountain and this cove will be seen the wharves, sheds, and derricks of a granite quarry.

Dwellings are few, and give evidence of the poverty of the soil by their wretched appearance. Above the quarry the shores are somewhat lower, and entirely covered with a dense growth of young trees, embracing all varieties.

On the eastern shore of the Sound, when past the steep cliffs of **Brown Mountain,** the banks are gently sloping and diversified, with woods and cultivated fields.

SARGENT POINT

lies on this side, nearly opposite to but a little below *Broad Cove;* is a long, gently-sloping, wooded point, making to the northward from the north base of **Brown Mountain.** Behind it makes in a long, shallow cove, called *Sargent Cove,* off the entrance to which lie rocks and ledges, rendering the approaches to it unsafe.

BAR ISLAND.

When up with *Broad Cove,* there will be seen at the head of the *Sound,* and nearest to the western shore, an islet, thickly wooded with large trees, and presenting a round, bluff head on its southern side. This is **Bar Island,** lying in the entrance to *SOMES HARBOR,* close in with the north shore of the *Sound,* and half a mile above *Broad Cove.*

SOMES HARBOR.

The entrance to this harbor lies on the west side of **Bar Island,** between it and **Mason Point,** which is low and also thickly wooded. The passage is only about one hundred and fifty yards wide, but has not less than three and a half fathoms. The village of **Somesville** occupies the western shore of the harbor, and is beautifully situated on undulating land, amidst great numbers of handsome trees. Its principal trade is in lumber and ship-building. The deep water and usual anchorage is close under the eastern shore, as the shoals extend from the west shore more than half the width of the harbor. From two to five fathoms, soft bottom, is found at mean low water.

DANGERS
IN APPROACHING AND ENTERING SOMES SOUND.

I. *Coming from the eastward.*—Vessels bound to **Somesville** by the main channel use the *Mount Desert Eastern Passage,* entering either on the north or south side of *Bunker Ledge.* This passage is common to the approaches to *North-East* and *South-West Harbors,* and the dangers in it have been fully described on pages 208 and 210.

When past **Bear Island,** however, the course leading toward the middle of **Greening Island,** look out for

GILPATRICK LEDGE,

lying nearly two hundred yards from the shore, on the north side of the entrance, and on the east side of the entrance to *Gilpatrick Cove.* It is bare at low water, and is not buoyed. When past it the course turns to the northwestward, leading along the north face of **Greening Island**, and the first danger met with is

MIDDLE ROCK,

lying off **Manchester Point** at a distance of an eighth of a mile. It is a detached rock, with thirteen feet at mean low water; bears from the eastern extremity of **Fernald Point SOUTH**, a little over a quarter of a mile distant, and from the northern end of **Greening Island NORTH**, five-eighths of a mile distant. *It is not marked in any way*, and is a very dangerous obstruction. In the absence of any local name we have given it the name of *Middle Rock.* There is good water (over three fathoms) on it western side, but this passage is not safe owing to the detached rock, called

FERNALD ROCK,

lying off the mouth of *Fernald Cove*, about two hundred yards from the shore and the same distance from *Middle Rock.* It is covered only at high tides, and is quite remarkable when out of water. There is no passage inside of it.

Above **Manchester Point** *the eastern shore must not be approached* nearer than four hundred yards until up with the steep slopes of **Brown Mountain**, as this shore is somewhat shoal; but hug the west shore closely, as it is very bold-to. When up with **Brown Mountain** both shores are bold, and so continue until past **Sargent Point.** *There are no obstructions or dangers of any kind until past Broad Cove* and about to enter *Somes Harbor.* Here look out for

BAR ISLAND LEDGES,

making off in a southerly direction from **Bar Island** for a quarter of a mile, and having five feet at low water on their southern end. *They are not buoyed*, but are easily avoided by keeping the western shore of the *Sound* aboard until up with **Bar Island.** After entering *Somes Harbor*, bear in mind that the whole of the western cove is flat from **Somes Point** to **Mason Point**, and keep the eastern shore aboard to the anchorage.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SOMES SOUND.

I. *From the eastward, by the Mount Desert Eastern Passage, north of Bunker Ledge.*—Keep the **Mount Desert** shore aboard until **Bunker Ledge Monument** bears **WEST**, distant one mile and a half, when steer **W. by N.** for **Bear Island Light**, carrying not less than ten fathoms water. On this course, when the **Monument** is in range with **Baker Island Light** on a bearing of **S. ¾ E.**, *Lewis Rock* is past, and there is ten and a half fathoms, rocky bottom. Now steer **WEST** until the eastern extremity of **Sutton Island** bears **S. ¾ E.** and **Bear Island Light NW. by W. ¾ W.**, in nine and a half fathoms, hard bottom; steer **W. by N. ¼ N.** about, for the middle of **Greening Island**, and continue this course (on which there will be not less than eight fathoms water) until **Manchester Point** bears **N. by W. ¼ W.**, the southeastern point of **Greening Island S. ¼ W.**, and the **wharf** in *Gilpatrick Cove* **N. by E. ¼ E.** Now, in nine fathoms water, steer **NW. ¾ N.** until **Clarke Point** opens to the westward of **Greening Island** on a bearing of **SW. ¾ S.**, when the depth will be twelve fathoms, and the southern end of **Gilpatrick Point** will bear **E. by S. ¾ S.** Now steer **N. ¾ E.** through the *Narrows*, after which keep the western shore rather best aboard until past the eastern spur of **Robinson Mountain.** Leave this to the westward about a

hundred yards off, and when past it the entrance to *Somes Harbor* will bear due **NORTH**; and that course, always remembering to keep the western shore aboard, will lead safely into the harbor and up to the anchorage. On the above courses the least water is seven fathoms until up with *Bar Island Ledges*, and in many places there will be twenty fathoms.

In beating to windward there is nothing in the way after passing the *Narrows*, and it is only necessary to repeat the caution against the sudden squalls and flaws of wind, which are so dangerous in this vicinity.

These courses pass a little over three hundred and fifty yards to the northward of the north end of *Bunker Ledge*, and nearly three-eighths of a mile north of the **Monument**; an eighth of a mile to the northward of *Lewis Rock;* four hundred yards to the southward of *Bowden Ledge;* three hundred and fifty yards to the southward of *Long Pond Shoal;* an eighth of a mile to the southward of **Bear Island**; four hundred yards to the southward of *Gilpatrick Ledge;* about seventy-five yards to the eastward of *Middle Rock;* and the same distance to the westward of *Bar Island Ledges.*

II. *To come through Mount Desert Eastern Passage, south of Bunker Ledge, and enter Somes Sound.*—From **Schoodic Point** steer **W. ½ S.**, which will lead, with not less than twelve fathoms, up to *Bunker Ledge.* When the **Monument** is seen, shape the course to pass about three hundred and fifty yards to the southward of it; and when it bears **NE. by N. ½ N.**, and **Baker Island Light** is just open to the eastward of **Little Cranberry Island** on a bearing of **S. by E.**, there will be thirteen fathoms, rocky bottom, with **Bear Island Light** bearing **N W. by W. ½ W.** Steer for the light, carrying not less than ten fathoms, until the eastern end of **Sutton Island** bears **S. ½ E.**, when there will be nine and a half fathoms, hard bottom; steer **W. by N. ½ N.** about, for the middle of **Greening Island**, carrying not less than eight fathoms. Continue this course until **Manchester Point** bears **N. by W. ½ W.**, the southeastern point of **Greening Island S. ½ W.**, and the wharf in *Gilpatrick Cove* **N. by E. ½ E.** There is now nine fathoms water; steer **N W. ½ N.**, and follow the directions given above.

III. *To come from the southward, or from sea, and enter Somes Sound.*—Bring **Baker Island Light** to bear **NORTH** and run for it, but gradually edge to the eastward on approaching the island, so as to pass half a mile to the eastward of it. When abreast of the light steer **N N W.**, which course will lead, with nothing less than fourteen fathoms, directly for **Bunker Ledge Monument.** On this course, when **Bear Island Light** bears **N W. by W. ½ W.**, in fourteen fathoms, rocky bottom, and one-quarter of a mile from the **Monument**, steer for the light until the eastern end of **Sutton Island** bears **S. ½ E.**, when steer **W. by N. ½ N.**, following the directions previously given.

These courses pass four hundred yards to the eastward of *Harding Ledge*, and a little over three hundred yards to the southward of the **Monument** on *Bunker Ledge.*

At night, when **Baker Island Light** is shut in behind **Little Cranberry Island**, *Bunker Ledge* is to the eastward; or when that light bears **S. by E. ½ E.**, the ledge is past.

IV. *To come from the westward, through Cranberry Island Passage, and enter Somes Sound.*—A full description of this passage, and the dangers therein, will be found on pages 210 to 212 of the directions for *South-West Harbor.* It is not necessary, therefore, to repeat it here.

When up with **Long Island** (which is off the entrance to *Blue Hill Bay*) steer **N N E.**, leaving the **Duck Islands** to the eastward, and **Calf, Black, Placentia,** and **Gott Islands** to the westward. When abreast of **Gott Island**, bring **Bear Island Light** to bear **N E. by N. ½ N.** and steer for it, passing about midway between the *red buoy on Bunker's Whore Ledge* and the *black buoy on Long Ledge*, and carrying not less than six fathoms water.

When abreast of the *red buoy on Cranberry Island Ledge* steer **N E. by E. ½ E.**, carrying not less than four fathoms, and passing midway between this buoy and the *black*

buoy on Flynn Ledge. Continue this course for about an eighth of a mile, or until *Flynn Ledge buoy* is a little abaft the beam, when there will be three and three-quarters fathoms, with **Sea-Wall Point** bearing NW. by N. ½ N. Now steer N. by E. NORTHERLY, which course leads across the bar in not less than fourteen feet water, and past the entrance to *South-West Harbor.* After crossing the bar there is not less than four and a half fathoms; and continue the course past the eastern point of **Greening Island** until **Bear Island Light** bears E. ½ N. Then steer NW. ½ N., following the directions for the *Sound*, previously given.

The above courses pass one-third of a mile to the eastward of the *buoy on Long Ledge;* about three hundred yards to the westward of the *buoy on Bunker's Whore Ledge;* about one hundred and fifty yards to the westward, and then one hundred yards to the northward, of the *buoy on Cranberry Island Ledge;* one hundred yards to the southward and eastward of *Flynn Ledge;* two hundred and fifty yards to the westward of *High Head Shoal;* a quarter of a mile to the westward of *Cow Ledge;* and a quarter of a mile to the westward of *Gilpatrick Ledge.*

V. *To enter Somes Sound from South-West Harbor by the Passage between* **Clarke Point** *and* **Greening Island.**—This passage, which is never used without a pilot, is a quarter of a mile wide at its narrowest part, and is crossed by a bar with fifteen feet water. It is obstructed—first, by *Greening Ledge,* which is bare at extreme low tides, lies off the south shore of **Greening Island,** near its western end, and is marked by a *red spar-buoy* placed on its south side; secondly, by *a detached rock, with one foot at mean low water,* lying off the eastern shore of **Clarke Point,** and on the west side of the passage, about two hundred yards from shore; *is not buoyed;* and thirdly, by the *bar* extending from **Greening Island** to **Clarke Point,** having fifteen feet of water. Vessels of light draught use this passage when bound from *South-West Harbor* into *Somes Sound,* but never without a pilot.

To enter *Somes Sound* through this channel, pass midway between the *red buoy on Greening Ledge* and the **steamboat wharf,** and steer NE. by N. ½ N. for **Manchester Point.** Great care is necessary on this course to keep the **Greening Island** shore aboard to avoid the dangerous *one-foot rock* off **Clarke Point,** the course leading pretty close to it. When within five hundred yards of **Manchester Point** and the two wharves on the east shore, about a quarter of a mile above *Gilpatrick Point,* bear EAST, there will be nine fathoms, rocky bottom. Now steer N. ½ E. toward **Robinson Mountain,** and follow the direction for *Somes Sound.* These courses lead across the bar in fifteen feet water.

LIGHT-HOUSES

MAKING THE APPROACHES TO THE SOUTH SHORE OF MOUNT DESERT.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Mount Desert Lt.	43° 58′ 07″	68° 07′ 42″	$4^h\ 32^m\ 30.8^s$	Fixed.	.....	75 ft.	14
Baker Island Lt.	44° 14′ 27″	68° 11′ 56″	$4^h\ 32^m\ 47.7^s$	F. V. F.	$1^m\ 30^s$	105 ft.	15
Bear Island Lt.	44° 16′ 59″	68° 16′ 12″	$4^h\ 33^m\ 04.8^s$	Fixed.	.....	97 ft.	15

TIDES.

Corrected establishment of South-West Harbor	$11^h\ 02^m$
Mean Rise and Fall of Tides	10.0 ft.
Rise of High Water Spring Tides	10.7 ft.
Rise of High Water Neap Tides	9.2 ft.

VARIATION OF THE COMPASS.

At South-West Harbor the approximate magnetic variation for 1875 is 15° 50′ W. The annual increase is about 2′.

BASS HARBOR.

From **Sea-Wall Point** the south shore of **Mount Desert Island** has a general course W S W. for two and a half miles to **Bass Harbor Head,** the eastern point of entrance to *Bass Harbor.* This portion of the shore is very irregular in outline, has several small coves with shoal water, and is quite foul, there being a great number of bare ledges and sunken rocks scattered along its face. Its general appearance is that of land of moderate height covered with a thick growth of scrubby trees. Of the several coves and indentations on this southern face there is only one worthy of mention, which is sometimes called *LOCUST REACH,* and sometimes

SHIP HARBOR,

the latter name having been given to it from the circumstance of a large vessel running in there in a gale as a last resource. The entrance is through a narrow passage between two rocky heads with precipitous faces; but this rapidly widens into a large but shallow cove of somewhat irregular shape, and completely land-locked. This entrance is a mile and three-quarters to the westward of **Sea-Wall Point** (**Flynn Point**) and three-quarters of a mile to the eastward of **Bass Harbor Head.**

Bass Harbor is formed by a long cove of irregular shape, about one mile and three-quarters long, penetrating the island at its southwestern extremity, affording good anchorage in from two to seven fathoms, with good holding-ground. The upper portion of the cove is, however, almost all flats, bare at low water.

The western point of entrance is called **Bass Harbor Point,** and between it and the **Head** the entrance is a little over one mile wide; but about five-eighths of a mile above this the harbor contracts to a width of four hundred yards, forming what is called *THE NARROWS,* joining the *Outer* and *Inner Harbors.* A depth of three and a half fathoms can be taken through the *Narrows,* but above their northern end the channel rapidly shoals and diminishes in width to a mere thread.

BASS HARBOR HEAD

is of moderate height, rocky, and dotted with scrub. Viewed from the eastward, it shows peculiar red rocks on its sea-face; and about half way up on its surface, on the extreme southern point, is built the **Light-House,** which is the guide to this harbor.

BASS HARBOR HEAD LIGHT-HOUSE

is a brick tower, twenty-six feet high, whitewashed, and connected with a wooden dwelling painted brown. It shows a fixed red light of the fifth order of Fresnel from a height of fifty-six feet above the sea, visible thirteen miles. This light cannot be seen from any bearings to the eastward of S E. by S. Its geographical position is

Latitude - - - - - - - - - 44° 13′ 18″ N.
Longitude - - - - - - - - 68° 20′ 14″ W.

From **Bass Harbor Head** the course of the eastern shore of the harbor is about **NORTH** for seven-eighths of a mile to the entrance to the *Narrows.* The shores are mostly smooth, gently sloping, cleared, and generally cultivated, but the fields are covered here and there with patches of alder bushes. The village of **Tremont** occupies both shores.

BASS HARBOR POINT,

the western point of entrance, is a bare, rocky head, dotted with a few scrubby spruce and fir, and hence to **Harbor Point** (or **Frye House Point** as it is often called) the general course of the west shore is about NE., although it curves first to the northward and then to the eastward, forming a large semicircular cove, in which there are from six feet to three fathoms.

HARBOR POINT,

or **Frye House Point,** forms the western shore of the *Narrows;* is low, rocky, and bare, and terminates, at low water, in a long ledge, called *Harbor Point Ledge.*

This is marked by a *black buoy* placed on its eastern end, and above this it is not safe to go with large vessels more than a few hundred yards. Vessels drawing six feet may, however, pass half a mile above **Harbor Point.**

GOTT ISLAND,

or **Great Gott Island** as it is sometimes called, lies south of **Bass Harbor Head,** at a distance of seven-eighths of a mile, and between it and the head runs a *bar*, across which only fourteen feet can be carried at mean low water; so that the passage between the two is not available for vessels of large draught except at high water. The island lies nearly NORTH and SOUTH, and is about three-quarters of a mile long. It is partly cultivated, but in most places well wooded, with alternate sandy and rocky faces. Close to it, on its southwestern side, lies **Little Gott Island,** which is also tolerably high and thickly wooded. About a mile and a half to the westward will be seen **Placentia Island,** easily recognized by the smooth, cleared, and nearly level land at its northeastern end, backed by thick woods. Close to **Little Gott,** and between it and **Placentia,** but to the southward of both, lies **Black Island,** which is high land, so densely wooded that the foliage has a black appearance—hence the name. All of these islands lie in the entrance to *BLUE HILL BAY*, that great bay which washes the western shores of **Mount Desert Island** as *Frenchman Bay* does the eastern shores. The entrance for large vessels bound to *Bass Harbor* from the eastward is through this bay, between **Placentia** and **Burnt-Coat Islands**; but coasters always pass between **Gott Island** and **Bass Harbor Head.** There is always a passage between **Gott Island** and **Placentia Island,** and another between the latter and **Black Island,** but they are not recommended to strangers. As a general rule, if draught be not over eighteen feet, it is best to wait near the bar until high water and enter that way.

DANGERS

IN APPROACHING AND ENTERING BASS HARBOR FROM THE EASTWARD.

I. *To enter between* **Gott Island** *and* **The Head.**—Passing along the south shore of **Great Cranberry Island,** look out first for

BUNKER'S WHORE LEDGE,

the red spar-buoy on which will be seen to the northwest about three-quarters of a mile off, when abreast of **Race Point,** (which is the southwestern extremity of **Great Cranberry Island.**)

This is a large, detached ledge, with from six to ten fathoms all around it, and lies three-quarters of a mile W. by S. ½ S. from **Race Point.** It is bare at half-tide, and very dangerous. Do not approach the buoy too closely, as it is not on the southern but the

western side of the ledge, being intended as a guide for the western entrance to *South-West Harbor*. It is a *red spar*, marked No. 2, placed in twenty feet water, and bears from **Baker Island Light** W. ½ N., nearly four miles distant. It is to be left to the northward. (See page 210.)

When up with it a *black can-buoy* will be seen, a little over half a mile to the westward, on

LONG LEDGE,

making off from the **Mount Desert** shore in a southeast direction for over half a mile. Two bare rocks, called **The Knubble,** rise from about the middle of this ledge, which is bare at low water to a distance of three-eighths of a mile from shore. The buoy is a *can of the second class*, marked No. 1, and placed in three fathoms water on the southeastern point, the course leading to the southward of it. There are no dangers between *Long Ledge* and

BASS HARBOR BAR,

extending from **Bass Harbor Head** to **Gott Island**, having fourteen feet at mean low water in the channel across it. The soundings are pretty regular, varying from thirteen to sixteen feet over almost the entire length of the bar; but there are *one or two spots with twelve feet*, and a long ledge makes off from **Gott Island** along the western edge of the bar for a little over half a mile, upon which there is as little as eight feet water. This narrows the channel across the bar, and compels vessels to keep **Bass Harbor Head** rather more aboard.

Gott Island should not be approached on its north side by any one not perfectly familiar with the shoals extending to the northward from it. They are many and dangerous. After crossing the bar there are no more dangers until well past the head and steering up into the harbor, when look out for

WEAVER LEDGE,

easily recognized by the *two spar-buoys* on its eastern and western ends. This is a detached ledge, dry at low water, lying a quarter of a mile E SE. from **Bass Harbor Point** and about sixteen hundred yards N W. ½ W. from **Bass Harbor Head-Light**. The shoal ground of the ledge is about two hundred yards square, with soundings over it varying from one to seventeen feet. There is equally good water on all sides, but the channel on its eastern side is the best, being nearly half a mile wide, while that between the rock and **Bass Harbor Point** is only a quarter of a mile wide.

On the eastern point of the ledge is placed *a black spar-buoy* in four fathoms water, marked No. 3, to be left to the westward by vessels using the eastern passage. On its western end is placed *a red spar* in three fathoms at low water, which is to be left to the eastward by those using the western passage. Those beating to windward in the vicinity of this ledge should give both of these buoys a berth to the southward or northward of not less than an eighth of a mile, as they do not mark the northern and southern limits of the shoal.

Passing *Weaver Ledge*, the course leads for the *Narrows*, and there are no obstructions in the channel, it being only necessary to keep off the shores. The eastern shore is much the bolder, and may be approached usually within a hundred and fifty yards; but there are several ledges and outlying rocks off the western shore, the most dangerous of which are off **Harbor Point**.

Of these the most important is

HARBOR POINT LEDGE,

bare at low water, making off from **Harbor Point** to the southeastward nearly two

hundred yards. It is marked by a *black spar-buoy* placed on its eastern end in three fathoms water. This buoy is marked No. 5, and must be left to the westward. All of this western shore in the vicinity of **Harbor Point** should be avoided, as, besides *Harbor Point Ledge*, there are *two very dangerous rocks* lying off the south side of that point at distances of one hundred and one hundred and fifty yards, respectively. The inner one is awash; the outer has four feet at mean low water; and both rocks lie close together, between three hundred and fifty and four hundred yards to the southwestward from **Harbor Point**. *They are not buoyed.*

The channel is extremely narrow and crooked above *Harbor Point Ledge*, and should not be attempted without a pilot.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BASS HARBOR FROM THE EASTWARD.

I. *To cross the bar between* **Gott Island** *and* **Bass Harbor Head.**—Bring **Baker Island Light** to bear NORTH, a mile and a quarter distant, and steer W. by N. ¼ N., which will lead safely across *Bass Harbor Bar* in not less than fourteen feet water. When over the bar and **Bass Harbor Head-Light** bears N E. ½ N., steer N. by W., keeping the eastern shore best aboard, and carrying not less than six fathoms water. Vessels of large draught may anchor anywhere on this course after passing *Weaver Ledge;* but wishing to proceed into *Inner Harbor*, when the southern extremity of **Bass Harbor Point** bears W. by S. ¼ S. steer N E. by N. ¾ N., through the *Narrows*, until past the *black spar-buoy* on **Harbor Point Ledge** and abreast of the **long wharf** on the eastern shore of the *Narrows*, in four fathoms; steer N N W. WESTERLY for about three hundred yards, and anchor in nineteen feet, *soft bottom, off the wharves.* It is not safe for strangers to go above this.

The above courses pass one-third of a mile to the southward of *Bunker's Whore Ledge;* about six hundred yards to the southward of *Long Ledge;* one hundred and fifty yards to the northward of *Gott Island Shoals;* about five hundred yards to the eastward of *Weaver Ledge;* and about seventy-five yards to the eastward of *Harbor Point Ledge.* This passage is the one commonly used by coasters, except such as are of large draught, and frequently by these at high water.

DANGERS
IN APPROACHING AND ENTERING BASS HARBOR FROM THE EASTWARD.

II. *By the passage between* **Placentia** *and* **Burnt-Coat Islands.**—This passage is obstructed by a dangerous ledge lying off **Staples Point,** (the southeastern point of **Burnt-Coat Island,**) and called

STAPLES LEDGE,

having two feet at lowest tides, and lying about an eighth of a mile SE. from the point. A *black spar-buoy*, No. 3, is placed on its eastern side in three fathoms. The ledge is easily avoided by keeping the middle of the passage. When past it there are no dangers until up with *Weaver Ledge*, in the entrance to the harbor. (See page 220.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BASS HARBOR FROM THE EASTWARD.

II. *By the channel between* **Placentia** *and* **Burnt-Coat Islands.**—This passage, though rarely used by vessels bound to *Bass Harbor*, has very deep water, suitable for vessels

of the largest draught. Wishing to enter by it, when about a mile and a quarter due SOUTH from **Baker Island Light** steer W. by S., leaving the **Duck Islands** to the southward and heading nearly for the southern end of **Burnt-Coat Island**; this course passes south of **Black Island** and the **Calf Islands**, with their outlying ledges and rocks, and when past them open the entrance to *Blue Hill Bay*.

When the middle of the entrance bears N N W. steer that course, passing to the eastward of the **Calf Islands, Black** and **Placentia Islands**, and to the westward of **Burnt-Coat Island.** When past **Placentia Island, Bass Harbor Light** will open to the eastward; bring it to bear N E. by E. ½ E. and steer for it, carrying not less than eight fathoms. Continue this course until within a quarter of a mile of the **Light**, in seven and a half fathoms, soft bottom, when the middle of **Harbor Point** will bear about N. by W.; steer that course until **Bass Harbor Point** bears W. by S. ½ S., when there will be six and a half fathoms; anchor, or follow the directions for the *Inner Harbor*.

III. *To come from the westward and enter Bass Harbor.*—There are various passages leading along the coast from *Penobscot Bay* to **Mount Desert**, most of which are in common use by coasters. Of these the most important are *EGGEMOGGIN REACH*, leading between **Deer Isle** and the main land; *DEER ISLAND THOROUGHFARE*, leading along the south shore of **Deer Isle**, between it and the numerous islets studding the space between it and **Isle au Haut**; and *MERCHANTS ROW*, leading between **Merchants** and **McGlathery Islands**, only used when the *Thoroughfare* is frozen. Of these, the first two are comparatively safe and have good water; but as they are somewhat intricate, and there are at present no charts, it is perhaps not advisable for strangers to use them.

Merchants Row can never be passed without a pilot.

Vessels having come through *Eggemoggin Reach* are accustomed, on leaving it, to pass between **Mahoney Island,** lying off **Naskeag Point**, and **John Island,** leaving the latter to the eastward and the former to the westward; round **Pond Island,** leaving it to the southward, and steer over to the **Mount Desert** shore, leaving **Ship Island** to the northward and the **spindle on the Barges** to the southward. The **spindle** is of iron, thirty feet high, painted red, and has a cask on top. There is good water in this passage, there being from six to nine fathoms between **Ship Island** and the **Barges.** When about midway between the island and the **spindle**, in nine fathoms water, **Bass Harbor Head-Light** will bear E S E., and that course leads up to the eastern entrance to the harbor with not less than fifteen fathoms. When up with the entrance, with the eastern extremity of **Bass Harbor Point** bearing N. by E. ½ E., in about thirteen fathoms, and about four hundred yards from the point, steer N E. by E., carrying not less than six fathoms, until the southern extremity of **Bass Harbor Point** bears W. by S. ½ S., or **Bass Harbor Head-Light** bears S E. by S. ½ S., when steer N E. by N. ½ N., following the directions given for *Inner Harbor*.

These courses pass one hundred and fifty yards to the northward of the *red buoy* on the west side of *Weaver Ledge*.

Vessels having come through *Deer Island Thoroughfare* either use the passage just described, or pass through *CASCO PASSAGE* or *YORK NARROWS;* but the latter cannot be attempted by strangers. Having come through *York Narrows*, steer EAST, which course leads up to *Bass Harbor Entrance*, when enter by either the eastern or western passage. If by the former, when the eastern extremity of **Bass Harbor Point** bears N E. ½ E. and **Bass Harbor Head-Light** E. ½ N., distant two miles, in twenty-one fathoms, soft bottom, steer N E. by E., which will lead through the eastern passage with not less than six fathoms. Continue it until **Bass Harbor Point** bears W. by S. ½ S. and the **Light-House** S E. by S. ½ S., when anchor in six and a half fathoms; or steer N E. by N. ½ N. through the *Narrows*, following the directions for the *Inner Harbor*.

These courses pass one hundred and fifty yards to the northward of *Weaver Ledge.*

Desiring to enter by the eastern passage, continue the **EAST** course until within about six hundred yards of the **Head-Light**, when in six fathoms, with the **light** bearing **N E. ½ N.**, steer **N.** by **W.**, as directed for this passage, (see page 221,) carrying not less than six fathoms water. Anchor when the southern extremity of **Bass Harbor Point** bears **W.** by **S. ½ S.**; or steer **N E.** by **N. ½ N.** into *Inner Harbor.*

IV. *To come clear outside of everything, and enter Bass Harbor from the westward.*—From off **Matinicus Rock** steer N E. by E. ½ E., which will lead up with **Long Island,** off *Blue Hill Bay.* Pass to the southward, and when past it open the entrance to *Blue Hill Bay*, between **Burnt-Coat Island** on the west and **Black** and **Placentia Islands** on the east. Bring the middle of this entrance to bear N N W., and steer that course until **Bass Harbor Light** opens to the northward of **Placentia Island.** Bring it to bear N E. by E. ½ E. and steer for it, carrying not less than eight fathoms. When within a quarter of a mile of the light, in seven and a half fathoms, soft bottom, the middle of **Harbor Point** will bear about **N.** by **W.**; steer that course until **Bass Harbor Point** bears **W.** by **S. ½ S.**, when anchor in six and a half fathoms, or follow the directions for *Inner Harbor.*

The above courses pass five hundred yards to the eastward of *Weaver Ledge.*

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Bass Harbor Head-Light..	44° 13′ 18″	68° 20′ 14″	4^h 33^m 20.9^s	F. red.	56 ft.	13

TIDES.

Corrected establishment of Southwest Harbor ..... 11^h 2^m
Mean Rise and Fall of Tides at Bass Harbor ..... 10.1 ft.
Mean Rise and Fall of Spring Tides ..... 10.8 ft.

VARIATION OF THE COMPASS.

The magnetic variation at *Bass Harbor* is for 1875 15° 40′ W., with an approximate annual increase of 2′.

BLUE HILL BAY.

BLUE HILL BAY, properly so called, is the fifth of the great bays (counting from the eastward) penetrating the coast of Maine, and is fifteen miles long, with an average width of about six miles. Its entrance is between **Bass Harbor Head** on the east and **Naskeag Point** (the northeastern point of *Eggemoggin Reach*) on the west. It is bounded on the east by **Mount Desert Island**, and on the west by the main land of **Brooklin** and **Blue Hill.** The name of this bay is derived from **Blue Hill,** an isolated peak, standing about a mile and a half back from the shore at its northwestern end. It is easily recognized when seen from the southward as a round, smooth mountain of very regular shape, with bold head, and slopes dotted here and there with trees. There is also a slight fringe of dark woods following the outlines of the mountain. The name *Blue Hill Bay* has been given to but a small portion of this great arm of the sea, viz: to so much of its western part as lies between the main land of **Brooklin** and **Blue Hill** on the west and **Long** and **Tinker Islands** on the east; while to an arm making to the

northward, on the eastern side of the bay, at its head, has been given the name of *UNION RIVER BAY.* To the southern and eastern portion (that lying along the shore of **Mount Desert** below **Bartlett Island**) the name *PLACENTIA BAY* has been applied; but geographically the name *BLUE HILL BAY* belongs to the whole body of water between the main land and **Mount Desert Island**, with the exception of *Union River Bay*, which should properly be called *UNION RIVER*, as it is nothing but a widening of that stream as it approaches its mouth, and is in no place more than a mile and a quarter wide.

Blue Hill Bay is connected with *Frenchman Bay* by a shallow strait called *Trenton River*, (see also page 198,) skirting the north shore of **Mount Desert Island**, separating it from the main land. It is crossed by bridge at **Thompson Island**, about midway of its length, and a large portion of it is dry at low water.

Blue Hill Bay is full of islands and a great number lie off its mouth, thus dividing the entrance into numerous channels. Of these islands, beginning at the eastward, the most important are the **Duck Islands**, the **Gott Islands**, **Black**, **Placentia**, **Long**, **Burnt-Coat** or **Swan**, **Marshall**, **Orono**, **Black**—2, **Calf**, **John**, **Pond**, and **Mahoney Islands**. There are many others studding the spaces between the larger islands, but they are small and of little importance.

THE DUCK ISLANDS

are two—**Great** and **Little Duck.** The latter lies four miles to the southward from **Cranberry Island**, is nearly round, about half a mile in diameter, rocky, and for the most part well wooded.

Great Duck Island lies about three-quarters of a mile to the southward from **Little Duck**. It is extremely narrow, being over one mile long, and having an average width of about two hundred and fifty yards; lies nearly N N E. and S S W.; is of moderate height, and is particularly noticeable when viewed from the northward and westward for a peculiar-looking open space in the centre; the appearance being caused by a clearing which crosses the island at this point, the rest of it being thickly wooded.

THE GOTT ISLANDS,

already described, (page 219,) are also two, called **Great** and **Little Gott.** The former lies three miles and three-quarters to the northwestward from **Little Duck Island** and about seven-eighths of a mile to the southward from **Bass Harbor Head**, the southwestern extremity of **Mount Desert Island.** It lies nearly **NORTH** and **SOUTH**; is about three-quarters of a mile long, partly cultivated, but in most places well wooded, with alternate sandy and rocky faces. Close to it, on its southwestern side, lies **Little Gott Island**, also of moderate height and thickly wooded. There is one house and a small clearing on the south side of this island.

BLACK ISLAND

lies nearly four miles to the westward of **Little Duck Island** and a quarter of a mile **SOUTH** from **Little Gott Island**; extends nearly **NORTH** and **SOUTH**; is about one mile long, thickly wooded, and somewhat higher than the other islands. The name is derived from the density of the woods, which look black when viewed from a distance. This island must not be confounded with the **Black Island** which lies off the north shore of **Burnt-Coat**, in the channel known as *CASCO PASSAGE.* About three-quarters of a mile to the northwestward from **Black Island** lies

PLACENTIA ISLAND,

which has given the name to the eastern portion of the bay. This island lies nearly **N E.** and **S W.**, is about three-quarters of a mile long, and, as a rule, is quite bold-to.

From **Bass Harbor Head** it is distant about one mile and a half. There is a good channel between it and **Black Island**, but it is not recommended for strangers.

On the northwestern side of **Placentia** are seen gently-sloping cleared fields, backed by very peculiar-looking, bare, white ledges, rising to the wooded summit. These ledges are very noticeable, and will enable any one passing on the north side of the island to recognize it. The northeastern point shows smooth, cleared, and nearly level land, backed by woods. On the south side are mostly thick woods. The eastern and main entrance to *Blue Hill Bay* lies between this island and

BURNT-COAT ISLAND,

the largest of the group, lying south of the entrance to the bay. It is very irregular in shape, but its average length may be taken at four miles and its width at two and three-quarters. From **Black Island** it is distant about three miles in a westerly direction; from **Naskeag Point** about four miles in a southeasterly direction; from **Bass Harbor Head** a little over five miles in a southwesterly direction; and from **Isle au Haut** (southern end) about twelve miles in a northeasterly direction.

This island was formerly called **Swan Island**, but is now almost universally known as **Burnt-Coat.** Its shores, especially the north, west, and south shores, are much cut up by coves, most of which afford good anchorage. The two most important are *MACKEREL COVE* on the north and *BURNT-COAT HARBOR* on the south shore.

The northeastern point of **Burnt-Coat Island** is called **Cranberry Marsh Point,** and shows as a long, low, wooded point, with sandy beach. A rocky, wooded head, looking like an island, juts out from this low land about half a mile to the southward of the point, and between these there is nothing but the low beach, over which the houses in *Mackerel Cove* are visible.

MACKEREL COVE

lies between this point and the northwest point of the island, called **Burnt Point.** The cove is large and roomy; its shores are of moderate height, and well wooded except at its head, where there is some cleared and cultivated land on the eastern shore. There is a small settlement here, and the harbor is used by coasters and others who are well acquainted, when overtaken by a gale or thick weather, after passing through *Deer Island Thoroughfare.*

York Narrows and the *Casco Passage* lead along the north shore of **Burnt-Coat Island,** the former between **Burnt-Coat** and **Orono Islands**, and the latter between **Orono** and **Black Islands.** Both will be described in place. Near the extremity of **Burnt Point**, and on its eastern side, lies a small, low, rocky islet, with a growth of spruce exactly in the middle. This is **Crow Island,** and S.E. ½ E. from it, about two hundred yards distant, lies a ledge, bare at half-tide, called *Crow Island Ledge.* *It is not buoyed*, and sunken rocks extend off from it to the southeastward, so it must receive a good berth.

Off **Cranberry Marsh Point**, at a distance of about two hundred and fifty yards, lies a sunken ledge, with about two feet at lowest tides, called *Cranberry Marsh Ledge.* *It is not buoyed.*

These are all the dangers in the entrance to the cove; but there is a large bare rock, about fifteen feet high, lying on the southwest side of the harbor, near its head.

To enter Mackerel Cove from the eastward.—Give **Cranberry Marsh Point** a berth of about four hundred yards to avoid *Cranberry Marsh Ledge*, and when past it, bring the high hill on the southwestern side of the cove to bear S.W. by S. and run for it. When past *Crow Island Ledge*, steer for the houses in the settlement and anchor at pleasure. There is plenty of water here for coasting-vessels of fifteen feet draught.

To come from the westward and enter Mackerel Cove.—Pass either through *Casco Passage* or *York Narrows;* give **Cranberry Island** a berth of about three hundred yards, and run for the houses in the head of the cove, anchoring as before.

It is proper here to remark that *a strong current sets constantly to the eastward*, near **Cranberry Marsh Point**, at all stages except the first of the flood.

The western side of **Burnt-Coat Island** presents rocky and wooded shores, with occasional cleared lands. There are several large coves on this side, but only one of importance, which is at the southwest end, and is called *BURNT-COAT HARBOR.*

The most northerly of these coves, called

BUCKLES ISLAND HARBOR,

is contained between **Burnt Point** on the northeast and **Valentine Point** on the southwest. The harbor is formed by the curve of the shore between these two points and by **Buckles Island,** a low, thickly-wooded islet lying off the mouth of the cove, about a third of a mile to the westward from **Burnt Point.** Here is good anchorage for coasters, as there is nothing in the way; stand fearlessly in, only using the lead, if at high water, so as not to run too far up, where vessels would lie aground at low tides.

Seal Cove Head is high and rocky, and covered with a sparse growth of spruce and fir. On its north side makes in

SEAL COVE,

large, but of little importance, and rarely used. It is just to the northward of *Burnt-Coat Harbor*, and vessels prefer to enter the latter for an anchorage; or, if to the northward, to make *Mackerel Cove.*

BURNT-COAT HARBOR

is one of the best harbors of refuge on the coast of Maine. It has been lately lighted by two range-lights, rendering its approach easy both by day and night.

Hockomock or **Hokomoaka Head** is a bold, bare head, on the west side of the entrance, dotted with scrubby firs here and there; and the higher lands behind it have some scrubby trees adhering to their slopes. On this head stand the two **Light-Houses,** called

BURNT-COAT HARBOR LIGHTS,

the guides to *Burnt-Coat Harbor.* They are square, brick towers, painted white, standing NNE. and SSW. from each other, one hundred feet apart. **The rear tower** shows a fixed white light of the fourth order of Fresnel from a height of seventy-five feet above the sea, visible fourteen miles. **The front tower** is seventeen feet high, and shows a fixed white light of the fifth order from a height of forty-two feet above the sea, visible eleven miles. Their geographical position is

Latitude - - - - - - - - -	44° 08′ N.
Longitude - - - - - - - - -	68° 27′ W.

Burnt-Coat Harbor is a cove of irregular shape, making in on the southwest side of **Burnt-Coat Island,** between **Stanley Point** on the east and **Hockomock Head** on the west; but the entrance is very much contracted by a large island, called **Harbor Island,** lying exactly in the middle of the mouth of the cove. The entrance lies between this island and **Hockomock Head.** The harbor is about three-quarters of a mile wide at its widest part, near its mouth, and gradually contracts in width to the head of the cove, about a mile above **Harbor Island.**

HARBOR ISLAND

is high, rocky, partly bare and partly wooded, and has bluff perpendicular faces to the

westward. It is three-quarters of a mile long, and varies in width from half a mile at its northern end to about three hundred yards at its southern extremity. To the southwestward of it are seen two low, rocky islets, bare of vegetation. That nearest to the island is called the **Old Sheriff**, and appears like two round, rocky humps. The other is called **Green Island**, and has a little grass on it. From the rear **Light-House** the **Old Sheriff** bears WEST. It is about twenty feet high. Inside of the **Old Sheriff** and close to shore lies a rocky islet, covered only with grass, called **Hay Island**. There is a passage inside of it for light-draught vessels, but it is not safe for strangers.

The eastern shores of *Burnt-Coat Harbor* are mostly high and barren, with a very few scattered trees upon them. The western shores are more fertile, and show in places cultivated fields and grass-lands. There is a small settlement occupying both shores.

DESCRIPTION OF APPROACHES TO BURNT-COAT HARBOR.

I. *From the westward, outside of* **Isle au Haut.**

ISLE AU HAUT

lies on the east side of the entrance to *PENOBSCOT BAY*, about twelve miles to the westward of **Burnt-Coat Island**, nearly six miles long in a N N E. and S S W. direction, and has an average width of a little over two miles. It is easily recognized by its high land, being highest in the middle and sloping gently toward its north and south ends. It is much the highest land in this vicinity, and is for the most part heavily wooded. There is a good harbor on its northwest side, between it and **Kimball Island**, called *ISLE AU HAUT THOROUGHFARE*, and a settlement occupies both shores. The rest of the island is very thinly settled.

Coming from the westward, outside of everything, the high land of **Isle au Haut** will be first seen, and on approaching it its southwestern extremity, called **West Head**, will be passed first, and then its southeastern point, called **East Head**. Both are steep, rocky bluffs, and each has a small, rocky island lying close to it, called, respectively, **West** and **East Ear**. The large cove contained between **East** and **West Heads** is not safe for strangers, and dangerous ledges lie off the south shore.

Passing **East Ear**, two rocky islets will be seen to the northward, called

SPOON ISLANDS,

lying east and west from each other off the east shore of **Isle au Haut**; the easternmost, called **Great Spoon Island**, being nearly three miles from the shore, is of moderate height, rocky, and bare except for a few scattered trees on its summit; lies nearly NORTH and SOUTH, and is two-thirds of a mile to the eastward of **Little Spoon Island**. There is a channel between these two islands, but strangers should not attempt it. **Little Spoon** is about half a mile long, lies N N E. and S S W., is rocky, and bare except for a heavy growth on its northern end. This north end is the highest; while on **Great Spoon** the highest land is at the south end. When past the **Spoon Islands** a large, high, wooded island will be seen just to the westward of **Burnt-Coat**, called

MARSHALL ISLAND.

Its southwestern end is remarkable as showing bare, yellow rocks, with a sickly growth of spruce and fir. Behind this the land rises to a considerable height, with a dense growth of black-looking trees. This island lies nearly N N E. and S S W., is over two miles long, and has an average width of a little over a mile. There are dangerous

ledges in its vicinity, and it should not be approached too closely by strangers. It is about two miles and a quarter to the west of *Burnt-Coat Harbor* entrance.

Off the southeastern end of **Marshall Island** lies

HERON ISLAND,

marking the north side of the passage leading to *Burnt-Coat Harbor*. It is a low, rocky islet, its eastern end covered with a thick growth of scrubby spruce, while its western end is bare of trees, and has a single house. Off its eastern end lies a bare, rocky islet, which is not named.

The south end of **Heron Island** bears from the rear **Light-House** at **Burnt-Coat** S W. ½ S., three miles distant. There is a good beating-passage between **Marshall and this island**, obstructed at its northwestern end, however, by a ledge covered at high water.

When past **Heron Island**,

GREEN ISLAND

will be seen to the northeastward. This is on the **Burnt-Coat** side of the passage, and is to be left to the eastward, there being no passage between it and **Burnt-Coat Island**. It is of moderate height, rocky, and entirely bare of trees. (See page 227.)

Well to the westward of the range-lights will be seen

HAT ISLAND,

easily recognizable by its yellowish bald head appearing above the trees which cover its slopes. It is of considerable height, and well wooded except on its summit, which is bare. It lies off **Gooseberry Point**, a high, white, rocky head, dotted with scrubby trees here and there. There is a passage between the point and the island, which is sometimes used by those living in the vicinity.

RING-TOWN ISLAND,

a small but high, rocky island, lying off the eastern shore of **Marshall Island**, near its north end, is covered with a growth of scrubby firs, spruce, and birch, but its sides are bare, and show conspicuous white rocks. A bare rock lies a quarter of a mile S E. by S. from the island.

HARBOR ISLAND

lies in the middle of the entrance to *Burnt-Coat Harbor*, and is to be left to the eastward. Seen from the westward it appears as a somewhat bluff, rocky island, partly wooded and partly bare; and lies just to the northward and eastward of **Green Island**. (See page 226.)

DANGERS
IN APPROACHING AND ENTERING BURNT-COAT HARBOR FROM THE WESTWARD.

I. *By the main channel.*—When up with **Isle au Haut**, beware of the *Roaring Bull*, lying about a mile and a quarter off the south shore, about midway between **East and West Ears**. It is very dangerous, breaks heavily, and *is not buoyed*.

When past the **Spoon Islands** and on the course for the **Range Lights**, cross *a ledge with five fathoms*, lying to the eastward of **Heron Island**, exactly on the range of the **lights**. It is called *Five-Fathom Rock*, and is not dangerous except in heavy weather or to vessels of the largest draught. It can be avoided, when in its vicinity, by simply opening the range to the eastward or westward, as the rock is small.

Heron Island should receive a berth to the northward and westward, as its southern end, called **Heron Island Point**, is shoal.

About three-quarters of a mile to the southwestward of **Marshall Island South Point** lies *Spirit Ledge*, a bare rock or islet, surrounded by many sunken ledges. It is not in the way of vessels bound into *Burnt-Coat Harbor* unless they are beating to windward. There is a good passage, with over three fathoms, between this ledge and **Marshall Island.**

Ring-Town Island Ledge is a bare rock a quarter of a mile S E. by S. from **Ring-Town Island,** and is also not in the way of vessels unless beating to windward.

Harbor Island Ledge, lying off the north shore of **Harbor Island,** bearing from the rear **Light-House** S. by E., a quarter of a mile distant, is to be left to the southward, the north shore of the entrance being kept aboard.

The **Old Sheriff,** as before described, is a rocky islet, formed by two round humps about twenty feet high. It lies to the westward of **Harbor Island,** and bears from the rear **Light** WEST, and from the front **Light** W. by N. These are all the dangers in approaching *Burnt-Coat Harbor.*

SAILING DIRECTIONS.

When to the eastward of **Isle au Haut,** bring the two **Lights** in range, which will be on a bearing of about N N E., and steer for them until within two or three hundred yards, when haul off about N E. by E. to pass them. When they are fairly abaft the beam steer N. ½ E., and anchor at pleasure. Not less than five fathoms may be taken in on the above courses.

APPROACHES FROM THE EASTWARD.

2. *In coming from the eastward to enter this Harbor*, first pass

LONG ISLAND,

a large island about two miles and a half to the southward of **Burnt-Coat Island,** and off its southeastern end. It is the southernmost of the islands lying off the entrance to *Blue Hill Bay*, lies nearly EAST and WEST, and is about a mile and a half long and nearly one mile wide, but is very irregular in shape, being indented by numerous coves, some affording good shelter.

On its north shore is a *very convenient little Harbor of refuge*, formed by a small and narrow cove making to the southward, and protected from northerly winds by an islet called **Harbor Island.** This is called *LUNT COVE* or *LUNT HARBOR*, and is often resorted to by vessels of light draught. It would not be advisable, however, for a stranger to attempt to enter it without a pilot. There is a small settlement here, but most of the island shows rocky and thickly-wooded shores.

Between **Long** and **Burnt-Coat Islands** are several small, rocky islands, some having good passages between them. Of these the most important are the two **Sisters,** lying off the southeastern end of **Burnt-Coat,** the easternmost being about one mile from it, and **Crow Island,** lying nearly in the middle of the passage between the **Sisters** and **Long Island.** It is not usual for strangers to attempt either of these channels, but to go to the southward of **Long Island,** steering toward **Heron Island** until the **Lights** are brought in range.

The eastern shore of **Burnt-Coat** when viewed from the eastward will appear low and very thickly wooded with a variety of trees. Here and there, on higher land back of the shore, appear cleared fields and a few houses, but as a rule this side of the island is very thinly settled.

John Island is a small, rocky island, lying about a mile and a quarter to the westward of **Long Island,** off its northwest end, and is not approached by vessels wish-

ing to enter *Burnt-Coat Harbor* unless using the passage to the northward of **Long Island**, when it is to be left to the southward.

There are several other islets scattered over the space between **Long** and **Burnt-Coat Islands**, but most of them are nameless; and a detailed description of them all would tend but to confuse.

SAILING DIRECTIONS.

II. *To come from the eastward, south of* **Long Island**.—Pass to the southward of **Long Island** and steer to the westward until the two lights on **Hockomock Head** are in range, when steer for them, leaving **Green Island** to the eastward and **Heron Island** to the westward, and when the **Lights** are close aboard haul to the eastward to pass them, and follow the directions given for the harbor, on page 229. Any stranger may enter this harbor by following the above directions.

DANGERS
IN APPROACHING BURNT-COAT HARBOR FROM THE NORTHWARD.

Coming through *Deer Island Thoroughfare* or *Merchant Row* and wishing to enter this harbor, beware, first, of *Hat Island Ledge*, bare at half-tide, lying about **NW.** from the island, a quarter of a mile distant. This island should receive a berth of six hundred yards to the eastward to avoid the ledge.

At night beware of *Ring-Town Island Ledge*, which is always bare, and lies a quarter of a mile SE. by S. from **Ring-Town Island.**

Egg Rock is a mass of bare rock lying about two miles from the west shore of **Burnt-Coat**, about **NW.** from **Seal Cove Head.** Southwest of it, about a quarter of a mile, there is a *detached rock, with about nine or ten feet water*, called *Sunken Egg Rock.* In smooth times the bottom is visible on this rock at low tides, and as it is right in the track of vessels who use this passage a buoy will be recommended upon it. In the absence of marks, keep the **Burnt-Coat** shore aboard to avoid this rock.

This channel between **Burnt-Coat** and **Marshall Islands** is quite wide, being nearly two miles from shore to shore. There are not many obstructions, the only really dangerous one being *Sunken Egg Rock*, (mentioned above.) It is a passage, however, not likely to be used by strangers, as it presupposes having come through *York Narrows*, *Deer Island Thoroughfare*, or *Merchant Row.*

ORONO ISLAND,

lying close in with the north shore of **Burnt-Coat Island**, on the south side of *Casco Passage*, and on the north side of *York Narrows*, is thickly wooded, its north end extending into a low, rocky point, with two or three trees. When viewed from the westward it shows as a wooded island, highest at its south end, a bare, bluff, rocky head, with white face, and has a few trees clinging to its precipitous sides. Its little **Thrumbcap**, the low, rocky point above mentioned, looks like a separate island.

BLACK ISLAND

lies on the north side of the *Casco Passage*, about half a mile to the northward from **Orono.** It lies **NW.** and **SE.**, is a little over half a mile long, and triangular in shape, the narrowest part being at the eastern end. It is low, rocky, and thickly wooded.

CALF ISLAND,

lying northwest of **Black Island**, about a third of a mile distant, is somewhat higher than the latter, and part of its southern face is cleared, having a house and out-buildings

upon it. Low, thick woods, mostly spruce, occupy the higher lands. The island lies nearly NORTH and SOUTH, and is about three-quarters of a mile long.

Next to the eastward of **Calf Island**, and about four hundred yards from it, lies

JOHN ISLAND,

a low islet, covered with a thick growth of stunted spruce and fir except at its east and west ends, which are low, rocky, and bare.

POND ISLAND

lies about one mile to the northward of **Black Island**; is nearly circular in shape, and about three-quarters of a mile in diameter. On the south side it shows cleared and gently-sloping fields backed by woods. The middle is low, mostly cleared, but has some scrub growth, while the northeastern end terminates in a round head covered with a very thick growth of trees, presenting a sufficiently remarkable appearance.

EAGLE ISLAND

lies between **Pond** and **Black Islands**; is low, rocky, and wooded, the rocks having a whitish appearance. Close to it, to the westward, lies a low, bare, rocky islet, called **Sheep Island.** It will seem part of **Pond Island** on passing to the southward of it, but is identified by a huge boulder on its western end, which, at a distance, looks like a large house.

THE SHIP AND BARGES,

or **Ship Island** and the **Barges,** are a group of islets and rocks lying to the eastward of **Pond Island** and on the west side of the main entrance to *Blue Hill Bay.* Their average distance from **Pond Island** is about one mile and from the **Mount Desert** shore about two miles and a half. There is good water among these islands, and they may be passed on either hand, but the main channel leads to the eastward. This group is easily recognized by the wooden spindle with cask on top, placed on the northernmost of the **Barges,** which is bare at half-tide.

EASTERN SHORES

OF BLUE HILL BAY FROM BASS HARBOR TO OAK POINT.

From **Bass Harbor Point,** the eastern point of entrance to *Bass Harbor*, it is a mile and a quarter to

BLACK COVE,

a long but shallow cove on the west side of **Mount Desert Island,** but of no importance. Anchorage for light-draught vessels may be found in its mouth in from six to twelve feet, but the cove is dry at low water for more than half its length. There are dangerous ledges along the shore between this and *Bass Harbor*, and it is not safe for strangers to approach nearer than four hundred yards, as none of the ledges are buoyed.

Half a mile to the northward of *Black Cove* lies

GOOSE COVE,

extending in a N E. and S W. direction into the west shore of **Mount Desert,** having from six feet to six fathoms, unobstructed except by a *twelve-feet rock* on the south side of the entrance; and the water shoals gradually, so that the lead will be a sufficient guide to the anchorage. The cove has an average width of a little over six hundred yards, affording excellent and secure shelter. The shores of both this and *Seal Cove* are of moderate height, mostly wooded, but with cleared fields here and there,

and there is a small settlement at each place. From *Goose Cove* to the western entrance of *Trenton River* is a little over five miles. The shores are diversified with cleared and wooded slopes, and in some places pretty well settled.

About a mile and a half above *Goose Cove* lies

SEAL COVE,

one of the best anchorages on this shore of the bay. It is a large cove, of irregular shape, lying nearly EAST and WEST, and is about three-quarters of a mile long and five-eighths of a mile wide at the usual anchorage; but it contracts to a small stream at its head, where it is connected with a large lake called *SEAL COVE POND.* There are some rocks lying near the shores, for the most part out at low water, and the main entrance is unobstructed. Good anchorage is always to be found here, and the shores are pretty thickly settled.

Just to the northward of *Seal Cove* lies a cleared island of moderate height, with somewhat steep shores, and joined at low water to the main land of **Mount Desert.** It lies nearly NORTH and SOUTH; is about half a mile long; is partly under cultivation; and its eastern shore has a thin fringe of trees.

In the middle of the west entrance to *Trenton River*, and about two miles above *Seal Cove,* lies

HARDWOOD ISLAND,

about three-quarters of a mile to the southwestward of **Bartlett Island,** and about a mile and a quarter to the eastward of the southeast end of **Long Island.** It extends N N E. and S S W., and is about a mile long, of moderate height, its southern end bare, but its northern end fringed with trees. The water is deep on both sides.

BARTLETT ISLAND,

large, of moderate height, and wooded with a scrubby growth except on its north side, where is a thick growth of oak, birch, and other trees; is thinly settled on the west shore, but on the east side there are many houses. The island lies about N N E. and S S W., and is three miles and a half long. The passage between it and **Mount Desert Island** is shoal and not fit for strangers.

TRENTON RIVER, as before mentioned, (see page 198,) connects *Blue Hill* and *Frenchman Bays,* and is entirely unfit for the use of strangers. It is very shoal, and requires the assistance of a pilot for its navigation.

OAK POINT,

the north point of the western entrance to *Trenton River,* is also the east point of entrance to *Union River Bay.* It is low and dotted with clumps of trees, and is about a mile to the northward of **Bartlett Island,** between which and this point lies the principal entrance to *Trenton River.*

WEST SHORES OF BLUE HILL BAY.

NASKEAG POINT,

the western point of entrance to the bay proper, is the southern extremity of the peninsula of **Brooklin,** and is also the eastern point of entrance to *Eggemoggin Reach.* It is high, smooth, and gently sloping; bare of trees except on the summit, where there is a small growth of stunted spruce, and has a number of houses on its eastern end. Many small islands lie off this point, in *Eggemoggin Reach* and in the western entrance to *Blue Hill Bay.* Of those in the *Reach* the most important are **White Island, Hog Island,** and **Harbor Island.**

White Island is low and thickly wooded, with here and there a grassy spot, and lies nearly in the middle of the entrance.

Hog Island is remarkable for the high, bold, bare, white, rocky head on its southwestern end, called **Devil Head.**

Harbor Island lies close in with the shore of **Naskeag Point**, and is low and thickly wooded.

MAHONEY ISLAND,

lying in the middle of the western entrance to *Blue Hill Bay* and about three-quarters of a mile to the southward and eastward of **Naskeag Point**, is a small, low islet, dotted here and there with scrubby trees, but otherwise bare. It is usual to pass to the westward of it, though there is a good passage between it and **John Island.**

SMUTTY-NOSE ISLAND

lies on the west side of the channel leading between it and **Mahoney Island**, and is simply a bare, rocky islet, destitute of trees.

Between **Harbor Island** and **Naskeag Point** is a good anchorage for vessels of light draught, called *NASKEAG HARBOR.*

Passing up the bay through this western channel, pass to the westward of the group composed of **Black, Calf, John,** and **Pond Islands. Black Island** will appear thickly covered with woods, as will also **Calf Island,** while **John Island** will show on its western end a bare, rocky shore, backed by stunted spruce and fir.

Pond Island will appear of moderate height, thickly wooded at its southeastern end, and showing a large grove of tall trees in the middle, while its western end will appear bare of trees and dotted with houses. The little green islet to the northeastward is **Lamp Island.**

The most prominent object in coming in by this channel is

EGGEMOGGIN LIGHT-HOUSE,

on **Green Island,** a low, bare, rocky islet but a little above sea-level, lying close in with the western shore of the bay, about a mile and a half above **Naskeag Point.** It will be seen off the end of **Flye Island,** of which it will appear a part. The **Light-House** is a round, white tower, twenty-two feet high, and shows a fixed white light of the fifth order of Fresnel from a height of twenty-six feet above the sea, and visible nine miles. It is the guide to *Blue Hill* and *Ellsworth.* The keeper's dwelling, to which it is attached, is painted brown. The geographical position is

Latitude - - - - - - - -	44° 14′ 54″ N.
Longitude - - - - - - - -	68° 29′ 52″ W.

FLYE ISLAND

is very low and sandy, scarcely elevated above high water; has one house upon it, and two or three lone trees at long intervals. Both this and **Green Island** lie in the mouth and on the north side of

HERRICK BAY,

making in to the northwestward, a little over a mile above **Naskeag Point. Flye Point** forms the north point of entrance to this bay; is high, grassy, and gently sloping, and has several houses on its eastern face. There is no passage between it and **Flye Island.**

Herrick Bay affords anchorage for vessels bound through *Eggemoggin Reach* or to the eastward, when caught by foul winds or head tides. It is about two miles long

and has an average width of half a mile; but the channel is narrow and its shores are foul. Its banks are of moderate height, steep, and partly wooded, but in most places bare of trees. At its head there is quite a settlement, as the village of **Brooklin** occupies the neck of land between it and *Eggemoggin Reach*. This bay is not recommended to strangers unless in case of necessity, but there are no directions needed for entering it except to keep the middle of the passage.

CHANNEL ROCK

is passed to the eastward before coming up with **Eggemoggin Light**; and is a high, round rock, lying between **Pond** and **Tinker Islands**, forming one of the chain of rocks and islands extending from **Burnt-Coat Island** to the head of the bay.

SAND ISLAND,

a low sand-spit, about six hundred yards to the northeastward of the **Light-House** on **Green Island**, may be passed on either hand, but it is usual to pass to the westward.

TINKER ISLAND

is the large island lying about two miles to the northward of **Pond Island**, nearly in the middle of the bay, and separating the eastern from the western channel to **Blue Hill**. It will appear as a large island of moderate height, gently sloping, bare at both ends and thickly wooded in the middle, and is about a mile and three-quarters long in a NE. and SW. direction. To the southward of it, about a quarter of a mile, lies **Bar Island**, a small, low islet, marking the north side of a wide but not very deep passage between it and **Ship Island**. Through this passage about sixteen feet may be carried, but the channel is narrow, long shoals extending off from **Bar Island** more than half the way across.

From **Flye Point** the course of the west shore is nearly NORTH for about two miles and a half to

HERRIMAN POINT,

the western point of that portion of the bay locally called *Blue Hill Bay*, and leading up between the main land and **Long Island** to the settlement of **Blue Hill**. This point is long, quite low, and fringed with a tolerably thick growth of trees. Behind it the land rises to a moderate height, gently sloping, and diversified with woods and cultivated lands. It is easily recognized in coming from the southward, as the shore between it and **Flye Point** is mostly cleared, this being the first low, thickly-wooded point met with.

ALLEN COVE,

making into the southward behind **Herriman Point**, affords excellent anchorage, with deep water. There is nothing in the way, it being simply necessary to round **Herriman Point** and steer boldly into the cove, anchoring at discretion.

LONG ISLAND

is the largest island in the *Bay*, and separates the east and west channels near its head. It is about five miles long in a NORTH and SOUTH direction, of somewhat irregular shape, but has an average width of about a mile and a half. It is nearly two miles to the northward of **Tinker Island**, and its southern end, called **Hopkins Point**, lies due EAST from **Herriman Point**. Viewed from the southward, **Long Island** will appear large, high, partly wooded and partly cleared and cultivated, with groups of houses here and there. **Hopkins Point** is long, low, gently sloping, and grassy to its southern end except

on its southwest side, where there is a thin fringe of scrub. A couple of fish-houses stand near the shore, and a little green, rocky islet, with one or two spruce trees, lies close in with the shore. This is called **Long Island Hub.**

The main channel from the westward to **Ellsworth** leads through between **Hopkins Point** and **Tinker Island.**

Long Island is thinly settled, the few houses that are there lying along the south and west shores; but the eastern shore is mostly covered with high, thick woods.

The west shore of Blue Hill Bay, from *Allen Cove*, takes a long curve to the westward and then to the northward, forming a sort of bay opposite to the southwest point of **Long Island**, and called the **Rockland Shore.** Anchorage may be had along this shore, or anywhere between **Long Island** and the main, well sheltered and protected from all winds. From **Herriman Point** to **Blue Hill** is about seven miles, the bay being one mile wide in its narrowest part, but obstructed by sunken ledges, none of which are buoyed, and it is necessary to take a pilot either at *Herrick Bay* or **Tinker Island.** Sailing directions will, however, be given, as it might become necessary for a stranger to enter it without a pilot. The west shore from *Allen Cove* to **Blue Hill** is of moderate height, gently sloping, and diversified with wooded and cleared lands dotted with houses.

The settlement lies at the south base of the mountain and extends part of the way up its slopes. It is a flourishing village, and does considerable business in lumber, granite, and ship-building. There is an excellent passage into this harbor along the north shore of **Long Island** and between it and **Newbury Head,** the western point of entrance to *Union River Bay.*

NEWBURY HEAD

is the southern extremity of a very long and narrow peninsula of the main land of **Surry**, running about SSW. between *Union River Bay* and *MORGAN BAY*, the latter being on its west side. It is mostly gently-sloping low land, cleared, cultivated, and well settled, the trees standing in small groups here and there, as in a park. The head is high, bold, rocky, partly bare and partly wooded, and its summit is covered with a growth of spruce. SSW. from it, and connected with it at low water, is a small, low, rocky island called **Treworgy Hub.**

MORGAN BAY,

making to the northward behind **Newbury Neck,** has good water, but is of little importance. It is about three miles long, and a mile and a half wide at its mouth, gradually contracting to about a third of a mile at its head, where is a small settlement.

SHORES OF UNION RIVER.

Union River Bay (or *Union River* as it should properly be called) enters between **Oak Point** and **Newbury Head,** running in a NNE. direction for about ten miles to **Ellsworth.** It has an average width of about a mile and a half for about seven miles above **Newbury Head** to **Weymouth Point,** where it suddenly contracts and becomes a narrow stream only a few hundred yards wide, and gradually diminishing to about one hundred and fifty yards at the town of **Ellsworth.**

Oak Point, the eastern point of entrance, (see page 232,) is also the north point of the west entrance to *Trenton River*, and is low and dotted with clumps of trees.

Both shores of the bay are nearly straight, running between cleared and cultivated lands, rising with a gentle slope and dotted with groves of trees. Two miles above **Newbury Head** and on the west shore is **Hopkins Point,** which is low and fringed

with spruce trees. It must not be confounded with the south point of **Long Island**, having the same name.

Four miles above **Newbury Head** lies

TREWORGY OR CARRYING-PLACE COVE,

also on the west shore. Its north point is low, grassy, and fringed with a few small birch and maple; but most of it is cleared and under cultivation. It is called **Treworgy Point.** There is good anchorage in the cove, and it is often used by coasters.

WEYMOUTH POINT

lies about seven miles above **Newbury Head** and on the west side of the *Narrows;* it is low, rocky, and thickly wooded. On its eastern side it is bold-to, vessels frequently lying, to load wood, on that side; but off its south end there are ledges, the outermost of which is three-quarters of a mile SSW. from the point. This point also forms the eastern point of entrance to

PATTEN BAY,

a long arm of *Union River*, extending to the westward about two miles to the village of **Surry.** Its shores are of much the same character as those of *Union River*, but somewhat higher; cleared and settled, and diversified with wooded and cleared lands. There are no sailing directions needed for *Patten Bay*—it being only necessary to keep midway between the two banks.

It is necessary for vessels bound to **Ellsworth** to anchor at **Weymouth Point** and take a tug, as the river is too narrow for working with a head wind.

THE NARROWS

commence about three-quarters of a mile above **Weymouth Point** and run **NORTH** and **SOUTH.** The east point is called **Purrington Point**; off which there is a **red spindle** with an oval cage on top, and a *red spar-buoy* just to the westward. The west point, called **Lord Point,** is low, grassy, and has a small ship-yard on it.

Ellsworth is one of the largest towns in this section, and does an immense lumber business. The river above **Weymouth Point**, however, is winding and very narrow, and it is almost always necessary to have the assistance of a tow-boat. It is the custom for vessels, unless they have a fair wind and a pilot, to anchor at **Weymouth Point** and wait for a tug.

The depth in the channel has been very much diminished of late years by the deposit of saw-dust and slabs from the mills, forming a regular bar, and in the course of time will close the river to navigation.

DANGERS
IN APPROACHING AND ENTERING BLUE HILL BAY
FROM THE EASTWARD.

I. *Entering the Bay by crossing Bass Harbor Bar.*—The first danger in this passage is

BASS HARBOR BAR,

extending from **Bass Harbor Head to Gott Island**, having fourteen feet at mean low water in the channel across it. The soundings are pretty regular, varying from thirteen to sixteen feet over almost the entire length of the bar, but there are one or two spots with twelve feet; and a long ledge makes off from **Gott Island** along the western edge

of the bar for a little over half a mile, on which there is as little as eight feet water. This narrows the channel across the bar, compelling vessels to keep **Bass Harbor Head** rather more aboard. (See also page 223.)

Gott Island should not be approached on its north side by any one not perfectly familiar with the shoals extending to the northward, which are many and dangerous.

Crossing *Bass Harbor Bar*, the course leads along the west shore of **Mount Desert Island**, leaving **Black Island**, **Pond Island**, and the

SHIP AND BARGES

to the westward. The channel is over two miles wide and perfectly unobstructed. If beating to windward do not approach the **Barges** very closely, although they are quite bold-to both on their north and east sides. Upon the northernmost of them, which is a little over half a mile to the southward of **Ship Island**, is placed a **wooden spindle** thirty feet high, painted red, and having a cask on top. It is on the north end of the rock, which is dry at half-tide.

The southern end of **Ship Island** should not be approached in beating to windward nearer than an eighth of a mile, and its eastern side not nearer than five hundred yards, as both sides are shoal.

GOOSE ROCK.

On the eastern side of the channel, about half a mile to the northward of *Goose Cove*, and about four hundred yards from shore, lies a small bare rock called **Goose Rock.** There is a passage for light-draught vessels in-shore of it, and it is quite bold-to on its western side.

THE NUB.

About five-eighths of a mile to the northward of **Goose Rock**, and nearly three hundred yards from shore, lies another bare rock, called **The Nub.** It is half a mile below the entrance to *Seal Cove*, and there is no passage inside of it at low water, except for vessels of very light draught. The **Nub** should not be approached on its south side nearer than three hundred yards, as there is a long ledge extending from it to the southward, which is bare at extreme low tides.

On the west side of the channel vessels should not approach *the south end* of **Bar Island** without a pilot, as it is quite shoal more than half-way across to **Ship Island**, and there is not more than seventeen feet between the two. When past **Bar Island**, there are no dangers until approaching **Long Island**, when look out for

HOPKINS POINT SHOAL,

making in a southerly direction nearly a quarter of a mile from the point, *and is not buoyed.*

Bound to **Blue Hill**: When past **Tinker Island**, pass to the westward and use the western passage; or continue up the main channel between **Hardwood** and **Long Islands**, pass between the latter and **Newbury Head**, and enter by the channel north of **Long Island.**

But if bound to **Ellsworth**, pass between **Hardwood** and **Long Islands**, (as before,) and steer up for **Oak Point**, passing between **Bartlett Island** and **Newbury Head.** There are no dangers in the channel, and it affords good beating-room until approaching **Weymouth Point**, where it is usual to anchor. This point is shoal, there being several ledges off its southern end; and three-quarters of a mile S S W. from it is a detached ledge, called

TUPPER LEDGE,

bare at low water, and *not buoyed.* A passage with good water exists between it and

Weymouth Point, but it is not safe for strangers. It may be remarked, however, that when near **Purrington Point** *a black spar-buoy* may be seen on the west side of the river. This is on *Horton Rock*, which is out at low water, and is to be left to the westward.

Off **Purrington Point** a *ledge extends*, on the dry part of which is **a red spindle with oval cage on top**, and *a red buoy to the westward of it* to mark the edge of the channel, which is here very narrow.

In the passage to **Blue Hill**, between **Long Island** and **Newbury Neck**, there are no dangers. In that leading between **Tinker Island** and **Long Island** the first danger is *Hopkins Point Shoal*, a quarter of a mile to the southward and eastward of **Hopkins Point**, and not marked in any way. When past it, a *red spar-buoy* will be seen off the northwestern end of **Tinker Island**, about three-quarters of a mile from it, on

COW AND CALF LEDGES,

a dangerous group of rocks, two feet out at half-tide, lying **N W.** from the northwestern end of **Tinker Island**, with no passage in-shore of them. The buoy is placed about one hundred yards to the northwestward of the ledge, in twenty feet of water, and is to be left to the southward by vessels using this passage. Past this buoy the channel is clear, affording good beating-room until past **Long Island** and up with the harbor entrance. Do not attempt to enter the harbor without a pilot, as it is full of shoals.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BLUE HILL BAY FROM THE EASTWARD.

I. *By crossing Bass Harbor Bar.—Bass Harbor Bar* is crossed on a course of **W.** by **N. ½ N.**, in fourteen feet water. This course continue past the entrance to *Bass Harbor* and until **Bass Harbor Head-Light** bears **E. ½ S.** and the western extremity of **Bass Harbor Point** bears **N. ½ E.**, then in fourteen and a half fathoms, soft bottom, steer **N W. by N.** along the west shore of **Mount Desert Island**, about for the southern end of **Long Island.** On this course there is not less than twelve fathoms until up with **Tinker Island.** Pass about midway between **Long** and **Hardwood Islands** on a **N. by E. ½ E.** course, and when abreast of the southeast point of the former steer **N N E.**, which leads safely up the middle of *Union River Bay*, after which no further directions are necessary except to look out for *Tupper Ledge*, lying **S S W.** from **Weymouth Point**, and is easily avoided by keeping the eastern shore aboard.

The above courses cross *Bass Harbor Bar* in fourteen feet water; pass one hundred and fifty yards to the northward of *Gott Island Shoals;* about a mile and a half to the eastward of the **Ship and Barges**; nearly half a mile to the westward of *Goose Rock;* and three-quarters of a mile to the eastward of *Hopkins Point Shoal.*

On the above courses, to enter Blue Hill Harbor.—1. By the main entrance between **Long** and **Tinker Islands**: Continue the course **N W. by N.** toward **Long Island** until nearly abreast of the northern end of **Tinker Island** and it bears about **WEST**, when there will be seen the *red spar-buoy on Cow and Calf* to the westward, and steer **N W. ½ W.** toward the **Rockland** shore, keeping about one mile from **Tinker Island** to avoid the ledge. Continue this course until about midway between **Herriman Point** and the southwest end of **Long Island.** After this keep the middle of the passage, as there are no obstructions and no sailing directions are necessary. When nearly up with the northern end of **Long Island** and **Blue Hill** bears **N. by W. ½ W.** steer for it, which will lead up to the harbor entrance.

On the above courses there is not less than twenty-one feet at low water. They pass a quarter of a mile to the northward of the *Cow and Calf Buoy* and a mile to the southward of *Hopkins Point Shoal.*

II. *To approach and enter Blue Hill Bay from the eastward by the Main Channel, between* **Placentia** *and* **Burnt-Coat Islands.**—From about one mile and a quarter due SOUTH from **Baker Island Light** steer W. by S., leaving the **Duck Islands** to the southward, and heading nearly for the southern end of **Burnt-Coat Island.** On this course continue until the middle of the passage between **Placentia** and **Burnt-Coat** bears N N W., or the southern end of **Long Island,** in *Blue Hill Bay,* bears N. by W. ½ W.; steer the latter course, which leads safely up the bay to abreast of **Tinker Island,** and when the middle of **Newbury Head** bears N. by E. steer N. by E. ½ E., between **Long** and **Bartlett Islands,** and then N N E. up the bay.

The above courses pass nearly one mile to the eastward of the **Ship and Barges**; one mile to the eastward of **Bar Island**; about three-quarters of a mile to the westward of **Goose Rock**; and about a mile to the westward of the **Nub,** off **Mount Desert** shore.

On the above courses, to enter Blue Hill Harbor.—When on the N. by W. ½ W. course the north end of **Tinker Island** bears WEST, steer N W. ½ W. toward the **Rockland** shore. This course leads up the middle of the passage, midway between **Hopkins Point** and **Tinker Island,** and between **Herriman Point** and the southwestern end of **Long Island.** When exactly between the two latter, steer N. ¾ W. until past the southwest end of **Long Island,** when keep the middle of the passage until **Blue Hill** bears N. by W. ½ W., when steer for it, which leads safely to the harbor entrance.

The above courses pass about a quarter of a mile to the northward of *Cow and Calf;* half a mile to the southward of *Hopkins Point Shoal;* and carry not less than three and a half fathoms.

DANGERS

IN APPROACHING AND ENTERING BLUE HILL BAY.

III. *By the passage between* **Burnt-Coat** *and* **Marshall Islands.**—This passage should never be used by strangers. It has many ledges and shoals, *none of which are buoyed,* and therefore ought not to be attempted except in case of urgent necessity. To enter it from the westward it is necessary, when to the eastward of **Isle au Haut,** to get the middle of the passage to bear N. ¾ W., which course will lead almost directly for the western end of **Naskeag Point.** On this course the first danger met with is

RINGTOWN ISLAND LEDGE,

(see page 228,) always bare; lies a quarter of a mile S E. by S. from **Ringtown Island,** and is not dangerous except at night. The course leads well to the eastward; and the next danger met with is on the eastern side of the channel, and is called

HAT ISLAND LEDGE,

bare at half-tide; lies about N W. from the island, a quarter of a mile distant, and is not buoyed. The island should receive a berth of six hundred yards to the eastward to avoid this ledge.

Hat Island lies off **Gooseberry Point,** and there is a passage between it and the point for light-draught vessels. (See also page 228.)

When to the northward of *Hat Island Ledge,* beware of

SUNKEN EGG ROCK,

lying about two miles to the northwestward of **Seal Cove Head** and about a quarter of a mile S W. from **Egg Rock.** The latter is a mass of bare rock, and the ledge is detached from it, having about nine or ten feet over it at low water. In smooth times the bottom is visible on this rock, and as it is right in the track of vessels using this passage a buoy will be recommended upon it. In the absence of marks keep **Burnt-Coat Island** shore aboard.

Continuing the course to the northward, the next danger met with will be found off the eastern entrance to *Eggemoggin Reach*, and is called

RUDDER ROCK,

marked by a *buoy painted red and black in horizontal stripes*, and has four feet at mean low water. This ledge lies off the southeastern point of **Crow Island** (in *Deer Island Thoroughfare*) and about two hundred yards SSE. from it. *The buoy is on its southwest end*, and, by vessels using this passage, is to be left to the westward. When past it, the western passage into *Blue Hill Bay* will open between **Mahoney Island** and **Naskeag Point**, and the course turns to the northeastward, leaving **Mahoney Island** to the eastward and **Smutty-Nose** and **Naskeag Point** to the westward. On this course the first danger is

MAHONEY ISLAND LEDGE,

lying SW. from **Mahoney Island**, awash at low water. A *red spar-buoy*, marked No. 2, is placed in fifteen feet water on the northwest side of the ledge, and bears from **Devil Head**, on **Hog Island**, nearly ESE., and from **Eggemoggin Light-House** about SW. by S. It is to be left to the eastward.

When past **Naskeag Point** and steering toward **Tinker Island**, a *red spar-buoy* will be seen well to the eastward, and off the northwest end of **Pond Island**, on

POND ISLAND POINT,

here making with shoal water from the island to the buoy. The buoy is marked No. 4, is placed in eighteen feet, sandy bottom, and is intended as a warning to vessels beating to windward not to approach too close to this point of the island.

On approaching the **Light-House** on **Green Island** a *black spar-buoy* will be seen to the southward of the **Light**. This is on

FLYE POINT LEDGE,

a large reef extending from **Green Island** nearly three-quarters of a mile to the southward. The buoy is marked No. 1, and is placed in five fathoms on the southeast side of the ledge.

Nearly due WEST from this buoy, and on the eastward, will be seen, at the distance of a mile, a high, round, rocky islet, called

CHANNEL ROCK,

to be left to the eastward. When past *Flye Point Ledge* and this rock, the channel turns to the northward, and *a red spar-buoy* will be seen off the northwestern end of **Tinker Island**. This is on

COW AND CALF LEDGE,

previously described, (see page 238.) Past this buoy the channel is clear, affording good beating-room until past **Long Island** and up with the harbor entrance. Do not attempt to enter the harbor without a pilot, as it is full of shoals.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BLUE HILL BAY.

III. *From the westward by the passage between* **Burnt-Coat** *and* **Marshall Islands.**—When the middle of this passage bears N. ½ W. steer that course, which will lead nearly toward **Devil Head** in the eastern entrance to *Eggemoggin Reach*. This course continue until past the *red and black spar-buoy* on *Rudder Rock* and the middle of **Tinker Island** bears about N E. by E., when steer that course, passing between **Mahoney and**

Smutty-Nose Islands; and when fairly through, steer N E. by E. ½ E., aiming to pass well to the eastward of **Eggemoggin Light-House.** When past it, *if bound to Blue-Hill*, steer N. ½ W. until past the southwestern end of **Long Island**; after which keep the middle of the passage, and proceed as directed for this harbor, (pages 238 and 239;) *but if bound to* **Ellsworth** on the course N. ½ W., bring the houses on **Flye Island** to bear S W. by S ½ S. and steer N E. by N. ½ N. nearly, for **Hopkins Point.** This clears the buoy on *Cow and Calf*, and when made good should lead along the west shore of **Tinker Island** at the distance of a mile. When past the *Cow and Calf Buoy* steer to the eastward toward **Hardwood Island** until past **Hopkins Point**, when steer N N E. up *Union River Bay*, and follow the directions given for the harbor, (pages 238 and 239.)

DANGERS

IN APPROACHING AND ENTERING BLUE HILL BAY.

IV. *From the westward by the various Thoroughfares.*—Vessels from the westward come through either *Eggemoggin Reach, Deer Island Thoroughfare, Merchant Row, Casco Passage*, or *York Narrows;* but as only the two former can be navigated without a pilot, it is unnecessary to give more than a general description of the others.

Vessels having come through Eggemoggin Reach will meet—first, with *a red spar-buoy*, lying to the southwestward of **Mahoney Island**, on

MAHONEY ISLAND LEDGE,

awash at low water, placed in fifteen feet water on the northwest side of the ledge. It bears from **Devil Head**, on **Hog Island**, nearly E S E., and from **Eggemoggin Light-House** about S W. by S. It is to be left to the eastward. (See also page 240.)

When past **Naskeag Point** and steering toward **Tinker Island**, *a red spar-buoy* will be seen well to the eastward and off the northwest end of **Pond Island.** This is on **Pond Island Point**, here making, with shoal water, from the island to the buoy. It is marked No. 4, placed in eighteen feet water, sandy bottom, and is intended as a warning to vessels beating to windward not to approach this point of the island too closely. (See also page 240.)

On approaching **Eggemoggin Light-House** *a black spar-buoy* will appear to the southward of the light, on

FLYE POINT LEDGE,

a long ledge extending from **Green Island** nearly three-quarters of a mile to the southward. The buoy is marked No. 1, is placed in five fathoms on the southeast end of the ledge, and must be left to the westward. Nearly due EAST from this buoy will be seen **Channel Rock,** nearly a mile distant. It is high, round, and bare, and must be left to the eastward.

When past *Flye Point Ledge* and **Channel Rock**, the channel turns to the northward, and *a red spar-buoy* will be seen off the northwest end of **Tinker Island.** This is on

COW AND CALF LEDGE,

a bad half-tide ledge, consisting of one large and two small rocks, lying three-quarters of a mile N W. from the island. The buoy is in twenty feet water northwest of the rocks, and is to be left to the eastward.

The dangers in the passage leading to *Blue Hill Harbor* and **Ellsworth** have already been described. (See pages 236 and 239.)

The above dangers are common to all the passages leading from the *Thoroughfares;* but *vessels having come through Deer Island Thoroughfare* will, before meeting with

Mahoney Island Ledge, and after passing **Lazygut Island**, steer N E. by N. for **Crow Island** until the highest part of **Green Island** bears E. by N., and thus will avoid

RUDDER ROCK,

a dangerous sunken rock, with five feet at low water, lying about S S E., two hundred yards from the southeast point of **Crow Island.** The buoy is in fifteen feet water on the southwest end of the rock, and is painted *red and black* in horizontal stripes. When past this buoy, the course leads between **Mahoney** and **Smutty-Nose Islands,** passing to the westward of *Mahoney Island Ledge*, and joins the eastern channel into the bay. The same dangers are encountered as those above described, viz: *Pond Island Point, Flye Point Ledge, Channel Rock*, and the *Cow and Calf.* (See pages 240.)

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BLUE HILL BAY AND UNION RIVER.

IV. *From the westward, having come through Eggemoggin Reach.*—When through the *Reach*, bring the middle of **Tinker Island** to bear N E. by E. and steer for it, passing between **Mahoney** and **Smutty-Nose Islands.** When fairly through, steer N E. by E. ½ E., leaving **Eggemoggin Light-House** well to the westward, and when past it haul up N. ½ W., and proceed as previously directed for **Blue Hill** and *Union River.* (See pages 238–239.) Not less than three fathoms may be taken on the above courses up to the entrance to **Blue Hill** and past **Newbury Point** in *Union River;* and in some places there are from five to ten fathoms.

V. *From the westward, having come through Deer Island Thoroughfare.*—When past **Lazygut Island**, at the eastern end of the *Thoroughfare*, steer N E. by N. for the northwest end of **Crow Island.** Keep this course until the highest part of **Green Island** bears E. by N., when haul to the eastward and steer N E. by E. for **Mahoney Island**, aiming to leave it to the eastward and **Smutty-Nose** to the westward. When fairly through the passage, steer N E. by E. ½ E. until past **Eggemoggin Light-House**, when haul up N. ½ W., and follow the directions previously given. Not less than five fathoms can be taken through the *Thoroughfare*, and there is plenty of water everywhere in the bay until past **Newbury Head** in *Union River*, or the north end of **Long Island** in the approach to **Blue Hill.** The bar in *Union River* and the shoals in *Blue Hill Harbor* require the assistance of a pilot.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude west from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
					Feet.	
Bass Harbor Head Lt.	44° 13′ 18″	68° 20′ 14″	4ʰ 33ᵐ 20.9ˢ	F. red.	56	13
Burnt-Coat Harbor Lts	44° 08′ 00″	68° 27′ 00″	4ʰ 33ᵐ 48ˢ	Fixed.	42 & 75	11 & 14
Eggemoggin Light ..	44° 14′ 54″	68° 29′ 52″	4ʰ 33ᵐ 59.5ˢ	Fixed.	26	9

TIDES.

Corrected establishment at Bass Harbor, (approximate) 11ʰ 2ᵐ
Mean Rise and Fall of Tides ..... 10.1 ft.

VARIATION OF THE COMPASS.

The magnetic variation for 1875 is 15° 35′ W., with an approximate annual increase of 2′.

PASSAGES
CONNECTING PENOBSCOT BAY WITH BLUE HILL BAY.

Of these, as before mentioned, there are five, which, beginning with the northernmost and most important, are named as follows: First, *EGGEMOGGIN REACH*, commencing at **Naskeag Point** in *Blue Hill Bay*, and having a general northwesterly course to **Cape Rosier** in *Penobscot Bay*. Secondly, *DEER ISLAND THOROUGHFARE*, beginning at **Stinson Neck**, the southeast point of **Deer Isle**, and running to the westward along the south shore of **Deer Isle** into *Isle au Haut Bay*. Thirdly, *MERCHANT ROW*, passing between **McGlathery** and **Merchant Islands**, two large islands just to the northward of **Isle au Haut**. Fourthly, *CASCO PASSAGE*, leading between **Black** and **Orono Islands**; and lastly, *YORK NARROWS*, between **Orono** and the north shore of **Burnt-Coat Island**. Of these the first two are the only ones commonly used, the others being suitable only for vessels of light draught, or unfit for navigation without experienced pilots.

EGGEMOGGIN REACH,

a strait connecting *Penobscot* with *Blue Hill Bay*, runs between the main land of **Brooklin, Sedgwick,** and **Brooksville** on the north, and **Deer Isle** and **Little Deer Island** on the south, and is about fifteen miles long. Its general course is about N W.; its width at its eastern entrance (between **Stinson Neck** and **Naskeag Point**) about three miles, and thence it gradually diminishes until up with the north point of **Deer Isle**, when it further contracts to a little less than a mile. One mile to the westward of this (between **Byard Point** and **Little Deer Island**) it is only about seven hundred and fifty yards in width, and from this point it increases in width to *Bucks Harbor*, where it is two miles wide; between **Condun Point** and the northwest end of **Little Deer Island**, and between **Cape Rosier** and **Spectacle Island** at its western end, it is about a mile and a quarter wide. The main channel, however, passes to the southward of **Spectacle Island**. There is good water (not less than five fathoms) throughout its entire length, and it is the most commonly used of all the passages from *Penobscot Bay* to the eastward.

The western entrance to this *Reach* is obstructed by many islands, through and among which lead the various channels. Of these the most important, beginning at the eastward, are **Harbor, Hog, White** or **York Islands**, and **Conary Island**.

NASKEAG POINT,

the eastern point of entrance to the *Reach*, is high, smooth, grassy, gently sloping, and tolerably well settled. It is entirely bare of trees except on the summit, where there is a small grove of stunted spruce.

STINSON NECK,

in reality an island, sometimes called **Green Island,** lies on the western side of the east entrance in a nearly **NORTH** and **SOUTH** direction, and is a mile and three-quarters long. It is of moderate height and tolerably well settled, but its eastern shore is in most places thicky wooded. It lies off the east side of **Deer Island**, forming the eastern shelter to *South-East Harbor*.

CROW ISLAND

lies about two-thirds of a mile to the eastward of the southeast point of **Stinson Neck**; is low, with a thick clump of trees on its southeast end and scattered spruce over the rest of its suface.

WHITE ISLAND,

or **York Island,** lying nearly in the middle of the entrance, but on the western side of the channel, and a little over a mile to the northward of **Crow Island**, is low, thickly wooded, and rocky, with here and there a cleared, grassy spot; lies NW. and SE., and is about half a mile long. Between this and **Crow Island** there are several rocky islets off the east shore of **Stinson Neck**, which, however, are of little importance.

HOG ISLAND

lies on the eastern side of the channel and close in with the **Brooklin** shore. Seen from the westward, it appears a mass of bare, white rock, showing a bold, bluff head, called **Devil Head,** which is the southern end of the island. Its northern end is also high, bare, and rocky, and the two are connected by a strip of low land, so that, when to the westward and abreast of it, it appears like two rocky hills with a small valley between them. At the base of the northern head is a thick growth of spruce, the only trees on the island.

This island is two-thirds of a mile long in a NW. and SE. direction, and the channel into *Eggemoggin Reach* leads between it and **White Island.** There is good anchorage between **Hog Island** and the main land, where there is a **porgy-oil factory.**

HARBOR ISLAND,

next to the eastward of **Hog Island,** lies WNW. and ESE., close in with **Naskeag Point,** and is about half a mile long and thickly wooded. Between the island and the point there is a small harbor for vessels of light draught, called *Naskeag Cove* or *Naskeag Harbor*, but it is of little importance.

CONARY ISLAND.

Passing between **Hog** and **White Islands,** there will be seen ahead, bearing about NW., a grassy island of moderate height, bare of trees except for a peculiar growth of spruce clinging to its eastern head. This is **Conary Island,** lying W. by N. and E. by S.; about three-quarters of a mile long; and is off the eastern entrance to *South-East Harbor*. There is a single barn upon it, but no other houses. The courses pass to the eastward of it, between it and

BABSON ISLAND,

which is of moderate height, partly cleared and partly wooded, and shows a thick growth of woods on its western end, terminating in a grove of birch on its summit. At low water it is joined to another and smaller island, called **Little Babson Island,** which is barren, rocky, and dotted here and there with spruce.

When past **Conary Island,** the course still continues to the northwestward toward the

TORRY ISLANDS,

lying nearly EAST and WEST from each other, on the northeastern side of the channel. The eastern islet is small, being about a quarter of a mile in length, about thirty feet high, and entirely bare except for a lone tree in the centre. The western island lies three hundred and fifty yards to the westward of it, in about a NW. and SE. direction, and is over seven hundred yards long. It is only about twenty feet high in its highest part, somewhat undulating, has a single tree on its western end and a small clump on its summit. About W. by N. from the northwestern end, and three hundred and fifty yards distant, lies a bare rock, called **Torry Castle,** which must also be left to the eastward.

It is remarkable for two large white boulders on its summit, the mass of the rock being of a reddish color.

The northeastern side of the Reach from **Naskeag Point** to abreast of the **Torry Islands** is mostly thickly settled, presenting alternately cleared and wooded lands. The village of **Brooklin** occupies this shore abreast of and a little above **Torry Island.**

The western side is, as before remarked, formed by the eastern shore of **Deer Isle,** the lands being of moderate height, well settled, and alternately wooded and cleared. The *Reach* is clear of islands to the westward of **Torry Islands,** and the northeastern shore mostly well wooded and low, with occasional groups of houses. Two miles beyond **Torry Castle,** on this shore, lies

CAPE CARTER,

the eastern point of entrance to *Benjamin River,* on the west bank of which is built the village of **Sedgwick. Cape Carter** is a high, bluff head, covered only with grass and a very scanty growth of scrub, and terminates in a low, rocky point on its western side.

BENJAMIN RIVER

runs about N W. and S E., and is nearly two miles long. Its width varies, being about three hundred and fifty yards at its mouth, but increasing rapidly until, about half a mile above, it is half a mile wide. From this point it rapidly diminishes in width to a mere creek. The village, which is situated upon its west bank, is of little importance, but is one of the landing-places for the coastwise steamers, which have a large wharf with warehouses near the southern end of the town. The best anchorage is abreast of this wharf in five and a half fathoms, or with less water a little above it. The banks on both sides of the river are cleared and cultivated, rising gently to higher wooded land behind them. From the west bank of the river makes off a long sand-spit, bare at three-quarters ebb, and a quarter of a mile long, which diminishes the width of the channel to less than half its width at high water, and forms a breakwater to the *Inner Harbor,* which is thus made secure from all winds. The *Inner Harbor* begins at the steamboat wharf and continues to the northward to the *Narrows.* Two fathoms at low water can be taken over the bar.

From the entrance to *Benjamin River* the course of the *Reach* continues to the northwestward, between cleared, cultivated, and thickly-settled lands, for about two miles, to

BILLINGS COVE,

or *SARGENT COVE* as it is sometimes called, also on the north side of the *Reach;* runs in a **NORTH** and **SOUTH** direction for about two-thirds of a mile; is a little over half a mile wide at its mouth, and gradually contracts to a width of two hundred yards at its head. Good anchorage may be found a little inside of the entrance, and it is only necessary to keep midway between the two shores in going in. It is rarely used, however, as vessels mostly anchor off **Sedgwick.**

On the south side of the *Reach,* opposite to *Billings Cove,* will be seen the passage leading between **Deer Isle** and **Little Deer Island** into *Penobscot Bay.* It is usually known as the

NORTHWEST SLUE;

is dry at low water, but is sometimes used at high water by vessels of light-draught. At its northern entrance it is about half a mile wide, but increases gradually to its southern end, where it is nearly one mile wide. The whole passage is a little over one mile in length, and full of dangerous ledges and shoals. Almost exactly in the middle will be seen a wooded islet about twenty feet high, with partly rocky and partly

sandy shores. This is **Carney Island.** Close to the eastern end of **Little Deer Island,** and connected with it at low water, lies another islet, called

STAVE ISLAND.

The latter is very remarkable for the bluff, rocky head on its northern end, which is bare of trees except a thin growth of scrub extending about half-way up the slopes. This head is eighty feet high, and is known as **Stave Island Head.** Passing it, it will appear as part of **Little Deer Island.**

The northern end of Deer Isle, forming the eastern point of entrance to the *Northwest Slue*, is a thickly-wooded head, descending on the north to a smooth, level, and grassy point, from the extremity of which extends a long wharf, which is also one of the landings for the coastwise steamers.

BYARD POINT,

the western point of entrance to *Billings Cove*, is cleared, with a group of houses upon it, and is mostly under cultivation, but dotted here and there with small groups of fir and spruce trees. It is sometimes called **Roberts Point.** On its western side makes in a small cove, with thickly-wooded shores, called the *The Punch-bowl*, and from this to **Gray Point,** the eastern point of entrance to *Buck Harbor*, the distance is two miles along a well-wooded shore, which in places rises to a height of two hundred feet, and in others is of moderate height close to the beach, with steep, wooded hills behind it.

The south shore of the Reach, from abreast of **Byard Point** to its western end, is formed by

LITTLE DEER ISLAND,

which is about three miles long; lies nearly N W. and S E.; is undulating and diversified with wooded and cleared lands, and is remarkable for a high, precipitous, rocky head rising from the middle of the island to a height of two hundred and thirty feet above sea-level, and covered only with grass. Most of the land on this island is barren and stony. About a quarter of a mile to the westward of **Stave Island,** and only a hundred and seventy-five yards from the north shore of **Little Deer Island,** will be seen a very small, round islet, with a single tree in its centre, called **Little Sally.** It is directly opposite to **Byard Point,** and is joined to **Little Deer Island** at low water. The northwest end of **Little Deer Island** shows a high, grassy head, with a thin growth of birch, and is eighty feet above sea-level. The small island just to the westward of it, with a light-house and keeper's dwelling upon it, is **Pumpkin Island.**

BUCK HARBOR,

formed by a large cove on the north side of the *Reach*, making to the northward between **Gray Point** on the east and **Condon Point** on the west, is half a mile wide at its entrance and about two-thirds of a mile long, but is irregular in shape, and the entrance to it is diminished in width by **Buck Island,** or **Harbor Island** as it is sometimes called, lying exactly in the middle, with a channel on either side. This island is about forty feet high at its east and west ends and quite low in the middle, which is entirely bare of trees, while both ends are thickly wooded, thus presenting a very peculiar appearance.

GRAY POINT,

the eastern point of entrance to *Buck Harbor*, is low and nearly flat, with a few trees upon it, but mostly cleared. Behind it rises what is called **Winches Mountain,** a steep, wooded hill three hundred and twenty feet high, and composed entirely of granite.

CONDON POINT,

the western point of entrance to the harbor, is a large, steep, wooded point, about two hundred feet high and tolerably bold-to. The best entrance to the harbor is between this point and **Buck Island.** The shores of the harbor are very high, steep, and mostly wooded; but in some places remarkable white, bare ledges, composed entirely of granite, crop out from among the trees. What appears to be *a sort of straight white path* runs from the summit of these hills down their almost perpendicular sides, and presents, when viewed from the westward, a very remarkable appearance. This is the road by which the granite is shot from the quarry to the wharf below, and is an unfailing mark for the recognition of *Buck Harbor.*

There are no dangers in the entrance to this harbor, and only one on the inside, which is called *Buck Harbor Ledge,* and is marked by a *black spar-buoy.* There is good anchorage, with soft bottom, anywhere between the island and the main land, by using the lead and being careful to keep off the shores.

On the west side of **Condon Point** makes in a long, narrow cove, called *Orcutt Harbor;* and just to the westward of this is another, called *Howard Harbor.* Neither is of any importance.

PUMPKIN ISLAND AND LIGHT-HOUSE.

On the southwest side of the *Reach,* at its western end, and nearly two hundred and fifty-yards from the end of **Little Deer Island,** will be seen a small rocky island, with a few scrubby spruce on its southwestern end, but otherwise covered only with grass. A white **Light-tower** and brown dwelling-house are seen on its western shore, and two long, low buildings on the shore below the light-house. This island is called **Pumpkin Island,** and the light-house is the guide to the western approach to *Eggemoggin Reach.*

The **Light-House** is a white tower, twenty feet high, and shows a fixed white light of the fifth order of Fresnel from a height of twenty-seven feet above the sea. It is visible nine miles. The geographical position is

Latitude - - - - - - - - -	44° 18′ 32″ N.
Longitude - - - - - - - -	68° 44′ 34″ W.

About half a mile to the southwestward of **Pumpkin Island,** and three hundred yards from the northwestern end of **Little Deer Island,** lies

BIRCH ISLAND,

about three hundred yards in diameter, twenty feet high, and with a few trees upon it. On its southwestern side it presents a precipitous face about twenty feet high. There is no passage between it and **Little Deer Island,** neither is there any, except for light-draught vessels, between the latter and **Pumpkin Island,** although six feet at low water is carried through by those who are acquainted.

The main channel of the *Reach* passes to the southwestward, between **Pumpkin Island** and a small low islet, about one hundred yards in diameter, lying nearly one mile to the northwestward of it. This is called **Thrumbcap Island.** It has one or two trees, and to the southward of it, about six hundred yards distant, there is a ledge, bare at half-tide, called *Thrumbcap Ledge.*

On the north side of the *Reach,* about two miles and three-quarters to the westward of **Condon Point,** lies

CAPE ROSIER,

the southwestern extremity of the peninsula of **Brooksville** and the northwestern end of *Eggemoggin Reach.* It is a high, rocky head, dotted with clumps of spruce and birch,

but its summit is almost entirely bare. To the southward it descends to a low, flat, grassy point, bare of trees. This cape has three heads. The easternmost, just described, will show when coming through the *Reach* from the eastward; the westernmost, which will be seen in approaching from *Penobscot Bay*, shows as a high, bluff head, with white rocks upon its surface here and there, and dotted with trees. *The northern channel*, leading from the *Reach* into the bay, passes along the south face of the cape, and is the one commonly used by vessels bound to the eastward from *Penobscot River*.

A remarkable peculiarity of this cape is *the calm streak*, or sudden calms experienced by vessels coming through the *Reach* from the eastward with easterly or northerly winds. Although a good breeze may blow through the *Reach* or over on the **Long Island** shore, dead calms are often experienced in *East Penobscot Bay* between the cape and the island. A vessel comes past **Rosier** with a good whole-sail breeze and stands boldly out into the bay, perhaps intending to cross to **Rockland**, perhaps bound to **Belfast**, when suddenly the wind dies out and she is held helpless by a calm, while close under **Cape Rosier**, and also to the westward of her, vessels are seen standing along with a fine breeze. To avoid this *calm streak*, if bound to the northward hug closely to the **Cape Rosier** shore until well past it, when edge over toward the middle of the bay.

When abreast of the northwest end of **Little Deer Island**, the **Camden Hills** will appear in the distance to the westward; **Pumpkin Island** and the **Light-House** will open from behind **Little Deer Island**, and gradually the main entrance will appear to the westward of **Pumpkin Island** and between it and **Thrumbcap**. Several islands will appear in this passage—the most prominent being **Birch Island**, already described; **Spruce Head Island**, next to the southwestward of **Hog Island** or **Fiddle-Head Island**, low and grassy; and to the westward two or three islets in a group, known, respectively, as **Spectacle**, **Pond**, and **Hog Islands**.

SPECTACLE ISLAND

lies to the southeastward of **Cape Rosier**, on the north side of the main channel and the south side of the north channel. It is low and grassy, with a few lone trees here and there, appearing like black specks on its surface. There is a bad ledge to the southwestward of it, called *Spectacle Island Ledge.*

HOG ISLAND

is grassy, precipitous on its eastern side, and has two or three clumps of trees on its southern end. Seen from the northward it shows a precipitous head at its eastern end, while its northwest end is low, flat, and entirely bare of trees. There are a few trees near the eastern shore, and a barn in the middle. It lies N N W. and S S E., and is about six hundred yards long. Off its eastern end will be seen also a rocky islet, with steep faces and bare of trees, called **Fiddle Head** or **Fiddle-Head Island**, which at low water is connected with **Hog Island**.

At its northwestern end **Hog Island** is connected at low water with

POND ISLAND,

which is bare of trees and grassy except at its northwest end, where there is a thick growth of low spruce. This end is the highest, and shows precipitous faces. There is a single barn on top and two or three fish-houses on the shore. When **Pond Island** is viewed from the westward, however, the northwest end shows as a white, rocky head, with a grove of spruce on its eastern face a little way south of the pitch of the head. The barn will show a little to the southward of the trees, on a cleared space, and in range with **Hog Island**. This island, as well as **Hog Island**, lies on the south side of the main channel.

TWO-BUSH ISLAND

lies off the eastern shore of **Hog Island** and on the south side of the channel. It is small, low, and grassy, with level surface and precipitous sides, looking like a sodded earthwork, but at its northeastern end terminates in a bare, bluff mass of rock with two spruce trees on it—the only trees on the island. This island bears W. by S. from **Pumpkin Island Light** and N. by W. ½ W. from **Eagle Island Light**. A dangerous ledge, called *Two-Bush Ledge*, lies off this island, which is just bare at low water. It may be passed on either hand, but it is usual to leave it to the southward and eastward.

GREAT SPRUCEHEAD ISLAND

lies about NE. by N. and SW. by S.; is about a mile long, and composed entirely of bare, white rock, rising to a considerable height. It is the highest land in this vicinity, and presents quite a remarkable appearance. About three-quarters of a mile to the westward lies

FRENCHMAN ISLAND,

about half a mile long, rocky, and wooded. The usual channel passes to the northward of this island, but there is a good wide passage between it and **Great Sprucehead**, and hence, to the westward, between **Frenchman** and **Turnip Islands**.

These last-mentioned islands (viz: **Two-Bush, Hog, Great Sprucehead,** and **Frenchman Islands**) are not, properly speaking, in the *Reach*, but form part of that large group of islands lying in the middle of *Penobscot Bay*, separating the western or main channel from the eastern entrance, commonly called *ISLE AU HAUT BAY*.

DANGERS

IN APPROACHING AND ENTERING EGGEMOGGIN REACH.

From the eastward or from Blue Hill Bay.—In approaching from *Blue Hill Bay*, the first danger met with lies to the southwestward of **Mahoney Island**, and is called

MAHONEY ISLAND LEDGE.

It is awash at low water, and marked by a *red spar-buoy*, (No. 2,) placed in fifteen feet water on its northwest side. It bears from **Devil Head**, on **Hog Island**, nearly ESE., and is to be left to the northward and eastward by vessels bound through the *Reach* from the southward, but by those who have come across *Blue Hill Bay* or from the **Mount Desert** shore it is to be left to the southward and eastward. When past it, the course leads between **White** and **Hog Islands**, and *a red and black spar-buoy* will be seen to the eastward of the southern end of **Hog Island**. This is on

HAY ISLAND LEDGE,

lying about a quarter of a mile from **Devil Head**, having seven feet at low water. The buoy is on its western end, and may be passed on either hand, but it is usual to pass to the southward of it. Next to the westward will be seen *a red spar-buoy*, which will appear in range with **White Island** and to the northeast. This is on

EASTERN HALF-TIDE ROCK,

the easternmost of the *Half-Tide Ledges*, lying to the southeastward of **White Island**. This rock is out only at low water, while the others of the group are out at half-tide. It is about half a mile distant from them in a SE. by E. direction, and the buoy (No. 10) is placed in eighteen feet NNE. of it. Passing this buoy, the course leads

toward the eastern end of **Conary Island**; pass to the eastward of it, and when past it *another red spar-buoy* will be seen well on the southwest. This is on

CONARY LEDGE,

bare at lowest tides, and lying **NW.** by **N.** from **Conary Island Head**, distant half a mile. The buoy is on its northeastern side in three fathoms, and is to be left to the southward, being used as a *Thoroughfare buoy.* There is, however, a good passage between it and **Conary Island.** From *Conary Ledge buoy*, **Torry Castle** bears **NW.** by **N.** When abreast of the latter, *a black spar-buoy* will be seen to the northwestward, on

TORRY LEDGE,

which has eight feet at lowest tides, and is to be left to the northeastward. The buoy is marked No. 1, is placed on the western end of the ledge, and is a guide to **Centre Harbor,** at the eastern extremity of the village of **Brooklin.** It may be left on either hand, however, by giving it a berth. From it **Cape Carter** bears **NORTH**, one mile distant.

When past *Torry Ledge* and almost up with **Cape Carter,** *another black spar-buoy* will be seen to the westward of the entrance to *Benjamin River.* This is on

STUMP COVE LEDGE,

making off from the western point of entrance to *Benjamin River* in a southwesterly direction about seven hundred yards. The buoy, marked No. 3, is placed in eighteen feet water on its southwestern end; pass to the southward of it, there being no passage between it and the north shore. Vessels bound into *Benjamin River* pass to the eastward of this buoy.

When past *Stump Cove Ledge*, the next danger met with is composed of two groups of rocks, bare at half-tide, lying close in with the shore of **Deer Isle**, a little to the eastward of its north point. The westernmost of these ledges is known as the

OUTER TINKER,

and is about a quarter of a mile from the **Deer Isle** shore. The *Inner Tinker Ledge* is sunken, and lies a hundred and fifty yards in shore of the *Outer.*

CLOSSON LEDGES

lie to the eastward of *Outer Tinker*, the westernmost of the group being about three hundred and fifty yards from it. They are all out either at half-tide or low water, and lie about a quarter of a mile from shore. *There are no buoys to mark either of these ledges*, and they are not in the way except of vessels standing to the southward on a wind. When past them, there are no more dangers in the *Reach* until past **Byard Point**, when *a red spar-buoy* will be seen to the westward and a little over half a mile off. This is on the northernmost of the

HOWARD LEDGES,

which has three feet at low water, and is one of a group of three lying nearly **NORTH** and **SOUTH** from each other. The buoy is placed in fifteen feet on their northern end, and is to be left to the southwestward. When past it, *two red spar-buoys* will be seen about three-quarters of a mile off, and off the northwest end of **Little Deer Island.** These are on

THE TRIANGLES,

a group of three ledges forming a triangle, lying about a third of a mile from the **Little Deer Island** shore and the same distance to the northeastward of **Pumpkin Island.** These

rocks have two feet at low water. The *eastern buoy* (which is marked No. 4½) is on the north side and about fifty feet from the north point of the ledges, in three fathoms water; pass to the northeastward of it. The *western buoy* is placed on the western end of the rocks, about sixty feet from them, and in fifteen feet water. It is marked No. 4. The shoal water of these ledges lie between these two buoys, and they may be passed on either hand—that is, if the northern buoy is first fallen in with, *both buoys should be left to the southward;* but if the western buoy is first seen, *leave both to the northward.* When past them, if bound out by the main channel the course is changed more to the westward, toward *Thrumbcap Ledge*, and a *red spar-buoy* will be seen about a third of a mile to the northwestward of **Pumpkin Island.** This is on

PUMPKIN ISLAND LEDGE,

having ten feet at low water and deep water all around it. The buoy is in twenty feet on its northwest end, and is to be left to the eastward, although a good channel exists between it and the island.

Pumpkin Island is shoal on its north side, a long ledge, bare at low water, making off from it in a N N E. direction a hundred and fifty yards, and shoal water extending a hundred and fifty yards farther to the northward from the bare ledge. So that this end of the island should not be approached nearer than four hundred yards.

PULPIT LEDGE,

lying in-shore of **Pumpkin Island**, with five feet at low water, is unmarked; bears E. by S. from the light, and takes its name from a detached rock off **Little Deer Island**, which looks something like a pulpit.

About a quarter of a mile to the southwestward of *Pumpkin Ledge Buoy another red spar-buoy* will be seen. This is on

MERRIMAN LEDGE,

lying about eight hundred yards EAST from **Pumpkin Island Light-House**; is bare a little before low water, and has deep water all around it. The buoy is placed about thirty yards northwest of it in fifteen feet water, and is to be left to the eastward.

THRUMBCAP LEDGE,

sometimes called **Long Ledge,** (a small portion of which is always out,) lies five hundred and fifty yards S. by W. ½ W. from **Thrumbcap Island** and nearly opposite to *Pumpkin Island Ledge.* There is a small detached ledge, out at low water, about a hundred and fifty yards E. by S. from the dry part of the ledge, and vessels when beating must beware of it.

When abreast of *Merriman Ledge a black spar-buoy* will be seen to the westward, on the north side of the channel, and a *red spar-buoy* nearly opposite to it, on the south side, and bearing about S W. by W. The former is on

SPECTACLE ISLAND LEDGE,

or *Heron Island Ledge* as it is sometimes called, a mass of rock nearly half an acre in extent, with about five feet at low water; lies about half a mile to the eastward of **Spectacle Island** and about a mile and a quarter to the westward of **Pumpkin Island Light.** The buoy is marked No. 1, and is placed in fifteen feet about thirty yards southwest of the ledge. Leave it to the northward.

TWO-BUSH LEDGE.

The red and black spar-buoy on the south side of the channel is on *Two-Bush Ledge,* a detached ledge awash at mean low water, lying off **Two-Bush Island,** and a little over

half a mile W N W. from **Birch Island.** The buoy is on its western end, about thirty yards from it, and in three fathoms water, and from it **Pumpkin Island Light-House** bears **E. by N. ½ N.**, one mile distant. It is to be left to the southward, and the course continued to the westward will lead safely into *Penobscot Bay.*

DANGERS
IN THE APPROACHES TO SEDGWICK OR BENJAMIN RIVER.

In approaching this harbor from the westward, beware of

STUMP COVE LEDGE,

making off in a S S W. direction from the western point of entrance to *Benjamin River* for about a third of a mile. On its southern end is placed a *black spar-buoy,* marked No. 3, in eighteen feet water; pass to the eastward of it when bound in. When past it, there are no dangers until up with the **steamboat wharf,** just above which there makes out from the eastern bank of the river *a sand-bar about four hundred yards long.* This is dry at low water, and is then easily avoided. At high water keep the western shore close aboard.

DANGERS
IN APPROACHING AND ENTERING BUCK HARBOR.

Here the only obstruction is in the **Inner Harbor,** a ledge called

BUCK HARBOR LEDGE,

with two feet at low water, lying about midway between **Buck Island** and the north shore of the harbor. There is good water on all sides, and it is marked by *a spar-buoy, painted red and black* in horizontal stripes, placed on top of the ledge.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING EGGEMOGGIN REACH FROM THE EASTWARD.

When the passage between **Hog and White Islands** bears N W. steer that course nearly, for the eastern end of **Conary Island.** This course leads through in the best water, leaving **Hay Island Ledge** to the northward and *Eastern Half-Tide Rock* to the southward and westward. Continue the N W. course until past *Conary Ledge* and **Torry Castle** bears **N. by E. ½ E.**, distant one-quarter of a mile, when steer **N W. by N. ½ N.**, which is nearly for *the black buoy on Stump Cove Ledge.* When past the *black buoy on Torry Ledge* and the western extremity of **Cape Carter** bears **N. ½ E.**, steer **N W.**, which course leads through the *Reach* clear of all dangers, and to the northward of the *Triangles.* When past the *western Triangle buoy* and **Pumpkin Island Light** bears **S W. ½ W.**, steer **W. ½ N.** until the **Light-House** bears **S E. ½ S.** and about abreast of the *red buoy on Pumpkin Island Ledge.* Now steer **S W. by W. ½ W.**, passing about midway between the *black buoy on Spectacle Island Shoal* and the *red and black spar-buoy on Two-Bush Ledge.* On this course, when **Pumpkin Island Light** bears EAST, a WEST course will lead out safely past **Spectacle Island.**

Wishing to pass to the southward of the Triangles: When abreast of the *red spar-buoy on Howard Ledges,* steer **N W. by W.** until **Pumpkin Island Light** bears **S. ½ E.**, when steer **W. ½ N.**, as before.

The above courses pass to the southward of *Hay Island Ledge;* to the eastward of *Eastern Half-Tide Rock;* well to the northward of *Conary Ledge;* nearly three hundred yards to the westward of **Torry Castle**; five hundred and fifty yards to the southwestward

of *Torry Ledge;* nearly half a mile to the southwestward of *Stump Cove Ledge;* about six hundred yards to the northward of *Outer Tinker Ledge;* one hundred and twenty-five yards to the northward of *Howard Ledges;* the same distance to the northward of the north *Triangle Ledge Bouy*, (or, if passing to the southward of the *Triangles*, a hundred and seventy-five yards to the southward of the *Western Triangle Ledge Buoy;*) an eighth of a mile to the northward of *Pumpkin Island Ledge;* a third of a mile to the southeastward of **Thrumbcap Ledge**; a quarter of a mile to the westward of *Merriman Ledge;* four hundred yards to the southeastward of *Spectacle Island Shoal;* and over five hundred yards to the northwestward of *Two-Bush Ledge.*

Not less than five fathoms at low water can be taken through the *Reach* on the above courses, soundings varying from five to eleven fathoms.

On the above courses, to enter Benjamin River: Continue on the course N W. by N. ¾ N., from abreast of **Torry Castle**, until the end of the *Steamboat Wharf* on the west bank of the river bears N. by E. ½ E., when steer N. by E. ¾ E., which course will lead midway between the two shores up to the wharf, where anchor in five fathoms, soft bottom. Wishing to pass into the *Inner Harbor*, when abreast of the steamboat wharf haul to the westward, steering about N. by E. to avoid the bar, and anchor at pleasure.

These courses pass half a mile to the eastward of the *black buoy* on *Stump Cove Ledge*, and carry not less than twelve feet into *Inner Harbor.*

To enter Billings Cove: When off the entrance to *Northwest Slue* and the highest part of **Stave Island Head** bears W. ½ S., steer N. by E. ½ E. up the middle of the cove, anchoring according to draught.

To enter Buck Harbor: When, on the northwest course, **Pumpkin Island Light-House** bears S W. ¾ W., and past the *Triangle Buoys*, steer N. by E. ¾ E., if wishing to pass to the eastward of **Bucks Island**; or N. ¾ E., if wishing to enter by the western channel. As soon as the *Inner Harbor* is open, round **Buck Island** to the northward, keeping about the middle of the passage, leaving the buoy on *Buck Harbor Ledge* to the southward, and anchor at discretion. This is an excellent harbor, sheltered from all winds.

In coming from the *westward*, bound into *Eggemoggin Reach:* When off the south end of **Long Island** and between it and **North Haven**, a N E. ½ N. course will lead up to the western entrance to the *Reach.*

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Eggemoggin Light..	44° 14′ 54″	68° 29′ 52″	$4^h 33^m 59.5^s$	F.	26 ft.	9
Pumpkin Island Lt..	44° 18′ 32″	68° 44′ 34″	$4^h 34^m 58.3^s$	F.	27 ft.	9

VARIATION OF THE COMPASS.

The magnetic variations for 1875 is 15° 30′ W., with an approximate annual increase of 2′.

DEER ISLAND THOROUGHFARE.

Next in importance to *Eggemoggin Reach*, of the different passages connecting *Blue Hill* and *Penobscot Bays*, is *DEER ISLAND THOROUGHFARE*, skirting the south shore of **Deer Isle**, beginning at **Stinson Neck** on the east, and joining **Penobscot Bay** at the southwest end of **Deer Isle.** The whole length of the *Thoroughfare* is a little over

six miles, and its width varies very much—the narrowest part being abreast of **Green's Head**, where it is a little over two hundred yards wide, and the widest near its eastern end, between **Lazygut Island** and **Eastern Mark Island**, where it is seven-eighths of a mile in width.

This *Thoroughfare* is protected on the south by the numerous islands studding the whole space between **Deer Isle** and **Isle au Haut**. Their name is legion, and it would be impossible to give an intelligible description of them all. Only such will be described, therefore, as lie *in* the *Thoroughfare* or form its immediate boundaries. As before mentioned, the easternmost point of entrance is

STINSON NECK,

or **Green Island** as it is sometimes called; for although it is generally considered a part of **Deer Isle**, it is in reality separated from it by *South-East Harbor* and its various entrances; is of moderate height, tolerably well settled, and in most places thickly wooded. Its shores are much cut up by coves, some of which, especially on the southern side, afford anchorage for small vessels. Of these the most important is *CONARY COVE*, making in at the southeastern extremity of the neck; is about half a mile long, and affords good anchorage for vessels of moderate draught, but is obstructed by several ledges, bare at half-tide and low water, lying off its mouth.

Coming from the eastward, through *Blue Hill Bay*, **Stinson Neck** will be easily recognized as the high, thickly-wooded head first to the westward of **Naskeag Point**, off which lie a couple of islets close together—the southernmost of which is thickly wooded; the other, small, and composed of white rock, with a grove of trees on its southeastern end. These are the

LAZYGUT ISLANDS,

marking the eastern point of entrance to the *Reach*. They lie on the north side of the passage, and have many ledges close to them; but most of these are out at low water. When past these islands, the wide passage opening to the northward between **Stinson Neck** and **Deer Isle** is the entrance to *SOUTH-EAST HARBOR* or **Oceanville.** It is over three-quarters of mile in width between **Stinson Neck** and **Sheep Island**, which marks the western point of entrance.

SHEEP ISLAND

lies about half a mile to the eastward of the **Deer Isle** shore and one mile WEST from **Lazygut Islands**. It extends in a N W. by W. and S E. by E. direction, is nearly eight hundred yards long, and has an average width of three hundred and fifty yards. It is high, thickly wooded, and surrounded by ledges, most of which are out at low water. About three hundred and fifty yards to the westward of its western end lies a very small rocky island with a few fir trees upon it, also surrounded by ledges. This is called **Little Sheep Island.**

On the south side of the passage the first island met with is nearly abreast of the **Lazygut Islands**, and is called

EASTERN MARK ISLAND,

and sometimes **Dumpling Island**; it is about forty feet high, three hundred yards long in a N W. and S E. direction, and is composed of white rock, and thickly covered with stunted fir and spruce. A ledge, bare at half-tide, lies about one hundred yards to the southward of it, and a sunken ledge nearly four hundred yards to the northward of it is marked by a *red and black spar-buoy.*

ROCKS AND LEDGES
IN THE CHANNEL OF THE THOROUGHFARE BETWEEN EASTERN MARK ISLAND AND SHEEP ISLAND.

The passage between this island and **Sheep Island** is over three-quarters of a mile wide, but the channel is very much contracted by the ledges with which it is studded. Of these the largest and most important is **Shelldrake** or **Eastern Yellow Rock,** which is always out, being in fact a very small island of a peculiar whitish color, lying nearly in the middle of the passage, about six hundred yards to the southeastward of **Sheep Island,** nearly half a mile N W. by W. from **Eastern Mark Island,** and on the north side of the channel. About three hundred and fifty yards to the southward of it lies a small ledge, bare at three-quarters ebb, called *The Haycock*, the channel passing between the two.

When abreast of **Sheep Island,** (after having passed between **Eastern Yellow Rock** and the *Haycock*,) pass well to the northward of a large mass of rock with two small knubbles, always out, lying nearly midway between **Eastern Mark Island** and **Bold Island,** bearing W. by S. from the former and E. by N. from the latter. This is called **Clam Island** or the **Clam Ledges,** and must not be closely approached by vessels beating through the passage.

Off the south side of **Sheep Island,** about a quarter of a mile, lies another small white rock, which at low water forms a large ledge, and is called **Sheep Rock.** About five hundred yards to the southwestward of it, and on the north side of the channel, lies a half-tide ledge, called *Haskell Ledge*, marked by a *black spar-buoy.*

BOLD ISLAND

is the next island met with, and is on the south side of the passage. It will appear high, round, and smoothly sloping, dotted with a scrubby growth here and there, but on its western side mostly bare. It lies nearly EAST and WEST, is about five hundred yards in diameter and one hundred feet high. A dangerous ledge, called *Bold Island Ledge,* lies off its north shore at a distance of three hundred and fifty yards, and is marked by a *red spar-buoy.*

On the north side of the passage, opposite to **Bold Island** and about eight hundred yards from it, lies

GROG ISLAND,

a barren islet of white rock, dotted here and there with a few scrubby trees, lying N N W. and S S E., and is about two hundred and fifty yards long. It is not safe to pass to the northward of this island, as there is a ledge, called *Grog Island Ledge,* a little over three hundred yards N W. from it, and a line of ledges extends along the southeast shore of **Deer Island,** from *Webb Cove* toward **Little Sheep Island,** at distances varying from two hundred and fifty to three hundred and fifty yards from shore. These latter are called *Buckmaster Ledges.* Passing to the westward of **Grog Island,** the entrance to

WEBB COVE

is opened, which affords good anchorage for vessels detained by adverse winds or weather. The entrance is between **Grog Island** and a very small, bare, rocky island called **Humpkins Island,** and is about eight hundred yards wide. The cove is obstructed only by a single small, bare rock, called **Channel Rock,** lying exactly in the middle of its mouth. It may be safely entered by passing to the westward of this rock.

Passing to the westward of **Bold Island** there will be seen, about half a mile to the southward, a high, rocky island, partly wooded and partly grassy, called **Devil Island.** Its eastern end terminates in a wooded head one hundred and twenty feet high, and there is no passage between it and **Bold Island.**

CAMP ISLAND

lies next to the westward of **Bold Island,** from which it is distant half a mile. It lies on the south side of the passage, extends in a N E. and S W. direction, and is half a mile long. Seen from the eastward it appears rocky, of moderate height, gently rising to a wooded summit, but its slopes are bare of trees or covered only with a thin growth of scrub. Seen from the westward it will appear wooded. On its southwestern side it is joined at low water to a small island, twenty feet high and thickly wooded, called **Little Camp Island.** Seven hundred and fifty yards to the westward of **Camp Island** lies

RUSS ISLAND,

also on the south side of the *Thoroughfare.* It lies nearly EAST and WEST; is about seven hundred yards long, and seen from the eastward will appear as a high, grassy hill, about eighty feet high, with a thick growth of scrubby trees clinging to its northern slopes. The western end of the island is lower, more gently sloping, and has a couple of houses with out-buildings near the shore.

The north shore of the Thoroughfare, from abreast of **Russ Island** to its western end, is formed by the south shores of **Deer Isle,** which present an undulating, hilly surface, in some places steep, in others gently sloping, and varying in height from forty to one hundred feet. For the most part this shore is thickly wooded, but there are occasional cleared lands, and a small settlement at **Green's Landing** in the vicinity of the granite quarries. On this shore, opposite to **Russ Island,** the dangerous **Dow Ledges** make off to the southward to a distance of over three hundred yards. Some of them are always out; but there are others, outside of the bare rocks, which are not out before low water. It is therefore necessary to give them a berth. The channel is here very much contracted, being not much over two hundred yards wide.

Four hundred yards to the westward of **Russ Island** lies

ROUND ISLAND,

a bold, rocky islet, about thirty feet high, with a thin, scanty growth of spruce and fir upon it. It lies in a N E. and S W. direction, and is about two hundred and fifty yards long. On coming up with this island the settlement at

GREEN'S LANDING,

on the north shore of the *Thoroughfare,* will be seen, lying along the north shore of a cove of irregular shape on the south side of **Deer Isle,** in which there is good anchorage with not less than three fathoms water. This cove is about seven hundred yards wide, but the anchorage is very much contracted by a great mass of ledges and bare rocks which lie in a line up and down the middle of the cove, and restrict vessels in anchoring to the west side, under

GREEN'S HEAD,

a steep, rocky bluff, forming the western point of entrance to **Green's Landing.** It is one hundred and twenty feet high and covered with a thick growth of scrubby trees. The name, "**Green's Landing,**" is painted in large letters on the rocks on the south side of the head. Opposite it, on the south side of the passage, lie three small islands. The two easternmost, which are joined at low water, are called

TWO-BUSH ISLANDS,

from the circumstance that the eastern and larger has two small spruce trees on its summit. The other is bare, and both are surrounded at low water by ledges. The westernmost of the three islets, called

THURLOW KNOB,

is about twenty feet high, rocky, and wooded; lies off the northeast point of **Thurlow Island**, with which it is connected at low water.

THURLOW OR CROTCH ISLAND,

forming the south shore of the *Thoroughfare* from abreast of **Green's Head** to the western end of **Moose Island**, is a large, high island, about two-thirds of a mile long in an **EAST** and **WEST** direction, and for the most part wooded. When seen from the eastward it shows two steep, bluff, rocky heads, thickly covered with trees, lying nearly **NORTH** and **SOUTH**, with low, level, and cleared land between them. The southern head is the largest and highest, and is called **Thurlow Head.** Between the two a long, narrow cove, called *MILL COVE*, penetrates to the middle of the island, affording shelter to vessels of very light draught, although its entrance is almost closed at low water. On the north side this island appears to be formed by three round hillocks, with low land between them. The two easternmost are steep, high, and wooded, and have cleared, cultivated, and settled land between them. The westernmost is more gently sloping, has a thin and scattered growth, and between it and the middle hill the land is densely wooded.

Off the north shore of **Thurlow Island**, about midway between its eastern and western ends and about seventy-five yards from shore, lies a rock, bare at low water, called *Crotch Island Ledge.* The channel at this point divides—one part, called the *NORTH CHANNEL* or *INDIAN NARROWS*, leading close under the south shore of **Moose Island**, with seven feet at mean low water; and the other, called the *SOUTH CHANNEL*, keeping nearly the middle of the passage, with fifteen feet.

ALLEN COVE

is the large cove on the north side of the *Thoroughfare*, which is fully open when abreast of *Crotch Island Ledge.* It is about five hundred yards long in a **N.** by **E.** direction, and is formed by the **Deer Isle** shore on the east, and the east shore of a low, partly-cleared and partly-wooded island, called **Moose Island,** on the west. There is good anchorage for any vessel that can pass through the *Thoroughfare.*

MOOSE ISLAND,

lying on the west side of *Allen Cove*, is about six hundred yards long in an **E S E.** and **W N W.** direction, quite low, and nearly level. The western part is pretty thickly wooded, but at its eastern end it is bare of trees and rocky. On this cleared space there are several houses and a wharf belonging to the granite quarries. At low water **Moose Island** is connected with **Deer Isle** by a causeway a little over one hundred yards long.

Two hundred and fifty yards to the southward of the western end of **Moose Island** lies a round, bare rock, about five feet out at high water, called **Yellow Rock.** A long ledge almost awash at low water makes off from it in a westerly direction, and is *not buoyed;* it is called *Yellow Rock Ledge.*

On approaching **Thurlow Island** from the *westward* two peculiar round boulders

will be seen close together off its western end, and about one hundred yards from high water mark. These are very noticeable, and are called **The Balls.**

When abreast of **Yellow Rock**, the western entrance to the *Thoroughfare* will be seen about one mile to the westward, with **Andrew Island** on the north side and **Mark Island** on the south.

ANDREW ISLAND

lies about two-thirds of a mile to the westward of **Moose Island**; is about sixty feet high, with gently-sloping shores composed of white rock, dotted with stunted firs and a few spruce. It lies nearly EAST and WEST, and is a little over three hundred and fifty yards long.

MARK ISLAND

lies a little over half a mile S. by W. from **Andrew Island**; is small, of oval shape, between two and three hundred yards long; composed of yellow rock, with a thick growth of scrubby fir and spruce upon its surface. Its southern end is the highest and has the thickest growth, and the precipitous rocks which descend from the base of the trees to the water form a sort of bluff head. On its north side the rocks are worn quite smooth by the action of the sea. At its western end, about midway between its north and south shores, stands **a square, white Light-tower**, with the keeper's dwelling close to it on the south side. This is called

MARK ISLAND LIGHT-HOUSE,

and sometimes DEER ISLAND THOROUGHFARE LIGHT-HOUSE. The former, however, is the name commonly used. This **Light-House** is a square, brick tower, white-washed, twenty-five feet high, showing a fixed white light of the fourth order of Fresnel from a height of fifty-two feet above the sea, visible twelve miles. Its geographical position is

Latitude - - - - - - - - -	44° 08′ 03″ N.
Longitude - - - - - - - -	68° 42′ 12″ W.

Approaching **Mark Island** from the eastward, pass to the southward a very small, white, rocky island lying about a quarter of a mile to the southward of the eastern end of **Andrew Island**. This is called **Western Deer Island Ledge.** There are also several bare ledges and islets between **Mark Island** and **Thurlow Island.**

SCRAGGY ISLAND.

To the westward of **Mark Island**, and nearly abreast of *Mark Island Ledge Buoy*, lies **Scraggy Island;** low and rocky, with a sparse and stunted growth of fir and spruce upon it. It extends N E. and S W., and its southwest end is a mere bare rock, destitute even of moss. Pass to the northward and westward of it.

When past **Mark Island** and in *EAST PENOBSCOT BAY*, shape the course to the northward toward **Eagle Island**; or pass to the westward, through *FOX ISLANDS THOROUGHFARE*, into *WEST PENOBSCOT BAY*. (The latter is the course usually pursued by coasters.) Or cross the bay to the southward of the **Fox Islands.** *Approaching Deer Island Thoroughfare from the westward*, the following description of the approaches will be found of service in enabling strangers to recognize the entrance:

The course from *Fox Islands Thoroughfare* is about E. by N., and when clear of it the western shore of **Deer Isle** will appear nearly ahead, partly cleared and cultivated and partly wooded, of moderate height, and fringed with whitish and reddish rocks. The high land of **Mount Desert** will be seen over this island almost directly ahead, and in range with the western end of the *Thoroughfare*. Over the northern part of **Deer Isle,**

and to the northeast, a high, round hill, with bare summit, will appear. This is **Blue Hill.** The **Light-House on Mark Island** will be seen as if in the middle of the island, with a brown dwelling-house close to it; and well to the southward of this **Isle au Haut** will appear as a large, very high island, with three peculiar peaked hills near its north end. On approaching **Mark Island several bare rocks and islets** will be seen on the south side of the channel. The westernmost of these, which is the largest and most important, is known as the **Brown Cow.** It is about ten feet out at low water, and at high tides is nearly covered. Neither the **Brown Cow** nor any of the other rocks near it are dangerous, except to vessels standing to the southward on a wind.

DANGERS
IN APPROACHING AND ENTERING DEER ISLAND THOROUGHFARE FROM THE EASTWARD.

The name *JERICHO BAY* is sometimes given to that portion of the western part of *Blue Hill Bay* contained between **Stinson Neck** on the north, and **Isle au Haut, Burnt-Coat,** and **Marshall Islands** on the south. It is in reality not a bay but a sound, full of islands and ledges, and dangerous for navigation except by the established channels. Coming through it to enter *Deer Island Thoroughfare,* when near **Green Island** *a black spar-buoy* will be seen ahead and a little to the northward, on

LONG LEDGE,

or *Mansfield Ledge,* which has five feet at low water and lies to the southward of **Green Island.** It is about a quarter of a mile in extent, and vessels may pass between it and **Green Island,** but it is usual to pass to the southward of it. When by this ledge, and approaching **Lazygut Island,** *a black spar-buoy* will appear to the southward of the eastern end of the island. This is on

LAZYGUT LEDGE,

a small detached ledge about six hundred yards SOUTH from the eastern end of the island, which has three feet at lowest tides. There is good water on all sides, but it is usual to pass to the southward of it. The buoy is marked No. 9, and placed in three fathoms close to the rock on its south side. When past it, *a red and black spar-buoy* will be seen on the north side, about a mile distant, and *another* nearly ahead, or a little to the south, at about the same distance. The former is in the entrance to *SOUTH-EAST HARBOR* and on the *Boat* or *Channel Rock,* which has three feet at low water. It is not in the way of vessels passing through the *Thoroughfare.* The latter is on

EASTERN MARK ISLAND LEDGE,

which has eight feet at low water, and lies about three hundred yards to the northward and westward of **Eastern Mark Island.** There is good water all around it, but it is usual to pass to the northward of it. When abreast of it, *a red spar-buoy* will appear nearly ahead, about six hundred yards off. This is on

HAYCOCK ROCK,

sometimes called *Bunker's Slippery Rock,* a small detached rock, three feet out at low water, lying a little over six hundred yards W. by N. ½ N. from **Eastern Mark Island,** on the south side of the channel. The buoy is marked No. 8, and is placed on the north side of the rock, close to it. The channel lies between this buoy and a large white rock about four hundred yards N W. by N. of it, called **Eastern Yellow Rock,** (see page 255,)

and when abreast of it *a black spar-buoy* will be seen on the north side of the channel. This is on

WHITE ROCK,

which lies about S. by W. from **Sheep Island**, and has three feet at low water. The buoy is marked No. 7, and is placed in fifteen feet water south of the rock. When up with it, *another black spar-buoy* will appear to the westward, a little less than half a mile off. This is on

HASKELL LEDGE,

bare at low water, which lies a little over half a mile S. by W. ½ W. from the western end of **Sheep Island** and two-thirds of a mile NE. ½ N. from the centre of **Bold Island**. The buoy is marked No. 5, and placed in fifteen feet water on its south side. There is good water on all sides of the rock by giving it a berth.

Passing this, *a red spar-buoy* will be seen off the north shore of **Bold Island**, on

BOLD ISLAND LEDGE,

bare at low water, and nearly two hundred yards long in an EAST and WEST direction. It lies about three hundred and fifty yards off the north shore of **Bold Island**, and at the highest tides has only four or five feet water over it. The buoy is marked No. 6, and placed in fifteen feet on the north side of the ledge. Pass to the northward of it, and there will be a clear channel until up with **Russ Island**, when *a red spar-buoy* will appear about a hundred and seventy-five yards off its north shore. This is on

ROEBUCK LEDGE,

sometimes called *Russ Island Ledge.* It is out at lowest tides, and is quite bold-to. The buoy is placed on its north side in eighteen feet water, and is to be left to the southward. In passing it, keep the southern side of the channel rather more aboard, especially if the wind is scant on the port tack, in order to avoid the dangerous

DOW LEDGES,

on the north side of the channel, a group of bare rocks, surrounded by ledges bare at low water, extending off from the south shore of **Deer Isle** toward **Russ Island** about three hundred and fifty yards. At low water they are easily avoided, but at high water the southernmost of the bare rocks should not be approached nearer than a hundred and fifty yards. When past these ledges and *Roebuck Ledge*, *a black spar-buoy* will be seen about half a mile to the westward, on

STAPLES LEDGE,

a detached ledge about an eighth of a mile to the southward of **Staples Point**, (the eastern point of entrance to **Green's Landing**,) having two feet at lowest tides. It is between five and six hundred yards to the northward and westward from **Round Island**, which distance is here the width of the channel. The buoy is marked No. 3, and placed in three fathoms on the south side of the rock.

When past *Staples Ledge* the channel is clear until up with *Allen Cove*, *when a red and black spar-buoy* will appear on the north side and *a red spar* on the south side of the channel. The former is on

GANGWAY ROCK,

lying about one hundred yards to the southward from the east end of **Moose Island**, and may be passed on either hand. The usual channel is, however, to the southward of it. The buoy is placed about forty yards to the northward of the rock, and is intended to mark the *NORTH CHANNEL*, or *INDIAN NARROWS* as it is often called, leading

between this buoy and **Moose Island,** with seven feet at mean low water. Vessels wishing to pass through the *SOUTH CHANNEL* must give it a berth and keep close to the *red buoy* on the south side of the passage, which is on

CROTCH ISLAND LEDGE,

bare at low water, lying about seventy-five yards off the north shore of **Crotch Island** and nearly midway between its east and west ends. The buoy is placed on the north side in about fifteen feet water, and is to be left to the southward. Fifteen feet at mean low water may be taken through the *South Channel*, leaving this buoy to the southward and *Gangway buoy* well to the northward. This is the narrowest and shoalest part of the channel. When past it, *a round, bare rock* will be seen to the westward about a quarter of a mile distant, and off the western end of **Moose Island.** This is **Yellow Rock,** and vessels in standing to the northward on a wind must be careful to give it a good berth to the eastward, to avoid

YELLOW ROCK LEDGE,

a long ledge, almost awash at low water, making off from the rock in a westerly direction toward **Andrew Island**; *is not buoyed* or marked in any way, but at low water is easily avoided.

When past **Yellow Rock,** *a red spar-buoy* will appear on the south side, about seven hundred yards off, and in range with **Mark Island.** This is on

FIELD LEDGE,

awash at low water, which lies on the south side of the channel, with good water on all sides, and bears from **Mark Island Light** E N E., a little over half a mile distant. The buoy is on the north side of it, is marked No. 2, and is to be left to the southward. When past it and approaching **Mark Island,** *a black spar-buoy* will be seen to the westward, a little over half a mile distant, on

MARK ISLAND LEDGE,

sometimes called *Bay Ledge,* a detached rock about thirty yards long, which lies N E. and S W., and has four feet at lowest tides. It may be passed on either hand, but it is usual to pass to the southward of it. The buoy is marked No. 1, and placed in four fathoms on its south side.

SAILING DIRECTIONS
FOR PASSING THROUGH DEER ISLAND THOROUGHFARE FROM THE EASTWARD.

Coming from the eastward, the usual course of coasters is to pass to the southward of **Long Ledge.** To do this, bring **Lazygut Island** to bear N W. by W. and steer for it until past *Long Ledge Buoy*, when haul to the westward so as to pass about seven hundred yards to the southward of **Lazygut Island,** thus leaving the *black buoy* on *Lazygut Ledge* one hundred yards to the northward. When abreast of this buoy, steer **W. ½ N.** until up with the *horizontal striped buoy* on *Eastern Mark Island Ledge* and the highest part of **Eastern Mark Island** bears SSE. This will lead about one hundred yards to the northward of the ledge; when abreast of it steer W. by S., which course leads between **Eastern Yellow Rock** and the *Haycock*, and through the middle of the passage in the best water up to **Russ Island.** When the eastern extremity of **Russ Island** bears **S W. ½ S.,** about two hundred and fifty yards off, and **Green's Head** bears **W. ½ N.,** steer the latter course until within two hundred yards of the head, with **Mark Island Light-House** bearing **W. by S. ½ S. SOUTHERLY**; when steer W. by S. ½ S. through the south channel, car-

rying not less than fifteen feet at low water. This course continue until abreast of **Mark Island Light-House,** when steer W S W. until by **Scraggy Island**, leaving *Mark Island Ledge* to the northward. When past the island, the course for *Fox Islands Thoroughfare* is W. by S. and the course for **Eagle Island Light-House** about N. ¼ W.

The above courses pass to the southward of *Long Ledge;* about one hundred yards to the southward of *Lazygut Ledge;* one hundred yards to the northward of *Eastern Mark Island Ledge;* a hundred and fifty yards to the southward of the dry part of **Eastern Yellow Rock**; two hundred yards to the northward of the *Haycock;* a little over one hundred yards to the southward of the *buoy on Haskell Ledge;* two hundred yards to the northward of *Bold Island Ledge;* a hundred and twenty-five yards to the southward of the southernmost of the *Dow Ledges;* about seventy-five yards to the northward of the *buoy on Roebuck Ledge;* nearly one hundred yards to the southward of the *buoy on Staples Ledge;* about thirty yards to the northward of the *buoy on Crotch Island Ledge;* eighty yards to the southward of the *Gangway buoy;* seventy-five yards to the northward of the *buoy on Field Ledge;* and well to the southward of the *black buoy on Mark Island Ledge.* Not less than fifteen feet at mean low water will be found on the above courses, and that only on the bar between **Crotch** and **Moose Islands.**

2. *Coming from the Mount Desert shore by the passage north of* **Pond Island**: Pass between **John** and **Mahoney Islands** and enter the *Thoroughfare* as usual, to the southward of **Lazygut Island.** Pass seven hundred yards to the southward of this island, and steer W. ¼ N. until up with the buoy on *Eastern Mark Island Ledge;* then follow the directions given for the *Thoroughfare.* The usual channel for vessels bound to the northward is between **Mahoney** and **Smutty-Nose,** though the one just mentioned (between **John Island** and **Mahoney Island**) is often used.

3. *There is still another channel, called Lazygut Channel,* which leads close under **Lazygut** south shore, *leaving Lazygut Ledge to the southward,* and then turning to the northeastward, between **Green Island** and **Crow Island,** crosses *Eggemoggin Reach* at its eastern entrance, and thence to **Mahoney Island.** This channel is never used by strangers, and is obstructed by a dangerous sunken ledge with four feet at low water, called *Rudder Rock.* (See also pages 240 and 242.) This rock lies S S E. from **Crow Island** about two hundred yards, and is marked *by a buoy painted red and black* in horizontal stripes. Pass to the southward of it.

To enter this channel from the eastward: From **Mahony Island** steer S W. by W. until the buoy on *Rudder Rock* is seen in the passage between **Crow** and **Green Islands.** Get the passage to bear S W., and steer that course until the highest part of **Green Island** bears E. by N. Then steer S W. by S., passing close under the east shore of **Lazygut Island** and three hundred yards to the northward of *Lazygut Ledge.* On this course, when the eastern extremity of **Lazygut Island** bears N. ¼ E. steer W. ¾ S. until up with the *buoy on Eastern Mark Island Ledge;* after which follow the directions for the *Thoroughfare.*

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Mark Island Light.....	44° 08′ 03″	68° 42′ 12″	4h34m48.8s	Fixed.	52 ft.	12

VARIATION OF THE COMPASS.

The magnetic variation for 1875 is 15° 20′ W., with an approximate annual increase of 2′.

DEER ISLAND,

or **Deer Isle** as it is locally called, lies on the eastern side of *Penobscot Bay*, separating it from *Eggemoggin Reach* and *Blue Hill* and *Jericho Bays*. It lies nearly **NORTH** and **SOUTH**, is about nine miles long and very irregular in shape, being much indented by bays and coves; but its average width is about five miles. It is thickly settled, but not very fertile.

The large bay forming *SOUTH-EAST HARBOR* on the south, and that which forms *NORTH-WEST HARBOR* on the west side, penetrate deeply into the interior of the island, nearly dividing it into two parts—a very narrow isthmus, only a few hundred yards wide, being all that separates the heads of the two bays.

SOUTH-EAST HARBOR

is the main port of the island, although there is quite a settlement at *North-West Harbor*. It is formed by the western branch of a very large bay or inlet contained between **Stinson Neck** and the shores of **Deer Isle** proper. From the southward it enters between **Stinson** and **Whitmore Necks**, branches to the westward along the north shore of the latter, forming *South-East Harbor*, and to the northeastward along the west shore of **Stinson Neck**, joining *Eggemoggin Reach* abreast of **Conary Island**. The only portion of this bay of any importance is its western branch, which forms *South-East Harbor*.

STINSON NECK,

on the east side of the entrance to this harbor, has been before described (see page 243) as an island lying N. by E. and S. by W., about two miles long, of moderate height, and in most places thickly wooded. Its shores are much cut up by coves, some of which, especially on its south side, afford anchorage for small vessels.

WHITMORE NECK,

on the west side of the entrance, is also an island, being separated from the main portion of **Deer Isle** by a passage about two hundred yards wide, which is, however, dry at low water. It is a mile and a half long, of irregular shape, the interior and highest parts thickly wooded, but near the shore showing cleared and cultivated land dotted with houses. Nearly in the middle of the southern entrance to the harbor lie the

SHEEP ISLANDS,

before described, (see page 254.) The easternmost and larger of the two is nearly eight hundred yards long, with an average width of three hundred and fifty yards; lies in a N W. by W. and S E. by E. direction; is high, thickly wooded, and surrounded by ledges, most of which are out at low water. Its western end is about two-thirds of a mile from the shore of **Whitmore Neck**. The western island, which is very small and low, is called **Little Sheep Island,** and lies three hundred and fifty yards to the westward of the larger island and about eight hundred yards from the shore of **Whitmore Neck**. There is, however, no safe passage between the two. Many ledges surround this island, which are for the most part out at low water. To the southward they extend three hundred yards, and this south shore should never be approached by strangers.

The entrance to *South-East Harbor* lies between **Sheep Island** and **Lazygut**, and is nearly one mile wide. The east shore is tolerably bold; but the west side, especially near **Oceanville**, is ledgy, and unsafe to approach. **Oceanville** is situated on the east shore of **Whitmore Neck**, about two-thirds of a mile above the entrance. The *Harbor* itself lies along the north and west shores of the *Neck*, and the *Inner Harbor* particularly, which is on the west side, is entirely land-locked and sheltered from all winds.

The usual anchorage is, however, off **Oceanville**—vessels of light draught alone being able to enter the *Inner Harbor* except at high water.

When the harbor is open it will appear as a straight and wide passage running between partly-wooded and partly-cleared shores of moderate height. The houses in **Oceanville** are seen on the western shore, near what appears to be the head of the harbor; while on the east shore **Stinson Neck** will show as a barren, rocky land, with one or two houses on it, and covered with a thick growth of spruce and birch. **The western shore** above **Sheep Island** is well settled; the cleared lands, however, alternate with a stunted growth of trees, among which appear houses here and there, and a single church-spire rising above the trees. **On the eastern or Stinson Neck shore**, and nearly opposite to **Oceanville**, lies *CROCKET COVE*, a large and wide indentation making to the eastward, and affording good anchorage in easterly gales. Its north shores are barren, rocky, and destitute of vegetation except a few stunted spruce; while the south shores are mostly cleared and of moderate height, with small groves of trees dotting the surface here and there. A wharf and group of houses stand on its south point of entrance.

DANGERS

IN APPROACHING SOUTH-EAST HARBOR COMING FROM THE EASTWARD.

In approaching this harbor from the eastward, the first danger met with is called

LAZYGUT LEDGE,

a small detached ledge, about six hundred yards SOUTH from the eastern end of **Lazygut Island**, having three feet at lowest tides. There is good water on all sides, but it is usual to pass to the southward of it, for which purpose *a black spar-buoy* (No. 9) is placed in three fathoms water on its southern side. When past it, the course leads to the northwestward, and *a red and black spar-buoy* will be seen ahead and about three-quarters of a mile off. This is on

THE BOAT OR CHANNEL ROCK,

which has three feet at lowest tides, and lies about seven-eighths of a mile **W. ¾ N.** from the west end of **Lazygut Island** and **E. by N. ¾ N.** from the east end of **Sheep Island**, nearly half a mile distant. The buoy is placed in three fathoms about fifty feet east from the ledge, and is usually left to the westward, although there is good water between the *Rock* and **Sheep Island**. When past it there will appear to the northwest, and pretty well in-shore, *a black spar-buoy*. This is on

SPERMACETI OR WHALE'S BACK LEDGE,

making off from the west side of the passage (**Whitmore Neck**) in a S E. direction for about eight hundred yards. There is no passage inside of the buoy, the whole space between it and the **Whale's Back** being studded with sunken rock. The **Whale's Back** is a large ledge, parts of which are always out, but which at low water forms a mass of bare rock about two hundred and fifty yards square. Its western end is only one hundred and fifty yards from the shore of **Whitmore Neck**, that space being studded with small ledges, bare at low water. Pass well to the eastward of the buoy on *Spermaceti Ledge* by the usual sailing-lines.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING SOUTH-EAST HARBOR FROM THE EASTWARD.

Having come through the main channel **south of** ***Long Ledge,*** **the course leads about seven hundred yards to the southward of Lazygut Island. When, on the W. ¾ N. course**

from *Lazygut Buoy*, toward *East Mark Island Buoy*, the easternmost point of **Lazygut Island** bears N E. ¾ N. steer N W. ½ W., which course will lead safely up to the anchorage off **Oceanville.** Or coming through the *Lazygut Channel*, when past *Lazygut Ledge*, on the W. ¾ S. course for *Eastern Mark Island Ledge*, bring the western extremity of **Lazygut Island** to bear N E. by N. and the highest part of **Eastern Mark Island** to bear S W. ½ W. and steer N W. ½ W., which will, as before mentioned, lead safely up to the anchorage. The above courses pass nearly a quarter of a mile to the eastward of the *buoy on Boat or Channel Rock*, and about six hundred and fifty yards to the eastward of *Spermaceti Rock*.

II. *To come from the westward and enter South-East Harbor.*—This can only be done through *Deer Island Thoroughfare.* Following the directions for that *Thoroughfare* (see pages 261 and 262) on the E. by N. course from **Russ Island**, pass between the *Haycock* and **Eastern Yellow Rock.** On this course, when the highest part of **Eastern Mark Island** bears SE. SOUTHERLY, and nearly three hundred yards to the westward of the *buoy on Eastern Mark Island Ledge*, steer N. by W. ¾ W., between **Sheep Island** and the *Boat.* On this course continue until past the *black buoy on Spermaceti Rock*, when the northwestern extremity of **Crockett Point** will bear N E. ¾ N.; then steer N W. ½ W. to the anchorage.

The above courses pass four hundred yards to the westward of the **Boat**, and seven hundred yards to the eastward of *Spermaceti Rock.*

Or, wishing to pass to the eastward of *Channel Rock*, continue the E. by N. course through *Deer Island Thoroughfare* until abreast of the *black and red buoy on Eastern Mark Island Ledge;* then steer N. ½ E. toward **Stinson Neck** until the eastern point of **Sheep Island** bears S W. by W. ¾ W.; then steer N W. ½ W., as before.

These courses pass one-eighth of a mile to the eastward of *Channel Rock*, and about six hundred and fifty yards to the eastward of *Spermaceti Rock.*

If wishing to go into *Inner Harbor*, take a pilot at **Oceanville.**

To enter Webb Cove from Deer Island Thoroughfare.—This cove, as before mentioned, (page 255,) affords good anchorage for weather-bound vessels. To enter it: When past **Grog Island** on the W. by S. course through the *Thoroughfare*, and about midway between it and **Humpkins Island**, *Channel Rock*, in the mouth of the cove, will bear N. by W. ¾ W. Steer N W. by N. ½ N., exactly for a low point on the western side of the cove, near its head. This point may easily be recognized by a clump of trees on its eastern end—the rest being cleared, and having two houses on its highest part. Anchor at discretion. This course leads nearly three hundred yards to the westward of *Grog Ledge*, and a hundred and fifty yards to the westward of *Channel Rock.*

MERCHANT ROW.

Although this passage, as before mentioned, is not fit for strangers, yet a description of it and its dangers will not be out of place. It is rarely used except in winter, when the ice has rendered *Deer Island Thoroughfare* and *Eggemoggin Reach* unsafe or impassable. There is never any ice in this passage.

Merchant Row begins between **Saddle-Back Island** on the north and **Mark Island** on the south, but the channel is close under the **Mark Island** shore. Thence it passes to the westward through the labyrinth of islands and islets lying between **Deer Isle and Isle au Haut**, and enters *Penobscot Bay* about a mile and three-quarters to the southward of **Mark Island**, at the western end of *Deer Island Thoroughfare.* The entire length of the channel is seven miles.

It is, of course, impossible to enter this passage unless familiar with the appearance of the different islands through and among which it threads its way. Of these the two

most important are **McGlathery Island** on the northeast and **Merchant Island**, on the southwest side of the channel. The north side of the entrance from the eastward is marked by

SADDLE-BACK ISLAND,

lying NE. and SW., and is about half a mile long. Its northeast and southwest ends are wooded and about forty feet high, but the middle of the island is quite low and bare of trees. When seen from the southward it shows two woody heads with a bare valley between them. About a quarter of a mile from its east shore lies a very small, rocky island, with one or two lone trees on it, called **Phebe Island**; and about the same distance to the southward another, with somewhat steep shores, and wooded, called **Enchanted Island.** Half a mile to the southward of this lies a bare rock, surrounded by ledges at low water, having no name.

MARK ISLAND

lies about a mile and a quarter SOUTH from **Saddle Back Island**, marking the south side of the main entrance to the *Row*. It may, however, be left to the northward by vessels having come from outside of **Marshall Island**, which, in that case, pass between it and the **Fog Islands.** It is small and rocky, the rocks being worn smooth by the action of the sea, and the only growth is stunted spruce. It lies about two miles to the westward of **Marshall Island**, and from it the general course to the entrance to *Merchant Row* is W. by S. if coming through the north channel, and about W. by N. if coming through to the southward of **Mark Island.**

THE FOGG ISLANDS

are a group of three; the two easternmost, lying NNE. and SSW. from each other, are merely small bare rocks. The westernmost islet, lying about a third of a mile to the westward of these, is about seven hundred yards long, high, rocky, and covered with stunted spruce. This group lies a mile and a quarter to the eastward of **Rich Point** (the northeastern point of **Isle au Haut**) and about a mile to the southward of **Mark Island.** Many bare ledges and rocks surround them, and there is a deep channel between the large and small islands, which is, however, unfit for strangers.

When to the westward of **Mark Island**, the two large islands lying on the north and south sides of the passage are **McGlathery** and **Merchant Islands.**

McGLATHERY ISLAND

is first met with, lying about two miles to the westward of **Mark Island** and about three-quarters of a mile to the southward of **Spruce Island**, on the south side of *Deer Island Thoroughfare.* Seen from the eastward, its southern end appears high and well wooded with scrubby trees, while the northeast end is from ten to twenty feet high, with a single tree here and there; and there are one or two houses near the northern end. This island lies NE. and SW., is about two-thirds of a mile long and of irregular shape. Its southeastern part rises to a height of one hundred feet, and is for the most part wooded with scrub. About a quarter of a mile to the southeastward of it lies **Gooseberry Island**; small, low, and rocky, with a growth of scrubby trees in the middle. It extends an eighth of a mile in an EAST and WEST direction.

ROUND ISLAND,

lying an eighth of a mile to the westward of **McGlathery**, is nearly round, rises regularly to a height of about eighty feet in the centre, has a diameter of about four hundred

yards, is rocky, and covered with a scattered growth of stunted spruce and fir. There is a passage for light-draught vessels between it and **McGlathery Island.**

In range with **Merchant Island** will be seen a rocky islet, about forty feet high, composed of smooth, bare rock, covered on top with a little grass and a very few scrubby trees. This is **Bill Island,** and lies about three-quarters of a mile SSW. from **Round Island** and nearly eight hundred yards to the eastward from the eastern end of **Merchant Island.** The main channel leads to the northward of this island, but those who are well acquainted with the locality often pass to the southward, between it and

PELL ISLAND,

lying about six hundred yards south of it, about eight hundred yards to the eastward from the southeast end of **Merchant Island,** and about two miles and a quarter to the southward and westward of **Mark Island.** It lies nearly NORTH and SOUTH, and is about a quarter of a mile in diameter; its surface undulating, (varying in height from twenty to sixty feet,) and bare of trees except at its northeastern end, which is well wooded. The rocks lining the shore are, like the rest of the islands in this vicinity, worn perfectly smooth by the action of the sea.

The large island lying about four hundred yards to the southward of **Pell Island,** and close in with the north shore of **Isle au Haut,** is

BURNT ISLAND,

very irregular in shape, about eight hundred yards long in a NORTH and SOUTH direction, and two-thirds of a mile in an EAST and WEST direction. On its eastern side it sends off a long, narrow spur, quite low, wooded with the usual growth of spruce and fir, and terminating in a round, woody head. On the southwest side the shore rises precipitously to a height of one hundred and twenty feet and is thickly wooded. There are one or two houses on the north side near the shore, where the land is much lower. Many bad ledges and dangerous, bare rocks lie off this north shore and between it and **Pell Island,** and no one should attempt that passage. Between **Burnt Island** and **Isle au Haut** there is a passage from an eighth to a quarter of a mile in width, called *BURNT ISLAND HARBOR.* Ten feet at low water may be carried through it, but it is not safe for strangers.

MERCHANT ISLAND,

lying on the south side of the *Row,* is the largest island in the group, and is very readily distinguished, its southeastern end rising somewhat steeply to a height of one hundred and twenty feet, bare of trees except on its extreme point, where there is a single lone spruce. From the summit of this high head the land descends to the northward regularly but rapidly nearly to sea-level, and the slopes and low lands are thickly wooded. The rest of the island is undulating, presenting alternately low lands and hills from twenty to forty feet high, partly wooded and partly cleared, with a group of houses on the north shore near the western end. This island is of very irregular shape; lies about NW. and SE., and is a little over a mile long. Anchorage may be found on its north side, near the group of houses mentioned above, between it and a small, rocky island about three hundred yards to the northward, called **Harbor Island.** It is bare except where a few spruce stand near its eastern end. The anchorage is called *MERCHANT HARBOR,* and is unobstructed.

On the north side of the passage, opposite to **Merchant Island** and next to the westward of **Round Island,** lies

WRECK ISLAND,

sometimes called **Barter Island.** It is high, rocky, and almost entirely bare except for

a stunted growth of spruce near the middle and one or two lone trees near its south end; is about four hundred yards to the northwestward of **Round Island** and two-thirds of a mile to the northeastward of **Harbor Island**; lies about E. by N. and W. by S.; is half a mile long, about sixty feet high, and has a group of houses on top near the middle. Nearly midway between it and **Harbor Island** a *red spar-buoy* will be passed, placed to the southward of a group of half-tide ledges, called *Barter Island Ledges.* There is no safe passage between this buoy and **Wreck Island.** Next to the westward, and a little over half a mile from **Wreck Island**, lies

GEORGE ISLAND,

or **George Head** as it is sometimes called, extending in an E. by S. and W. by N. direction; is a little over a quarter of a mile long, and of moderate height at its eastern end; but its west end runs into a steep, almost perpendicular, rocky bluff, about eighty feet high, bare of trees, while a thick growth of fir and spruce cling to the slopes on the eastern end. Where the rocks are bare they have a peculiar white appearance, common to several of this group. Long shoals extend to the eastward and southeastward from this island, and several rocky islets and bare ledges lie south of it and between it and **Wreck Island.** Between these two, but much farther to the northward, will be seen

ST. HELENA ISLAND,

remarkable for the very white rocks of which it appears to be composed when seen from this side. It is high, almost entirely bare except for a growth of stunted firs clinging to its sides and summit near the middle; lies nearly half a mile to the southward of **Green Island** and one mile to the southeastward of **Thurlow Island,** (on the south side of *Deer Island Thoroughfare.*) Between it and **George Island** there is a narrow passage through which fifteen feet may be carried, the channel leading close under the **St. Helena** shore. Off the western end of **Merchant Island** there will be seen, on passing to the westward, three small islands in a line nearly N E. and S W. from each other. Of these, the northernmost and smallest, which is to be left to the southward, is **Ewe Island,** a rocky islet, with steep, white-looking shores, and crowned with small fir and spruce, lying about six hundred yards to the northwestward of **Merchant Island** and nearly four hundred yards N N E. from **Hardwood Island,** the largest of the group. This latter is a nearly round island, about three hundred and fifty yards in diameter, and lies nearly a quarter of a mile to the westward of **Merchant Island.** It is about forty feet high, rocky, and covered with a pretty thick growth of trees. Like all of the islands on this side, the rocks are worn quite smooth by the action of the sea. There is a good, safe passage, with over three fathoms water, between **Hardwood** and **Merchant Islands**, leading into *Isle au Haut Bay.*

Ram Island, the southernmost of the group, lies a quarter of a mile to the southwestward of **Hardwood Island**; is small and rocky, with a thick growth of fir and spruce near its summit. The channel passes well to the northward of it.

On the north side of the passage the large, high, well-wooded and partly-settled island seen next to the westward of **George Head,** but much farther to the northward, is **Thurlow** or **Crotch Island,** lying on the south side of *Deer Island Thoroughfare.* Two small islands lie off its south side called, respectively, **Sand** and **John Islands.** They are not, however, in *Merchant Row.* After passing to the westward of **Ewe Island,** the next met with on the north side of the passage is

FARREL ISLAND,

high, bare, and rocky, and composed of smooth rocks covered with a small growth of

grass. It lies about EAST and WEST; is about four hundred yards long, and a little over a mile to the westward of **George Head**. The bare, rocky ledges extending from its southwestern end are known as *Farrel Island Ledges.* The channel passes between this island and **Halibut Rock West,** a bare, rocky islet, surrounded by ledges and with somewhat steep faces. About five hundred yards to the westward of this rock lies **Shag Ledge,** another bare, rocky islet, somewhat steep-to. Each is about fifteen feet high at high water.

Mark Island, on the southern side of the western entrance to *Deer Island Thoroughfare,* will be seen about a mile and a half to the northward on approaching **Farrel Island,** and will be easily recognized by the **Light-House** and keeper's dwelling on its western end. When seen from the southward, it shows white rocks covered with a scanty growth of fir and spruce.

When to the westward of *Halibut Rock* and in *Isle au Haut Bay,* shape the course for *Fox Islands Thoroughfare,* **Eagle Island,** or **Owl's Head.** If bound to the *Thoroughfare,*

SCRAGGY ISLAND

will soon be seen, lying to the southward and westward of **Mark Island,** at the western entrance to *Deer Island Thoroughfare.* It is low, rocky, and wooded, and a group of trees near the middle has much the appearance of a large sheaf of fodder. Bad ledges lie to the southward and southwestward of this island, some of which are out at one-quarter ebb and some at high water. About one mile southwest from it lies **Black Ledge,** which is always out. This is a very dangerous ledge, and must not be closely approached. **Scraggy Island** should receive a large berth to the northward and eastward by vessels using this passage, as *none of the ledges are buoyed, and they are all dangerous.*

DANGERS

IN APPROACHING AND ENTERING MERCHANT ROW FROM THE EASTWARD.

Although, as before mentioned, no stranger should attempt to use this passage unless compelled by necessity to do so, a general description of its dangers will not be out of place. Coming through the main channel, on approaching **Mark Island** *a red and black spar-buoy* will be seen about three-quarters of a mile to the southward of **Saddle-Back Island.** This is on

EAST HALIBUT ROCK,

lying nearly in the middle of the entrance, but on the north side of the channel and about a mile to the northeastward of **Mark Island;** it has four feet at low water and good water all around it, but it is usual and best to leave it to the northward, unless bound to the southward through *Jericho Bay,* when it is usually left to the southward. When past this buoy and up with **Mark Island,** on the course toward **Merchant Island,** *a red spar-buoy* will be seen about half a mile **E. by N. ½ N.** from **Gooseberry Island.** This is on

COLBY LEDGE,

dry at half-tide, and is to be left to the northward and westward. The buoy is marked **No. 4,** and is placed on the southeast side of the ledge. When past it, and steering up between **Merchant** and **McGlathery Islands,** *another red spar-buoy* will be seen about half a mile to the westward of **McGlathery Islands.** This is on

BARTER ISLAND LEDGES,

bare at half-tide, which lie six hundred and fifty yards **SOUTH** from **Wreck Island** and

about half a mile to the northeastward of **Harbor Island.** The buoy is marked No. 6, and is placed about thirty yards to the southeastward of the ledge. It is not well to pass to the northward of it, although that passage is sometimes used by those who are well acquainted. When past the buoy on this ledge there are no dangers in the channel until up with **Farrel Island**, which should receive a berth to the northward of not less than three hundred and fifty yards, to avoid

FARREL ISLAND LEDGES,

a group of bare, half-tide rocks, lying off its south and southwestern ends. They are tolerably bold-to, and the southernmost being always out *they are not buoyed.*

SCRAGGY ISLAND LEDGES

lie to the southward and southwestward of **Scraggy Island**, and consist of a long line of rocks, some bare at one-quarter ebb and others always out, which extend about one mile from the island. **Black Ledge,** the southernmost, which is always out, is very dangerous, and must be carefully avoided. It is not advisable to come nearer to the island than a mile and a quarter.

SAILING DIRECTIONS.

No detailed directions can be given for *Merchant Row.* The course in by the main channel, after leaving *Jericho Bay*, is about SW. by W. ½ W. When up with the *red and black spar-buoy on Halibut Rock East*, leave it to the northward and continue the course, edging rather more perhaps to the northward until past **Mark Island** and **Gooseberry Island** bears **NORTH**, about half a mile distant. The middle of the passage should now bear WNW., and that course should be steered through the *Reach*, passing two hundred yards to the southward of *Barter Island Ledge*, and when abreast of **Ewe Island** a **WEST** course will lead through between **Farrel Island** and *Halibut Rock.* There is good water for any coaster through this passage, not less than three fathoms at low water having been reported; still it is not safe without a pilot. Those coasters who use it are such as are accustomed to thread the intricate channels of the *Casco Passage* and *York Narrows*, and, therefore, generally of draught not exceeding thirteen feet, and perfectly familiar with all the dangers.

Vessels using the *SOUTH CHANNEL* (between **Mark Island** and the **Fogg Islands**) are accustomed to steer about W. by N. ½ N. for the north end of **Merchant Island** until **Gooseberry Island** bears **NORTH**, when WNW. is the course through the *Row.*

CASCO PASSAGE.

What is called *Casco Passage* leads between **Black Island** on the north and **Orono Island** (which lies off the northwest end of **Burnt-Coat Island**) on the south, and is used by vessels of light draught which have come through the *Cranberry Island Passage* from **Mount Desert.** It cannot be used by strangers, the larger portion of the dangers in it being unmarked. This passage leads from *Blue Hill Bay* across what is called *Jericho Bay*, and thence by *Deer Island Thoroughfare* or *Merchant Row* into *Penobscot Bay.*

BLACK ISLAND,

on the north side of the passage, will appear as a low, rocky, and thickly-wooded island, lying NW. and SE., off the north shore of **Burnt-Coat**, from which it is distant about three-quarters of a mile. On the south side, what appears to be the northwest end of **Burnt-Coat** is, in reality,

ORONO ISLAND,

showing as low, rocky land, thickly wooded, extending into a long, low, rocky point

which has one or two lone trees upon it. It may be well to state that *coming from the westward* this island presents a more remarkable appearance, and serves as a means of recognizing the entrance to *Casco Passage*. It shows as a wooded island, highest at its southern end, where is a bare, white, bluff, rocky head, with a few trees clinging to its southern face. Its little **Thrumbcap**, a low, rocky point on its northern end, with a few trees in the middle, looks like a separate islet. (See page 230.)

A little to the eastward of **Orono Island**, and also on the south side of the passage, lies a low, rocky islet with a group of spruce trees exactly in the middle. This is **Crow Island**, and there are dangerous ledges on both sides. (See page 225.)

In entering the *Passage*, **Cranberry Marsh Point** is first passed. This is the northeastern point of **Burnt-Coat**, and appears as a long, low, wooded point, with sandy beach, and a rocky, wooded head, looking like an island, rising from the beach about half a mile to the southward. The houses which appear over this beach are in *MACKEREL COVE*, which opens as soon as past the western part of the point, when it will show as a large, deep cove, extending into the north shore of the island about a mile. Its shores are well wooded, and of moderate height except at the head of the cove and near its eastern side, where are cleared fields and a few houses. This cove is a good anchorage for coasters. (See page 225.)

Passing to the westward of **Black Island** two other islands will appear to the westward of it, which are not, however, in this passage. The southernmost, called **Calf Island**, is somewhat higher than **Black Island**; part of its southern face is cleared and has a house and barns on it. The higher part is mostly covered by low, thick woods. (See page 230.)

The northern island, about a mile and three-quarters off, is **Pond Island**, which appears cleared and gently sloping, with a wooded summit. The middle of the island is low land, while the northeast end rises to a round head covered with a very thick growth of trees. (See page 231.)

Just to the westward of **Calf Island** is a small, low islet, covered with a thick growth of spruce and fir. This is **John Island.** All of these islands lie on the eastern side of the southern approach to *Eggemoggin Reach*, and vessels which have come through *Casco Passage* and bound through the *Reach* must pass to the westward of them.

The high, wooded lands seen in the distance, and apparently stretching across the passage at its western end, are the shores of **Stinson Neck** and **Deer Isle.** (See page 254.) Bound through *Deer Island Thoroughfare*, the course leads directly toward them; but if bound through *Merchant Row*, it turns more to the southward, toward **Saddle-Back Island**, leaving **Marshall Island** to the southward.

When to the westward of **Orono** a bare, rocky islet, called **Long Ledge**, will be seen nearly in the middle of the passage. Shoal water and ledges, bare at low water, lie on all sides of it. Next to the westward, and close in with the northwest point of **Burnt-Coat**, lies

BUCKLES ISLAND,

also on the south side of the passage. It is low, thickly wooded, and between it and **Burnt-Coat** is a good anchorage for coasters, called *BUCKLES ISLAND HARBOR.* There are no dangers in the entrance, and vessels may stand fearlessly in, using the lead, and anchor according to draught. (See page 226.)

MARSHALL ISLAND

is that large, high, woody island seen about two miles to the southwestward, and is also to be left to the southward. It is about two and a half miles long, lies nearly **NORTH**

and SOUTH, exactly in the middle of the western entrance to *Blue Hill Bay*, and there is a good channel on each side of it. From its northern end **Saddle-Back Island** is distant about three miles, and **Mark Island** nearly the same distance in a S W. by W. direction. (See also page 227.)

DANGERS
IN APPROACHING AND ENTERING CASCO PASSAGE FROM THE EASTWARD.

Coming from the eastward.—Give **Cranberry Marsh Point** a berth of four hundred yards, to avoid

CRANBERRY MARSH LEDGE,

lying about two hundred and fifty yards from the point. It has two feet at low water, and *is not buoyed.*

Approaching **Crow Island,** look out for

THE TRIANGLES,

which lie to the northward and westward of that island, are bare at half-tide, and *are not buoyed.* Near them is a bare ledge called **Cherry Ledge,** and both are to be left to the southward. When past them, and nearly abreast of the southeast point of **Black Island,** there will be seen ahead and about half a mile off, *a black spar-buoy* on the **Northeast Point** of

LONG LEDGE,

which pass to the southward of. This ledge, as before mentioned, is a bare, rocky islet about half a mile to the westward of **Orono,** and is surrounded by ledges. This buoy is on that portion which extends to the eastward, and is bare at low water. *Do not approach the southwestern end of* **Black Island** *nearer than three hundred yards,* to avoid a ledge out an hour before low water, and lying about two hundred yards from that point. Also, when near *the northwest end of* **Orono** *do not approach it too closely,* as there are several ledges off the point, obstructing the south side of the channel.

When past the *black spar-buoy* on the northeast point of **Long Ledge,** *another black spar-buoy* will be seen about half a mile off. This is on

THE MIDDLE GROUND,

sometimes called *Buckles Island Ledge,* and the buoy, which is marked No. 12, bears about SE. from the southwest end of **Long Ledge,** half a mile distant. There is no passage north of this buoy—the whole distance to **Long Ledge** being full of shoals. The name *Middle Ground* is, therefore, improper.

W SW. from the dry part of **Long Ledge,** and a quarter of a mile off, is *another black spar-buoy,* marking the *southwest point of the Long Ledge Shoals.* It is marked No. 1, and placed in three fathoms on the southwest side of the ledges, which are here dry at low water.

SAILING DIRECTIONS.

Strangers cannot use this passage on account of its contracted channel and dangerous ledges, many of which *are not buoyed.*

From *Bass Harbor Bar* a **WEST** course leads into the passage as far as the northwest end of **Orono**; after which the rule is to keep in the middle of the passage, being guided by the buoys, and *remembering that black buoys are to be left to the northward, and red buoys to the southward, going west,* as these channels were all buoyed for vessels bound to the eastward.

The only tidal notice at present available is that already referred to in the description of **Burnt-Coat Island** and vicinity, (see page 226,) viz: that near **Cranberry Marsh Point** a strong current sets constantly to the eastward at all stages of tide except the first of the flood.

YORK NARROWS

is the name given to that narrow and somewhat crooked passage leading between **Orono Island** on the north and the northwest end of **Burnt-Coat** on the south, into the *Casco Passage.* It is never used except by fishermen and light coasters who are thoroughly familiar with its dangers; and no sailing directions would be of use.

PENOBSCOT BAY,

the most extensive of the great bays which penetrate the coast of **Maine,** may be said to begin at **Isle au Haut** on the east and **White Head** (at the entrance of *Muscle Ridge Channel*) on the west. Between these two points the distance is twenty-one miles, which is here the width of the bay; but a great mass of islands, large and small, lying about midway between the east and west shores, separates the bay into two parts, known as *EAST* and *WEST PENOBSCOT BAYS.*

From the entrance to the mouth of the *PENOBSCOT RIVER* the bay is about twenty-eight miles long, its general course being about **NE. by N. to NNE.**

It is not only the largest but the most important bay on the coast of Maine. Upon its shores are situated the towns of **Belfast, Castine, Camden, Rockport,** and **Rockland;** while at the head of navigation on *PENOBSCOT RIVER* is the city of **Bangor,** the centre of the most extensive lumber-trade on this part of the coast. Many smaller towns and villages line the shores of the river and bay, most of which have some coastwise trade.

Bangor, one of the largest towns in the State, having a population of about sixteen thousand, is situated on the west bank of *Penobscot River*, forty-five miles above the mouth of the *Bay*, and at the head of tide-water and navigation.

Belfast is situated at the mouth of *BELFAST* or *PASSAGASSAWAKEAG RIVER*, which empties into *BELFAST BAY*, and is about twenty miles above **Owl's Head** and twenty-six miles above the mouth of the *Bay.*

Castine is on the east side of the *Bay*, on what is called *BAGADUCE RIVER*, which makes in to the northward of **Cape Rosier**, between it and **Dice Head.** It is twenty-one miles above **Saddle-Back Ledge Light** at the mouth of the bay.

Camden lies on the west side of the bay, seven miles above **Owl's Head** and thirteen from the entrance. **Rockport** is about two miles below **Camden.**

The city of **Rockland** is also on the west side, at the head of a large cove which makes in on the north side of **Owl's Head.** It is the largest town on the west shore, and is famous for its lime-works. The entrance to the harbor is about six miles above the mouth of the bay.

Both sides of the entrance to *Penobscot Bay* are marked by lights. The easternmost is on

SADDLE-BACK LEDGE,

which is off the southwest end of **Isle au Haut,** and is a high, black rock, formed somewhat like a saddle, lying about four miles **NW. by W. ¾ W.** from the southwestern end of **Isle au Haut,** sometimes called **Western Ear.**

SADDLE-BACK LEDGE LIGHT-HOUSE

is of granite, the lower half painted white and the upper half remaining of the natural color of the stone, and has a one-story wooden porch attached, painted brown. The tower is thirty-six feet high, and shows a fixed white light of the fifth order of Fresnel from a height of fifty-one feet above the sea, and visible twelve miles. Its geographical position is

Latitude - - - - - - - - 44° 00′ 51″ N.
Longitude - - - - - - - - 68° 43′ 35″ W.

The light which marks the western side of the entrance is on

WHITE HEAD ISLAND,

a rocky island lying close in with the main shore, seventeen miles W. ¾ N. from **Saddle-Back Ledge Light.** It is about eight hundred yards long in an EAST and WEST direction, and wooded principally with stunted spruce and fir, with which, like all the islands in its vicinity, its surface is covered.

WHITE HEAD LIGHT-HOUSE

is built on the western end of the island, half way up the slope of **White Head,** and is a granite tower, unpainted, thirty-four feet high, and shows a fixed white light of the third order of Fresnel from a height of seventy feet above the sea, visible thirteen miles. The tower is connected with a one-story dwelling-house, whitewashed. Its geographical position is

Latitude - - - - - - - - 43° 58′ 42″ N.
Longitude - - - - - - - - 69° 07′ 28″ W.

FOG-SIGNAL.

A ten-inch steam fog-whistle has been established at this light-house, which during a fog gives blasts of eight seconds at intervals of fifty-two seconds.

The following are the bearings and distances from prominent points of the **two lights** which mark the east and west limits of *Penobscot Bay:*

	Miles distant.
Saddle-Back Ledge Light bears from	
Mount Desert Rock Light, W N W.	26
Matinicus Rock Lights, N E. ¼ N.	15
White Head Light, E. ¾ S.	17
Monhegan Light, E. by N. ¼ N.	30
Seguin Light, E. ¼ N.	48
Cape Ann Lights, (**Thatcher Island,**) N E. by E. ¼ E.	116
Highland Light, (**Cape Cod,**) N E. ¼ N.	133
White Head Light bears from	
Saddle-Back, Ledge Light, W. ¾ N.	17
Mount Desert Rock Light, W. by N. ¼ N.	43
Matinicus Rock Lights, N W. by N. ¼ N.	17
Monhegan Light, N E. ¼ E.	15½
Cape Ann Lights, N E. by E. NORTHERLY	105
Highland Light, (**Cape Cod,**) N E. ¾ N.	125

The guide to the approaches to *Penobscot Bay* from seaward is on

MATINICUS ROCK,

a bare, rocky islet, about eight hundred yards long in a N E. and S W. direction, and about fifty feet high, lying about thirteen miles to the southward of the entrance and

about four miles S. ½ E. from **Matinicus Island.** Near its southwestern end, and on the highest part, are the **Light-Houses** called

MATINICUS ROCK LIGHTS,

two granite towers one hundred and eighty feet apart, in a line N N W. and S S E. from each other. Two dwelling-houses, one of granite and one of wood painted brown, stand close to the towers. The **Light-Houses** are forty and fifty feet high, respectively, and show fixed white lights of the third order of Fresnel from heights of eighty-five and ninety feet above the sea. They are visible fourteen miles.

The geographical position of these lights is

Latitude - - - - - - - - -	43° 47′ 00″ N.
Longitude - - - - - - - - -	68° 51′ 18″ W.

FOG-SIGNALS.

A twelve-inch steam fog-whistle is placed south of, and near the foot of, the southern tower, and gives blasts of five seconds at intervals of twenty-five seconds; and there is also a bell-tower, with a fog-bell struck by machinery, which is sounded during thick weather in case of accident to the steam-whistle.

The following are the bearings and distances of **Matinicus Rock Lights** from prominent points on the coast: From

	Miles distant.
Machias Seal Island Lights, W. by S. ½ S.	87
Byer Island Light, WEST	110
Seal Island Light, (Cape Sable,) N W. by W. ¾ W.	106
Mount Desert Rock Light, W. ½ S.	34
Head Harbor Light, W. by S. ¾ S.	71
Petit Manan Light, W S W.	56
Saddle-Back Ledge Light, S W. ½ S.	15
White Head Light, S E. by S. ½ S.	17
Monhegan Light, E. by S. ½ S.	20
Seguin Light, E. by S. nearly	39
Cape Elizabeth Lights, E. ½ S.	60
Boon Island Light, E. by N. NORTHERLY	81
Cape Ann Lights, N E. by E. ¾ E.	102
Boston Light, N E. by E. ½ E.	125
Minot Ledge Light, N E. by E. ½ E.	125
Race Point Light, (Cape Cod,) N E. ½ E.	120
Highland Light, (Cape Cod,) N E. NORTHERLY	118

From the **Matinicus Rock Lights** the centre of *Jeffrey Bank* bears S. ½ E., twenty-six miles distant; and *Ammen Rock*, on *Cashe Ledge*, S. by W. ½ W., fifty-one miles distant.

RAGGED ISLAND

lies about two miles and a half N. by W. from **Matinicus Rock Lights** and about three-quarters of a mile SOUTH from **Matinicus Island.** It is of irregular shape; lies nearly N E. and S W.; is a mile and a quarter long, with hills from sixty to one hundred feet high, separated by low lands. The hills are mostly wooded and the low lands cleared. Its outline is very irregular, being much cut up by coves, some of which afford good shelter for vessels of light draught; but its shores are foul, especially on its southern and eastern sides, where there are many dangerous, bare, and sunken ledges.

MATINICUS ISLAND

lies N N E. and S S W., about three-quarters of a mile to the northward of **Ragged Island**

and a little over four miles from **Matinicus Rock Lights.** It is somewhat more than a mile and three-quarters long, about three-quarters of a mile wide, in no place over sixty feet high, very gently sloping, and for the most part cleared, although near the shore cleared and wooded lands occur alternately. Its northern end, called **Northeast Point,** is wooded and about forty feet high. Its southwestern end, known as **South Point,** is about sixty feet high, partly wooded and partly cleared and settled. Its shores, especially the eastern shore, are much indented by coves, some of which afford anchorage for vessels of light draught; but this eastern shore is very foul, there being many bad ledges to the eastward of it, some of which are a mile from the island.

Between **Matinicus** and **Ragged Islands** are what is called *MATINICUS ROADS,* and sometimes *RAGGED ISLAND ROADS;* but this anchorage is only suitable in light winds and calms.

NO MAN'S LAND

is a small, wooded island, about fifty feet high and five hundred yards long, lying about seven-eighths of a mile to the eastward of the **Northeast Point** of **Matinicus.** Its shores are bold-to. Between it and **Northeast Point,** but rather nearer the latter, is a small, bare island, called **Two-Bush Island.** The bearing from **Northeast Point** to **No Man's Land** is E. by N. ½ N.

Between **Matinicus** and **Ragged Islands** lie two islets—the northernmost, which is nearly midway between the two, called **Ten-Pound Island,** and the other, which is close to the north-shore of **Ragged Island,** called **Pudding Island.**

TEN-POUND ISLAND

lies NNW. and SSE., is a little over five hundred yards long, low on its northern end, but rising with a very gradual slope to a height of forty feet at its southern end. It is rocky, and bare except a few trees in small clumps on the higher lands.

PUDDING ISLAND

lies about a hundred and fifty yards from the north shore of **Ragged Island,** off what is known as *Wilson Cove.* It lies NORTH and SOUTH, and is only about an eighth of a mile long, rocky, and barren except for a few scrubby spruce and firs on its summit. Both of these islets are tolerably bold-to.

NE. by N. from **Matinicus Rock Lights,** four miles distant, lies

WOODEN BALL ISLAND,

narrow and rocky, from fifty to sixty feet high, almost entirely bare of trees except on its western side, near the middle, where there is a small clump, and a single tree on **Northwest Point,** its northern end. The island lies NE. and SW., is about a mile long, and about two-thirds of the way from **Northwest Point** to its southern end is nearly separated into two parts by a narrow cove called *Back Cove.* Here the land is quite low, forming a sort of valley between the two hills, and has a couple of houses upon it. This is known as the **Low Place,** and gives the island when viewed from the southward the appearance of two islands separated by a narrow strait. The shores are bold-to. This island lies about two miles and three-quarters to the eastward of **Matinicus Island** and three miles W. by S. ½ S. from

SEAL ISLAND,

or **Matinicus Seal Island,** (as it is sometimes called to distinguish it from **Machias Seal Island,**) the easternmost of this group of outlying islands. This island bears from

Matinicus Rock Lights N E. ¾ E., distant seven miles and a half. It is of irregular shape, lies about E N E. and W S W.; is a mile long, very narrow and undulating, the land varying from twenty to sixty feet in height, and entirely bare of trees. Its eastern end is quite low, being in places but a little elevated above high-water mark, while its western end, which is called **Western Head,** is sixty feet high, bare and steep. From **Northeast Point** (the northern point of **Matinicus**) this head bears E. ¾ S., distant six miles. The dangerous ledges known as the *Malcolm Ledges,* which are bare at low water, lie midway between **Seal Island** and **Wooden Ball.**

DESCRIPTION OF THE SHORES OF EASTERN PENOBSCOT BAY, THE HARBORS AND ADJACENT ISLANDS, FROM THE ENTRANCE TO THE MOUTH OF PENOBSCOT RIVER.

The eastern point of entrance to *Penobscot Bay* is formed, as before mentioned, by

ISLE AU HAUT,

a large island, nearly five miles long, with an average width of a little over two miles, lying about N E. by N. and S W. by S.; is very high, the highest part being in the middle, and formed by two peaks with a depression between them, having somewhat the appearance of a saddle. The rise of the land is gradual from the north and south ends toward the middle, and it is in most cases wooded to the summit. The highest point is four hundred feet above sea-level, and on its eastern and western sides it is very steep. Its eastern shore has a comparatively straight outline; has several outlying islands, and is comparatively bold-to. The western shore is very irregular, indented by several coves, some of which afford good harbors, and is not safe to approach nearer than a mile and a half except on the sailing-lines for the different harbors, as there are many outlying ledges, some of *which are always under water and very dangerous.*

On the south side the island extends into two high heads; the easternmost, forming the southeast point, called **Eastern Head,** is a bluff, rocky head one hundred and twenty feet high, its southern and eastern faces almost perpendicular to a height of eighty feet, and composed of bare rocks, while the summit is mostly wooded. Off the **Eastern Head** lies a rocky islet about forty feet high, and between five and six hundred yards long in an EAST and WEST direction, partly bare and partly wooded, and about one hundred yards from the **Head.** It is called **Eastern Ear.**

The southwestern end of the island is a bluff, rocky head, about eighty feet high, quite steep, bare of trees, and is called **Western Ear.** It is an island at high water, being then separated by a very narrow and shoal passage from **Western Head,** the southwest point of the island. Between these two is formed a large bay about a mile and a half wide, but not safe of approach on account of the dangerous ledges in the vicinity.

Great and **Little Spoon Islands** lie off the eastern shore of **Isle au Haut,** about one mile and three-quarters to the northeastward of **Eastern Ear.** They are EAST and WEST from each other. **Great Spoon Island,** being the easternmost, lies two and a half miles from the east shore of **Isle au Haut;** extends nearly NORTH and SOUTH; is a little over half a mile long, and high and bare except for a few scattered trees on the summit. **Little Spoon Island** is about half a mile to the westward from **Great Spoon** and a little over two miles and a half to the eastward from **Isle au Haut.** It is rocky, and bare except on the northern end, where there is a heavy growth of trees. The passage between the **Spoon Islands** and **Isle au Haut** is not considered safe for strangers, although it has good water. But little is known of it, and there may be hidden dangers which

would render its navigation unsafe. **The York Islands** lie about a mile and a half to the northward from **Little Spoon Island** and about a third of a mile from the east shore of **Isle au Haut.** There are two of them—the northernmost, which is the smaller, being about three-quarters of a mile to the southward and eastward from **Rich Point,** the northeast point of **Isle au Haut.** The larger island, which is a little over three-quarters of mile in length, is bare in the middle, where it rises to a peak, the sides of which are marked with firs and small spruce trees. The passage between it and **Isle au Haut** is full of ledges and bare rock, and is not safe for strangers, although there is a harbor for light-draught vessels between the northermost island and **Isle au Haut** which is often used by fishermen.

On the west side of **Isle au Haut,** about one mile and a half above **Western Ear,** there makes in a narrow cove, called *Duck Harbor.* There are two or three houses on its shores, but it is not considered safe for strangers. Two-thirds of a mile to the northward of *Duck Harbor,* and a little over two miles above **Western Ear,** makes in a large cove to the northeastward, called *Moore Cove.* There is good water in it, but as there are several outlying ledges *which are not buoyed,* strangers must not attempt to enter. Its north point of entrance, called **Moore Head,** is about sixty feet high, and composed of white rocks so dotted with scrubby trees as to give it a somewhat mottled appearance. On its north side makes in the principal harbor of the island, known as

ISLE AU HAUT THOROUGHFARE.

It is contained between this shore and a large island, called **Kimball Island,** lying close in with it, forming the north shore of the harbor. Though known as *Thoroughfare,* there is really no passage through, a bar, dry at low water, extending across the northeast end of the *Reach.*

KIMBALL ISLAND

lies nearly EAST and WEST, and is a mile and three-quarters long. At its nearest point to **Isle au Haut** it is only a hundred and fifty yards off, which is here the narrowest part of the *Thoroughfare.* It is one hundred and sixty feet high in the middle, sloping gradually toward the east and west ends, and again at the western end rising to a steep, bluff head, known as **Kimball Head.** With the exception of this head, which is thickly wooded, the island is a mere bare rock, dotted with clumps of stunted spruce standing on the summit and clinging to its sides. On the south side of this head makes in *Marsh Cove,* which is not safe on account of the dangerous *Marsh Cove Ledges,* extending off in an easterly direction nearly one mile from **Marsh Cove Head,** on its south side. This head is about sixty feet high, and forms the north point of entrance to *Isle au Haut Thoroughfare.*

On the southeastern side of the entrance, about one mile above **Moore Head,** is **Robinson Point;** low, rocky, and thickly wooded. The shores above the point are undulating, with one or two cleared fields, but for the most part rocky and barren.

On the north shore, immediately opposite to the lower end of the village, is **Money Point;** gently sloping, forty feet high, and with tall trees upon it. The settlement is upon the south side of the *Thoroughfare,* at its eastern end, and has a very conspicuous white church with a tall steeple.

DANGERS

IN APPROACHING AND ENTERING ISLE AU HAUT THOROUGHFARE.

I. ***From the southward and westward.***—In approaching this harbor from *Isle au Haut Bay,* the first danger met with is

SAWYER LEDGE,

which has seven feet at low water, and lies about half a mile to the northwestward of **Robinson Point.** *A black spar-buoy*, marked No. 1, is placed on its southeastern end in three and a half fathoms, and is to be left to the northward. When abreast of it, *another black spar-buoy* will be seen to the northeastward, on

INNER LEDGE,

which lies off the **Kimball Island** shore, and is out at low water. The buoy is on its southeastern end in twenty feet, and is to be left to the northward. The channel is narrow, but affords beating-room for a smart-working vessel, and the anchorage is excellent.

In approaching from the southward on a wind, be careful to give the western shore of **Isle au Haut** a wide berth, certainly not less than a mile, until up with *MOORE HARBOR*, as there are bad ledges lying all along this shore, some of which are sunken, others bare at low water, and none of them buoyed. Off the entrance to *Moore Cove* lie two ledges, bare at low water, nearly EAST and WEST from each other, the innermost a third of a mile from shore, the westernmost two-thirds of a mile. *They are not buoyed, and are very dangerous when covered.*

Do not approach **Moore Head** *nearer than one-third of a mile*, as there is a reef nearly four hundred yards long extending out from it in a southwesterly direction.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ISLE AU HAUT THOROUGHFARE.

I. *From the southward and westward.*—When up with **Saddle-Back Rock Light,** bring it to bear SSW. and run NNE. until the entrance to the harbor is well open, when steer to the northeastward, keeping the southeastern shore best aboard, when the *black spar-buoy on Sawyer Ledge* will soon be seen a little to the northwestward. Steer for this buoy, aiming to pass to the southeastward of it; and when past it continue along the southeast shore, when the *black spar-buoy on Inner Ledge* will be seen, which also pass to the southward of; and when abreast of it, NE. by E. leads safely to the head of the harbor.

Anchorage may be found anywhere in the channel after passing *Inner Ledge.* Not less than three fathoms at low water may be taken into the harbor.

DANGERS

IN APPROACHING AND ENTERING ISLE AU HAUT THOROUGHFARE.

II.—*Coming from the northward, through East Penobscot Bay.*—On approaching **Kimball Island** from the northward, look out first for

KIMBALL ROCK,

lying about two-thirds of a mile WEST from **Kimball Head**, and always out. There is a passage in-shore of it, but strangers are advised to keep to the westward. When past it, the dangerous

MARSH COVE LEDGES

are met with, extending off from **Marsh Cove Head** in an easterly direction nearly three-quarters of a mile. The innermost ledge is a bare, rocky islet surrounded by shoal water; but the others, with the exception of the outer rock, are bare at low water, the latter having three feet at lowest tides. *They are not buoyed*, and strangers must be careful not to approach **Marsh Cove Head** nearer than a mile until the highest part of it

bears to the northward of E. by N. When past these ledges the *black buoy on Sawyer Ledge* will be seen, which pass to the southward of, and the entrance to the harbor is clear.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ISLE AU HAUT THOROUGHFARE.

II. *From the northward, through East Penobscot Bay.*—The course from the northward through the east bay is SOUTH from **Eagle Island Light.** On this course pass about a mile and a half to the westward of **Kimball Head.** When the head bears WEST, haul to the westward toward **Moore Head**, which is easily recognized as the high, white, rocky head, with small black trees dotting its surface and giving it a mottled appearance. When the middle of the entrance bears E N E., steer that course until the *black spar-buoy on Sawyer Ledge* is visible. Leave this to the northward and westward, and when past it, keep the S E. shore best aboard until up with the *black spar-buoy on Inner Ledge*, when N E. by E. leads to the head of the harbor.

The above courses pass well outside of **Kimball Rock** and *Marsh Cove Ledges*, and carry not less than three fathoms at low water.

The northeastern point of **Isle au Haut**, known as **Rich Point,** is bare, bluff, and rocky, with grassy surface and a solitary spruce tree on top near the middle. It is not very bold-to, and should not therefore be approached very closely by strangers. **Burnt Island** lies off the north shore of **Isle au Haut**, and is recognized by the precipitous, bluff, wooded head on the southwest end. Between it and **Isle au Haut** is formed what is called *BURNT ISLAND HARBOR*, where there is ten feet at low water; but it is not safe for strangers. This island must not be approached from the northeastward nearer than a mile, as the dangerous *Burnt Island Ledges* extend in that direction for nearly three-quarters of a mile. There is a passage between them and the island with twelve feet at low water, but it is not possible for any stranger to go through.

Flood-tide sets along the east shore of **Isle au Haut** about N N E. until up with **Rich Point,** when it turns and sets N N W.

On the west side of *East Penobscot Bay*, and nearly abreast of the entrance to *Isle au Haut Thoroughfare*, begin

THE FOX ISLANDS,

a group composed of two large and innumerable small islands, lying nearly midway between **Isle au Haut** and the west shore of *Penobscot Bay*, and separating *West Penobscot Bay* from what is commonly called *ISLE AU HAUT BAY.* This latter is that portion of *East Penobscot Bay* which is contained between **Isle au Haut** and the lower portion of **Deer Isle** on the east and the **Fox Islands** on the west, and on the north is bounded by **Eagle Island** and its surrounding islets. The name *East Penobscot Bay* is, however, properly applied to the whole sheet of water extending from *Saddle-Back Ledge* to the mouth of *Penobscot River.*

There are two large islands, known as the **Fox Islands.** The southernmost, known as

VINAL HAVEN ISLAND,

is about five miles long in a N E. and S W. direction, and very irregular in shape, being cut up by long and narrow coves, most of which have good water in them. It presents a very diversified surface, being for the most part undulating and wooded, with occasional cleared fields and small settlements near the shore. On the north it is separated from **North Haven Island** by a wide and good, though somewhat crooked, passage known as *FOX ISLANDS THOROUGHFARE.*

The southeastern point of **Vinal Haven** is N E. by E. from **Saddle-Back Light**, and eight miles N E. by E. ½ E. from **Western Ear**, (at the southwest end of **Isle au Haut.**) There are a large number of islands and islets lying to the southward of it, and extending off between two and three miles, rendering an approach to it without a pilot unsafe. On its southwest side, near the southern end, there is an excellent harbor, with anchorage in from ten feet to four fathoms at low water, called *CARVER HARBOR.* This, however, properly belongs to *West Penobscot Bay*, and will be described in due course. The **red brick tower** seen on an island off the west side of the entrance is **Heron Neck Light-House**, which is a guide to this harbor and also to *HURRICANE SOUND*, running along the west shore of **Vinal Haven Island** in a northerly direction.

NORTH HAVEN ISLAND

lies nearly EAST and WEST; is about five miles and a half long and very irregular in shape. Its shores are undulating, of considerable height, and diversified with woods and cleared and settled lands, especially near the shore. Several small islands lie off its southeastern end, and in the eastern entrance to the *Thoroughfare.* Of these, **Burnt Island** lies nearest to **North Haven**; **Stimpson Island** next to the southward; **Calderwood Island** a little to the eastward of **Stimpson**; and **Babbidge Island** to the eastward of **Calderwood**, being the easternmost of the group. Between **Burnt Island** on the north and **Stimpson** and **Calderwood Islands** on the south leads a passage called *LITTLE THOROUGHFARE*, through which fourteen feet may be carried, but which is not safe for strangers.

THE FOX ISLANDS THOROUGHFARE

is one of the most important of the in-shore passages, used by coasters bound east and west, between *Passamaquoddy Bay* and **Cape Elizabeth.** In connection with *Moose-a-bec Reach*, *Mount Desert Eastern Pass*, *Cranberry Island Passage*, and *Deer Island Thoroughfare* or *Eggemoggin Reach*, it forms an almost uninterrupted in-shore passage, with comparatively smooth water, and a depth of not less than fifteen feet at low water, from *Englishman Bay* to *West Penobscot Bay.* Its eastern entrance bears from the western end of *Deer Island Thoroughfare* about W. by N., distant about four miles, and is somewhat difficult of recognition in the absence of any distinguishing marks, as the passage is apparently closed by the overlapping points of land to the westward.

This eastern entrance, a mile and three-eighths wide, is contained between **Babbidge Island** on the north and the northeast point of **Vinal Haven** on the south. The latter, when seen from the westward, shows as a high hill, bare except on its summit, which is flat, and has a group of tall trees upon it standing in a line apart from each other. It is known as **Calderwood Neck.**

BABBIDGE ISLAND,

on the north side, lies N E. and S W.; is about five-eighths of a mile long, barren, rocky, of moderate height, and undulating. It is for the most part bare of trees; but at its eastern end there is a thick grove of scrubby fir and spruce, and an occasional growth of scrub along its southern face. It is surrounded by ledges, and is not safe to approach on its south side nearer than three-eighths of a mile. The shores of **Vinal Haven**, on the contrary, are bold-to, from four to seven fathoms being found within two hundred yards of the rocks.

CALDERWOOD ISLAND

lies next to the westward of **Babbidge Island**, from which it is separated by a shallow

passage a quarter of a mile wide and full of ledges. It is about five-eighths of a mile long E N E. and W S W.; and seen from the southward and westward appears of moderate height, nearly bare of trees, with a high, rocky head near the middle on its south side, which has a single tall spruce tree upon it, forming a somewhat remarkable feature, as there are no other trees near it.

There is a passage, with eight feet at low water, between this and **Stimpson Island**, which leads into *Little Thoroughfare*, (before mentioned as contained between **North Haven** and **Burnt Island** on the north and **Calderwood** and **Stimpson Islands** on the south.) This passage must not be attempted without a pilot.

STIMPSON ISLAND

lies nearly EAST and WEST, also on the north side of the passage; is about one mile long, and for the most part composed of rugged bare rocks. At its western end it terminates in a high, rocky head, covered with a very thick growth of small birch and spruce. This head cannot be mistaken, as the grove upon it is the only thick growth on this side of the entrance.

Off the south shore of **Stimpson Island** there will be seen, on coming abreast of the southwest end of **Babbidge Island**, a high, bare rock about seven-eighths of a mile off, and nearly in the middle of the passage. This is **Channel Rock**; lies about eight hundred yards from the south shore of **Stimpson Island**, nearly three-quarters of a mile from the **Vinal Haven** shore; has good water on all sides, (from seven to nine fathoms,) and may be passed on either hand close-to, as it is quite bold. It is usual, however, to pass to the southward of it.

When up with it, a small island will be seen in the middle of the passage and about seven-eighths of a mile to the westward. This is

WIDOWS ISLAND,

and will appear grassy, entirely bare of trees, and of moderate height; lies E N E. and W S W., and is nearly four hundred yards long. It is exactly equidistant from **Stimpson Island** and **Calderwood Neck** on the **Vinal Haven** shore. There is deep water on both sides of it, but it is usual to pass between it and **Stimpson Island**, or to the northeastward of it. **Widows Island** lies NORTH from *CARVER COVE*, which makes in on the north shore of **Vinal Haven**, is perfectly unobstructed, and affords excellent anchorage in from ten feet to four fathoms, soft bottom. The water shoals gradually, and it is only necessary to stand boldly in, using the lead. The western shore of this cove is formed by

CALDERWOOD POINT,

extending from the north side of **Vinal Haven** in a northerly direction about seven eighths of a mile. It is of moderate height, mostly cleared, with clumps of trees scattered over its surface. It is tolerably bold-to. About one hundred yards to the eastward of its northern end lies **Birch Island**, a low, rocky islet, with a few trees on its southern end, and connected at low water with the neck.

On the north shore, when past the west end of **Stimpson Island**, there opens a large and deep cove five-eighths of a mile wide at its mouth, called *KENT COVE*, affording good anchorage in from two to ten fathoms, and almost entirely unobstructed. Its shores are for the most part cleared and cultivated. Crossing the mouth of this cove and passing to the westward of **Calderwood Neck**, there will be seen ahead, and on the north side of the passage, about three-quarters of a mile off, a rocky point of moderate height, called

IRON POINT,

with two small spruce trees near its southern end, and its summit covered with spruce and fir. Behind it and to the westward will be seen the houses in the village of **North Haven**, and to the northward the land rises gradually, and is diversified with wooded, cleared, and cultivated lands. **Iron Point** forms the southwestern point of entrance to a large cove just to the westward of *Kent Cove*, affording anchorage in from six to ten feet at low water, and called *WATERMAN COVE*. Opposite to **Iron Point**, and on the south side of the *Thoroughfare*, is

ZEKE POINT,

the northwestern end of **Calderwood Neck**. It will appear low and rocky, with two or three scattered spruce trees upon it, and between it and **Iron Point** is the narrowest part of the *Thoroughfare*, the channel being only about four hundred yards wide from shore to shore and obstructed by dangerous ledges. On the west side of the point the shore turns abruptly to the southward, forming a large cove, called *SEAL COVE*, from the south side of which makes off *MILL RIVER*, which, running to the southward for nearly a mile and a half, almost separates **Vinal Haven Island** into two parts, there being but a very narrow strip of land between the head of this river and *PLEASANT RIVER*, which penetrates the eastern shore along the south side of **Calderwood Neck**. *Seal Cove*, the entrance to which is between **Zeke Point** on the east and **Hopkins Point** on the west, affords good anchorage in from six feet to seven fathoms, soft bottom, but is obstructed by a *Middle Ground* with eight feet water. From **Zeke Point** to its head the distance is one mile and a quarter.

HOPKINS POINT

is of moderate height, rocky, and bare of trees, and is quite bold-to, four fathoms being found within fifty yards of the rocks. On its south side makes in to the westward *PERRY COVE*, into which eleven feet may be carried, but which is of no special importance. Opposite to **Hopkins Point**, on the north side of the *Thoroughfare*, is the village of **North Haven,** built upon the low shore at the base, and a little to the southeastward of **Kent Hill,** a round and grassy head, which is very conspicuous. The shore in the vicinity of the settlement has many outlying ledges and sunken rocks, and must not be closely approached; but the south shore is quite bold-to. To the westward of the village the land is partly cleared and settled; but there is very little cultivation, the country being generally barren and rocky.

CALF POINT.

When abreast of the settlement, a round, rocky head will be seen to the westward and on the south shore, about three-quarters of a mile off. Its western end is fringed with spruce trees, and it is called **Calf Point.** Opposite to it, on the north shore, is

AMES POINT,

low, rocky, and dotted here and there with spruce trees. On this point rises a high, pyramidal, rocky head, looking like the traverse of an earthwork, which is one of the ranges for entering the *Thoroughfare* from the westward. On the western side of **Ames Point** makes in what it known as *SOUTHERN HARBOR*, a large cove, running in a northeasterly direction for about a mile and three-eighths, and affording excellent anchorage in from three to four fathoms. The entrance from the eastward, however, is obstructed by

THE DUMPLINGS,

a group of low, rocky islets extending in an EAST and WEST direction from **Ames Point** for nearly five-eighths of a mile, and surrounded by ledges and shoals. The middle and largest of these islets has a thick growth of small spruce upon it, and is called **Cross Island.** The others are almost entirely bare.

Opposite to **Cross Island**, on the south side of the *Thoroughfare*, is

YOUNG POINT,

rocky, of moderate height, covered with grass, and a group of fir and spruce on its north slopes.

AMESBURY POINT,

the western point of entrance to *Southern Harbor*, is of moderate height, almost entirely bare of trees, and mostly under cultivation. The channel into *Southern Harbor* leads between this point and the **Dumplings**, and is exactly one-third of a mile wide. Anchorage for small vessels may be had in what is called *AMES CREEK*, making in on the west side of the point, and having from nine to fifteen feet at low water.

From **Young Point**, on the south side of the *Thoroughfare*, the shore of **Vinal Haven** turns to the southwestward and the passage rapidly widens, being a mile wide at **Fish Head,** just below. This head is about one-quarter of a mile to the southwestward from **Young Point**; is round, rocky, and covered with grass; and there is a small shallow cove on the south side of it.

About three-quarters of a mile to the southwestward from **Young Point**, and a little over a quarter of a mile from the eastern shore, will be seen

THE SUGAR LOAVES,

two large, round, bare rocks, showing as one from this point of view, with a curious nick in the top. They are bold-to on their east and west sides, with from five to seven fathoms all around them. It is usual to pass to the southeastward, although the passage to the westward of them is much the wider of the two. On approaching these rocks closely, they appear of a peculiar orange color, owing to the moss upon them; and from **Brown's Head Light** their southern end bears N W. ¼ N., about five hundred yards distant, and their northern end N W. by N. ¼ N., five hundred and fifty yards distant.

Five-eighths of a mile below **Fish Head**, and seven-eighths below **Young Point**, is

BROWN'S HEAD,

which, from the northeastward, will appear high and rocky, covered with grass, and dotted with clumps of fir and spruce. On approaching it a **square, white light-tower** will be seen on its extreme eastern point, attached to a small brown dwelling-house. This is

BROWN'S HEAD LIGHT.

The tower is of brick, whitewashed, twenty-three feet high, and shows a fixed white light of the fifth order of Fresnel from a height of thirty-nine feet above the sea, visible eleven miles. Its geographical position is

Latitude - - - - - - - -	44° 06′ 41″ N.
Longitude - - - - - - - -	68° 54′ 34″ W.

This light is not exhibited when the *Thoroughfare* is obstructed by ice.

Brown's Head is quite bold-to, six fathoms being found within one hundred yards of the light-house.

The western shore of the *Thoroughfare* from **Amesbury Point** to **Crabtree Point** (the western point of entrance) is mostly cleared land, undulating, covered with a scanty growth of grass, with a few lone trees dotting the surface at wide intervals.

CRABTREE POINT

is a mile and three-quarters below **Amesbury Point** and almost exactly opposite to **Brown's Head**, the passage between it and the **Head** being a mile and one-eighth wide. The point is low and rocky, with a scanty growth of grass, and has two spruce trees standing close together some distance back from the southern extremity. Many dangerous ledges lie off its shores to the eastward, southward, and southwestward, and it is not safe to approach it closely from any direction.

On the east shore, below **Brown's Head**, the shore-line is very irregular, forming several small coves, which are, however, of no importance. Many ledges and bare rocks lie off this shore between **Brown's Head** and **Crockett Point,** and it is not safe to approach it nearer than one-third of a mile.

CROCKETT POINT

is about seven-eighths of a mile below **Brown's Head**; is rocky and of moderate height, and covered only with a scanty growth of grass. Behind it makes in to the northward a long cove, called *CROCKETT COVE*, in which anchorage may be found in from one to four fathoms. One-third of a mile S S W. from **Crockett Point** lies

DOGFISH ISLAND,

which is rocky, of moderate height, and covered with grass except on its western end, where there are a few stunted spruce trees near the foot of the slope. Between this island and **Crockett Point** is a passage, with not less than five fathoms, leading to the southeastward into what is known as *LEADBETTER NARROWS*, and thence into *Hurricane Sound* and *Carver Harbor*. The channel hugs the **Dogfish Island** shore at the western entrance, as there is a bad ledge, out at half-tide, nearly midway between the island and **Crockett Point**, and there is no passage to the northward of it.

DANGERS
IN APPROACHING AND ENTERING FOX ISLANDS THOROUGHFARE FROM THE EASTWARD.

The southern and southeastern shores of **Babbidge Island** *are shoal* and must not be approached closely. A long reef extends from the southeast shore in about a S S E. direction for five hundred yards, in places bare at half-tide, in others at low water, in some places always out, and in others always covered. Seven feet at mean low water is found on the extreme southeastern point of this ledge, five hundred yards from shore, and five feet on a detached rock three hundred and fifty yards to the southward from the southwest end of the island. Four hundred yards S W. ½ W. from the southwest end of **Babbidge Island** lies another bare ledge, surrounded by deep water. It may be passed on either side, being bold-to, but it is usual to pass well to the southward of it, and it is not in the way unless a vessel is standing to the northward on a wind. Three hundred and fifty yards to the westward of this ledge, and three-eighths of a mile W. by S. from the southwest end of **Babbidge Island,** lies

BLACK LEDGE,

which is bare at half-tide. A little over two hundred and fifty yards S W. ½ S. from it lies a detached rock with seven feet at mean low water and good water all around it, called *Sunken Black Ledge*, and sometimes *Fox Island Ledge*. A *black spar-buoy*

is placed on its southern side, and is the first buoy met with on entering the *Thoroughfare.* It bears E. ½ S. from **Channel Rock,** five hundred yards distant, and the courses pass to the southward of it. Between *Black Ledge* and *Sunken Black Ledge* there is not less than thirty-one feet at low water through a channel one hundred and twenty-five yards wide, while on the south side of the buoy the depth varies from eight to ten fathoms.

CHANNEL ROCK

is quite bold-to, and may be passed on either side; but if standing to the northward, between it and *Sunken Black Ledge,* be careful not to go to the northward of *Black Ledge,* bearing E. ½ S., or the southwest point of **Babbidge Island,** bearing E. ½ N., as there are several sunken rocks north of this line at distances from *Black Ledge* varying from three hundred yards to a quarter of a mile. When to the westward of **Channel Rock** the channel is clear, and stand to within a hundred and fifty yards of **Stimpson Island,** with six fathoms of water.

The course now leads to the westward, between **Stimpson** and **Widows Islands,** and on this course it is necessary to look out first for

BRADSTREET ROCK,

a detached ledge, with nine feet at mean low water, lying two hundred and fifty yards to the eastward of **Widows Island.** There are from five to six fathoms water between it and the island, but this passage is not often used. *The rock is not buoyed,* but is quite bold-to, and the course passes nearly one hundred and fifty yards to the northward of it. Nearly opposite to *Bradstreet Rock,* on the north side of the channel, is another pinnacle rock, called

STIMPSON ROCK;

it has four feet at mean low water, lies off the west end of **Stimpson Island,** a little over one hundred yards from shore, is very bold-to, and *is not buoyed.* When up with these two rocks, a *black spar-buoy* will be seen to the north and west, one-quarter of a mile off, on

GOOSE ROCKS,

bare at half-tide, lying off the western end of **Stimpson Island,** nearly four hundred yards from shore. There is a passage, with nearly five fathoms, leading into *Kent Cove,* inside of these rocks, but it is not safe. There are many ledges and bare rocks to the northeastward from *Goose Rocks,* extending nearly to **Indian Point,** (the eastern point of entrance to *Kent Cove,*) and there is *a sunken rock with five feet at low water* one-third of a mile E. by S. ½ S. from **Fish Point.** This is called *Kent Ledge,* and is the only dangerous obstruction found in the cove after passing *Goose Rocks.*

The buoy on *Goose Rocks* is marked No. 11, and is placed in three fathoms on their southern end. When up with it the course turns more to the westward, and *another black spar-buoy* will be seen to the north and west nearly five-eighths of a mile off, on

FISH POINT LEDGE,

sometimes called *Thomas Ledge,* bare at three-quarters ebb, and lies S E. by S. ½ S. from **Fish Point,** one-quarter of a mile off. There is no passage between it and the point, and shoal water makes from the dry ledge all the way to the buoy. The buoy is marked No. 9, and is placed in fourteen feet water on the southeastern point of the ledge. Do not, under any circumstances, pass to the northward of it. When up with it the course turns to the southwestward, passing well to the southward of *a red and black spar-buoy* off the entrance to *Waterman Cove,* and leading directly toward *a red spar-buoy* two-

thirds of a mile to the southwestward, and nearly in range with a *black buoy* beyond it. The *red and black buoy* is on *Waterman Ledge,* the *red buoy* on *Iron Point Ledge,* and the *black buoy* on *Grindstone Ledge.*

WATERMAN LEDGE

is a detached rock, with four feet water, lying N E. ¾ E. from **Iron Point**, distant one-third of a mile. Vessels bound into *Waterman Cove* may pass on either side of it, only giving it a berth if passing between it and **Iron Point**; but the course through the *Thoroughfare* leads two hundred and fifty yards to the southward of it.

IRON POINT LEDGE

is a half-tide rock, almost exactly in the middle of the passage between **Zeke Point** and **Iron Point**, and about one-eighth of a mile from the latter. Shoal water extends from it to the southward nearly two hundred yards. Not less than four and three-quarters fathoms can be taken between this ledge and **Zeke Point**, but it is usual to pass to the northward of it, (between it and **Iron Point**,) and the buoy is so placed and colored, being on the northwest end of the ledge. In steering for this buoy it is necessary to be careful not to approach **Iron Point** too closely until up with the buoy, as there is a dangerous sunken ledge, called

DOBBIN ROCK,

lying about one hundred and seventy-five yards S E. by E. ½ E. from **Iron Point**. It has eight and a half feet at mean low water, *is not buoyed*, and as the sailing-lines pass very close to it great care is necessary in approaching it.

When up with *Iron Point Ledge*, the *black spar* on

GRINDSTONE LEDGE

will be seen about three hundred yards ahead. This ledge has four feet at low water, and lies one-eighth of a mile to the southwestward of **Iron Point**. The buoy is marked No. 7, and is placed in seventeen feet on its southern end. Pass to the southward of it. When nearly up with **Hopkins Point** the course turns to the northwestward, with *a black spar-buoy* about five hundred yards off to the north, and *a red and black buoy* a short distance to the westward of the *black*. Both of these buoys lie off the village of **North Haven**, the *black spar* being on

LOBSTER LEDGE,

with two feet at low water, and bearing from **Iron Point** W. ½ N., distant nearly half a mile, and nearly one-eighth of a mile from the wharf-line of the settlement. All of this shore between *Grindstone Ledge* and *Lobster Ledge* is full of shoals and dangerous of approach. The *red and black spar-buoy* is on

POST OFFICE LEDGE,

about three hundred and fifty yards W. by N. ½ N. from *Lobster Ledge*, and also on the north side of the passage. It is a detatched rock, with eight feet at mean low water, lying about three hundred yards from the **North Haven** shore and nearly five-eighths of a mile W. ½ N. from **Iron Point**. The buoy is on top of the ledge, and is usually left to the northward; but fourteen feet at low water may be taken through between it and the **North Haven** shore. When past it, the channel is clear to the northwestward until up with *Brown's Cove*, (on the east side of **Ames Point**,) when it is necessary to look out for *a seven-feet rock* lying two hundred yards S. ½ E. from the southeastern end of **Ames Point**. *It is not buoyed;* and as there is a shoal making out to the northeastward from

Calf Point, on the south side of the channel, one hundred and fifty yards, this part of the channel is somewhat narrow. As a rule, however, it is safe to pass **Calf Point** at a distance of one-eighth of a mile. When past it the course turns to the westward, passing between the **Dumplings** and **Young Point**; and when off the latter, *a black spar-buoy* will be seen three-eighths of a mile to the westward, on

CROSS ISLAND LEDGE,

bare at low water, lying one-fourth of a mile S W. by W. ½ W. from the easternmost of the **Dumplings** and a third of a mile N W. by W. ½ W. from **Young Point**. It marks the eastern point of entrance to *Southern Harbor* as well as the northern limits of the *Thoroughfare*. The buoy is marked No. 3, and is placed in three fathoms off the south-western end of the ledge.

Nearly three hundred yards S W. ½ S. from *Cross Island Ledge*, and one-quarter of a mile N W. by W ½ W. from **Fish Head**, is

CALDERWOOD ROCK,

a small pinnacle rock with six and a half feet water, and *not buoyed*. The courses pass well to the eastward of it, leading out of the *Thoroughfare*, and about one hundred and seventy-five yards to the northward of it if bound into *Southern Harbor*. But in standing across the passage in its vicinity on a wind it may be avoided by passing not less than two hundred and fifty yards to the southward of the *Cross Island Ledge Buoy*.

The course now turns to the southwestward, passing between **Brown's Head** and

THE SUGAR LOAVES.

The latter, as before mentioned, are bold-to on their east and west sides, but shoal on the north and south sides. Two hundred yards N E. ½ E. from their northern end is *a small detached rock called the Fox Ears*, bare at low water and quite bold-to, with three and a quarter fathoms between it and the **Sugar Loaves**. In passing north of the latter, therefore, they should receive a berth of three hundred yards to the southward; and in passing SOUTH from them, they should not be approached within less than one hundred and seventy-five yards.

The west shore of the *Thoroughfare*, from **Amesbury Point** nearly to **Crabtree Point**, is quite bold-to, and may be safely approached within one hundred and fifty yards with not less than five fathoms at low water; but off **Crabtree Point** are some of the most dangerous and extensive ledges in the *Thoroughfare*.

CRABTREE POINT LEDGE,

making off from the eastern extremity of the point in an E. ½ S. direction, is composed of a number of rocks, bare at half-tide, with small detached ledges to the eastward of them. Five feet at low water is found on the eastern end of this ledge a little over four hundred yards from the shore, and two feet a little to the southward of this and a quarter of a mile from shore. *This ledge is not buoyed, and is very dangerous.* To avoid it, when standing to the northwestward in its vicinity do not stand to the north-ward of the **beacon** on *Fiddler Ledge*, bearing S W. by W. ½ W.

FIDDLER LEDGE

lies S W. by S. from **Crabtree Point**, its southern end being distant from that point exactly half a mile. It is bare at half-tide, and is surmounted by a **large, square, stone beacon with a mast and cask on top, painted black.** The beacon is near the southern end of the ledge and marks the northern limits of the channel, there being no passage to the northward of it, even for vessels of light draught.

DOGFISH LEDGES

are a number of sunken and bare rocks with good water between them, lying to the eastward and northeastward of **Dogfish Island.** The northeastern ledge is composed of four rocks, bare at low water, lying in a line nearly NORTH and SOUTH from each other, the northernmost being three-quarters of a mile NW. ½ N. from the north end of **Dogfish** and the same distance W. by N. ¾ N. from the extremity of **Crockett Point.** The group is about five hundred yards long, has deep water on all sides, and is marked by a *red spar-buoy* (No. 2) placed on its northern end in five fathoms water. This buoy bears SE. EASTERLY from the **Beacon** on *Fiddler Ledge*, distant a little over eleven hundred yards. The channel between them has from five to twelve fathoms at low water. About one-third of a mile SW. ¾ S. from this *red buoy* lies *a sunken ledge with eight feet*, which is *not buoyed.* From **Fiddler Ledge Beacon** it bears S. by E. ½ E., distant nearly three-quarters of a mile. From four to six fathoms can be taken between this ledge and the northern *Dogfish Ledge.* Four hundred yards to the southwestward lies *another with nine feet*, which bears from the buoy on the north ledge SW. by S., nearly twelve hundred yards distant, and S. ½ E. from **Fiddler Ledge Beacon**, distant seven-eighths of a mile. *It is not buoyed.* About midway between these ledges and **Dogfish Island** are other groups lying nearly in a NORTH and SOUTH direction, mostly bare at half-tide, and with deep channels on their EAST and WEST sides. None of these passages, however, should be used by strangers, even at low water, as there are quite a number of sunken ledges in them which are not buoyed.

When up with the *red buoy* on *Dogfish Ledges* different courses are steered, according as bound to the westward or up or down the bay. *Bound for Muscle Ridge Channel or down the Bay*, the course continues to the southwestward toward *another red spar-buoy* about a mile and a half off. This is on the northernmost of the

INNER BAY LEDGES,

a very dangerous group of sunken and bare rocks, lying in a line nearly NORTH and SOUTH from each other, and about five-eighths of a mile in length. The northern end bears W. ½ S. from **Crockett Point**, a little over two miles distant, and SW. from the **Beacon on Fiddler Ledge**, distant one mile and three-eighths. The southern end, out at low water, bears W. by S. ¾ S. from **Crockett Point**, two miles and a quarter distant, and from the **Beacon on Fiddler Ledge** SW. by S., distant one mile and seven-eighths.

There are five of the *Inner Bay Ledges:* the northernmost, with four and a half feet; the easternmost, with four feet; the two southern, bare at low water; and the middle ledge, with three and a half feet. About one hundred feet to the northward of the northern ledge is placed a *red spar-buoy* in six fathoms water. It is marked No. 2, and is to be left to the southward. West of the southern ledge, in eight fathoms, is placed a *red can-buoy* of the third class, also marked No. 2. It is intended to mark the *Bay Channel*, and therefore pass to the westward of it; but it is possible to pass to the southward of it, and through the *Dogfish Ledges* to **Brown's Head**, with not less than four and three-quarters fathoms at low water. This channel is, however, not suitable for strangers.

Vessels bound to **Rockland** or up the *Bay*, change course to the westward on coming up with the *red buoy* on *Dogfish Ledge;* pass about one-quarter of a mile SOUTH from *Fiddler Ledge;* and when abreast of it a *black spar-buoy* will be seen to the northwest, about five-eighths of a mile off, on

DRUNKARD LEDGE,

a dangerous half-tide ledge, lying W. by N. ½ N. from **Fiddler Ledge Beacon**, distant nearly

five-eighths of a mile. There is a good channel, with from four to seven fathoms, between this and *Fiddler Ledge*, but it is not advisable for strangers to use it. The *black buoy* on *Drunkard Ledge* is marked No. 1, and placed in three fathoms water SSW. from the bare rock. When past it and in the *Bay*, the channel is clear in all directions.

The western extremity of **Crabtree Point** is sometimes called **Stand-in Point,** and dangerous ledges and sunken rocks extend from it all the way to *Fiddler Ledge.* A half-tide ledge, called

STAND-IN POINT LEDGE,

lies WEST from it, about two hundred yards distant, and from this to *Fiddler Ledge* it is all shoal. Therefore this point must not be approached on the west side nearer than one-quarter of a mile.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING FOX ISLANDS THOROUGHFARE.

I. *From the eastward.*—From **Mark Island**, at the western entrance of *Deer Island Thoroughfare*, the course is about W. by N. to the entrance to *Fox Islands Thoroughfare*, which, with not less than seven and a half fathoms, will lead up to **Channel Rock.** Coming from the southward, however, through *East Penobscot Bay*, it is usual to bring the western end of **Babbidge Island** to bear NNW., distant one mile and a quarter, or the centre of **Widows Island** NW. by W. ½ W., in fourteen and a half fathoms, sticky bottom, and steer NW. by W., which course will lead, with not less than seven fathoms, up to *Goose Rocks Buoy.*

From *Deer Island Thoroughfare.*—When on the W. by N. course, **Channel Rock** bears N. by E. ½ E., distant two hundred yards, in eight and a half fathoms, soft bottom; steer NW. by W. toward **Fish Point**, which course leads up to *Goose Rocks* with not less than seven fathoms. (The channel from the southward and that from *Deer Island Thoroughfare* unite at **Channel Rock.**) On this NW. by W. course, when about a hundred and fifty yards to the westward of *Goose Rocks Buoy* and in eight fathoms, steer W. ½ N. for half a mile until abreast of *Fish Point Ledge Buoy.* On this course the least water is five fathoms; and the course, when abreast of the buoy, is SW. by W. ½ W. for *Iron Point Ledge Buoy*, which is left to the southward close-to. On this course the least water is seven and a half fathoms. From *Iron Point Buoy* steer W. by S. ½ S. across the mouth of *Seal Cove*, passing to the southward of *Grindstone Ledge Buoy* and carrying not less than three and three-quarters fathoms. When the eastern extremity of **Hopkins Point** bears S. ½ W., with four and a half fathoms, steer NW. by W. nearly, for **Ames Point,** passing to the southward of *Lobster* and *Post Office Ledges* and carrying nothing less than four fathoms. When **Calf Point** bears SW. ½ S., and about midway between it and the eastern extremity of **Ames Point,** in six and a half fathoms, steer WEST until abreast of the middle of the **Dumpling Islands**, with **Amesbury Point** bearing NW. ½ N.; there will be six and a quarter fathoms. Steer W. by S. ½ S. until abreast of **Fish Head** and **Brown's Head Light** opens, bearing SW. ½ S. Here is found six fathoms, with *Cross Island Ledge Buoy* well to the westward; then the course is SW. ½ W. for a mile and three-quarters, which will lead up to the *red spar-buoy* on the north end of the *Dogfish Ledges*, carrying not less than six fathoms water. When up with this buoy, *if bound for Muscle Ridge Channel* steer WSW. for a little over a mile and a half, which will bring up with the *red spar-buoy* on the north end of *Inner Bay Ledges*, when W. by S. leads safely in by the *Fisherman Island Passage*, and with not less than nine fathoms water.

Bound to **Rockland,** *or up the Bay.*—When abreast of the *red buoy* on the north end of *Dogfish Ledges*, steer WNW. until past the *black buoy* on *Drunkard Ledge*, when steer

W. by N. ½ N. for *Rockland Harbor;* N. by W. ¾ W. for *Camden Harbor;* or N. by W. if bound up through *West Penobscot Bay.*

Bound up through East Penobscot Bay, or toward *Castine Harbor.*—Continue the W N W. course until about four hundred yards to the westward of *Drunkard Ledge Buoy*, when steer N E. by N. up the bay. On these courses the least water is four fathoms, which is found on the W N W. course past *Drunkard Ledge;* the courses through the bay carry not less than thirteen fathoms.

The above courses pass from an eighth to a quarter of a mile to the southward of the *black buoy* on *Sunken Black Ledge;* two hundred yards to the southward of **Channel Rock**; one hundred and fifty yards to the northward of *Bradstreet Rock;* two hundred yards to the southward of *Stimpson Rock;* seventy-five yards to the southward of the buoy on *Goose Rocks;* one hundred and seventy-five yards to the southward of *Fish Point Ledge;* three hundred yards to the southeastward of *Waterman Ledge;* fifty yards to the southeastward of *Dobbin Rock;* the same distance to the northward of the *red buoy* on *Iron Point Ledge;* the same distance to the southward of the *black buoy on Grindstone Ledge;* one hundred and seventy-five yards to the southward of *Lobster Ledge;* one hundred yards to the southward of *Post Office Ledge;* one hundred and twenty-five yards to the southward of the *Seven-Feet Rock off Brown's Cove;* about eighty yards to the northward of the shoal off **Calf Point**; three hundred yards to the eastward of *Cross Island Ledge;* two hundred and fifty yards to the eastward of the *Fox Ears;* about one-eighth of a mile to the eastward of the **Sugar Loaves**; nearly half a mile to the eastward of *Crabtree Ledge;* and one hundred yards to the northward of the *red buoy* on *Dogfish Ledge.*

Bound to the southward, or through Muscle Ridge Channel, the courses steered pass half a mile to the southward of **Fiddler Ledge Beacon**, and about seventy-five yards to the northward of the buoy on the north end of the *Inner Bay Ledges.*

Bound to **Rockland**, *or up the bay*, the courses steered pass about four hundred yards to the southward of **Fiddler Ledge Beacon**, and about one hundred and twenty-five yards to the southward of the *black buoy* on *Drunkard Ledge.*

On the above courses, to enter Kent Cove.—On the N W. by W. course from **Channel Rock**, continue past *Goose Rocks buoy* and until the western end of **Widows Island** bears S. by W. ¾ W., when steer N. ½ E., which will lead safely into the cove, passing about one hundred and fifty yards to the westward of *Goose Rocks* and about eight hundred yards to the eastward of *Kent Ledge.* On this course there will be found soundings varying from ten and a half fathoms to fifteen feet, the latter depth being found near the head of the cove.

Coming from the westward, to enter Kent Cove.—When at the *red buoy* on *Iron Point Ledge*, steer N E. by E. ½ E. for **Indian Point**, and continue this course until within one-third of a mile of it, with the southern extremity of **Fish Point** bearing W. ½ N., with five and a half fathoms, and the *Little Thoroughfare* fairly open to the eastward; then steer N. ½ E. toward the head of the cove, or N E. ½ N. past **Indian Point**, anchoring in from six to fourteen feet at low water. The courses from the westward pass fifty yards to the southward of *Dobbin Rock;* three hundred yards to the southeastward of *Waterman Ledge;* one hundred and seventy-five yards to the southeastward of *Fish Point Ledge;* and about three hundred and fifty yards to the southeastward of *Kent Ledge.*

To enter Waterman Cove.—When about midway between *Fish Point Ledge* and *Waterman Ledge*, steer N W. ½ W., which will lead into the cove, where there is anchorage in from six to thirteen feet at low water.

To enter Seal Cove in the best water.—From abreast of the *red buoy on Iron Point Ledge* steer W. by S. ½ S., carrying not less than four fathoms, until the eastern extremity of **Hopkins Point** bears S. ½ W., when steer S. ¾ E., aiming to give the point a berth of about

one hundred yards, and continue this course (on which there is not less than three and three-quarters fathoms) until abreast of the rocky islet lying off the southern end of **Hopkins Point** and in the entrance to *Perry Cove.* Give this islet a berth of not less than one hundred yards, and pass in about five and a half fathoms, when S. ½ W. will lead with not less than six fathoms to the anchorage. If of moderate draught, (twelve feet or less,) S. W. by S. ½ S. may be steered from **Iron Point** *buoy*, on which course the least water will be fourteen feet. When exactly abreast of the mouth of *Perry Cove* the water will deepen to four or five fathoms, when S. ½ W. will lead to the head of the cove. Or a light-draught vessel coming from the eastward may round **Zeke Point** close-to and steer S. by W. ½ W., giving the point a berth of about eighty yards. From four to five fathoms will be found at this distance from the point, and when to the southward the soundings will rapidly increase, there being in some places twenty fathoms, in what is known as *THE DEEP HOLE.* Passing to the southward of this, the course will cross the *Middle Ground* in not less than nine feet at low water, and when the small island off the south end of **Hopkins Point** bears N W. ¾ W., S W. ½ W. will lead toward the head of the cove, with not less than eleven feet at low water. This cove is an excellent anchorage in easterly or westerly gales.

To enter Southern Harbor from the eastward.—When on the course W. by S. ½ S., (which leads between the **Dumplings** and **Young Point**,) **Brown's Head Light** bears S W. ¾ S. and **Amesbury Point** N. ½ W., steer N W. by W. until about one hundred and fifty yards to the westward of the *black buoy* on *Cross Island Ledge*, with five and a quarter fathoms, and the course is N E. ½ E. past **Amesbury Point**, and until the southern extremity of **Ames Point** bears S E. ½ S., when there will be four fathoms, and N E. by E. ¾ E. leads up the middle of the channel about midway between the east and west shores. The above courses pass fifty yards to the southward of the *black buoy* on *Cross Island Ledge;* one hundred and fifty yards to the northward of *Calderwood Rock;* again, one hundred and twenty-five yards to the westward of *Cross Island Ledge;* and one hundred yards to the westward of the western end of the **Dumplings.**

To enter Southern Harbor from the westward.—Bring **Brown's Head Light** to bear E N E. and run for it until the **Beacon** on *Fiddler Ledge* bears N. ½ W., five hundred yards distant, when there will be about ten fathoms, with brown mud bottom, and N E. ½ E. will lead safely in with not less than five fathoms. Continue this course until past **Ames Point** and the **Dumplings**, and the southern extremity of **Ames Point** bears S E. ½ S. as before, when steer N E. by E. ¾ E. to the head of the harbor.

These courses pass a quarter of a mile to the eastward of the **Beacon** on *Fiddler Ledge;* about one-third of a mile to the westward of the *red buoy* on *Dogfish Ledge;* three hundred and fifty yards to the eastward of *Crabtree Ledge;* and one-eighth of a mile to the westward of the **Sugar Loaves**; two hundred yards to the westward of the *Fox Ears;* one hundred and seventy-five yards to the westward of *Calderwood Rock;* and about one hundred and twenty-five yards to the westward of the *black buoy* on *Cross Island Ledge.*

II. *To enter from the westward and pass through Fox Islands Thoroughfare into Isle au Haut Bay.*—From *Fisherman Island Passage* steer E. by N., which course will lead to the *red spar-buoy* on the north end of *Inner Bay Ledges*, which pass to the northward of, and steer E N E., with not less than four fathoms, until abreast of the *red buoy* on the north end of *Dogfish Ledges.*

From **Owl's Head**, or *Rockland Entrance*, steer E. by S. ½ S., which will lead up to the *black spar-buoy* on *Drunkard Ledge;* pass to the southward of this buoy and steer E S E., carrying not less than four fathoms, which course will also lead to the *red buoy* on the north end of the *Dogfish Ledges.*

When up with it, N E. ½ E. leads, with not less than seven fathoms, midway between **Brown's Head** and the **Sugar Loaves**, and up with **Fish Head**. When the southern extremity of **Amesbury Point** will bear N. ½ W. and **Brown's Head Light** S W. ¾ S., there will be about six fathoms; steer about E. by N. ½ N. past **Young Point**, and until **Amesbury Point** bears N W. ¾ N., when there will be six and a quarter fathoms, and steer EAST past **Ames Point** until abreast of **Calf Point**, carrying not less than four fathoms water. When the centre of **Calf Point** bears S W. ½ S., steer S E. by E. down the middle of the passage, with not less than four fathoms, until the eastern extremity of **Hopkins Point** bears S. ½ W., when there will be about four and a half fathoms, with sticky bottom; and E. by N. ½ N. leads up with the *red buoy* on the north end of *Iron Point Ledge*, with not less than three and three-quarters fathoms. From this buoy steer N E. by E. ½ E., carrying not less than seven and a half fathoms, until abreast of *Fish Point Ledge Buoy*, which pass to the southeastward of, one hundred and seventy-five yards off, and steer E. ½ S. toward the *black buoy* on *Goose Rocks*. On this course there is not less than five fathoms. When within one hundred and twenty-five yards of the *Goose Rocks Buoy* and in nearly nine fathoms, steer S E. by E., which course leads safely out of the *Thoroughfare*, with not less than eight fathoms.

But if bound through *Deer Island Thoroughfare*, or across the bay toward *Northwest Harbor*, when abreast of **Channel Rock**, in eight and a half fathoms, steer E. by S.

The above courses are merely a reversal of those from the eastward, and pass at the same distance from the several dangers. (See page 290.)

The range for coming into the *Thoroughfare* from the westward is the high pyramidal head on **Ames Point** (which looks like the traverse of an earthwork) just open to the eastward of the **Sugar Loaves**. Strangers would do well to note this, as the marks are permanent and can never be mistaken.

TIDES IN FOX ISLANDS THOROUGHFARE.

	Iron Point.	Carver Cove.
Corrected Establishment	$11^h\ 1^m$	$11^h\ 2^m$
Mean Rise and Fall of Tides	9.7 ft.	9.6 ft.
Rise of High Water Spring Tides	10.3 ft.	10.1 ft.
Rise of High Water Neap Tides	9.1 ft.	9.2 ft.
Mean duration of Rise	$6^h\ 11^m$	$6^h\ 16^m$
Mean duration of Fall	$6^h\ 14^m$	$6^h\ 09^m$

On the eastern shore of **Vinal Haven** there are one or two good harbors, which are not, however, safe for strangers to enter. Of these may be mentioned *SEAL BAY* and *WINTER HARBOR*, the former on the south and the latter on the north side of **Long Island**, and near the mouth of *PLEASENT RIVER*.

Seal Bay may be entered by hugging the southeast shore of the entrance, called **Coombs Head**, but the passage is very narrow and much obstructed. *Winter Harbor*, however, may be entered by keeping midway between the north or **Calderwood Neck** shore and the south or **Long Island** shore.

On the north shore of **North Haven** there are also several small harbors, which have good water in them. Of these, the first above **Crabtree Point** is *WOOSTER COVE*, which is about seven-eighths of a mile above **Stand-in Point**, and has anchorage in about fifteen feet. Five-eighths of a mile to the northeastward of *Wooster Cove*, and about one and five-eighths miles above **Stand-in Point**, is a small cove, with excellent water, called *BARTLETT HARBOR*, in which anchorage may be had in from seven feet to seven fathoms; but it is obstructed by a *sunken rock, with nine feet at low water*, lying exactly in the middle of the entrance. It is small, bold-to, and may by passed on either hand in from seven to eight fathoms.

Nearly two miles to the northeastward of *Bartlett Harbor*, and three and a half miles above **Stand-in Point**, is *NORTH HARBOR*, sometimes called *PULPIT COVE*, from the dry rock, known as **Pulpit Rock,** lying off the western point of entrance, but nearly in the middle passage. Not less than seven fathoms can be carried into this harbor by simply keeping the eastern shore somewhat the best aboard, and it affords excellent anchorage in from ten feet to seven fathoms.

These northwest shores of **North Haven** are of moderate height, with clumps of trees here and there on the slopes, undulating, and for the most part cleared, and thinly dotted with houses. **Oak Hill,** the northeast point of the island, is quite a prominent headland, smooth, bare of trees, and grassy.

The eastern shore of *East Penobscot Bay*, from nearly abreast of **North Haven** to the entrance of **Eggemoggin Reach**, is formed by the west side of

DEER ISLE,

which extends in a nearly NORTH and SOUTH direction with a very irregular outline, showing lands partly cleared and cultivated and partly wooded; of moderate height, and fringed with peculiar whitish and reddish rocks. On this shore there are several large coves, forming harbors, which are resorted to by fishermen and others who are familiar with the coast. Of these, the first met with to the northward of *Deer Island Thoroughfare* is *BURNT COVE*, making into the west shore about one mile from the southwest end of the island and about one and a half miles to the northward of **Mark Island.** It runs nearly EAST and WEST, is about half a mile long and from two hundred and fifty to three hundred yards wide, and may be safely entered from the westward, as there are no dangers except a ledge, out at low water, lying in the middle, near the west end of the cove.

CROCKETT COVE makes in just to the northward of *Burnt Cove*, the two having a common entrance between **Fifield Point,** the southern point of entrance to *Burnt Cove*, and **Bear Island,** which lies off the southern end of **Stimpson Point,** (the west point of entrance to *Crockett Cove.*) This cove runs nearly N E. and S W., and is about one and three-quarters miles long; but for about one-third of this distance is bare at low water, and is not passable for more than six hundred yards above its mouth. Its eastern shores are steep and thickly wooded, the western also wooded, but much lower.

About one and a half miles to the northward of **Bear Island** is a small indentation, called *Small's Cove,* which affords no shelter, being bare at low water. Just to the northward of it makes in *SOUTH-WEST HARBOR*, where there is quite a settlement, known as **South Deer Isle.** *South-West Harbor* is found between the western shore of **Deer Isle** and a small island, not quite half a mile long, called **Jordan Island,** lying about three-eighths of a mile from shore. It is of little importance as a harbor, there being much better ones in the vicinity, either in *Eggemoggin Reach*, *Deer Island Thoroughfare*, or in the **Fox Islands**; and it is never resorted to by any but the fishermen and coasters who belong there.

About one and a quarter miles above **Jordan Island**, and nearly six miles above *Deer Island Thoroughfare*, is **Saunders Point,** the northwest point of **Deer Isle.** It lies nearly due east from **Eagle Island**, from which it is distant about two miles. At this point the shore of **Deer Isle** turns abruptly to the westward and northwestward, running to the north point of the island, on the south side of *Eggemoggin Reach.*

One and three-quarters miles to the eastward of **Saunders Point** makes in *NORTH-WEST HARBOR*, upon which is the settlement of **Deer Isle.** This harbor is formed by a long cove of irregular shape making in to the southeastward for about one and three-

quarters miles, nearly joining *Long Cove,* which makes off from the northwest end of *SOUTH-EAST HARBOR.* There is but a very narrow strip of land separating the heads of these two bays.

This harbor is seldom used except by the people of **Deer Isle**, and is of little importance as a harbor of refuge, as it is out of the track of vessels, and much better and safer harbors are readily found both in *Eggemoggin Reach* and among the **Fox Islands.** Strangers must never attempt to enter it, and no detailed descriptions will therefore be necessary.

Off the northwest end of **Deer Island** lies

LITTLE DEER ISLAND,

joined to the larger island at low water. It is about two and three-quarters miles long, and seen from the southwestward will appear of considerable height, with undulating surface, the heights varying from forty to two hundred and thirty feet. The land rises very gradually in some places, and in others abruptly, forming steep hills, most of which are bare, and the low lands between them mostly cleared and settled, though occasional groves of trees are seen. A number of small islands lie off the south side of **Little Deer Island**, but they are of no importance.

A great number of islands lie to the northward and northeastward of **North Haven**, and extend thence to the south side of the entrance to *Eggemoggin Reach.* A description only of the important ones will be given.

When to the northward of **Babbidge Island,** at the west end of the *Thoroughfare*, there will be seen ahead, and about five miles distant, (if bound up the bay,) a large, high island with white light-tower on its northeastern end. This is

EAGLE ISLAND,

which lies on the west side of *East Penobscot Bay*, and the light-house is the principal guide for the channel. **Eagle Island** is a little over one mile long; lies nearly N E. and S W.; is of irregular shape, high, and rocky; for the most part wooded, but with small clearings here and there, especially toward the southwest end. The **Light-House**, which is the guide to *East Penobscot Bay*, is built upon the northeast point of the island. It is of stone, whitewashed, attached to the keeper's dwelling, which is painted brown; is thirty feet high, and shows a fixed white light of the fourth order of Fresnel from a height of one hundred and six feet above the sea. It is visible fifteen miles, and its geographical position is

Latitude - - - - - - - - -	44° 13′ 03″ N.
Longitude - - - - - - - -	68° 46′ 04″ W.

Several small islands lie to the southward and westward of **Eagle Island**, and a large number to the westward of it, but none of them are of importance to vessels bound through *East Penobscot Bay.*

When up with the light another high island, but not quite so large as **Eagle Island**, will be seen about two miles to the northeastward. This is

BRADBURY ISLAND,

on the east side of the passage. It is steep, with precipitous faces, one hundred and seventy feet high at its western end, which is thickly wooded; the rest of the island being partly wooded and partly cleared. **Bradbury Island** lies E. by S. and W. by N., and is about two-thirds of a mile long. The channel passes between it and a large, high, and rocky island a little over one mile to the westward, called

BUTTER ISLAND.

This island lies nearly NORTH and SOUTH, is of irregular shape, and about two-thirds of a mile long, gently sloping on the south side, and for the most part cleared, with a few houses upon it. But at its north end it rises to a hill about one hundred and seventy feet high, with precipitous faces, to a height of about twenty feet on its east and west sides, and thinly wooded. At the eastern end of the island, nearly midway between its north and south sides, there rises a steep, round hill without trees, and with bare ledges on its summits and slopes. This hill is very noticeable. **Butter Island** lies half a mile to the northward of **Eagle Island**. Between it and **Eagle Island** there is a wide and deep passage leading from *East* into *West Penobscot Bay;* but the many ledges and sunken rocks it contains render it unsafe at present for strangers to attempt it. If these ledges were buoyed, this would be a safe channel from *East* to *West Bay*. On passing to the northward, another large island will open to the westward, with a group of islets between it and **Butter Island**. This is

GREAT SPRUCE HEAD ISLAND;

lies about NW. by N. and SW. by S., and its northern head (which will first appear) is composed entirely of bare, white rocks, rising to a considerable height. It is the highest land in the vicinity, and presents quite a remarkable appearance. On its north side there passes another channel, which leads between **Beach Island** on the north and this and **Great Spruce Head**, and **Frenchman Island** on the south and west, into *West Bay*.

When to the northward of **Butter Island**, or when abreast of **Great Spruce Head**, there will be seen on the east side of the passage a large, high, rocky, and for the most part wooded island, about one and a quarter miles long in a WNW. and ESE. direction. This is called

PICKERING ISLAND,

and here the channel is about two and three-quarters miles wide. **Pickering Island** lies off the western shore of **Little Deer Island**, about one and a quarter miles from it. The centre of the channel of *East Penobscot Bay* leads about midway between it and **Great Spruce Head.**

Passing between **Pickering** and **Great Spruce Head Islands**, the channel continues to the northward, passing a number of islands on either hand. Of these, the first met with to the northward of **Great Spruce Head** is

BEACH ISLAND,

a little to the northward of **Spruce Head** and on the west side of the channel. This island, when seen from the southward, will show precipitous faces about twenty feet high, behind which the land rises to a height of eighty feet, with a very gentle slope toward the east end. It lies about WNW. and ESE.; is about eleven hundred yards long, of irregular shape, and bare of trees with the exception of a very few on the low land between its east and west heads, and a small growth on the north slopes of the west head, which is not visible from the southward. To the eastward of it lie a number of small islands, between this channel and the *Middle Passage*, of which may be mentioned **Colt Head, Horse Head,** and **Mark Islands.**

COLT HEAD ISLAND

is a small, rocky island, about forty feet high, dotted with a thin and scrubby growth, and lies about half a mile to the eastward of **Beach Island.** It is about three hundred yards long, and lies nearly in a NORTH and SOUTH direction.

HORSE-HEAD ISLAND

lies a little over a mile to the westward of **Beach Island** and about two-thirds of a mile to the southwestward of **Colt Head.** It is easily recognized as the only densely-wooded islet in the vicinity, being about forty feet high and covered with a very thick growth of fir and spruce.

MARK ISLAND,

the westernmost of this group, is about three-quarters of a mile to the westward from **Colt Head**; about a mile and one-third to the westward from **Beach Island**; and half a mile northwest from **Horse Head.** It lies in a N N E. and S S W. direction; is between seven and eight hundred yards long and sixty feet high, and is pretty thickly wooded. On the eastern and western sides it presents precipitous faces twenty feet high. A good channel, with deep water, here leads from *East Bay* into the middle passage, leaving **Beach Island** and the **Horse Head** on the north and **Great Spruce** and **Frenchman Islands** on the south. It is not, however, recommended to strangers. The main channel leaves **Beach Island** to the westward, passing between it and **Hog Island** on the eastern side of the channel.

HOG ISLAND

is easily recognized by the high, steep head on its southern end, with two or three clumps of trees dotting its surface. It is about eighty feet high. Off its eastern end will be seen a rocky islet, with steep faces, and bare of trees. This is **Fiddle Head** or **Fiddle Head Island,** and at low water is connected with **Hog Island.** When to the southwestward of the island, a single barn will be seen on the north slopes, and nearly in the middle; and the northwestern end is found to be low, flat, and entirely bare of trees. This island is the southernmost of the group which lies on the east side of the channel. It is very irregular in shape, and about six hundred yards long in a NORTH and SOUTH direction. On the north it is connected at low water with

POND ISLAND,

which is between five and six hundred yards to the northwestward of it. It is low and flat, except at its northwest end, where it rises to a height of sixty feet, with precipitous faces about twenty feet high; and is crowned with a thick growth of low spruce. When viewed from the westward, it appears only as a white, rocky head, with a growth of spruce on the southern face, a little to the southward of which will appear a single barn. **Pond Island** is nearly half a mile long in a N W. and S E. direction, and is dangerous of approach from the southward and westward on account of the dangerous ledges lying at some distance from its southern faces. A small, bare, rocky knubble lies about one hundred and fifty yards to the northward of its northwest end.

On the western side of the channel, between five and six hundred yards to the northward of **Beach Island,** lie the

BARD ISLANDS,

two rocky islets with a few fir trees upon them, and joined at low water. They lie EAST and WEST from each other, about one hundred yards apart; the easternmost about one hundred and fifty yards long in a NORTH and SOUTH direction, the other three hundred yards long in an EAST and WEST direction. They mark the turning-point of the channel, which here turns to the westward, leaving these islands, **Colt Head,** and **Mark Island** to the southward, and joins the *Middle Passage.* On the north side, and about seven hundred and fifty yards to the westward of **Pond Island,** lies

WESTERN ISLAND,

a rocky islet, quite low on its eastern end, but rising to a steep hillock about thirty feet high at its northwest end. It is partly wooded with the usual growth. A bare rock, about one hundred yards in diameter, lying about an eighth of a mile to the westward of it, is called *Green Ledge.*

The western entrance to *Eggemoggin Reach* is on the north side of **Western** and **Pond Islands**, between them and **Cape Rosier,** the southwestern extremity of **Brooksville.** Here the *Middle* and *Eastern Passages* of *East Penobscot Bay* unite and proceed in one wide channel to the mouth of *Penobscot River.* While the east shore is formed by the main land of **Brooksville** and **Castine**, the west side is bounded by a large island, called

LONG ISLAND,

which, extending in a N N E. and S S W. direction, separates *East* from *West Bay.* It is about five miles long and very irregular in shape, and near the middle is almost separated into two islands by two coves, which penetrate its eastern and western shores, leaving only a narrow strip of land about one hundred yards wide between their heads. That portion of the island lying north of this strip of land is called **North Islesboro'**, and that to the southward, **South Islesboro'.**

Off the southern end of **Long Island** lie many small islands, bare rocks, and ledges, extending to the southwestward, in about the same direction as the island, for nearly five miles. The *Middle Passage* into *East Penobscot Bay* passes between these islands and **North Haven**, while the channel up *West Bay* passes to the westward of them.

There are many good anchorages on the shores of **Long Island**, but the best are those on its south and west shores. Of those on the east side may be mentioned *Bounty Cove, Sabbath Day Harbor*, and *Parker Cove;* while on its south side is a most excellent anchorage, called *Gilkey Harbor;* and on the west side, *Chow-Chow Cove* and *Seal Harbor*, both of which are excellent, though small.

The eastern shore of the island is very irregular in outline, diversified with wooded and cleared lands of moderate height. The southern half of **South Islesboro'** is for the most part well wooded, while **North Islesboro'** shows high, cleared lands, well settled, and dotted here and there with groves of trees.

BOUNTY COVE, which separates **North** and **South Islesboro'**, is four miles and three-quarters above the southern point of the island; is of irregular shape, and affords anchorage in from four to eight fathoms; but its entrance is obstructed by two rocks, nearly awash, lying to the northward and eastward of its south point of entrance, the outermost being about six hundred yards from the point. There is also a sunken ledge, with six feet, in the middle of the cove, and it is not recommended as an anchorage for strangers.

SABBATH DAY COVE, or *SABBATH DAY HARBOR*, is about two miles to the northward of *Bounty Cove* and about six miles and three-quarters above the south point of the island. It is situated on the southeast shore of **North Islesboro'**; is somewhat irregular in shape, and only about three hundred and fifty yards in diameter at its mouth; but good anchorage in from one to three fathoms may be found in it, and it may be safely entered by simply keeping the eastern shore best aboard until fairly into the cove, and then keeping the middle.

PARKER COVE, just to the northward of this, though larger, is by no means so good an anchorage for strangers, as it affords little shelter from any but westerly winds. There are several ledges and bare rocks off its entrance, and strangers are advised not to enter it unless compelled.

At the north end of **Long Island** *East* and *West Penobscot Bays* unite, and here begins the *Penobscot River*. This north end of **Long Island** is known as **Turtle Head;** is rocky and of moderate height, its edges fringed with a thin growth of scrub, and its summit crowned with a thick growth of spruce and fir. It is joined to the island by a sort of neck of low land.

When off this head the city of **Belfast** will be plainly seen on the west shore of the bay, and the villages of **Searsport** and **Stockton** on the north shore.

The east shore of *East Penobscot Bay* from *Eggemoggin Reach* to *Castine Harbor* is formed by the main land of **Brooksville.**

CAPE ROSIER,

the southwest extremity of that peninsula, is about one mile and a quarter to the northward of **Western Island** and nearly abreast of *Bounty Cove.* Seen from the southward, it will show a high, bluff head, with white rocks on its surface here and there, and dotted with trees. It really has three heads—the easternmost having a bare summit, and its slopes dotted with clumps of spruce and birch. The western head is the one seen coming up the bay. From this cape to the entrance to **Castine** the distance is a little over four miles. The shores are mostly high, steep, rocky, and wooded.

CASTINE HARBOR

is at the mouth of *BAGADUCE RIVER*, a very crooked stream, which takes its rise between **Sedgwick** and **Brooksville**, about three miles to the northward of *Billings Cove*, in *Eggemoggin Reach*, flows to the northward and northwestward for about five miles, where it widens out into a broad bay, called *SOUTH BAY*, at the western end of which it turns to the southward past **North Castine,** and then to the southwest, flowing into *Penobscot Bay* between **Dice Head** on the north and the northern end of **Cape Rosier** on the south. Thus, in its course, the river describes three curves. It may be mentioned that at *South Bay* it sends off a long arm to the northward, called *NORTHERN BAY*, on the east shore of which is built the village of **Penobscot.**

DICE HEAD,

the northern point of entrance to *Castine Harbor*, is easily recognized in coming up the bay by the white light-tower on its summit. It is about five miles above **Cape Rosier** and three miles to the eastward of **Turtle Head,** and forms the southeastern point of entrance to *PENOBSCOT RIVER* as well as the north point of entrance to *Bagaduce.* It is a steep and rocky bluff, wooded on the edges with a thick growth of fir and spruce, and quite bold-to, the rocks rising almost perpendicularly.

DICE HEAD LIGHT.

is an eight-sided stone tower, sheathed with wood, and painted white. It is attached to the keeper's dwelling, which is of wood, and painted brown. The tower is forty-two feet high, and shows a fixed white light of the fourth order from a height of one hundred and thirty feet above the sea, and visible seventeen miles. Its geographical position is

Latitude - - - - - - - -	44° 22′ 57″ N.
Longitude - - - - - - - -	68° 49′ 09″ W.

Coming into *Castine Harbor*, two islands will be seen lying on the south side of the passage, near the **Brooksville** shore. The easternmost of these is called

HOLBROOK ISLAND,

which lies between **Dice Head** and the north point of **Cape Rosier,** and about a third of a

mile from the latter. It extends EAST and WEST, and is about three-quarters of a mile long; is rocky, and at its west end shows a round, bare bluff, whence it descends to much lower land, covered with a thick growth of small trees. Next to the westward is

NAUTILUS ISLAND,

also on the south side of the passage. It is low and rocky, with undulating surface of moderate height, dotted here and there with clumps of fir, and with one or two houses on it. The passage south of these islands, between them and the **Brooksville** shore, is not suitable for strangers, being narrow and dangerous.

On the north side of the river, after passing **Dice Head**,

FORT POINT

is next reached, a grassy head, upon which is built an earthwork. This point has a very gradual rise, and its summit is covered with houses. The town is seen stretched along the north shore just to the eastward of this point.

Above **Nautilus Island** the river spreads away into a large bay, full of islands, called

SMITH COVE,

making into the **Brooksville** shore between **High Head,** a wooded, rocky bluff just to the southeastward of **Nautilus Island,** and **Henry Point,** a low, smooth, gently-sloping and grassy point, backed by trees, which lies exactly opposite to **Castine.** It is not safe for strangers to enter this cove, as it is obstructed by several ledges, which require local knowledge to avoid them. The islets ars mostly low, rocky, and covered with a growth of scrub.

A little over two miles to the northward of **Henry Point** are the *NARROWS*, leading into *South Bay*, and on approaching them two little rocky and wooded islands will be seen nearest the west shore. There is no passage to the westward of them.

Here the river is extremely narrow, and strangers should not attempt to pass above **Castine** without a pilot. The current, especially on the ebb, rushes with great velocity through the contracted passage at the *Narrows*, rendering it almost impossible for a sailing-vessel to pass through except with a fair tide.

The usual anchorage is off the town, between the steamboat wharf and the *red spar-buoy on the Middle Ground*, where from eight to ten fathoms may be found.

There is but little business in **Castine** outside of the usual fishing interest, though there is some small trade in bricks.

DANGERS
IN APPROACHING AND ENTERING CASTINE HARBOR.

I. *From the southward, through East Penobscot Bay.*—When nearly up with *Parker Cove*, a *black spar-buoy* will be seen off the **Long Island** shore. This is on

LONG ISLAND LEDGE,

which has six feet at low water, and lies about **S W.** from **Dice Head Light.** The buoy is placed in twenty-six feet water on the east side of the ledge, and must be left to the westward.

When past it, the course continues toward **Dice Head Light** until within half a mile of it, when it turns to the westward, passing to the southward of a *black spar-buoy*, which is on

OTTER ROCK SHOAL,

a ledge making off from the north side of the entrance in a southeasterly direction about one-eighth of a mile. The buoy is placed on its southern end, and there is no passage inside of it.

Passing this, the course leads toward a **square, stone monument with a pole and cask on top.** This is on

HOSMER LEDGE,

which is out at three-quarters ebb, and is to be left to the southward. When abreast of it there will be seen to the north, about three-quarters of a mile off, a *red spar-buoy*, on the

MIDDLE GROUND,

out at low water, and having the **remains of a stone monument** upon it. When up with this buoy, anchor anywhere between it and the wharves; but wishing to proceed farther up, pass to the westward of it, and steer toward **another stone monument, surmounted by a spar and cask,** on

TROTT ROCK,

which also pass to the westward of. Above this it is not safe for strangers to go.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CASTINE HARBOR.

I. *From the southward, through East Penobscot Bay.*—Bring **Saddle-Back Light** to bear **N W. by N.** and steer for it until within one-quarter of a mile, when a **NORTH** course will lead up to **Eagle Island Light**, leaving **Saddle-Back Light** to the westward.

Give **Eagle Island Light** a berth of not less than eight hundred yards, and when it bears **WEST** steer **N N W.**, which course will lead up the middle of the channel past **Butter, Spruce Head,** and **Beach Islands** on the west, and **Bradbury** and **Pickering Islands** on the east.

When exactly between the **Bard Islands** and the high hill on the southeast head of **Hog Island**, the former bearing **W. by S. ½ S.** and the latter bearing **E. by N. ½ N.**, steer **N W.**, which course will lead safely into the *Middle Passage.* Then bring **Dice Head Light** to bear about **N E. by N.** and steer for it until within half a mile; when **E. by N.**, for the beacon on *Hosmer Ledge*, should be steered, passing to the southward of the buoy on *Otter Rock Shoal* and to the northward of *Hosmer Ledge.*

When up with this **Monument** the *red spar-buoy on the Middle Ground* will be seen, and the course must be shaped to pass to the northwestward of it, keeping the **Castine** shore best aboard. Anchor anywhere between this buoy and the wharves, in from eight to ten fathoms. Or, wishing to proceed farther up, steer toward the **beacon on Trott Rock**, which also pass to the northwestward of. Above this it is not safe to go without a pilot.

The above courses pass well clear of all the dangers in the *Bay;* from one-half to three-quarters of a mile to the eastward of *Long Island Ledge;* about two hundred yards to the southward of the *black buoy* on *Otter Rock Shoal;* about the same distance to the northward of the **beacon** on *Hosmer Ledge;* and one hundred and fifty yards to the northward of the *red buoy* on the *Middle Ground.*

DANGERS

IN APPROACHING AND ENTERING CASTINE HARBOR.

II. *From the southward, through the Middle Passage, between* **Fox Islands** *and* **Long Island.**—Of these, in coming from *West Penobscot Bay*, the first met with is on the south side of the entrance of the passage off **Crabtree Point,** and is known as

DRUNKARD LEDGE.

It is not in the way unless for vessels in its vicinity standing to the southward on a wind. It is bare at half tide, and lies about five-eighths of a mile S W. by W. ½ W. from

Stand-in Point, and W. by N. ½ N. from **Fiddler Ledge Beacon** nearly the same distance. A *black spar-buoy*, No. 1, is placed in three fathoms on the southern side of the ledge, and by vessels passing to the northward of it must receive a berth of three hundred and fifty yards. There is a passage with from four to eight fathoms inside this ledge, but it is not safe for strangers.

The *Middle Passage* at its western entrance is nearly four miles wide, and the channel itself almost entirely unobstructed. On the north side, however, there are outlying ledges and rocks off the small islands to the southward and westward of **Long Island**, none of which are buoyed, and scarcely any of them marked.

Of these, the first met with is

ROBINSON ROCK,

a small, bare, rocky island, forming the southernmost of the group S W. from **Long Island**, and the north point of entrance to this passage. It lies NORTH and SOUTH, and is only about one hundred and fifty yards long; but dangerous shoals extend to the northward and southward of it, and also to the northeastward, so that it is not safe to approach it closely. A ledge with eight feet at low water lies about four hundred and fifty yards S S W. from the rock, and another, which is bare, lies about six hundred yards northeast of its northern end.

The general name, *Robinson Ledges*, is given to all of these, and there is deep water (from seven to thirteen fathoms) to the northward, between them and **Mark** and **Saddle Islands**. *They are not buoyed*, however, and should not be approached by strangers.

There is also deep water among the small islands lying to the southward of **Long Island**, through which from seven to fourteen fathoms may be carried with safety by those who are acquainted. But these passages are not recommended to strangers except in case of necessity.

A very dangerous pinnacle rock, known as

McINTOSH LEDGE,

but which is awash at low spring tides, lies about fifteen hundred yards to the eastward of **Robinson Rock**, bearing about S E. by E. ½ E. from the dry part of the ledge. It is surrounded by deep water, is very small and bold-to, and not less than fifteen fathoms can be taken between it and **Robinson Rock** through a channel two-thirds of a mile in width. It should be buoyed.

When past this ledge there are no dangers in the passage, it being only necessary not to approach too closely the small rocky islands and bare rocks lying on the west side of **Long Island**, and to look out for

EGG ROCK,

which lies on the east side, about one mile and three-eighths from the north shore of **North Haven**, and bears from the entrance to *North Harbor* N. by E. ¾ E., distant nearly two miles. It is a small rock, out at low water, and surrounded by deep water, from five to eight fathoms, and there is a sunken ledge, with five feet, about six hundred yards S S W. from it. *Neither of these is buoyed*, but in fresh weather they will generally show by breakers. *Egg Rock* is nearly opposite to

MOUSE ISLAND,

which lies two miles S W. by S. from the southern end of **Long Island**, and is the northernmost of the line of ledges and bare rocks lying to the eastward of the outlying islands. It is a very small, rocky island, being only about two hundred and fifty yards long, and there are shoals and ledges north and south of it, although between it and

Lasell Island runs the good channel above mentioned, which is here about eleven hundred yards wide and has ten fathoms.

When to the northward of **Mouse Island** the channel is perfectly clear and safe, and the east shore of **Long Island** pretty bold-to, until up with the entrance to *Bounty Cove.*

Mark Island on the east side is also quite bold-to, ten fathoms being found within one hundred yards of the rocks.

Off the south side of the entrance to *Bounty Cove* lie two rocks, called *Hughes Ledge,* awash at low water, close together, and about five hundred yards northeast from the point. In entering this harbor, therefore, or in standing to the westward on a wind, beware of them and give the point a berth to the southward of not less than three-eighths of a mile. Above this point there are no dangers until up with

LONG ISLAND LEDGE,

which lies off *Parker Cove,* has six feet at low water, and bears about S W. from **Dice Head Light.** It is marked by a *black spar-buoy* placed in twenty-six feet water on its eastern side, and must be left to the westward; past it, the course continues toward **Dice Head Light** until within half a mile of it, when it turns to the westward, passing to the southward of the *black spar-buoy* on *Otter Rock Shoal,* which, with the other dangers in the harbor, have already been described. (See page 300.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CASTINE HARBOR.

II.—*From West Penobscot Bay, through the Middle Passage, between* **Long Island** *and the* **Fox Islands.**—When off **Owl's Head,** in forty-four fathoms, sticky bottom, with the **Light-House** bearing W. by N. ½ N., about one mile and five-eighths distant, steer N E. ½ E., which course will lead up the middle of the passage in not less than twenty-five fathoms. On this course, when **Mouse Island** bears W. by N. and the southern end of **Job Island** N W., in twenty-five fathoms, steer N E. by N., carrying not less than twenty-five fathoms. Continue this course until **Dice Head Light** becomes visible, when bring it to bear N E. by N. and steer for it until within half a mile, when steer E. by N. into the harbor, toward **Hosmer Ledge Beacon,** passing to the southward of the *black spar-buoy* on *Otter Rock Shoal.* Then follow the directions previously given for the harbor.

The above courses pass about one mile and five-eighths to the westward of *Drunkard Ledge;* a little over half a mile to the eastward of *Sunken Ledge;* a little over a mile to the westward of *Egg Rock;* about three-quarters of a mile to the westward of the bare ledge west of **Mark Island;** and the same distance to the eastward of *Long Island Ledge.*

This is a very excellent and easy passage, and may be used by strangers without hesitation.

DANGERS
IN APPROACHING AND ENTERING CASTINE HARBOR.

III.—*From the westward, north of* **Long Island.**—Vessels bound from **Belfast** or **Searsport** to **Castine** pass to the northward of **Long Island,** through an excellent channel, two miles wide, between **Turtle Head** and **Sears Island,** (formerly known as **Brigadier Island.**) In this passage there are but two dangers—one on the north side, to the southwestward of **Sears Island,** and the other off **Turtle Head,** on the south side. The former is known as

BRIGADIER ISLAND LEDGE,

is bare two hours before low water, and extends off in a southwesterly direction from the southwest point of **Sears Island,** about one third of a mile off. It is marked by a

black spar-buoy, No. 1, placed in seventeen feet water on the south end of the ledge. The

SHOAL OFF TURTLE HEAD,

a detached ledge, with thirteen feet at low water, lies one hundred yards to the northward of the head, *and is not buoyed.* There is deep water between it and the head, but it is not advisable to try this passage.

When past the shoal off **Turtle Head** there are no more dangers until up with

OTTER ROCK SHOAL,

at the entrance to **Castine.** The dangers of this harbor have already been described. (See page 300.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CASTINE HARBOR.

III. *From the westward, by the passage north of* **Long Island.**—Coming from **Belfast,** the course is S E. by E. ½ E. until the northern extremity of **Turtle Head** bears S W. by W. ½ W. and **Dice Head Light** S E. ½ S., then steer S E. ½ S., which will lead up to the entrance; and when the **Light** bears N. by E. ½ E. and half a mile distant, steer E. by N. toward *Hosmer Ledge*, and follow the directions given for the harbor.

These courses pass about one mile to the southward of *Brigadier Ledge*, and half a mile to the northward of the shoal off **Turtle Head.**

Having come from **Searsport,** the course is S. by E. for **Turtle Head** until past the buoy on *Brigadier Ledge*, and **Dice Head Light** bears S E. ½ S., then steer S E. ½ S., which will lead safely up to the entrance. When the **Light-House** bears N. by E. ½ E., half a mile distant, steer E. by N., as before, into the harbor.

This course passes half a mile to the westward and southward of *Brigadier Ledge*, and does not approach the **Turtle Head** shore at all.

Vessels having come down the *PENOBSCOT RIVER* and intending to enter **Castine,** must, when below **Fort Point** and approaching **Dice Head,** be careful to give the eastern shore a berth of about half a mile, as there is a dangerous ledge off **Steel Head,** about two miles and a half above **Dice Head,** which makes off to the northwestward about one-quarter of a mile. As little as two feet at low water has been found on this rock. Its extent is not yet fully known, and *it is not buoyed.* It is therefore necessary to give it a wide berth.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Dice Head Light	44° 22′ 57″	68° 49′ 09″	4^h 35^m 16.6^s	Fixed.	130 ft.	17

TIDES.

Corrected Establishment of the Port	11^h 11^m
Mean Rise and Fall of Tides	9.3 ft.
Mean Duration of Rise of Tide	6^h 24^m
Mean Duration of Fall of Tide	6^h 01^m

VARIATION OF THE COMPASS.

The magnetic variation for 1875 is 15° 25′ W., with an approximate annual increase of 2′.

WEST PENOBSCOT BAY,

which is contained between **Fox Islands** and **Long Island** on the east, and the main land of **White Head** and **Belfast** on the west, is the entrance commonly used by vessels coming from the westward. There are several channels leading into it, the most commonly used of which is the

MUSCLE RIDGE CHANNEL,

beginning at **White Head**, and terminating at **Owl's Head**, nearly eight miles above. The main entrance is between **Matinicus** and **Green Islands**, which are about five miles to the northwestward of it. There are, however, other passages—one between **Matinicus** and **Wooden Ball Islands**; another between **Wooden Ball** and **Matinicus Seal Islands**; and still another between **Seal Island** and **Saddle-Back Ledge**. Of these, the least obstructed is the passage between **Matinicus** and **Wooden Ball**—the others not being recommended to strangers.

From **Matinicus Island** to **Heron Neck Island**, at the southwestern extremity of the **Fox Islands**, the distance is ten miles, and this point is, properly, the east point of entrance to *West Bay.*

HERON NECK LIGHT

is on the southwestern end of **Green Island**, which lies close to the west shore of **Vinal Haven**, near its southern end. The **Light-House** is a brick tower of natural color, and twenty-four feet high, which shows a fixed red light of the fifth order of Fresnel, from a height of ninety-two feet above the sea, and visible fourteen miles. The keeper's dwelling, to which it is attached, is also of brick. The geographical position of this light is

Latitude - - - - - - - - 44° 01′ 30″ N.
Longitude - - - - - - - - 68° 51′ 43″ W.

It is a guide to *Carver Harbor* and *Hurricane Sound.*

GREEN ISLAND

is of irregular shape, lies nearly **NORTH** and **SOUTH**, and is about one mile and a half long, of moderate height and for the most part wooded, though there are occasional houses and cleared fields. It is separated from **Vinal Haven** by a passage three hundred and fifty yards wide in its narrowest part; but this passage is full of ledges and entirely unsafe. On the south side of the island there is a cove, about three-eighths of a mile in length, called

DEEP COVE,

making in on the east side of **Heron Neck**, between it and the southeast point of the island. In this cove not less than four fathoms can be found at low water, and it affords good shelter in northerly winds.

CARVER HARBOR

is formed by a cove of irregular shape, which penetrates the southwestern shore of **Vinal Haven Island** in a **NNE.** and **SSW.** direction, and is about five-eighths of a mile long. It is not a very good harbor under any circumstances, and the approach to it is so obstructed by ledges and sunken rocks (*few of which are buoyed*) that strangers are not advised to attempt to enter it unless compelled by necessity. There is a small settlement here, occupying both shores of the cove; the principal industry is fishing

and the working of stone-quarries in the neighborhood. The land in this vicinity is for the most part barren and rocky, with an occasional sickly growth of fir and spruce, and the approaches present a peculiar forbidding appearance.

DANGERS
IN APPROACHING AND ENTERING CARVER HARBOR.

I. *From the southward and westward.*—In approaching this harbor from the main channel of *West Bay* it is customary to bring **Heron Neck Light** to bear NE. and run for it. On this course, the first danger met with is

DEADMAN LEDGES.

These are a group of bare and sunken rocks, which lie in a mass to the southward of **Hurricane Island**, from which their southern point is distant fourteen hundred yards. There are a great number of them, and the southernmost is dry at low water. It lies on the north side of the entrance to *Carver Harbor* and on the west side of the entrance to *Hurricane Sound*, and bears from **Heron Neck Light** W. ½ S., distant about a third of a mile. It is to be left to the northward, and the course continues to the northeastward until close to **Heron Neck**, on which course a large ledge will be passed, with two or three knubbles out at high water, which lies a quarter of a mile S. by E. ½ E. from the **Neck**. This is

HERON NECK LEDGE.

It is not buoyed, and vessels using this passage pass to the northward of it. When past it the course continues to the eastward, keeping the **Green Island** shore best aboard to avoid a pinnacle rock, with twelve feet at low water, which lies a quarter of a mile EAST from **Heron Neck Ledge** and about five hundred yards southeast of **Heron Neck.** It has no name, *is not buoyed*, and is quite bold-to.

When up with the southeast end of **Green Island**, there will be seen ahead *a dry ledge*, lying EAST from the southeast point and about three hundred and fifty yards from it. The channel passes to the westward of this ledge, between it and the southeast point of **Green Island**, the course turning now to the northward.

When past this ledge the *Harbor* itself will be fairly open, and the course turns more to the eastward, leading almost straight in.

Both sides of the channel are obstructed by dangerous ledges, some of which are bare at low water, and others have from two to twelve feet, and *none of them are buoyed.* Off these there is *a dry ledge* on the east side of the channel, about five hundred yards to the northeastward of the dry ledge just described and the same distance from the east point of **Green Island.** Opposite to it, on the west side of the channel, is a rock, with ten feet at low water, called

CHANNEL ROCK,

upon which is a *black spar-buoy* in four fathoms, which serves as a guide both to this harbor and the *Thoroughfare* between **Green** and **Vinal Haven Islands.**

About three hundred and fifty yards NNE. from the bare rock is another, with three and a half feet at low water, and a long ledge makes off from **Norton Point**, on the west side of the harbor, to a distance of three hundred yards. It is called

NORTON POINT LEDGE,

and is marked by a *black spar-buoy* on its southeast end. At this point the passage is only about three hundred and fifty yards wide, between **Norton Point** and a bare, rocky islet on the east side, called

POTATO ISLAND,

and the available channel is only about one hundred and fifty yards wide, though there is not less than four fathoms in it. The holding-ground is good, the bottom being soft.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CARVER HARBOR.

I. *From the southward and westward.*—Bring **Heron Neck Light** to bear N E. and run for it until close aboard. On this course there is not less than fourteen fathoms; deep water can be taken close to the **Neck**, there being nine fathoms within one hundred and fifty yards from the shore.

When about two hundred yards from the extremity of the **Neck** steer E. ½ N. across the mouth of *Deep Cove*, keeping **Green Island** shore close aboard, and carrying not less than seven and a half fathoms. Round the southeast point, giving it a berth of about one hundred and seventy-five yards, and steer N N E., between this point and the rocky islet on the eastern side. The least water will be three and a half fathoms, and the course will be continued until abreast of *Channel Rock Buoy*, when it should be altered to the eastward so as to pass about midway between the *black spar-buoy* on *Norton Point Ledge* and **Potato Island.** The course will be about N E. ¼ E., and will lead safely into the harbor, where anchor in from ten feet to four and a half fathoms, sticky bottom.

These courses pass five hundred and fifty yards to the southeastward of *Deadman Ledge;* two hundred and seventy-five yards to the northward of *Heron Neck Ledge;* one hundred and fifty yards to the westward of the *Dry Ledge*, off the southeastern point of **Green Island**; the same distance eastward of *Channel Rock;* and about one hundred yards to the eastward of *Norton Point Ledge*, passing midway between it and **Potato Island.**

DANGERS
IN APPROACHING AND ENTERING CARVER HARBOR.

II. *Coming from the southeastward.*—The approaches to this channel are obstructed by many sunken ledges and bare rocks, which render its navigation rather unsafe. In coming from the eastward it is well not to approach **Brimstone** and **Otter Islands** nearer than one mile and a half, on account of the many dangerous sunken ledges on their south sides.

When about two miles and a quarter to the southward of **Heron Neck Light,** (having it bearing about N. ¾ W.,) the course in is about N. by E., and a *red spar-buoy* will soon be seen a little to the northeast, on

COLT LEDGE,

with six feet at lowest tides, lying a mile and a quarter S E. ½ S. from **Heron Neck Light** and a mile and an eighth W N W. from **Roberts Island.** It is a pinnacle rock, with deep water all around, but it is not well to pass to the eastward of it, as there are many sunken ledges between it and **Little Green Island.** The buoy is placed in five fathoms on its southwestern end, and is always to be left to the eastward. When up with it, *two spar-buoys* (*one red and one black*) will be seen about seven hundred yards to the northward, one on either bow. The *red spar* is on

AREY LEDGE,

which is composed of two bare rocks, from which a long shoal makes to the westward about a third of a mile, and on the southwestern end of this shoal the buoy is placed.

The bare rocks bear from **Heron Neck Light** S E. by E. ½ E., distant one mile and an eighth, and from the southern end of **Lane Island** S S W., distant seven-eighths of a mile. The buoy is marked No. 4, and is placed in five fathoms on the west end of the ledge.

The *black spar-buoy* to the north is on the

SOUTH BREAKER,

a dangerous ledge, the eastern end of which is dry one hour before low water, and bears S E. from **Heron Neck Light**, distant seven-eighths of a mile. It lies EAST and WEST, and is between seven and eight hundred yards long, with eight feet on its western end; but there are dangerous sunken ledges all the way from this ledge to **Heron Neck Light**, a mile and three-quarters to the westward. The buoy is placed in five fathoms on the east end of the ledge, is marked No. 1, and is to be left to the westward.

The course now continues to the northward, and another *black spar-buoy* will be seen, about three-quarters of a mile distant, off the southeast end of **Green Island**. This is on

CHANNEL ROCK,

a sunken rock, with ten feet at lowest tides, lying about five hundred yards to the eastward of the southeast point of **Green Island** and about two hundred yards to the southeastward of the bare rock called *Green Island Knub.* The buoy is placed in four fathoms; pass to the eastward of it. When abreast of it the channel turns to the northwestward, running toward **Norton Point**, and another *black spar-buoy* will soon appear aboard, to the north. When this buoy bears NE. ½ E. the course leads toward it, passing a little to the eastward of it. It is on

NORTON POINT LEDGE,

dry at half-tide, which makes off in an E S E. direction from **Norton Point** to a distance of three hundred and fifty yards.

Beyond this there are no buoys, the usual anchorage being just above *Norton Ledge.*

After passing to the northward of *Channel Rock* a bare rock will be seen to the northward, surrounded by ledges, and bare at low water. It lies six hundred yards to the eastward of **Lane Island**, and there is no safe passage between it and the island. Vessels entering must give it a berth to the eastward of an eighth of a mile to pass in the best water, and in steering up for *Norton Ledge Buoy* must be careful on the one hand to keep it open with **Potato Island** in order to avoid a ten-feet rock lying three hundred yards to the southward of **Norton Point**, and in the middle of the entrance to the *Reach;* and, on the other hand, not to open **Potato Island** too much with it in order to avoid *a detached ledge, with three and a half feet,* lying about four hundred and fifty yards to the southwestward of **Potato Island**, and on the east side of the channel.

The rule is not to go to the eastward of **Potato Island**, bearing N E. ½ E. to avoid this rock.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING CARVER HARBOR.

II. *From the southward and eastward.*—Bring **Heron Neck Light** to bear N. ½ W., distant two and three-quarters miles, and the middle of **Brimstone Island** E. by N. ½ N., distant three miles and a quarter, when there will be from twenty-two to twenty-five fathoms, (though the bottom is very broken;) steer N. by E., which course will lead, with not less than eleven and a half fathoms, past *Colt Ledge Buoy* and nearly up with the *South Breaker.* Pass midway between the *black buoy on South Breaker* and the *red buoy on Arey Ledge,* when there will be not less than six fathoms, and continue the N. by E. course until

abreast of the dry ledge off the S E. point of **Green Island**, called *Folly Ledge*, to which give a berth to the westward of about three hundred and fifty yards, and steer N N W. for *Channel Rock Buoy*, carrying not less than four and a half fathoms, until past the rocky islet off **Lane Island**, and **Dodge Point** bears N E. ½ N., with the *black buoy on Norton Point Ledge* a little to the southward. When this buoy bears N E. ½ E. steer for it, passing to the eastward, and steer midway between it and **Potato Island**, to the anchorage. The last two courses carry not less than four fathoms.

The above courses pass about three hundred yards to the westward of *Colt Ledge;* one-eighth of a mile to the eastward of *South Breaker;* the same distance to the westward of *Arey Ledge;* one hundred and fifty yards to the eastward of *Channel Rock;* an eighth of a mile to the westward of the bare rock west of **Lane Island**; one hundred and fifty yards to the eastward of the ten-feet rock at the entrance to the *Reach;* the same distance to the westward of the *three and a half feet rock* on the east side of the channel; and about fifty yards to the eastward of the *black buoy on Norton Point Ledge.*

All the ledges and rocks lying in the approaches to this harbor have deep channels through and among them, but strangers should not attempt any but the two just described unless they have an experienced local pilot on board. In fact, the approach to the harbor, even by the recognized channels, is somewhat unsafe for strangers, and, as before mentioned, is not recommended except in case of necessity.

HURRICANE SOUND

is that body of water included between **Green Island** and **Vinal Haven Island** on the east, and **Hurricane Island**, the **White Islands**, and **Leadbetter Islands** on the west. It runs in a NORTH and SOUTH direction, and has deep water in it, but is obstructed by many ledges and sunken rocks, and is not recommended for strangers.

There are two entrances to this sound—the *main channel*, which leads between **Green Island** on the east and **Hurricane Island** on the west; and the *west channel*, which leads between the **White Islands** on the north and **Hurricane Island** on the south. Both are good, but the main channel is the best, being the easier of access for strangers.

Many other passages lead into this sound from the bay, in all of which there is water sufficient for the largest vessels; but their navigation is impossible for strangers on account, in some cases, of their contracted limits, winding courses, and strong currents, and in others, of the numerous ledges obstructing them, *which are not buoyed.*

Green Island, before described, lies on the east side of the main entrance, and **Heron Neck Light**, on its southwest end, is the guide to this sound as well as to *Carver Harbor.*

HURRICANE ISLAND,

on the west side, is a little over half a mile long in a NORTH and SOUTH direction, rocky, and dotted here and there with a thin growth of fir and spruce. Its surface is undulating, but highest in the middle, where it rises to a sort of peak, somewhat steeper on the eastern than on the western side. Off the south end extends to the southward a mass of ledges and bare rocks to the distance of three-quarters of a mile, the southernmost of which is called

DEADMAN LEDGE.

It is five-eighths of a mile to the eastward of **Heron Neck Light**, this being the width of the channel. *It is not buoyed*, but almost always shows itself by breakers. From *Deadman Ledge* a line of ledges, bare rocks, and rocky islets extends about N. by W. for a little over a mile, the northernmost being abreast of the middle of **Hurricane Island**. The *main channel* passes between these ledges and **Green Island** with an average width of about seven hundred yards and a depth of from twelve to twenty-four fathoms. There is also a deep channel between them and **Hurricane Island**, through

which not less than four and a half fathoms at low water is found, but it is entirely unsafe without a local pilot.

LITTLE HURRICANE ISLAND

lies about three-eighths of a mile to the westward of **Hurricane Island**; is about three hundred yards long, bare of trees, (except one or two at the northern end,) and surrounded by very dangerous ledges. It is on the south side of the western entrance, while on the north side of the same entrance lie the

WHITE ISLANDS,

a group of seven rocky islets, lying E N E. and W S W. from each other, of moderate height, and dotted with a very few scrubby fir. One or two of them have houses, but for the most part they are barren and rocky. On the north side of **Green Island** makes in what is known as

OLD HARBOR,

which is at the north end of the *Reach*, and has from two to six fathoms, and a small settlement on its shores, but is obstructed by dangerous ledges.

It may be entered, however, by keeping the bare ledge on the south side of the entrance about one hundred yards off, to avoid a dangerous six-feet rock lying about one hundred and seventy-five yards to the southeastward of **Dog Point**.

DOG POINT

is low, gently sloping, with cleared summit, upon which are a couple of houses, and behind these a steep, wooded hill. About half a mile to the northward is

DYER ISLAND,

which lies close in with the **Vinal Haven** shore. It is low and flat except at its northwest end, where there is a somewhat steep hillock; and cleared, except for a few trees near the centre of the island. Above **Dyer Island** is

GUNDILL ISLAND,

a low, flat islet, with a very few trees and one or two houses; lying close in with

BARTON ISLAND,

a large island, with undulating surface, highest near its northern end, thickly wooded with spruce and fir, but showing occasional cleared fields, and a few houses near the shore. Between it and **Dyer Island** there is no passage; but on its north side three feet at low water may be taken, through a very narrow channel between it and **Conway Point**, into a large cove of irregular shape and about a mile and a quarter long in a NORTH and SOUTH direction, and in the middle of which from eight to eighteen fathoms may be found at low water. It is entirely land-locked, the northern passage being only about one hundred and fifty yards wide, with three feet in it; and the southern passage about sixty yards wide and dry at low water. This is called *THE BASIN*, and forms a most secure and excellent harbor, but cannot be entered except at high water, and then only with a light-draught vessel. No strangers can enter it at any time. Between **Barton Island** and **Leadbetter Island** two-thirds of the passage is filled with rocky islets, bare ledges, and sunken rocks, so that it is not possible to approach the western shore nearer than three-eighths of a mile, the channel running close along the east shore of **Leadbetter Island** with from thirteen to fifteen fathoms water.

On the west side of the passage, and about three hundred and fifty yards to the southwestward of **Leadbetter Island**, are two small, rocky islands, connected at low

water. The southernmost, called **Lairey Island,** is about four hundred yards long, and has one or two fir trees upon it. The northernmost, called **Pole Island,** is six hundred yards long; is much higher than the other; has a very few scattered spruce upon it, and one house on its eastern end. There is a passage, with six fathoms at low water, leading to the westward, between this and **Leadbetter Island**; and another, much narrower, with three and a half fathoms, leading between these islands and the **White Islands**, but neither is fit for strangers.

The passage from *Hurricane Sound* to the northward leads into *Leadbetter Narrows*, along the north shore of **Leadbetter Island**, and thence between **Dogfish Island** and **Crockett Point** into *Penobscot Bay*. No intelligible description can be given of the dangers in *Hurricane Sound* and its various passages, which should not be used by strangers, the fishermen only who live upon its shores being sufficiently conversant with its dangers to act as pilots.

SAILING DIRECTIONS
FOR ENTERING HURRICANE SOUND.

I. *From the westward and southwestward.*—Bring **Heron Neck Light** to bear N E. as for entering *Carver Harbor* and steer for it, passing from two hundred and fifty to three hundred yards to the southward of *Deadman Ledge*, and within half a mile of the light, and about one quarter of a mile from **Heron Neck Ledge**, in thirteen fathoms; steer N. ¼ W. toward **Leadbetter Island**, which will be almost in range with **Lairey Island**, and distant three and a quarter miles. This course leads in the best water up the sound, passing one-quarter of a mile to the eastward of *Deadman Ledge* and from two hundred to five hundred yards to the eastward of the line of ledges and islets off **Hurricane Island**, and carries not less than thirteen fathoms water.

When exactly abreast of the north end of **Hurricane Island** there will be seen directly ahead, and about half a mile off, a breaking ledge almost exactly in the middle of the passage. This ledge lies about eight hundred yards to the eastward of the easternmost of the **White Islands** and about five-eighths of a mile to the westward of **Dog Point**; has equally good water on all sides, but is boldest-to on its eastern side. It is called *Lairey Ledge*, and is marked by a *red and black spar-buoy* placed in six feet water, on top of it.

When abreast of **Hurricane Island**, as before, with *Lairey Ledge* bearing **NORTH**, three-quarters of a mile distant, steer N. by E. ¼ E. toward the western extremity of **Dyer Island**. On this course there is not less than thirteen fathoms; and when abreast of *Lairey Ledge*, with the southern end of **Leadbetter Island** bearing N. by W. ¼ W., steer that course, which will lead, with not less than eleven fathoms, up to **Lairey Island**. When abreast of the northern end of this island, in thirteen fathoms, steer N. by E. ¼ E. along the east face of **Leadbetter Island**. This course, with not less than twelve fathoms, leads up to the northeast point of **Leadbetter**, and when the *Narrows* are fairly open, N W. ¼ W. will lead safely through them with not less than four fathoms.

Anchorage may be found on any of the above courses—either by entering *Old Harbor* north of **Green Island**; the small cove between **Dyer** and **Gondola Islands**, in which there is from eight feet to five fathoms; or in *Long Cove*, which makes into the northeastward on the west side of **Conway Point**, opposite to the northeast point of **Leadbetter Island**. Thirteen feet may be taken into this cove, but the channel is narrow.

To enter Hurricane Sound from the westward: Steer E. by N. about midway between **White Islands** and **Hurricane Island**, carrying not less than eight fathoms. On this course a ledge with thirteen feet is left two hundred and fifty yards to the southward, and a bare ledge off the **Hurricane Island** group two hundred yards to the southward.

Continue this course toward **Dog Point**, passing about one hundred and fifty yards to the southward of *Lairey Ledge*, and carrying not less than six fathoms.

Bound to the northward through *Leadbetter Narrows*, when the southern end of **Leadbetter Island** bears N. by W. ¼ W. and the west point of **Dyer Island** N. by E. ¼ E., steer for **Leadbetter Point**, and follow the directions previously given.

DESCRIPTION OF THE WESTERN SHORE OF PENOBSCOT BAY, ITS HARBORS AND ADJACENT ISLANDS, FROM WHITE HEAD ISLAND TO THE MOUTH OF PENOBSCOT RIVER.

As before remarked, the eastern point of entrance to this bay is formed by

WHITE HEAD ISLAND,

(see page 274,) a rocky island lying close in with the western shore, about eight hundred yards long in an EAST and WEST direction, and wooded principally with stunted spruce and fir. From **Saddle-Back Ledge Light** it bears W. ¾ N., seventeen miles distant.

WHITE HEAD LIGHT-HOUSE

is built on the western end of the island, half-way up the slope of **White Head**, and is a granite tower, unpainted, thirty-four feet high, and shows a fixed white light of the third order of Fresnel from a height of seventy feet above the sea, and visible thirteen miles. The tower is connected with a one-story dwelling-house, whitewashed. Its geographical position is

Latitude - - - - - - - - -	43° 58′ 42″ N.
Longitude - - - - - - - -	69° 07′ 28″ W.

FOG-SIGNAL.

A ten-inch steam fog-whistle has been established at this light-house, which during a fog gives blasts of eight seconds at intervals of fifty-two seconds.

The following are the bearings and distances of this light-house from prominent points on the coast: From

	Miles distant.
Saddle-Back Ledge Light, W. ¾ N.	17
Mount Desert Rock Light, W. by N. ½ N.	43
Matinicus Rock Light, N W. by N. ½ N.	17
Monhegan Light, N E. ¼ E.	15½
Cape Ann Lights, N E. by E. NORTHERLY	105
Highland Light, (**Cape Cod**,) N E. ¾ N.	125

White Head is also the western point of entrance to

MUSCLE RIDGE CHANNEL,

the westernmost of the passages leading into the bay, and the one most commonly used by coasters coming from the westward. It is separated from the *Middle Passage* by a line of islands, islets, and bare ledges, which by breaking the force of the sea in easterly weather produce comparatively smooth water in this channel. The safe and comfortable anchorages afforded by the arms of the bay projecting into the main land on the western side of the channel, and by the islands lying close along the shore, add to the great advantages possessed by this passage.

Beginning at **White Head Island**, the *Muscle Ridge Channel* extends to the northeastward to **Owl's Head**, a distance of seven miles and three-quarters, and is in many places narrow and full of shoals, but always affords beating-room for ordinary coasting-vessels, with plenty of water, and is comparatively well sheltered. The group of islands separating it from the *Middle Passage* is known as

THE MUSCLE RIDGE ISLANDS.

Beginning at the southernmost, they are named as follows: **Pleasant, Grafton, Hewell, Andrews, Dix, High, Green, Otter, Ash, Fisherman, Sheep,** and **Munroe Islands,** the first mentioned lying on the eastern side of the southern entrance, and the last on the eastern side and at the northern end of the passage. In coming from the southward the group formed by **Pleasant, Grafton,** and **Hewell Islands** will be first noticed; but there are many small rocky islands scattered among the larger ones.

PLEASANT ISLAND,

the southernmost of the **Muscle Ridge** group, is of irregular shape, and lies nearly two miles to the eastward of **White Head Light.** Near its southern end it is nearly divided by a deep cove which makes in from the eastward, contracting it to a strip of land which at high water is only fifty yards wide and about six feet above sea-level. This strip connects the northern with the southern part of the island, which is forty feet high, with precipitous faces. There are a few trees on a hillock at the north end of the island, and the crest and southern end are wooded with spruce, pine, and birch, but near the middle the land is cleared and has one or two houses upon it.

On the north side of this island is formed a harbor of refuge known as *HOME HARBOR*, fully protected from all winds except those between S E. and EAST. Its boundaries are **Hewell Island** on the north and northeast, **Pleasant Island** on the south, **Bar Island** on the west, and **Flag Island** on the northwest.

GRAFTON ISLAND

lies about one thousand yards to the westward of **Pleasant Island,** and is the westernmost of the larger islands of this group. It lies E NE. and W S W., is half a mile long, and has an average width of three hundred and fifty yards. With a gradual rise this island attains a height of sixty feet near its centre. Its northern, eastern, and southern ends are thickly wooded, leaving a cleared patch of grass-land on the western side, near the middle.

About four hundred yards N NE. from **Pleasant Island** is

HEWELL ISLAND,

lying NE. and SW., three-quarters of a mile long, and of a very irregular shape, both shores being indented by long coves. At its northeastern end it is sixty feet high, with the crest covered with a sparse growth of fir, from which it descends gently and regularly toward the middle of the island, where two coves, making in from the eastward and westward, nearly separate it into two parts; and here the land is barely elevated above high-water mark. The southwestern end is eighty feet high, partly wooded with spruce and birch; while the southeastern end is very similar in appearance, but not quite so high. Between these two heads runs a low, narrow neck of land, separating the heads of two coves, which approach each other from the east and west.

Thus viewed from the eastward or westward, **Hewell Island** presents the appearance of three distinct hills, like three islands separated by narrow passages.

From the northern extremity of this island extends a long line of rocks—some bare at high water, some covered, and others elevated twenty feet above the sea. These are the **Clam Ledges,** which extend off nearly a mile to the westward and occupy all the space between **Hewell** and **Dix Islands.**

CROW ISLAND.

On approaching the **Muscle Ridge Islands** from the southward, a small rocky island, with a few scattered fir trees upon it, will be seen off the southern end of **Pleasant Island.** This is **Crow Island,** which lies nearly six hundred yards S S W. from **Pleasant Island**; is between five and six hundred yards long and forty feet high, with a somewhat precipitous face. It is one of a group of small islands lying to the southward of **Pleasant Island** and on the north side of what is commonly known as *TWO-BUSH CHANNEL*, which leads into the *Middle Passage.* About six hundred and fifty yards E S E. from it lies

GREAT TWO-BUSH ISLAND,

bare, rocky, and forty feet high. This islet is about four hundred yards long, lies nearly EAST and WEST, and is half a mile south of **Pleasant Island.** At low water a long dry reef extends from it in an E N E. direction to a distance of over five hundred yards.

LITTLE TWO-BUSH ISLAND

is merely a bare rock, about one hundred yards square and thirty feet high, lying two hundred and fifty yards W N W. from the southern end of **Great Two-Bush.** At low water it is surrounded by a dry reef and connected with the larger island. These two islands give the name to *Two-Bush Channel.*

In the middle of the passage between **White Head** and the **Muscle Ridge Islands** lies

YELLOW RIDGE ISLAND,

a bare rocky islet, about a hundred and fifty yards long and twenty feet high, with deep water on all sides, lying W. by S. ½ S. from the southern end of **Grafton Island,** distant nearly three-quarters of a mile, with a dangerous ledge, called *Yellow Ledge,* about two hundred and fifty yards to the westward of it. This ledge is marked by an **iron spindle** with a copper cylinder on top, painted red. The usual channel passes between **Yellow Ridge Island** and **Grafton Island** with fifteen fathoms water.

On the north side of **White Head Island** makes in what is known as

SEAL HARBOR,

a bay of irregular shape, contained between **Spruce Head Island** on the north, **White Head Island** on the south, and **Norton** and **Rackliff Islands** on the west and northwest; thus is formed a broad cove about a mile long and a little over three-quarters of a mile wide, which is a good harbor of refuge, sheltered from all winds from S W. around by N. to E. Even in southerly winds there is comparatively good shelter, as the force of the sea is greatly broken by the numerous ledges and islands surrounding the entrance. This harbor is difficult of access to strangers, who should always endeavor to make *TENNANT HARBOR* to the southward; or in southerly winds to anchor under the north shore of **Spruce Head Island,** in what is known as *FALSE WHITE HEAD HARBOR.*

SPRUCE HEAD ISLAND

is the first large island met with on the western side of the *Muscle Ridge Channel* after passing **White Head,** and is nearly abreast of the northern end of **Hewell Island.** It is about a mile to the northward of **White Head,** close in with the main shore, lies N W. by W. and S E. by E.; is three-quarters of a mile long, with an average width of a little over a quarter of a mile. It is formed by two rocky heads covered with a scattered growth of stunted spruce and fir, and connected by low land about twenty feet above sea-level. On its southern shore may be seen the buildings and apparatus belonging to the granite-

quarries, which are usually in full operation. Between this island and **White Head** is, as before mentioned, the entrance to *Seal Cove*, which may be entered in the day-time, but should not be attempted at night.

The southeastern head of this island is known as **Spruce Head** or **False White Head.** The former is the preferable name, but the latter often is used, and gives the name to *False White Head Harbor*, under its north shore. **Rackliff** and **Norton Islands**, on the west side of *Seal Harbor*, are two rocky, wooded islands, lying nearly NORTH and SOUTH from each other, and separate *Seal Cove* from *Rackliff Bay*, to the westward of it. **Norton Island** is much the smaller as well as the southernmost of the two, and lies about a quarter of a mile to the westward of **White Head Island**, extends in a N. by E. and S. by W. direction, and is about a thousand yards long. From **Rackliff Island** it is separated by a passage a hundred and seventy-five yards wide, through which five feet may be carried; but there is no passage between it and **White Head**, the space being full of rocks and ledges.

Rackliff Island is a mile long in a N E. and S W. direction, with a width varying from two hundred yards to half a mile. It is highest about the middle, where it is over one hundred feet above sea-level, and to the southeastward shows a somewhat steep and precipitous face. There are several wharves and a few houses on the eastern side of the island, but it is for the most part covered with the usual growth of small fir and spruce, in which respect it is similar to **Norton Island.**

The small rocky island lying off the south shore of **Spruce Head**, and about one hundred yards from it, is called **Burnt Island.** It is low and covered with a growth of spruce.

FALSE WHITE HEAD HARBOR,

formed by the curve in the north shore of **Spruce Head Island**, is only used as a harbor of refuge in southerly gales, or by vessels caught by a head tide and a light wind when bound through the *Muscle Ridges.*

It affords secure anchorage, in two fathoms at low water, about three hundred and fifty yards from shore. The approach to it from the eastward is obstructed by three islands lying nearly NORTH and SOUTH from each other, and surrounded by dangerous ledges. These islets lie off **Thorndike Point,** the southwestern point of entrance to *WESKEAG RIVER*, and are known, severally, as **Eben, Tommy,** and **Garden Islands.**

Eben Island, the northernmost, is about four hundred yards to the southward of **Thorndike Point**; is about two hundred and fifty yards in diameter, low, bare, and rocky, and surrounded by shoals. Eight feet may be carried between it and **Thorndike Point.**

Tommy Island lies a third of a mile to the southward of **Eben Island**, and is also bare and rocky. It is surrounded by ledges and should not be approached closely on either side.

Garden Island lies eight hundred yards S S E. from **Tommy Island**; is very irregular in shape, rocky, from twenty to thirty feet high, and surrounded by ledges. The northern entrance to *False White Head Harbor* lies between this island and **Tommy Island**, and through it not less than three fathoms may be taken to within six hundred yards of the head of the cove. The middle of the passage is obstructed by dangerous ledges, and it is necessary to keep either the southern shore of **Tommy Island** or the northern shore of **Garden Island** aboard to avoid them.

When between **Grafton** and **Spruce Head Islands**, coming through the *Muscle Ridge Channel*, there will be seen to the eastward, and about four hundred yards north of **Grafton Island**, a rocky islet with a single tree at its northeastern end. This is

HURRICANE ISLAND,

lying in a N E. and S W. direction, about two hundred yards long, twenty feet high, and bare with the exception of the single tree mentioned above, which stands at its northeastern end. Eleven feet may be carried between it and **Grafton Island**, but it is not well for strangers to attempt this passage.

The two rocky islets seen close in with the western shore of **Hewell Island**, and to the northward of **Hurricane Island**, are **Bar** and **Flag Islands**.

Bar Island, the westernmost, is about a quarter of a mile to the westward from the southwestern end of **Hewell Island** and a little over an eighth of a mile WEST from **Flag Island**. It lies NORTH and SOUTH; is a quarter of a mile long, and connected at low water by a ledge of rocks with **Grafton Island**. Its northern end is twenty feet high and has a few spruce trees on it, while the southern end is forty feet high and bare.

Flag Island lies an eighth of a mile to the eastward of **Bar Island** and about two hundred yards W. by N. from the southwestern end of **Hewell Island**. It is twenty-five feet high, and bare except for a couple of fir trees on each end; lies N. by E. and S. by W., and is about three hundred yards long.

To the northeastward of **Hewell Island**, and distant from it about twelve hundred yards, will be seen a large island of moderate height, and for the most part covered with a mixed growth of trees. This is

ANDREWS ISLAND,

the largest as well as the most easterly of the **Muscle Ridge** group, lying N E. and S W., three quarters of a mile long, and with an average width of a quarter of a mile. Seen from the eastward or westward it will present an undulating and irregular outline, which, together with its size and peculiar growth of trees, will serve to distinguish it from any other of this group. The surface is partly grassy and in places cultivated, but a large portion of the island is covered with a mixed growth of trees. At its northeastern end the land rises to a height of over eighty feet, then gently descends toward the middle of the island, where the height is only twenty feet, which elevation it maintains to its southern end, where are two hillocks sixty feet high—one on the southeastern and the other on the southwestern face. There are a few houses on the northeastern and southwestern ends.

On its northwestern side **Andrews Island** is connected at low water with a rocky island, about seven hundred yards long and twenty-five feet high, which is called **The Neck.** It lies N E. and S W., and has a few scattered fir trees upon it.

DIX ISLAND

is the next of the large islands met with in passing through this channel to the northward, and is the most readily distinguished by a stranger on account of the number of houses and the derricks and machinery of the granite-quarries which occupy nearly the whole of the island. It is about twelve hundred yards to the northward of **Hewell Island** and about seven hundred yards to the northwestward of the neck of **Andrews Island**. It lies N. by E. and S. by W., is seven hundred yards long, sixty feet high, and destitute of trees except a small clump of firs here and there.

A channel exists between this island and **Andrews Island**, through which over three fathoms at low water may be carried into a sort of harbor contained between **Dix, High, Andrews,** and **Hewell Islands**. This harbor affords comparatively good shelter, and is often used by vessels loading at **Dix Island** with the granite for which that place is famous.

Between **Andrews** and **Dix Islands**, but closer to the latter, lies a small island known as

BIRCH ISLAND.

It is five hundred yards N W. by N. from **The Neck**; lies W N W. and E S E., and is a little over three hundred yards long. It rises abruptly from the water to a height of twenty feet; the surface level, except at the western end, where there is a slight elevation, and bare except for a few spruce trees at its eastern extremity. From its southwestern end a long and narrow tongue of land extends to the southward one hundred and twenty-five yards, with two or three spruce trees on its summit.

Between **Birch Island** and **The Neck** there exists a good channel with eleven feet at low water, which, passing between **Dix** and **Hewell Islands**, soon deepens to over three fathoms, and finally joins the *Muscle Ridge Channel* south of the **Clam Ledges**. This passage is the northern entrance to the harbor between **Dix** and **Andrews Islands**, mentioned above, and which is sometimes called *DIX ISLAND HARBOR*. But strangers should not attempt any of these passages leading among the islands.

The small island lying just to the northwestward of **Dix Island** is called

OAK ISLAND,

bare of trees, twenty feet high, and about two hundred yards long. From **Dix Island** it bears N W., distant three hundred and fifty yards, and from **Otter Island** S W. ½ S., distant nearly half a mile.

HIGH ISLAND

is a little over five hundred yards to the eastward of **Dix Island**, and is not usually seen by vessels coming through the *Muscle Ridge Channel* until to the northward of **Dix Island**, when it will appear well to the eastward as a rocky island, with its top fringed with fir trees and a few scattered trees on its eastern and western ends. It lies N W. and S E.; is seven hundred yards long and seventy feet high.

Birch Island lies close in with its southwestern shore, and the two islets to the northward are **Little Green** and **Otter Islands**.

Several bare, rocky islets, which have no names, lie to the northward of this island, obstructing the passage between it and **Marble Head**, which would otherwise be a mile and a half wide. Through this passage from ten to twelve fathoms may be carried by keeping about two hundred yards from **Marble Head Island** and steering about midway between **Otter** and **Ash Islands**. Four fathoms may be taken between **High** and **Little Green Islands** into a little harbor contained between these islands and **Dix Island**.

Two islets lie to the southeastward of **High Island**, called, respectively, **Great** and **Little Pond Islands**, but they are not visible from the *Muscle Ridge Channel*.

Little Pond Island lies about six hundred and fifty yards E. by S. from **High Island**; is about three hundred yards long and twenty-five feet high. It is for the most part bare and barren, but there are a very few small trees near its summit.

Great Pond Island is two hundred yards S S W. from **Little Pond**; lies N W. and S E., and is in reality composed of two rocky islets separated by a narrow passage, dry at low water. The eastern one, which is sometimes called **Camp Island**, is twenty feet high, and has a lone spruce tree upon its summit, near the southern end. The western island is between forty and fifty feet high, and has fir and spruce scattered in groups over its surface. Between it and **Little Pond Island** there is a narrow channel with thirteen feet, but unfit for strangers. Many dry ledges surround **Camp Island**, and it is not safe to approach too closely.

LITTLE GREEN ISLAND

lies three hundred yards N W. ½ W. from **High Island**. It is low, rocky, and bare, and about three hundred yards long in an EAST and WEST direction. Between it and **Otter**

Island there is a passage with four fathoms at low water. Three hundred yards N. by W. from it is

OTTER ISLAND,

lying N W. and S E., nearly five hundred yards long, and about fifty feet high. From **Dix Island** it bears N. by E. ½ E., distant half a mile; and from **Fisherman Island** W S W., distant one mile and three-quarters. Its eastern end is partly wooded with spruce and fir, while the western end is bare, or covered with the rough grass so commonly found on the islands in this vicinity. Between **Otter Island** and **Ash Island** runs the main channel with twelve fathoms water.

The western boundary of the *Muscle Ridge Channel* is formed, as before mentioned, by the main land from **Spruce Head Island** to **Owl's Head.** That point of the main land which approaches to within a hundred and seventy-five yards of the northwest end of **Spruce Head Island** and forms with it the eastern boundaries of *Seal Harbor*, is called

FOGG POINT.

It is low and cleared near its eastern extremity, with several houses upon it, and behind these rises **Fogg Hill,** ninety feet high, and partly wooded. Dangerous ledges lie to the eastward of this point, and indeed no part of the shore from **Fogg Point** to the entrance of *Weskeag River* should be approached by strangers.

From **Fogg Point** the shore, with many curves and indentations, has a general course about N E. for a mile and a quarter to the entrance to *Weskeag River*. The land varies in height from forty to eighty feet, with rocky faces, and is partly cleared and partly wooded.

THORNDIKE POINT,

the southwestern point of entrance to *Weskeag River*, is one hundred feet high and diversified with woods and cleared land. Its eastern face is rocky and steep, and the point is in some places bold-to; but there are many dangerous outlying ledges, which render an approach to it unsafe for strangers.

WESKEAG RIVER,

on the banks of which **South Thomaston** is built, is a crooked and shallow stream, about two-thirds of a mile wide at its mouth, but rapidly diminishing in width until at **South Thomaston** it is but little over fifty yards wide. Its width at the mouth is also still further diminished by an island a quarter of a mile long called **Spaulding Island,** the available channel being thus diminished to a little over four hundred yards.

SPAULDING ISLAND

lies E N E. and W S W.; is about a quarter of a mile long, twenty feet high, and very irregular in shape. Its southern shore, which is the only side of the island shown to vessels bound in, appears barren and rocky, covered with a scant and sickly growth of yellowish grass, dotted at long intervals with lone spruce and fir trees, and with bare ledges cropping out all over the surface. On the summit, however, there is a thin growth of spruce, birch, and maple, and some trees on the north side of the island, which will appear over the summit. It is surrounded by bare and sunken ledges, *none of which are buoyed*, thus rendering the approaches to the river very unsafe for strangers.

OTTER POINT,

the east point of entrance to the river, is about thirty feet high, barren, and rocky, and has a single small spruce tree on its southern extremity.

The shore-line on both sides of *Weskeag River* is very irregular in outline, and the channel tortuous and narrow. Nothing but a general description of the shores can be given, and sailing directions would be of little avail. On the east side, from **Otter Point**, the general course of the shore is about N W. for about two-thirds of a mile to the entrance to *Ballyhac Cove*, a large cove, dry at low water, running about N E. for five-eighths of a mile, and about a quarter of a mile wide; almost exactly opposite to it, on the west shore, is another and smaller cove, contained between **Cushing Point** (the northern extremity of **Thorndike Point**) and **Crouch's Folly,** which is opposite to **Birch Point,** the north point of entrance to *Ballyhac Cove.* **Cushing Point** is barren, rocky, and crowned with spruce trees.

Crouch's Folly is also rocky and fringed with a thick growth of bushes, but on top is cleared and composed for the most part of grass-land. **Birch Point** is a high clay head with precipitous, water-worn faces, and is crowned with small birch trees.

On the north side of **Crouch's Folly** makes in a large creek to the westward, called *Sharkeyville Creek.* It is of little importance, being very shallow, but there is a granite-quarry at its head which is in partial operation. A low, grassy islet lies on the eastern edge of the flats off the mouth of this creek and marks the western limits of the channel of *Weskeag River*, which passes between this island and **Hayden Point,** on the east shore of the river. This point is exactly opposite to the mouth of *Sharkeyville Creek*, and is formed by a sand and clay cliff, crowned with bushes and a thick growth of small stunted trees.

At **Hayden Point** the river turns abruptly to the northeastward, running N E. for about five-eighths of a mile to **South Thomaston Bridge**, which marks the head of navigation. On this course it runs between tolerably steep banks, fringed with bushes and backed by grass-land and cultivated fields.

The village of **South Thomaston** occupies both banks of the river. It is of little importance, being supported mainly by the granite-quarries in its vicinity and on the **Muscle Ridge Islands.**

Strangers should never attempt to enter Weskeag River, and no intelligible sailing directions can be given. The chart will be found the best guide, but a careful scrutiny of it will show the difficulty of threading the intricate channels among the various islets and rocks obstructing the river.

From **Otter Point** the main shore has a course about E. by N. for about one mile and three-eighths to

ASH POINT,

which is sixty feet high at its highest part, gently sloping, cleared from the water's edge to its summit, and the cleared land backed by trees. There are several houses on the summit and slopes, and on its southeastern extremity a large **day beacon in the form of a tripod**, fifty-seven feet high, with its legs painted white, and covered in from the top twenty-four feet down, the cover part being painted brown.

The island which lies to the southeastward of **Ash Point** is called

ASH ISLAND,

and marks the turning point in the *Muscle Ridge Channel.* It is about a quarter of a mile long in a N E. and S W. direction, and about sixty feet high at its highest point, which is near the northeastern end. Its southwest end is rocky, and wooded with the usual growth of stunted trees.

Ash Island is four hundred yards S E. from **Ash Point**, but the passage between them has only five feet water, and is never used except by small boats. Abreast of **Ash**

Island, on the eastern side of the channel, lie two others of the **Muscle Ridge** group, known as **Fisherman** and **Marble Head Islands.**

FISHERMAN ISLAND

is the larger and more northerly of the two; lies a mile and three-quarters E NE. from **Otter Island** and about a mile and an eighth to the eastward of **Ash Island.** It is of irregular shape, rocky, lies NE. and SW., and is about three hundred and seventy-five yards long. A few stunted fir trees are scattered along the northern and eastern faces and on the summit, but both ends are bare.

This island forms the southern boundary of *FISHERMAN ISLAND CHANNEL*, which is nearly a mile wide, and leads from *Muscle Ridge Channel* into the bay with not less than five fathoms at mean low water.

MARBLE HEAD ISLAND

lies a quarter of a mile SW. from **Fisherman Island.** It is small, rocky, and bare of trees; lies N NE. and S SW.; is one hundred yards long and forty-five feet high, with steeply-sloping shores. Between this and **Fisherman Island** there is a channel four hundred yards wide, with six fathoms water.

SHEEP ISLAND,

also on the eastern side of the channel, is a little over a mile NORTH from **Fisherman Island,** the passage called *Fisherman Island Channel* passing between them. It is also a mile and a half to the northeastward of **Ash Island,** and forms the eastern point of entrance to *OWL'S HEAD BAY*, which is the name given to the northern portion of the *Muscle Ridge Channel.* **Sheep Island** is half a mile long and not quite a quarter of a mile wide. It lies N NE. and S SW., and shows a grove of tall pines at its southwestern point—the rest of the southern part being wooded with a stunted growth of spruce. It is low and sandy, with water-worn faces; and the northern half is cleared with the exception of an occasional solitary tree. It is not safe to approach, as it is surrounded by dangerous shoals.

MUNROE ISLAND,

the northernmost of the **Muscle Ridge** group, lies about three-eighths of a mile to the northeastward from **Sheep Island** and about the same distance to the southeastward from **Owl's Head.** It is rocky and well wooded, principally with fir trees; lies N. by E. and S. by W.; is three-quarters of a mile long, and at its highest point, which is on its eastern side, is one hundred and twenty feet high, with steeply-sloping shores. Its southern end is cleared and has one or two houses on it.

The west shores of the channel from **Ash Point** to **Owl's Head** have a general course N E. ½ N. for three miles, but are much indented by coves and small harbors, which are used by the fishing-vessels of light draught. None of these coves are of importance, as they are not safe for strangers, nor for any vessels except those of light draught. The general characteristics of this shore are hilly, undulating lands, in some places cleared, in others wooded, and with scattered houses here and there.

At *OWL'S HEAD HARBOR*, which is a little over two miles above **Ash Point,** there is a small settlement. The harbor itself is formed by a small cove under the south shore of **Owl's Head** and to the westward of what is known as **Dodge Point.** This point may be known by the stone pier built out from it for the accommodation of the self-registering tide-gauge placed there by the Coast Survey.

OWL'S HEAD

lies in latitude 44° 5′ N., longitude 69° 2′ W., and forms the south point of the entrance

to *Rockland Harbor* and the north promontory of *Muscle Ridge Channel.* It is a high, round, rocky, and precipitous head, having a very few stunted fir trees growing out of the almost perpendicular sides of the hill. It is surmounted by a light-house known as

OWL'S HEAD LIGHT-HOUSE,

a white tower, nineteen feet high, which shows a fixed white light of the fourth order of Fresnel from a height of one hundred feet above the sea, and visible fifteen miles. The keeper's dwelling, which is near the light-tower, is a low wooden building, painted brown. The geographical position of this light-house is

Latitude - - - - - - - -	44° 05′ 31″ N.
Longitude - - - - - - - -	69° 02′ 39″ W.

There is no fog-signal.

DANGERS

IN APPROACHING AND ENTERING PENOBSCOT BAY BY THE MUSCLE RIDGE CHANNEL.

On nearing **White Head Light-House**, *a black bell-buoy* will be seen a little to the eastward. This is on the

SOUTH BREAKER,

a dangerous ledge, surrounding a small bare rock lying about eight hundred yards **SOUTH** from **White Head Light-House** and almost directly in the track of vessels. The *bell-buoy* is moored in twelve fathoms water about a hundred yards from the southwestern point of the shoal, while to the eastward of it, and about thirty yards to the southwestward of the ledge, will be seen a *red spar-buoy*, marked No. 6, which is anchored in four fathoms water.

When past the **South Breaker**, look out for

YELLOW LEDGE,

which is marked by a *red spindle* with copper cylinder on top, and is out at one hour ebb. This ledge lies on the southeastern side of the channel, and bears from **White Head Light-House** EAST, distant nearly half a mile. It is two hundred and fifty yards from the western shore of **Yellow Ridge Island**, with a very narrow channel between them. This channel has seven fathoms water, but is not recommended, being only seventy-five yards wide.

From **Yellow Ridge Island** the shoal water extends to the northward two hundred, to the eastward three hundred, and to the westward two hundred yards, while its southern shore is comparatively bold-to.

Vessels using the eastern channel between **Grafton** and **Yellow Ridge Islands** pass well to the eastward of the *South Breaker;* between it and **Stallion Rock,** a small bare ledge lying twelve hundred yards **W. ½ N.** from **Crow Island.** In using this channel care must be taken to avoid a

FIVE-FEET SHOAL,

lying on its western side, *not buoyed*, but generally showing itself by breakers. It bears from **Stallion Rock N W. ¾ N.**, three-quarters of a mile distant; from the *red buoy on* **South Breaker E. by N. ½ N.**, half a mile distant; and from **White Head Light-House S E. ¾ E.**, half a mile distant.

The channel leads to the westward of *Yellow Ledge;* the course leads to the northeastward, toward

HAY ISLAND LEDGE,

sometimes called the *Haycock,* which is marked by a *black spar-buoy* (No. 3) placed in eighteen feet water on its eastern side. This ledge has five feet at mean low water; bears from **Seal Island** W. by N., three hundred yards distant, and between the two there is a channel with five fathoms, but too narrow and intricate for strangers. Pass to the eastward of the buoy, the channel passing between it and *an iron can-buoy* of the second class, painted *red and black* in horizontal stripes, which marks the position of

LOWER GANGWAY LEDGE,

being placed on top of it, in six feet water. This ledge lies in mid-channel with from five to eight fathoms all around it, and may be passed on either hand, but the custom is to pass to the eastward of it. It lies nine hundred yards N N E. from *Yellow Ledge* and eight hundred yards E. by N. from **Seal Island.**

Four hundred yards N W. by N. ½ N. from this ledge will be seen *a black spar-buoy* on the southern end of

BURNT ISLAND LEDGE,

which is one of the guides to *Seal Harbor.* This ledge lies two hundred and fifty yards SOUTH from **Burnt Island,** and has four feet at mean low water. The buoy is placed in two fathoms on its southern end, is marked No. 5, and is to be left to the westward except by vessels bound into *Seal Harbor,* which pass to the southward of it.

Next to the northward of this ledge lies

HURRICANE LEDGE,

bare at low spring tides and with two feet at mean low water. From **Spruce Head Island** it bears S E. ½ E., distant eight hundred yards; from **Hurricane Island** N W. ½ N., nearly half a mile; and from **White Head Light-House** N E. by E. ½ E., a mile and a third distant. It lies in the middle of the channel, and is marked by *a red spar-buoy* placed in two fathoms on its northwestern side, and it is usual to pass to the westward of this buoy. A channel equally deep and less obstructed, however, will be found leading between **Yellow Ridge** and **Grafton Islands,** and to the eastward of this ledge, between it and **Hurricane Island.** A **spindle,** painted red and black in horizontal stripes, which would enable vessels to use either channel with safety, should be placed here instead of the buoy.

Next to the northward of *Hurricane Ledge,* and on the eastern side of the channel, will be seen a mass of rocks and ledges known as the

CLAM LEDGES.

They are all dry at low water and most of them at high water, forming a group of islets bare of all vegetation. The most westerly, as well as the largest of the group, is known as **Fogg Island,** and is about one hundred yards in diameter. To the eastward of **Fogg Island** the shoals appear as bare rocky islets and breaking ledges, which form the northern boundary of that narrow and intricate channel which leads into *Penobscot Bay,* having for its boundaries on the north and west these ledges and **Dix, Birch,** and **High Islands;** on the south and east, **Hurricane, Hewell, Andrews,** and **Pond Islands.** This channel will be treated of elsewhere. On the western side of the channel, nearly opposite the **Clam Ledges,** *a black spar-buoy* will be seen on

GARDEN ISLAND SUNKEN LEDGE.

This ledge has nine feet at mean low water, according to the Coast Survey chart, but it is reported that a pinnacle with but five feet exists. The ledge lies a quarter of

a mile **SOUTH** from **Garden Island**, leaving a very narrow channel with from six to seven fathoms between them. From *Garden Island Ledge* **Spindle** it bears S W. by S., distant eight hundred yards. The buoy is marked No. 7, and is placed in seventeen feet on the southeastern side of the ledge, marking the western boundaries of the channel.

CHANNEL ROCK,

the next danger met with, lies on the eastern side of the channel, with deep water on all sides. It is a small, bare rock, surrounded by shoal water, the main channel passing to the westward of it; but there is a good passage, with from five to six fathoms, on its eastern side. It bears S E. from *Garden Island Ledge* **Spindle**, a little over half a mile distant, which is here the width of the channel.

When up with **Channel Rock**, the **spindle** on

GARDEN ISLAND LEDGE

will be seen to the northwest. It is of iron, painted black, and surmounted by a copper cylinder and red ball, and lies three-quarters of a mile W. by N. from **Oak Island** and one-third of a mile E. by N. from **Garden Island**. This ledge is dry at low spring tides, and may be passed on either hand, although the best water is to the eastward. Between this ledge and **Garden Island** the channel is a quarter of a mile wide, and between it and **Oak Island** nearly three-quarters of a mile in width. There is a passage between **Garden Island** on the east and **Tommy Island** on the west, with five fathoms water, but it is narrow and obstructed by ledges.

Six hundred yards N E. ½ E. from *Garden Island Ledge* is a pinnacle rock, called *Wiggins Rock*, with twelve feet at mean low water; and N. ¼ E. from *Garden Island Ledge*, distant three-quarters of a mile, lie the

LARK LEDGES,

which are on the northwestern side of the channel, extend **NORTH** and **SOUTH**, and are in several places dry at low water. The shoalest part of these ledges is near their southern end, and thence they extend to the northward four hundred yards. The northern point bears S E. from the middle of **Spaulding Island**, about four hundred yards distant. Between this northern point and the island three and a half fathoms can be carried, but the channel is narrow.

Three hundred yards S W. by S. from the *Lark Ledges* is a *pinnacle rock with eight feet* at mean low water. The channel is nearly three-quarters of a mile wide between these ledges and

OTTER ISLAND LEDGE,

lying on the eastern side of the channel, immediately opposite to the *Lark Ledges*. It is a small bare rock, lying between six and seven hundred yards N W. ¼ W. from the northwestern end of **Otter Island**, and is marked by an iron spindle painted black, surmounted by a copper cylinder and two red balls. From eight to ten fathoms may be taken on either side of the ledge, but it is usual to pass to the westward of it. Both the ledge and the northwestern side of **Otter Island** are quite bold-to, and may be safely approached within less than one hundred yards by vessels drawing eighteen feet.

INNER GRINDSTONE LEDGES.

These are two ledges lying **NORTH** and **SOUTH** from each other, two hundred and fifty yards apart. The northern one has eight feet at mean low water; the southern one has six feet at each end, and is awash in the centre. Between the two a channel of from six to ten fathoms exists. On the northwestern end of the northern rock is placed a *red spar-buoy*, not numbered. Over ten fathoms can safely be taken between

these ledges and the *Upper Gangway*, and between the lines of three fathoms the channel is a quarter of a mile wide. Opposite to this buoy, about a quarter of a mile distant in a WEST and W. by N. direction, will be seen a *spar-buoy, painted red and black in horizontal stripes.* This is on

UPPER GANGWAY LEDGE,

which has eleven feet at mean low water, and lies in mid-channel, though it is usual to pass to the northwestward of it. From **Ash Island** it is distant about three-eighths of a mile in a SE. direction, the channel between them being about a quarter of a mile wide, with from four to ten fathoms at low water. The buoy is placed on top of the rock, and may be passed on either hand by giving it a berth of half a cable's length.

On the northwestern side of the channel, off the southwestern point of **Ash Island**, lies

ASH ISLAND LEDGE,

part of which is bare at low water. It makes off from the island in a southerly direction for three-eighths of a mile, and is marked by a *black spar-buoy*, No. 9, placed in fourteen feet water about one hundred yards SSE. from the dry part of the ledge. Vessels drawing over twelve feet must give this buoy a good berth, as the tail of the shoal is about one-third of a mile SW. by S. from it. On **Ash Point** is a large day beacon in the form of a tripod, fifty-seven feet high, with its legs painted white, and covered in from the top twenty-four feet down, the covered part being painted brown.

A dangerous rock, with eight feet at mean low water, lies to the southwestward of **Sheep Island**, distant half a mile, and from **Ash Island Spindle** NE. ½ E., distant one mile. It is called *North West Ledge*, and is marked by a *red and black buoy.*

SHEEP ISLAND SHOAL

is not, strictly speaking, in this passage, but on the north side of *Fisherman Island Channel*, extending off from **Sheep Island** to the southeastward, southward, and southwestward. To the southward and southeastward it extends one-third of a mile and to the southwestward three-eighths of a mile. There is only half a foot at mean low water a third of a mile south of the southern end of **Sheep Island.** On approaching **Sheep Island** from the southward, a *red can-buoy* will be seen on the eastern side of the channel, about a quarter of a mile from the western shore of the island. This is on

SHEEP ISLAND BAR,

which extends off from the middle of **Sheep Island** in a westerly direction about a quarter of a mile, and has four feet at low water. The buoy is a second-class *iron can*, marked No. 10, and is placed in nineteen feet water on the western end of the ledge. From it the **spindle** on *Dodge Point Ledge* bears NE. ¾ N., distant a little over one mile and a quarter.

DODGE POINT LEDGE.

This rock, which is marked by a **wooden mast or spindle painted black,** is nearly bare at high water, and lies about two hundred and fifty yards to the eastward of **Dodge Point**, and on the northeastern side of *Owl's Head Harbor.* **Dodge Point** may be known by the stone pier extending out from it, the site of one of the self-registering tide-gauges of the Coast Survey. When up with the ledge, *a black can-buoy* will be seen ahead and off the eastern point of **Owl's Head,** on

OWL'S HEAD LEDGE,

which makes off to the eastward of **Owl's Head,** and is bare at low water. There is no passage between it and the head. The buoy is a can of the second class, marked No. 13, and is placed in eighteen feet about twenty yards to the eastward of the end of the

ledge. Pass to the eastward of it and enter the bay—this being the last danger in *Muscle Ridge Channel.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PENOBSCOT BAY THROUGH THE MUSCLE RIDGE CHANNEL.

Vessels coming from the southward pass about midway between **Monhegan** and the **George Islands**, on a course about E. ½ N., until **Monhegan Light** bears S. by W. ½ W., distant three miles, with thirty-one fathoms, rocky bottom. The course is then N E. by E., passing two hundred yards to the westward of the *bell-boat* near *South Breaker;* three hundred yards to the eastward of **White Head Light**; and two hundred yards to the westward of the **spindle** on *Yellow Ledge*, until up with the *red and black can-buoy* on *Lower Gangway Ledge*, which leave to the westward about two hundred and fifty yards, when there will be eight fathoms, hard bottom. Now steer N E. ¼ E., passing to the westward of *Hurricane Ledge* buoy; to the eastward of the buoy on *Garden Island Sunken Ledge*, and of the spindle on *Garden Island Ledge;* to the westward of **Channel Rock**; between **Otter Island** and the spindle on *Otter Island Ledge;* and to the eastward of *Ash Island Ledge.* When abreast of the eastern end of **Ash Island**, about three hundred yards distant, with eleven fathoms water, steer N. by E. ¾ E. to the southern entrance of *Owl's Head Bay.* On this course, when the southern end of **Sheep Island** bears E S E., with nine fathoms, hard bottom, steer N E. through the bay. This course passes to the westward of the *red buoy on Sheep Island Bar;* to the eastward of the spindle on *Dodge Point Ledge*, and to the eastward of *Owl's Head Ledge;* and leads safely into *Penobscot Bay* in a position to run for **Rockland, Rockport, Camden** or the **Fox Islands**, or to proceed up the bay.

On the E. ½ N. course from **Seguin** there is not less than fifteen fathoms; on the N E. by E. course toward **White Head**, not less than six fathoms; on the N E. ¼ E. course, not less than six fathoms; on the N. by E. ¾ E. course, not less than eight fathoms; and and on the N E. ½ N. course, not less than five fathoms until past *Owl's Head Ledge.*

On the above courses, to enter Seal Harbor: On the course by **White Head**, which pass close-to, in from eight to twelve fathoms water, leaving the bell-buoy on the *South Breaker* about a hundred yards to the eastward until past **White Head**, when alter the course to N E. ¼ E., and continue it until past the **red spindle** on *Yellow Ledge*, which leave to the eastward three hundred and fifty yards off, and *Hay Island Ledge* to the westward two hundred yards. When within three hundred yards of the *Lower Gangway Buoy*, with **White Head Light** bearing S W. by W ½ W., steer N W. by **N. NORTHERLY**, into the harbor. Continue this course until between *Long Ledge Buoy* and *Spruce Head Buoy*, passing two hundred and fifty yards to the eastward of the former and one hundred and fifty yards to the westward of the latter. After passing these buoys, anchor in three and a quarter fathoms, soft bottom, and there will not be less than that water on any of the sailing-lines given above.

Coming from the northward, to enter Seal Harbor: Vessels coming through the *Muscle Ridge Channel* from the northward pass between **Spruce Head Island** and a small grassy island lying to the northward of **Grafton Island**, which is called **Hurricane Island.** (See page 316.) In so doing a *red spar-buoy*, marked No. 8, is passed to the southward, the mid-channel line leading about a quarter of a mile from it. This buoy is on *Hurricane Ledge.* Now, if bound into *SEAL HARBOR*, when exactly between this buoy and **Hurricane Island**, in about fourteen fathoms, soft bottom, steer W S W. for seven-eighths of a mile, passing two hundred yards to the southward of the *buoy on Lower Gangway*, and carrying not less than seven fathoms water. When this buoy bears N. by E. ¼ E., and in about eight fathoms, steer N W. by **N. NORTHERLY**, and follow the directions given above.

Coming from the eastward through the bay, to enter Seal Harbor: Bring **Tennant Harbor Light** to bear **N W.** by **W. ½ W.** and steer for it, carrying not less than nine fathoms, passing five-eighths of a mile to the northward of the *Northern Triangles* and a quarter of a mile to the southward of *Crow Island Ledges.* Continue this course until **White Head Light** bears **N.** by **W.**, when there will be twenty-one fathoms, muddy bottom; then steer **N. ½ W.**, passing a quarter of a mile to the eastward of the dry part of the *South Breaker*, about three hundred and fifty yards to the westward of the **spindle** on *Yellow Ledge*, and carrying not less than nine fathoms water. When **White Head Light** is abeam, bearing **W. ½ S.**, in twelve fathoms, soft bottom, steer **N E.** by **N. ½ N.**, passing about a hundred yards to the eastward of the *black buoy on Hay Island Ledge*, and carrying not less than seven fathoms. When well past this buoy, and in about five fathoms water, steer **N W.** by **N. NORTHERLY**, and follow the direction given above.

SEAL HARBOR is used by coasters as an anchorage in head winds or gales, and also by vessels loading with granite from the quarries on **Spruce Head Island.** Good anchorage may be found, also, in *Spruce Head* and *False White Head Harbor* in southerly winds; off the mouth of *Weskeag River* or under the south shore of **Ash Island** in northerly winds; and anywhere in *Owl's Head Bay.*

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Owl's Head Light	44° 05′ 31″	69° 02′ 39″	$4^h 36^m 10.6^s$	Fixed.	100 ft.	16
White Head Light	43° 58′ 42″	69° 07′ 28″	$4^h 36^m 29.9^s$	Fixed.	70 ft.	14

TIDES.

The nearest station to *Muscle Ridge Channel* at which regular lunar tides have been observed is **Herring Gut,** in the eastern entrance to *ST. GEORGE RIVER,* and about seven miles to the westward from **White Head Light.** From these observations the following data have been obtained:

Corrected Establishment of Herring Gut	10^h 58^m
Mean Rise and Fall of Tides	9.3 feet.
Mean Rise of High Water Spring Tides	10.0 "
Mean Rise of High Water Neap Tides	8.5 "
Mean Duration of Rise	6^h 12^m
Mean Duration of Fall	6^h 13^m

CURRENTS.

Vessels intending to enter *Penobscot Bay* enter, as before mentioned, between **Monhegan** and the **George Islands.** In their courses for **White Head Light** the following information as to the set of the tidal current will be found of service:

Passing the entrance to *St. George River*, the flood sets on to the old *Cilley Ledge.* A strong flood-current also sets through the passage between **Burnt** and **Allen Islands,** the two southernmost of the **George Islands.**

When passing by the *Mosquito Island Channel* into *Herring Gut* it is necessary to be careful in light winds not to be set on *Marshall Point Ledge* by the flood-tide, or on to *Gunning Rocks, Hart Bar,* or *Allen Ledge* by the ebb. As it is easy to get a head range in this channel, the courses in are easily made good.

Bound from the eastward, into Tennant Harbor.—The flood sets on to *White Head Ledges*, *Norton Island Ledges*, and the other shoals which obstruct the entrance to *Rackliff* and *Wheeler Bays*. The ebb sets to the southward and eastward, but there are no obstructions on the southern side of the approach. When up with **Southern Island**, which is bold-to, the flood sets directly in and the ebb almost directly out of the harbor.

ROCKLAND HARBOR,

the first harbor on the west side of the bay, to the northward of *Muscle Ridge Channel*, is formed by a large cove, whose north point is called **Jameson Point** and its south point **Owl's Head.** It lies exactly opposite to **North Haven Island,** (the northernmost of the **Fox Islands**;) is a mile and a quarter long and a mile and a half wide. The city of **Rockland,** an enterprising and thriving town, occupies the western shore of this harbor. Two prominent spurs of land, known, respectively, as **Crockett** and **Atlantic Points,** make out from this western shore, forming part of the wharf-line of the town, with shallow coves on both sides.

CROCKETT POINT,

the northernmost of these two, is the site of several lime-kilns. A long pier and warehouse, used by the coastwise steamers and the *Carver Harbor* steam-packets, occupy the southern end of the point.

ATLANTIC POINT

is the southernmost of the two points, and has the deepest water close to it. A large wharf, called **Atlantic Wharf,** which has a warehouse upon it, extends out from this point, and is used as the landing-place of the **Boston & Bangor** and **Portland & Bangor** steamers. Hence it is often called **Steamboat Wharf.**

Rockland Harbor is not well protected from easterly winds, the only land which breaks the force of the wind and sea being the **Fox Islands,** distant six nautical miles from **Owl's Head.** The holding-ground is good, however, and comparatively well-sheltered anchorage can be found in the bight southeast of **Atlantic Point** and near **Owl's Head. Rockland** is a town of little over seven thousand inhabitants. The trade is principally in ship-building and lime, but there is some lumber business and a small fishing interest.

JAMESON POINT,

the north point of the harbor entrance, is of moderate height, sloping gently to the water, and has scattered groves of trees here and there over its surface. On its summit are a few houses, and on its southern extremity is an earthwork whose tall flag-staff forms a conspicuous mark.

OWL'S HEAD.

This prominent headland, before described, (see page 320,) is the south point of entrance to *Rockland Harbor* and the north promontory of *Muscle Ridge Channel.* It is high, round, rocky, and precipitous, having a very few stunted spruce trees growing out of its almost perpendicular sides. It is surmounted by a light-house known as

OWL'S HEAD LIGHT-HOUSE,

which shows a fixed white light of the fourth order of Fresnel from a height of one hundred feet above sea-level, and visible sixteen miles at sea. The light-tower is only nineteen feet high, and is squatted (so to speak) upon the pitch of the point. To the left of the tower, in the hollow, is situated the keeper's dwelling, which is painted brown, while the tower is white.

Westward from **Jameson Point** the shore curves away to the northward and westward, forming a large but very shallow cove. The land is here low, and from the south side of the harbor the **Camden Hills** are visible over it. The town itself is situated at the foot of the hills, which lie along the west shore, rising to a considerable height. Some of them are cleared and cultivated to their summits, while others are crowned with a dense growth of spruce and fir. Westward from **Atlantic Point**, however, and thence to the southwest point of the harbor, the hills retreat back a considerable distance and the land is much lower. The south shore is of various heights, attaining its greatest elevation about midway between the southwest end of the bay and **Owl's Head.** At this point it is thickly wooded, with a few houses on the slopes and one or two on the crest of the hills. But little of this south shore is cleared, the settlements being mostly on **Owl's Head Bay**, on the southern side of the peninsula.

DANGERS
IN APPROACHING AND ENTERING ROCKLAND HARBOR.

I. *From the southward, through Muscle Ridge Channel.*—In coming through *Owl's Head Bay*, bound to **Rockland**, the first danger met with will be seen off **Dodge Point**, on the west side of the passage, and is marked by a **wooden mast** or **spindle.** This is

DODGE POINT LEDGE;

is bare until nearly high water, and lies about two hundred and fifty yards to the eastward of **Dodge Point.** Pass to the eastward of it, and a *black can-buoy* of the second class will be seen off **Owl's Head.** This is on

OWL'S HEAD LEDGE,

(see page 324,) which makes off to the eastward of **Owl's Head**, and is bare at low water. The buoy is placed in eighteen feet about ten fathoms to the eastward of the ledge, is marked No. 13, and is to be left to the westward.

After passing *Owl's Head Ledge* the shore is bold-to, and it is safe to keep within three hundred yards of the south shore until well up in the bight. But when well to the westward of **Owl's Head**, look out for

SPEAR ROCK,

which has four feet and three-quarters at mean low water. This dangerous rock, which is exactly in the course of the **Boston** steamers when bound out, lies off **Halfway Point,** about three hundred and fifty yards from the shore. There is over three fathoms inside of it, but there are so many ledges and scattered rocks as to render it extremely dangerous to pass to the southward of it. A *black buoy* has been recommended to be placed in good water north of this ledge.

LOWELL LEDGES

also lie off **Halfway Point**, but to the westward of *Spear Rock.* They consist of a number of rocks, some bare at low water and some with from one to four feet upon them, which extend three hundred yards in a **NORTH** and **SOUTH** direction from **Halfway Point.** There is no channel between these ledges and the shore, but a narrow passage exists between them and *Spear Rock.* When past them, the next danger met with is called

SOUTH LEDGE,

which has seven feet at low water, and lies almost in the centre of the harbor. From the earthwork on **Jameson Point** it bears **S W. by S. ½ S.**, and from **Atlantic or Steamboat Wharf E. ¼ N.**, distant three-quarters of a mile. It will be recognized by the *spar-buoy, painted*

red and black in horizontal stripes, which is placed in two fathoms on its southwest end. It may be passed on either hand, and it is usual for vessels coming from the southward to pass to the southward of it, while those coming from the northward pass well to the northward of the buoy. On passing **Owl's Head** three hundred yards from the shore this shoal will be exactly in range with **Crockett Point**; so that should the buoy at any time be absent, this will be a guide to avoid it. It may also be mentioned that NORTH from this ledge is a shoal spot with fifteen feet upon it, distant from the buoy two hundred and fifty yards.

When past *South Ledge* there are no dangers in the way of a vessel coming from the southward, unless she intends to anchor to the northward or eastward of **Crockett Point**, in which case it will be necessary to look out for

JAMESON POINT LEDGE,

which has nine feet water, and lies about half a mile to the eastward of **Crockett Point**. It extends in a N. by E. and S. by W. direction, and is marked by a *spar-buoy, painted red and black in horizontal stripes*, placed close to the ledge, upon its southwestern side. The best water between this buoy and **Crockett Point** is fifteen feet, and it is not usual for any but vessels of light draught to pass inside of it.

Vessels approaching the wharf-line of the town may do so without fear, as the water shoals gradually toward the shore.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ROCKLAND HARBOR.

I. *Coming from the southward, through Muscle Ridge Channel.*—When abreast of the *black can-buoy* off *Owl's Head Ledge*, and in about six fathoms water, steer N. by W. until **Owl's Head Light** bears S. ¾ W., or **Atlantic Wharf** W. by N. ¼ N., when steer that course into the harbor and anchor at pleasure. This course has all the way from three to fifteen fathoms, and passes about an eighth of a mile to the northward of *Spear Rock* and about a quarter of a mile to the southward of *South Ledge*. These directions serve for both day and night.

At mean low water eighteen feet may be carried to within two hundred yards of **Atlantic Wharf**, and the wharf has thirteen feet alongside of it.

II. *Coming across the bay from Fox Islands Thoroughfare.*—When abreast of the *red buoy* on the north end of *Dogfish Ledges*, steer W N W. until past the *black buoy* on *Drunkard Ledge*, when steer W. by N. ¼ N. across the bay. In crossing the bay the least water is fourteen fathoms. When abreast of **Owl's Head Light**, having it bearing S. by W. ¼ W., steer for **Atlantic Wharf** and anchor, as before directed.

DANGERS

IN APPROACHING AND ENTERING ROCKLAND HARBOR.

II. *Coming from the northward, through West Penobscot Bay.*—In coming from the northward the first danger met with lies off **Jameson Point**, and is marked by a *red nun-buoy*. It is called

JAMESON POINT SHOAL,

and extends from **Jameson Point** to the southward about three hundred yards. The buoy is marked No. 2, and is placed in twenty feet water on its southern end. After passing it either steer toward **Crockett Point**, thus passing between *Jameson Point Ledge* and *South Ledge*, or keep to the southward, passing south of the buoy on *South Ledge*, and steer for **Atlantic Wharf**. In the former case, when abreast of *Jameson Point Shoal Buoy*

the *red and black spar-buoy on Jameson Point Ledge* will be seen to the westward and in range with the northern end of **Crockett Point.**

JAMESON POINT LEDGE.

This ledge has nine feet water; lies N. by E. and S. by W.; is three-quarters of a mile from the buoy on *Jameson Point Shoal* and half a mile from **Commercial Wharf.** *The red and black spar-buoy* is placed on its southern end in about fourteen feet water. Fifteen feet only can be taken between this buoy and *South Ledge*, and it is therefore usual for vessels of heavy draught to pass to the southward of the latter.

SOUTH LEDGE

lies about eight hundred yards to the southward of *Jameson Point Ledge*, and has seven feet at mean low water. *A spar-buoy, painted red and black in horizontal stripes*, is placed in two fathoms on its southwest end, and should receive a berth of about four hundred yards to the southward from vessels using the *North Channel.* *South Ledge* bears from the earthwork on **Jameson Point** S W. by S. ½ S., and from **Atlantic wharf** E. ¾ N., nearly three-quarters of a mile distant.

If passing to the southward of this ledge, do not stand too close to the south shore of the harbor in the vicinity of **Halfway Point,** to avoid

SPEAR ROCK,

which has only four feet and three-quarters upon it, and lies about three hundred and fifty yards from **Halfway Point.** There is good water inside of it, but the passage is not practicable, being narrow and full of shoals. A *black buoy* has been recommended to be placed on the north side of this ledge.

LOWELL LEDGES

also lie off **Halfway Point**, but to the westward of *Spear Rock.* They consist of a number of rocks, some bare at low water, and some with from one to four feet upon them, which extend in a NORTH and SOUTH direction to a distance of three hundred yards. There is no channel between them and the shore, but a narrow passage exists between them and *Spear Rock.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ROCKLAND HARBOR.

III. *Coming from the northward, through West Penobscot Bay.*—When abreast of **Ram Island,** (which is the small rocky island nearly a mile and a half to the northward of **Jameson Point,**) give it a berth to the westward of about nine hundred yards, when pass into thirteen fathoms, and steer S W. by S. ½ S. until the southern extremity of **Jameson Point** is abeam and **Commercial Wharf** bears W. ½ S. There will then be ten fathoms. Now steer W. ½ S. for the wharf, if intending to pass through the *North Channel;* or S W. by W., if intending to pass to the southward of *South Ledge.* In the former case there will be fifteen feet to the anchorage, and in the latter from three to seven fathoms. Or bring **Owl's Head Light** to bear S. by W. ¼ W. and steer for it until the southern extremity of **Jameson Point** bears W. ¼ N., when there will be twenty-one fathoms; steer W. ½ S. for **Commercial Wharf,** pass through the *North Channel*, or W. by S. ¾ S. to pass to the southward of *South Ledges.*

Passing through the *North Channel*, leave the buoy of *Jameson Point Ledge* about one hundred and fifty yards to the northward and the *buoy on South Ledge* about seven hundred yards to the southward; while in entering by the *South Channel* pass about two hundred yards to the southward of the *buoy on South Ledge.* *Or, at night,* bring **Owl's Head Light** to bear S. ¾ E. and **Jameson Point** W. ¼ N., and steer W. ¾ S. for **Commercial**

Wharf, anchoring in three and a half fathoms, sticky bottom. Or, wishing to pass to the southward of *South Ledge*, steer W. ½ S. as before, until **Owl's Head Light** bears S E. ½ S., when S W. by W. ¼ W. leads safety to the anchorage or to **Atlantic Wharf**.

Wishing to anchor under the northern shore, round the *nun-buoy on Jameson Point Shoal* close to; haul to the westward, and anchor in three fathoms two or three hundred yards from the shore.

There is good beating-room in both the *North and South Channels*, and there is not less than fourteen feet water in the former and three and a half fathoms in the latter, except upon the ledges described above.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Owl's Head Light	44° 05′ 31″	69° 02′ 39″	$4^h 36^m 10.6^s$	Fixed.	100 ft.	16

TIDES.

Corrected Establishment	$11^h\ 2^m$
Mean Rise and Fall of Tides	9.6 ft.
Mean Rise and Fall of Spring Tides	10.9 ft.
Mean Rise and Fall of Neap Tides	8.3 ft.
Mean Duration of Rise	$6^h\ 20^m$
Mean Duration of Fall	$6^h\ 6^m$
Mean Duration of Stand	$0^h\ 38^m$

From **Jameson Point** the west shore of *Penobscot Bay* runs about N E. by N. for about a mile and a quarter to *Clam Cove*. The land is of moderate height, but not steep; partly wooded, but mainly cleared and settled.

CLAM COVE,

a long and narrow cove, penetrating the western shore in a S W. by W. direction for three-quarters of a mile, is half a mile wide at its mouth, and gradually contracts to a width of a quarter of a mile at its head. For half its length it is bare at mean low water, but comfortable anchorage is found in the mouth of the cove in from four to seven fathoms, soft bottom, the sea from the eastward being broken by a small, bare, rocky island called **Ram Island**, which lies N E. from the south point of entrance to the cove and serves as a sort of breakwater. There is a passage, with thirteen feet, between it and the south point, but it is not fit for strangers, the proper course being to pass to the northward of **Ram Island** to enter the cove.

Clam Cove is only half a mile to the southward of *Rockport Entrance*, the shore having a general course of about N N E., with high, gently-sloping land, diversified with woods and cultivated fields.

ROCKPORT HARBOR.

The entrance to this harbor is nearly two miles and a half above **Jameson Point**, and the course along shore from *Rockland Harbor* is N E. by N. ¼ N. *Rockport Harbor* is formed by an arm of the bay running NORTH and SOUTH, a mile and a half long, three-quarters of a mile wide at its mouth and two hundred and fifty yards at its head, where is built the village of **Rockport**. The east point of entrance is called

BEAUCHAMP POINT,

which is the southern extremity of the peninsula separating **Rockport** from **Camden.** It is sixty feet high, with gently-sloping surface; is partly cleared and partly wooded with spruce, birch, and oak. On its eastern and western sides it is bold-to; but it must not be approached from the southward by strangers, on account of the numerous shoals and ledges extending in a southerly direction from it for about a third of a mile.

On this point there is a small light-house, supported by private enterprise. It serves as a guide to the fishermen and others who make **Rockport** their headquarters, enabling them to avoid *Porterfield Ledge.*

INDIAN ISLAND

is small, bare, and about two hundred and fifty yards long. At its south end it rises to a height of about sixty feet, and its eastern, southern, and southwestern faces are rather precipitous. The surface is grassy and bare of trees, and there is a small house at each end of the island.

There is no passage between **Indian Island** and **Beauchamp Point**—the space between them being filled with sunken ledges.

LOWELL ROCK

is a bare, rocky islet, about two hundred yards south of **Indian Island**, but there is no passage between them. It is about one hundred and fifty yards long, and is easily recognized by **the red spindle**, with cage and ball on top, which is placed on the ledges about fifty yards to the southward of it.

The *western shores* of *Rockport Harbor* are mainly composed of steep hills, partly cultivated and partly wooded. In some places the woods are extremely thick, in others they are in clumps among cultivated fields.

The *eastern shores* are not so high as the western, the crests of the hills being only two hundred feet above the sea; whereas the hills on the western shore rise as high as five hundred and forty feet. The land is cleared and cultivated, and dotted with small clumps of trees, while above all tower the **Camden Hills,** the most prominent landmarks for the approach to *West Penobscot Bay.* In coming from the southward the most important of the hills will show as follows: **Mount Pleasant,** as a smooth, round mountain of regular shape, farthest to the westward; **Ragged Mountain,** easily distinguished by its peculiar hump; then **Mount Beattie;** and, higher than all, **Megunticook,** which is thirteen hundred and fifty feet above the sea.

The village of **Rockport** contains about two thousand inhabitants, and the trade is principally in lime.

DANGERS

IN APPROACHING AND ENTERING ROCKPORT HARBOR.

In coming from the southward, when near **Ram Island** a *black spar-buoy* will be seen to the northeastward of the island. This is on

RAM ISLAND LEDGE,

which makes off from the northeastern end of **Ram Island** to a distance of nearly three hundred yards, and is awash at low water. The buoy is marked No. 1, and is placed in ten feet on the eastern end of the shoal. When up with it, there will be seen on the northeast side of the channel, and about a mile and an eighth distant, **a stone beacon with mast and barrel on top.** This is on

INDIAN ISLAND LIGHT-HOUSE.

On the southern end of this island is built the light-house, which is the guide to *Rockport Harbor.* It is a square brick tower, thirty feet high, and painted white, and shows a fixed *red* light, of the fifth order, from a height of forty-seven feet above the sea, and visible twelve nautical miles. The tower is attached to a brick dwelling with frame addition, painted white, and its approximate geographical position is

Latitude - - - - - - - - - - -	44° 10′ N.
Longitude - - - - - - - - - - -	69° 3′ W.

PORTERFIELD LEDGE,

the southernmost of the shoals south of **Beauchamp Point**, and which is dry at low water. From the **spindle on** *Lowell Rock* it bears S. by W. ½ W., distant one hundred yards; and from **Beauchamp Point** it is distant seven-eighths of a mile in the same direction. The beacon, which is square and twenty feet high, is a guide to vessels coming either from the northward or southward, for on the north side of the ledge, between it and *Lowell Rock*, is an excellent channel half a mile wide, with from eight to eleven fathoms, which is used by vessels coming from the northward. The channel from the southward leads to the westward of this ledge, with from eight to twelve fathoms and bold shores. The **red spindle**, seen about a thousand yards to the northward of **Porterfield Beacon**, is on

LOWELL ROCK,

before described, (see page 332,) which is bare at low water, and lies about two hundred and fifty yards south from **Indian Island**, and marks the northern limits of the *North Channel.* The **spindle**, which is of iron, is surmounted by a cage eleven feet long, with a ball on top, and is to be left to the eastward by vessels coming from the southward, and to the northward by those using the *North Channel.*

When up with **Beauchamp Point**, *another red spindle* will be seen near the eastern shore. This is on

SEAL LEDGE,

which lies about eight hundred yards to the northward of **Beauchamp Point** and about two hundred yards from shore. The **spindle** is similar to that on *Lowell Rock*, except that it has no ball on top, being surmounted by a cage only. About five hundred yards to the northward of **Seal Rock Spindle is another red spindle**, close to the eastern shore of the harbor; but it is not upon any particular ledge, being merely a guide to vessels approaching the eastern shore.

When up with this **red spindle**, a **stone beacon**, pyramidal in shape, will be seen on the western side of the harbor, bearing about **N N W.** This is on

HARBOR LEDGE,

which has ten feet at low water; lies six hundred yards **N W. by N.** from the **upper red beacon** and about two hundred and fifty yards from shore. The beacon is surmounted by a mast with barrel on top, painted white.

One hundred and fifty yards **N W. by N. ½ N.** from **Harbor Ledge Beacon** will be seen **a black spindle surmounted by a cage and ball.** This is on

SHIPYARD LEDGE,

which extends off from the west shore, at the south end of the wharf-line of **Rockport.** Above this ledge the harbor becomes narrow and shoal. Eleven feet at low water may, however, be carried to within one hundred yards of the wharves at its head. The vessels frequenting the harbor usually lie alongside the wharves, where they are aground at low water, but perfectly safe.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ROCKPORT HARBOR.

I. *Coming from the northward, through the bay.*—Approaching from the northward, it is necessary to remark that the guide to the north entrance is **Negro Island Light-House, on Negro Island**, which lies on the south side of the entrance to *Camden Harbor*, about two hundred and fifty yards from shore. It is about four hundred yards long,

with somewhat steep shores, and a few scattered trees here and there upon its surface. The light-house is built upon its southern end, which is thirty feet high, and shows a fixed white light of the fourth order of Fresnel from a height of fifty-two feet above the sea, and visible twelve miles.

A mile and a quarter S. by E. from this light-house, and nearly a mile from shore, lies a rocky islet, with bold shores, called **The Graves.** It is exactly in the way of vessels coming along shore from the northward, and should be marked by a beacon. Such beacon has been recommended to be placed upon it.

Bound into *Rockport Harbor* from the northward, when **Negro Island Light-House** bears **W.** by **N.**, a mile and a quarter distant, and in from thirty to thirty-five fathoms water, **The Graves** will bear **S W. ½ S.**, one mile and one-third distant. Steer **S W. ½ W.** until nearly up with the **red beacon** on *Lowell Rock*, which pass to the eastward of, about two hundred yards off. Round this beacon to the westward, keeping about two hundred yards from it, and enter the harbor, keeping the eastern shore aboard, and steering from beacon to beacon until off the village, when anchor at discretion. The above courses pass about an eighth of a mile in-shore, or to the westward of **The Graves,** carrying not less than eight fathoms water, but cannot be sailed at night, as **The Graves** cannot be seen at any distance.

At night-time bring **Negro Island Light** to bear **W. by N. ¾ N.** and steer for it until within a quarter of a mile, when steer **S. by W. ½ W.** until abreast of *Lowell Rock* **spindle,** which round as before, and steer up the harbor.

11. *Coming from Fox Islands Thoroughfare.*—Steer **W N W.** from the *red buoy* on the north end of *Dogfish Ledges* until up with the *black buoy* on *Drunkard Ledge*, when **N W. ½ N.** will lead safely across the bay and up to the entrance, with not less than thirteen fathoms water. On this course, when the beacon on *Porterfield Ledge* bears **N E. by E. ½ E.**, a quarter of a mile distant, with thirteen fathoms water, steer **N. ¾ E.** up the middle of the harbor, carrying not less than eight fathoms to within half a mile of its head.

Coming from the southward, bring the **Greystone Beacon** on *Porterfield Ledge* in range with the **red spindle** on *Lowell Rock*, on a bearing of **N. by E. ¾ E.**, and when within three-quarters of a mile of the former steer **N. ½ E.**, which course will lead clear of all dangers to within two or three hundred yards of the village, where anchor in three and a half fathoms, soft bottom.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude west from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Negro Island Light	44° 12′ 04″	69° 02′ 56″	4^h 36^m 11.7^s	Fixed.	52 ft.	12

TIDES.

Corrected Establishment	11^h 8^m
Mean Rise and Fall of Tides	9.8 ft.
Mean Rise and Fall of Spring Tides	10.5 ft.
Mean Rise and Fall of Neap Tides	9.2 ft.
Mean Duration of Rise	6^h 14^m
Mean Duration of Fall	6^h 11^m

From **Beauchamp Point** to the entrance to *Camden Harbor* the distance is about two miles, and the general course of the west shore of the bay is **N N E.**

But about E N E. from **Beauchamp Point,** six hundred and fifty yards distant, is

DEADMAN POINT,

with a small cove between them, formed by a curve in the shore. **Deadman Point** is bare and grassy, about forty feet high, with a gently-sloping surface, most of which is under cultivation. From this point the general course of the shore is N. by E. ½ E. for about a mile and three-quarters to **Ojier Point,** the southwestern point of entrance to *Camden Harbor.* It is, however, somewhat irregular in outline, and about half a mile above **Deadman Point** there is formed a sort of cove, called *Hog Cove,* with two rocky islets off its mouth. That to the northward is called **Goose Rock,** and lies nearly a quarter of a mile from shore; the other is **Hog Cove Ledge,** and is connected with the main land at low water. The shores between **Ojier** and **Deadman Points** are from one hundred and fifty to two hundred feet high, and are for the most part cleared and cultivated, although some clumps of trees are seen here and there.

CAMDEN HARBOR.

The entrance to this harbor is about six and one-third miles to the northward of **Owl's Head** and a little over two miles above *Rockport Entrance.* The harbor is formed by a large cove with two arms, one running N N E. and called *Sherman Cove,* or *Outer Harbor;* the other running N N W. and called *Inner Harbor.* Into the latter flows the *Megunticook River.* Between the *Outer* and *Inner Harbors* is a bare sandy point, about forty feet high at its highest point, called

EATON POINT.

It has no trees, but a number of houses and wharves on its southern and western sides. It is not bold-to, and cannot be approached nearer than an eighth of a mile with three fathoms water.

SHERMAN COVE

is about half a mile long in a N N E. direction, and has an average width of a little over a quarter of a mile. Its entrance is between **Northeast Point** on the east and **Eaton Point** on the west, and has a width of about eight hundred yards.

Northeast Point is long, rather low, and bare of trees; lies NORTH and SOUTH, and has on its south point **a large iron spindle,** surmounted by a copper cylinder and a gilt ball, and painted red. Its northern part is wooded. This point is also sometimes called **Morse Point.**

Eaton Point, already described, has a settlement upon it. Back of the harbor the lands are cleared and cultivated well up the slopes of the hills. Off the south end of the point a long pier makes out, which is used by the **Boston** and **Portland** steamers as their landing-place.

INNER HARBOR

is about half a mile long, and a third of a mile wide at its entrance, after which its width contracts gradually until at the town it is but two hundred and fifty yards wide. Its entrance is between **Eaton Point** on the north, and

METCALF POINT

on the south. The latter is low and under cultivation for some distance back from the shore, and backed by hills with wooded slopes and bare summits. The most noticeable landmark in the approach to *Camden Harbor* is

NEGRO ISLAND,

a small island of moderate height, with a light-tower upon it. It lies two hundred and fifty yards W. by S. from **Metcalf Point**, is about a quarter of a mile long, with somewhat steep faces, and has a few scattered trees upon it. There is a passage between this island and **Metcalf Point**, but it is nearly dry at low water, and is seldom used except by small boats. On the southern end of the island, which is thirty feet high, is built a **light-house** called

NEGRO ISLAND LIGHT-HOUSE,

which is the night guide to *Camden* and *Rockport Harbors*. It is a white tower sheathed with wood, and shows a fixed white light of the fourth order of Fresnel from a height of fifty-two feet above the sea, visible twelve miles. Its geographical position is:

Latitude - - - - - - - - -	44° 12′ 04″ N.
Longitude - - - - - - - -	69° 02′ 56″ W.

A low, white house, standing near the tower, is the keeper's dwelling.

The village of **Camden** occupies the west side of *Inner Harbor*, at the base of the **Camden Hills**, which rise to a height of from twelve to fifteen hundred feet. Behind the village the sides of the hills are cultivated to a height of two hundred feet, but above this they are mostly wooded with a thick growth of short pine, low spruce, and fir, birch, hemlock, and oak trees. The village has about four thousand six hundred inhabitants. The trade is mostly in lime, although there are some lumber and fishing interests.

APPEARANCE OF CAMDEN HARBOR.

When approached from the southward.—When off the entrance to **Camden**, with **Negro Island Light-House** bearing N NW., about two and a half miles off, the island itself will appear between *Inner Harbor* and *Sherman Cove*. Behind it will be seen **Mount Beattie**, with its southern slopes cultivated to a height of about two hundred feet, and above this thick woods almost to the summit. Partly hidden by this mountain, but with its summit rising to the eastward of it, is **Megunticook**, the highest of the **Camden Hills**. It is wooded to its peak, which is thirteen hundred and fifty feet above the sea, and in summer presents a beautiful appearance. The foot-hills are occupied by settlements, the cultivated lands extending nearly to the shore-line, which is fringed with trees. To the westward of **Negro Island** part of **Camden** will show; but a considerable portion of the town is hidden from this point of view by the wooded lands of **Ojier Point**, the southwestern point of entrance to the harbor, which is about two hundred feet high, with steep faces to the southward and eastward. Its southern and southwestern slopes are, however, cleared and cultivated, so that to a vessel coming from the southward the point itself will appear of moderate height and bare of trees, but with a high, wooded hill behind it. Approaching **Negro Island** on the N NW. course the village opens from behind this hill.

When off **Deadman Point**, with **Negro Island Light** bearing N NW., **The Graves** will appear to the westward of **Negro Island**, and in range with the cleared land of **Ojier Point**, as a low, bare, rocky islet. A beacon formerly existed here, but it has long been gone; and one is much needed for the safety of vessels beating up to the harbor at night.

DANGERS
IN APPROACHING AND ENTERING CAMDEN HARBOR.

I. *From the southward, by the main channel.*—This channel leads between **Northeast Point** and **Negro Island**, and in approaching it the first danger met with is

THE GRAVES,

a rocky islet, lying S. by E. from **Negro Island Light-House**, a mile and a quarter distant. It is exactly in the way of vessels coming along shore from the southward, and should be marked by a beacon.

OUTER LEDGES.

When past **The Graves** and up with **Negro Island**, *a red spar-buoy* will be seen well to the southward of **Northeast Point.** This is on the southern end of *Outer Ledges,* sometimes called *Northeast Ledges.* These are a group of dangerous rocks SOUTH from **Northeast Point,** lying in a N N E. and S S W. direction, and are between five and six hundred yards long; *many of them are bare, and all are dangerous.* The buoy is marked No. 2, and is placed in four fathoms about twenty yards to the southwestward of the ledge. It is to be left to the eastward in coming in by the *main channel.* When up with the *red buoy* on the southern end of *Outer Ledges,* look out, to the westward of their north end, for

INNER LEDGES,

which are separated from the *Outer* by a passage one hundred yards wide, with over three fathoms water. They are bare in places at low water, and are buoyed on their S W. end by a *red spar-buoy.* On the north end of these ledges will be seen **an iron spindle** with cylinder on top, painted black. This, however, is a guide to the *North Channel.* To avoid them be careful not to approach **Northeast Point** from the southward or southwestward nearer than four hundred yards. On the west side of the channel, when up with the *red buoy on Outer Ledges,* look out for

WHITE LEDGE,

sometimes called ***HARBOR LEDGE,*** which extends off from the northwest end of **Negro Island** in a N N W. direction about two hundred and twenty yards. It has four feet at mean low water, and is nearly awash at low spring tides, but is only dangerous to vessel bound into *Inner Harbor. A black spar-buoy,* so small as to be invisible at night, and difficult to see in the day-time, is placed on its eastern side in eight feet water. Notwithstanding, vessels may avoid the ledge by keeping about midway between **Northeast Point** and the north end of **Negro Island** until the long wharf just above **Metcalf Point** bears W. by N. ¼ N., when the channel is clear to the **steamboat wharf** on **Eaton Point,** with nothing less than ten feet at mean low water. Only two feet at mean low water can be taken into *Inner Harbor,* and at low spring tides it is nearly dry from shore to shore. Vessels lie aground either on the flats or alongside the wharves.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CAMDEN HARBOR.

I. *Coming from the southward.*—When off **Beauchamp Point,** (the eastern point of entrance to *Rockport Harbor,*) and it bears W. by N. ¼ N., bring **Negro Island Light-House** to bear N N W. and steer N. by W. ¾ W., passing a quarter of a mile to the eastward of **The Graves** and two hundred yards to the eastward of **Negro Island.** This course leads clear of all dangers, directly into *Sherman Cove,* with not less than six and a half fathoms, until past *Inner Ledges,* after which the soundings gradually decrease, when anchor, according to draught, in from two to four and a half fathoms, soft bottom. The above course passes two hundred yards to the southward and westward of the *red spar-buoy* on the southwestern end of *Outer Ledges,* and the same distance to the westward of *Inner Ledges.*

II. *To come from Fox Islands Thoroughfare and enter Camden Harbor.*—When abreast of the *red buoy* on the north end of *Dogfish Ledge*, steer W N W., carrying not less than six fathoms water, until past the *black buoy on Drunkard Ledge*, when N. by W. ½ W. leads straight into *Camden Harbor*, which is a little over seven miles distant.

If bound into Inner Harbor: When on the course N. by W. ½ W. into *Sherman Cove*, the *red buoy* on the southwest end of *Inner Ledges* is abreast, or when **Negro Island Light** bears S. by W. ½ W., steer N W. ½ W. for the **steamboat wharf** on **Eaton Point** until within one hundred and fifty yards of it, when bear to the westward, rounding the point at about the same distance, and keep midway between the two lines of wharves.

III. *Bound from Rockport to Camden.*—Round *Lowell Rock* **beacon** (which is the **red spindle** at the eastern point of entrance to *Rockport Harbor*) at a distance of two hundred yards, with nine fathoms water, and steer N E. ½ E. until abreast of **Deadman Point**, (the first point to the northward of **Beauchamp**;) now steer N N E. until **Negro Island Light** bears W N W. or is abeam, when, if bound into *Sherman Cove*, steer N. by W. ½ W. to the anchorage. Or, if bound into *Inner Harbor*, steer N. by W. ½ W. until abreast of the *red buoy on Inner Ledges*, or until **Negro Island Light** bears S. by W. ½ W., when steer N W. ½ N. for the **steamboat wharf** on **Eaton Point**, and follow the direction previously given.

DANGERS
IN APPROACHING AND ENTERING CAMDEN HARBOR.

II. *Coming from the northward, through the Northeast Channel.*—This passage has three and a quarter fathoms at mean low water, but is quite narrow. It is, however, very much used by coasters and fishermen bound to **Camden** from the northward. The only obstructions are the *Outer* and *Inner Ledges*, and *Northeast Point Ledge*, or *Morse Point Ledge*, which makes off from the point of that name on the north side of the entrance. On approaching the harbor by this channel, **two spindles** will be seen—one on the north and one on the south side of the entrance. That on the north side is on

NORTHEAST POINT LEDGE,

which makes off from **Northeast Point**, and is dry at low water. The spindle is painted red, and surmounted by a copper cylinder and gilt ball. It is placed on the extreme southern point of the ledge, and marks the northern limits of the *Northeast Channel.*

The spindle on the south side of the entrance is on the north side of

INNER LEDGES,

which, as before mentioned, lie W N W. from the north end of *Outer Ledges*, from which they are separated by a passage one hundred yards wide. The spindle stands on the north end of the rocks, and is surmounted by a copper cylinder—the whole being painted black. In approaching these spindles from the eastward, a *black spar-buoy* will be seen a little to the southward and eastward of the **spindle** on *Inner Ledges.* This is on the

EASTERN END OF OUTER LEDGES,

and is to be left to the southward by vessels using this passage. These ledges are for the most part bare at low tide, and are between five and six hundred yards long in a N N E. and S S W. direction. The buoy is marked No. 1, is painted black, and placed in fifteen feet water on the eastern point of the ledge. When safely past, between the two spindles at the entrance, the course leads to the westward toward the long wharf on the western shore of the harbor, just above **Metcalf Point**, and a small *black spar-buoy* may, perhaps, be seen off the northwest end of **Negro Island**. This is on

WHITE OR HARBOR LEDGE,

with four feet at mean low water and awash at low spring tides, which extends off in a N N W. direction from the northwest end of **Negro Island** about two hundred and twenty yards. The buoy is placed on its eastern side in eight feet water, and is so small as to be invisible at night and difficult to see in the day-time. Vessels may, however, easily avoid it by not going to the southward of the long wharf, (which has a warehouse upon it,) bearing W. ¾ N.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CAMDEN HARBOR BY THE NORTH-EAST CHANNEL.

Bring **Negro Island Light** to bear S W. ½ W., one mile distant, when there will be seven fathoms, the light being in range with the dry rocks of *Outer Ledges*. Steer for the light, carrying not less than five fathoms, until the spindle on *Northeast Point Ledge* bears W. by N. ½ N., a quarter of a mile off, when there will be five fathoms, and steer W. ¾ N., keeping the northern side of the entrance best aboard. This course leads straight into *Inner Harbor*, with not less than nineteen feet at low water, until past the mouth of *Sherman Cove*, after which it gradually shoals to the head of the harbor. Wishing to anchor in *Sherman Cove*, no directions are necessary further than to keep about two hundred yards from **Northeast Point**; after passing the spindle, haul to the northwest and anchor at discretion.

To escape being set by the tide on *Inner Ledges*, watch the bearing of the **long wharf** above **Metcalf Point** and keep it directly ahead.

Those who are well acquainted with the dangers sometimes pass between *Outer* and *Inner Ledges*. This channel is wider than the northeast channel, but is not safe for strangers. The courses in are as follows: Bring the eastern extremity of **Ojier Point** to bear S W. ¾ S., just open to the eastward of the **Southeast Point** of **Negro Island**. Steer S W. ¾ S., keeping the range, and carrying not less than three and a quarter fathoms, until the **black spindle** on *Inner Ledges* is in range with the **red spindle** on *Northeast Point Ledge*. Then steer N W. by W. ½ W. into *Inner Harbor*, or N W. by N. ½ N. into *Sherman Cove*.

At night bring **Negro Island Light** to bear S W. ¾ S. and steer for it, following the directions given above.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Negro Island Light.....	44° 12′ 04″	69° 02′ 56″	$4^h 36^m 11.7^s$	Fixed.	52 ft.	12

TIDES.

Corrected Establishment.....	11^h 08^m
Mean Rise and Fall of Tides.....	9.8 feet.
Mean Rise and Fall of Spring Tides.....	10.5 "
Mean Rise and Fall of Neap Tides.....	9.2 "
Mean Duration of Rise.....	6^h 14^m
Mean Duration of Fall.....	6^h 11^m

From **Northeast Point** (the eastern point of entrance to **Camden**) the west shore of *Penobscot Bay* has a general course about NE. ½ N. for a little over five miles to *DUCK TRAP* or *LINCOLNVILLE HARBOR.* The shores are for the most part formed by the foot-hills of the **Camden Mountains**; are in some places steep, in others gently sloping, and are almost all cleared, cultivated, and settled. The peaks of **Garey Mountain, Bald Rock, Darcy,** and **Frohock Mountains** are seen as progressing to the northward, while on the east side of the bay lies **Long Island** with its adjacent islets, the principal of which are **Job's** and **Seven Hundred Acre Island**, off *Gilkey Harbor.*

LINCOLNVILLE HARBOR.

The harbor of **Lincolnville** is formed by a large cove on the west shore, contained between **Spruce Head** on the east and **Frohock Point** on the west, between which two points it is about a mile and two-thirds in width. The settlement is built at the base of **Duck Trap Mountain,** a high and precipitous hill with bare summit, and its slopes partly wooded, but for the most part covered with scrub and bushes. It is next to the northeastward of **Frohock Mountain,** with comparatively low, undulating land between them, diversified with woods and cultivated fields.

Into the northwest corner of the harbor empties the *Duck Trap River*, a small stream, which rises in *Pitcher Pond*, and skirts the west base of **Duck Trap Mountain** on its southeast course to the bay. The settlement stretches along the whole of the west shore and part of the north shore.

Spruce Head, the northeastern point of entrance to the cove, is low, grassy, and dotted with a scattered growth of fir and spruce; while **Frohock Point,** the southwestern point of entrance, shows cultivated fields and grassy lands dotted with houses, and with several wharves extending out from it. Just above this point is that part of the settlement which is known as **The Beach,** and is of some importance as a watering-place during the summer season.

Anchorage in from two to seven fathoms is found in this cove, with good shelter in northerly and westerly winds, but it is completely open to the southward.

DANGERS
IN APPROACHING AND ENTERING LINCOLNVILLE HARBOR.

I. *Coming from the southward.*—The only danger in this approach lies nearly in the middle of the entrance, but somewhat nearer to **Spruce Head.** It is called

HADDOCK LEDGE,

and has four feet at mean low water; is marked by *an iron nun-buoy* of the second class, painted *red*, marked No. 2, and placed on the southwestern side of the ledge. It should, however, be painted red and black in horizontal stripes, as there is equally good water on all sides of it.

When past *Haddock Ledge*, there are no dangers in the harbor. It is only necessary to keep about a quarter of a mile from either shore, and **Spruce Head** may even be approached with safety to within one-eighth of a mile by vessels of the largest draught.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LINCOLNVILLE HARBOR.

I. *Coming from the southward.*—From off *Camden Harbor*, with **Negro Island Light** bearing W. by N., distant about a mile and a quarter, and in about forty-five fathoms water, steer NE. by N. ½ N., which course will lead straight into the harbor, passing an eighth of a mile to the westward of *Haddock Ledge* and carrying not less than nine

fathoms until past the ledge, after which the soundings will vary from three to seven fathoms to the anchorage.

II. *Coming from the northward*, no sailing directions are necessary further than to round **Spruce Head** at a distance of from one-eighth to a quarter of a mile and steer to the westward into the harbor.

To the northward of **Spruce Head** the west shore of the bay has a course first **N E.** by E. for about a mile and a half, then turns about **N E.** by **N.** ½ **N.** to

GREAT SPRUCE HEAD,

which is a high, steep bluff, very thickly wooded from its base to its summit. The shore between the two heads is somewhat steep, and diversified with wooded and cultivated lands. **Great Spruce Head** is nearly opposite to *SEAL HARBOR*, on the west shore of **Long Island.** The bay is here a little over a mile and a half wide, and the clear channel is still further contracted by two islets, lying off the entrance to *Seal Harbor*, reducing the width of the passage to about one mile.

The southernmost of these islets, lying almost exactly in the middle of the entrance to *Seal Harbor*, is low, flat, and grassy, while the other, which is on the north side of the entrance, is high, rocky, and bare. A passage, with from three to five fathoms, exists between the two.

From **Great Spruce Head** the west shore gradually turns to the northward with a regular curve to *Belfast Bay*, about three miles and a half above the head. The shores partake of the same general character as those to the southward, but are somewhat higher, with steep slopes, partly wooded and partly cultivated. About three-quarters of a mile above **Great Spruce Head** is

SATURDAY COVE,

a small indentation, of little importance as an anchorage, and very shallow. There is here a small settlement of about the same size as that at **The Beach**, and of importance only as a summer resort. A low rocky islet lies nearly in the middle of the bay and abreast of this cove, which diminishes the width of the channel to somewhat less than a mile. The islet is covered with scrubby fir trees.

Above *Saturday Cove* the west shore presents no noticeable features, showing merely high, steep shores, partly wooded and partly cultivated, until up to

BROWN'S HEAD,

about two miles and three-quarters above *Saturday Cove*. This head, which forms the southwestern promontory of *Belfast Bay*, is high, steep, rocky, and wooded, and there is a settlement here, called **Brown's Corner.** This is almost exactly opposite to **Turtle Head,** the northern extremity of **Long Island**, the distance between them being a little over four miles.

BELFAST BAY

is the northwestern arm of *Penobscot Bay*, as *Penobscot River* is its northeast arm. It is about three miles wide at its mouth, but rapidly contracts in width to about eight hundred yards at the mouth of the *PASSAGASSAWAKEAG RIVER*, now more commonly known as *BELFAST RIVER*. The north point of entrance to the bay, which is known as

SAWYER POINT,

and sometimes as **The Beaver Tail,** is cleared, gently sloping, bare of trees, and under cultivation, and there are groups of houses on the higher lands, at some distance back from the shore. It is comparatively bold-to. From this point the north shore has a

course nearly W. by N. for about a mile and three-quarters to the mouth of *Belfast River*. It is of moderate height, gently sloping, entirely under cultivation, and well settled.

The west shore has a course about N. by W. to the southern limits of the city of **Belfast,** and partakes of the same general character as the north shore, being entirely cleared and cultivated and thickly settled. The course of *Belfast River* is about N W. by N., with an average width of about a quarter of a mile. Its shores are cleared, cultivated, and thickly settled. The city of **Belfast** is built upon the west bank, at its mouth, and is a town of considerable importance. The coastwise trade is principally lumber, but there is a large manufacturing interest and some ship-building. At the northern end of the town the river is crossed by a draw-bridge, through which only such vessels pass as load with lumber at the mills above. The usual anchorage is off the **steamboat wharf,** or off **commercial wharf,** which is the first large pier to the southward of the former; but vessels may anchor anywhere after passing *Goose River Point Ledge.*

DANGERS
IN APPROACHING AND ENTERING BELFAST HARBOR.

I. *Coming through West Penobscot Bay.*—In approaching this harbor, the first danger met with is

STEELE LEDGE,

which will be easily recognized by the **large, square, stone beacon** upon it. This beacon is thirty feet high, of the natural color, and is surmounted by a pole and barrel. The ledge lies off the north shore of the bay a little to the westward of **Sawyer Point,** and the beacon is placed on top of it. When near the beacon *a red spar-buoy* will be seen a little over one hundred yards to the southward. This is on

HARBOR SHOAL LEDGE,

and bears from *Steele Ledge* **beacon** S. by E., distant one hundred and twenty-five yards. The buoy is placed in ten feet water on its southern end, and is to be left to the northward, as there is no passage between it and *Steele Ledge.*

About half a mile to the northwestward of this buoy will appear *another red spar-buoy.* This is on

GOOSE RIVER POINT LEDGE,

and is not in the way of vessels unless they are standing across the harbor on a wind. This ledge lies off **Goose River Point,** (on the east bank of *Belfast River,*) and bears from *Steele Ledge* **beacon** N W. ½ N., half a mile distant. It is not possible to cross the line between the two, as the shoal water extends from the buoy to the beacon.

When past *Goose River Point Ledge,* there are no dangers until up with the town, when, if intending to anchor above the steamboat wharf, look out for

WHARF LEDGE,

which lies off **Foundry Wharf,** (the first above the steamboat wharf,) and about twenty yards from it. It is bare at low spring tides, and is marked by *a black spar-buoy* (No. 1) placed on its northeastern end.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BELFAST HARBOR.

I. *Coming from the southward, through West Penobscot Bay.*—The course through *West Bay* from off **Camden** is N E. ½ N. until abreast of **Great Spruce Head,** after which it

is usual to haul to the northward, keeping about three-eighths of a mile from shore until up with **Brown's Head,** when the beacon on *Steele Ledge* will be seen, with the *red buoy* on *Harbor Shoal Ledge* to the southward of it. Pass to the southwestward of the buoy and steer N W. by N., which course will lead past *Goose River Point Ledge* and up with the steamboat wharf, when anchor in good water, or proceed farther up, at discretion.

DANGERS
IN APPROACHING AND ENTERING BELFAST HARBOR.

II. *Coming from the southward, through East Penobscot Bay.*—This passage leads between **Sear's Island** on the north and **Long Island** on the south. The northern extremity of **Long Island** is called **Turtle Head,** and about one hundred yards to the northward of it lies

TURTLE HEAD SHOAL,

a detached ledge, with thirteen feet at low water. *It is not buoyed,* but is easily avoided, as the channel is about two miles wide and it is only necessary to keep in the middle. There is deep water between this shoal and **Turtle Head,** but it is not advisable for strangers to attempt this passage. (See also page 304.)

On the north side of the channel, and off the southern extremity of **Sear's Island,** will be seen *a black spar-buoy.* This is off the southern end of

BRIGADIER ISLAND LEDGE,

which extends off in a southwesterly direction from the southwest end of **Sear's Island** for one-third of a mile, and is bare two hours before low water. **Sear's Island** was formerly called **Brigadier Island,** and the name still clings to the ledge. The buoy is marked No. 1, and is placed in seventeen feet water on the southern end of the ledge.

When past *Brigadier Island Ledge,* there are no dangers until up with the **stone monument** on *Steele Ledge.* (For this and the other dangers in *Belfast Bay* see page 342.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BELFAST HARBOR.

II.—*Coming from the southward, through East Penobscot Bay.*—From off **Dice Head** (the north point of entrance to *Castine Harbor*) steer N W. ¾ N. until the extremity of **Turtle Head** bears S W. by W. ½ W., when steer N W. by W. ½ W. until up with the **monument** on *Steele Ledge,* after which follow the directions given for the harbor.

HARBORS
ON THE WEST SHORE OF LONG ISLAND.

Long Island, which, as before mentioned, is the northernmost of the islands separating *East* from *West Penobscot Bay,* extends in a N N E. and S S W. direction, and is about five miles long. It is very irregular in shape, and near the middle is almost cut in two by coves which penetrate its eastern and western shores, leaving only a narrow strip of land, about one hundred yards wide, between their heads. That portion of the island lying north of this strip of land is called **North Islesboro',** and that to the southward **South Islesboro'.**

Off the southern end of **Long Island** lie many small islands, bare rocks, and ledges, extending to the southwestward in about the same direction as the island for nearly five miles. *THE MIDDLE PASSAGE* into *East Penobscot Bay* passes between these

islands and **North Haven**, (the northernmost of the **Fox Islands**,) while the channel up the *West Penobscot Bay* passes to the westward of them.

The harbors on the east shore of **Long Island** have been already described, (see page 298;) but those on the west shore are of much more importance, and merit a more particular description. The largest and most important of these harbors is formed by a large cove penetrating the south shore of the island, and is called

GILKEY HARBOR.

It is sheltered on the west by a large island known as *Seven Hundred Acre Island*, and two small ones, called **Warren** and **Spruce Islands**. The most commonly-used channel into the harbor passes to the northward of these islands, between them and **Grindel Point**, the southwestern extremity of **Long Island**. The southern entrance to the harbor, which passes between **Seven Hundred Acre Island** and **Job** and **Spruce Islands**, is obstructed by outlying islands and ledges, and should not be used at night.

Seven Hundred Acre Island lies about N N E. and S S W., and is a mile and five-eighths long, of moderate height, with a very gentle slope, and is for the most part under cultivation, though there is a large, thick patch of woods near the centre. Its western end is rocky and barren, with scattered clumps of trees upon it, conspicuous among which is a group of very tall birch trees. The northern end of this island is nearly opposite to, but a little below, the settlement of **The Beach**, on the west shore.

Warren Island lies to the eastward of this northern end, at a distance of about two hundred and fifty yards. It extends NORTH and SOUTH; is about three-quarters of a mile long, and is for the most part cleared and under cultivation. Its northern end is, however, thickly wooded with spruce and fir, and extends into a low sandy point with a few small fir trees upon it. This is the southern point of the main entrance to *Gilkey Harbor*, and is about six hundred yards to the southwestward of **Grindel Point**.

Next to the eastward of **Warren Island**, separated from it by a narrow strait, lies **Spruce Island.** It is of irregular shape, lies NORTH and SOUTH, and is about half a mile long. At its southern end is a somewhat steep hillock thinly covered with the usual growth of spruce and fir; but the rest of the island is diversified by woods and cleared fields.

Grindel Point, the north point of entrance to *Gilkey Harbor*, is low, rocky, and thickly covered with low, bushy trees. On its southern extremity is built **Grindel Point Light-House**, which rises from the roof of the keeper's dwelling, and shows a fixed white light of the fifth order of Fresnel from a height of thirty-nine feet above the sea, and visible eleven miles. Its geographical position is

Latitude - - - - - - - - -	44° 16′ 53″ N.
Longitude - - - - - - - - -	68° 56′ 35″ W.

Gilkey Harbor is easy of access, and is one of the best harbors in the whole bay. There are no dangers in the approach to it, and it is only necessary to keep in the middle in entering between **Grindel Point** and **Warren Island**. Inside the harbor, however, there are several bad ledges, which render the passage from the northern to the southern part of the harbor dangerous to strangers. Of these, the first met with after passing **Grindel Point** is called *Lobster Rock*, and lies pretty well over to the eastern shore, being a little over half a mile EAST from the north end of **Spruce Island**, and about two-thirds of a mile S E. from **Grindel Point Light**. As its name implies, it is out at half-tide, and it is not in the way of vessels using the northern part of the harbor as an anchorage. The best anchorage is to the southward or westward of this ledge, or off the mouth of what is called *Broad Cove*, which makes in on the eastern side of

Grindel Point in a N E. direction. The cove is shallow, however, and must not be entered except by vessels of light draught.

Vessels intending to pass into the southern part of the harbor will find the passage very much contracted by two ledges, one of which lies off the eastern shore of **Spruce Island**, and is called *Sunken Ledge;* and the other extends from **Sherman Point**, on the east side of the harbor, directly opposite to **Spruce Island**. This latter, called **Long Ledge**, is bare at low water to a distance of a quarter of a mile from the shore; bears from the north point of **Spruce Island** E. by S., a little over half a mile distant, and from **Grindel Point Light** S E. ½ E., three-quarters of a mile distant. *None of these ledges are buoyed.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING GILKEY HARBOR.

On the course N E. ½ N. from off **Camden**, when nearly opposite **The Beach**, in twenty-seven fathoms, blue mud, bring **Grindel Point Light** to bear E. ½ N. and steer for it until within a little over four hundred yards of the light, in five fathoms water. Then steer S E. by S. toward the northern end of **Spruce Island**, continuing this course for about three hundred and fifty yards, with not less than four and a half fathoms, when steer E. by S. ½ S., carrying not less than four and a half fathoms, and anchor to the westward of *Lobster Rock;* or turn to the southward, keeping about three hundred yards from the east shore of **Spruce Island**, and carrying six fathoms water, and anchor at discretion.

This entrance is the easiest of access by night, owing to **Grindel Point Light**; but it is much the narrower of the two, and the shores are not so bold. It is, however, the best channel for vessels coming from the northward.

II. *Coming from the northward, to enter Gilkey Harbor.*—When off **Spruce Head** and about abreast of the small, flat, grassy island off the mouth of *Seal Harbor*, and in thirty-three fathoms water, bring **Grindel Point Light** to bear S. by W. and steer S. by W. ½ W., carrying not less than five fathoms. Continue this course until **Grindel Point Light** bears E. ½ N., about four hundred yards off, when steer S E. by S., and follow the directions previously given.

III. *Coming from the southward, to enter Gilkey Harbor by the South Channel.*—This passage is much the best entrance to *Gilkey Harbor*, being over half a mile wide between the lines of three fathoms at its southern end, and three hundred and fifty yards wide in its narrowest part. Not less than ten fathoms can be taken into it for a distance of a mile and a quarter above its mouth through a wide and unobstructed channel, and seven fathoms may be carried over two miles. If it were lighted, so as to be easy of access by night, it would be universally used by vessels coming from the southward; but without such a guide it is difficult of approach.

DANGERS.

There are no dangers in the approach to *Gilkey Harbor* from the southward except to vessels standing to the eastward on a wind. These must beware of approaching too closely the line of islets and islands which extend in a southwesterly direction from the southeast point of **Long Island**. The southernmost of these is a bare rocky islet, known as **Robinson Rock**, which lies a little over four miles and a half to the southwestward of **Long Island**, and is surrounded by bare and sunken ledges. With the shoal water around it, it occupies a space of about one thousand yards in a N N E. and S S W. direction, and may be approached from the westward to within an eighth of a mile; but in passing across its southern end it should receive a berth to the northward of one-third of a mile.

About two-thirds of a mile to the northward of **Robinson's Rock** will be seen a small rocky island with steep faces and wooded with fir. This is **Mark Island.** It lies NNE. and SSW.; is between five and six hundred yards long, and very bold-to on its western shore. Vessels may stand boldly to within one hundred yards of the island with four fathoms water. An excellent passage, with from twelve to fourteen fathoms water, exists between this island and **Robinson Rock.** It is about seven hundred and fifty yards wide between the lines of three fathoms, is perfectly unobstructed, and may be safely used by strangers. It leads between *East* and *West Penobscot Bays.*

To the northward of **Mark Island,** and between it and **Lasell Island,** lie several bare and sunken ledges, dangerous to vessels standing to the eastward. The most remarkable of these is the westernmost, which lies about eight hundred yards NNE. from **Mark Island,** and is called **Goose Rock.** It is a rocky islet, bare of all vegetation, and surrounded by shoal water. It may be approached, however, from the westward within a hundred and seventy-five yards, with seven fathoms water. From **Negro Island Light,** at the entrance to **Camden,** it bears SE. by E., a little over three miles distant. To the southeastward, nearly a quarter of a mile, lies a ledge bare at low water; to the northeastward, a little over a quarter of a mile, lies another; and between and among these edges wind deep channels with from ten to seventeen fathoms water. Between **Goose Rock** and **Mark Island** there is a channel eight hundred yards wide, with from seven to thirteen fathoms, obstructed only by a ledge, bare at low water, which lies about a hundred and fifty yards to the northward of **Mark Island.** This channel may also be used by strangers, who need only keep in the middle to pass safely through with not less than nine fathoms.

Lasell Island, which lies about a mile and an eighth to the northeastward of **Mark Island,** is about twelve hundred yards long N. by E. and S. by W.; is diversified with woods and cleared lands of moderate height, and bold-to. Its southern end is the highest, and is rocky, steep, and wooded, while the northern end is composed of nearly level land, cleared and cultivated, has several houses upon it, and shows a steep, almost perpendicular, face to the westward. There is no passage between this island and **Long Island,** as a mass of shoals extends the whole distance, surrounding the various islands between them.

About an eighth of a mile to the northeastward of **Lasell Island** lies **Lime Island,** a small, low, sandy island, about two hundred yards long, and pretty thickly wooded; and about two-thirds of a mile to the northeastward of this lies **Job Island,** which marks the eastern point of the southern entrance to *Gilkey Harbor.* It is a little over a mile and a half long NE. and SW., and when seen from the southward and westward appears rather low, wooded, and faced by a white-sand beach. The eastern side of the island is, however, steep and rocky. Between **Job** and **Lime Islands** there extends a line of ledges for the most part bare at low water. The west shore of the island is shoal and should not be approached within less than three hundred and fifty yards. On the west side of the entrance lie two very small, low islands, with a few trees upon them, known as **Ensign Islands.** From the southern point of **Job Island** they bear about NNW., a little over three-quarters of a mile distant, and from the southern end of **Seven Hundred Acre Island** SW. by S. ½ S., distant about eleven hundred yards. These are connected with this latter point by a mass of shoals and ledges for the most part bare at low water.

Job Island is connected at its north end by a bridge with **Minot Island,** small and low, with a few trees upon it, and a little over a third of a mile long in a NE. and SW. direction. It lies about a third of a mile from the west shore of **Long Island,** but

there is no passage between them, the whole space being occupied by flats and ledges. About three hundred yards off its southwestern end lies a bad ledge, bare at low water, called *Minot Ledge*, which contracts the width of the channel to a little less than six hundred yards. This is the narrowest part of the channel, being only about three hundred and fifty yards wide between the lines of three fathoms. This island is sometimes called **Spruce Island.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING GILKEY HARBOR.

I. *From the southward, by the South Channel.*—Having come through *Muscle Ridge Channel*, when **Owl's Head Light** bears **WEST**, distant about two hundred and seventy-five yards, steer **N E.** by **N. ½ N.** until the middle of **Mark Island** bears **S E.** by **E. ½ E.** and **Negro Island Light** bears **N W. ½ N. NORTHERLY**, the latter being distant about two miles and one-eighth, in thirty fathoms water, with the southern entrance to *Gilkey Harbor* fairly open; steer **N E. ½ E.**, which will lead fairly in, with not less than eight fathoms, as far as *Minot Ledge*. This course passes a little over two-thirds of a mile to the westward of **Goose Rock**; about three hundred and fifty yards to the eastward of **Ensign Islands**; and one hundred and seventy-five yards to the westward of *Minot Ledge*. After passing *Minot Ledge* keep the middle of the passage, and anchor at discretion.

II. Or, when off *Rockport Entrance*, with the **Monument** on *Porterfield Ledge* bearing **N W. ½ N.** and distant nearly a mile and a quarter, with twenty-two fathoms water, **Negro Island Light** should bear **N. ¾ E.**, distant nearly four miles; steer **N E. ½ E.**, as before, and follow the directions given above.

III. Or, from off **Camden**, in about forty-five fathoms, with **Negro Island Light** bearing **W. by N.**, a mile and a quarter distant, steer **E. by N.**, carrying not less than eight fathoms, until the southern end of the westernmost **Ensign Island** bears **N. ¾ E.**, distant one-third of a mile, in eight fathoms, sticky bottom; then steer **N E. ½ E.**, as before.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Grindel Point Lt....	44° 16′ 53″	68° 56′ 35″	$4^h\ 35^m\ 46.3^s$	Fixed.	39 ft.	11

Above **Grindel Point** the west shore of **Long Island** is lower, but partakes of the same general character as that to the southward, being diversified with wooded slopes and cleared fields, dotted with houses. Two miles above the point there is formed a large cove of irregular shape, which makes in a **N E.** by **E.** direction for nearly a mile, almost cutting the island in two. This is

SEAL HARBOR,

which affords excellent anchorage in from five to ten fathoms, and is entirely unobstructed. A small, low, flat, grassy island lies almost exactly in the middle of the entrance, with a channel about a thousand yards wide on its south side with from nine to ten fathoms, and another about three hundred and fifty yards wide on its north side with from four to eight fathoms water. This latter passage leads between the islet and a high, bare, rocky islet to the northward. The best channel is, however, that on its south side.

The shores on the north side of *Seal Harbor* are, for the most part, wooded, while those on the south side are cleared, and there are no other obstructions, either in the harbor or in the approaches to it. It is only necessary to give the shores on both sides a berth of about three hundred yards, and the southeastern shore may be approached within two hundred, with not less than three fathoms at low water. The northern shore is not so steep-to, and should in no case be approached within less than three hundred and fifty yards.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SEAL HARBOR.

I. *From the southward.*—On the course N E. ½ N. from off **Camden**, bring **Grindel Point Light** to bear E. ½ N., as though to enter *Gilkey Harbor* by the *North Channel.* Then, in twenty-three fathoms, blue mud, steer N E. by E., or N E. by E. ½ E., according as wishing to anchor under the north or under the south shore. In neither case will there be less than nine fathoms until within the harbor, after which there will be soundings of from five to six fathoms on the N E. by E. course, but not less than eight fathoms if keeping the southern shore aboard until well up toward the head of the harbor.

II. *To come from the northward and enter Seal Harbor by the North Channel.*—This passage, as before mentioned, leads between the two islets which lie off the mouth of the cove, and is about three hundred and fifty yards wide between the lines of three fathoms. The two islets are half a mile apart, but the width of the available channel is diminished by *a long ledge*, which makes in a N N E. direction for a quarter of a mile from the north end of the southern islet. This ledge is in places bare at low water, and four feet is found upon it about three hundred and fifty yards from the islet. It is therefore necessary in coming in to give this islet a berth of about one-third of a mile to the southward, while the northern islet may be approached within a hundred and fifty yards with not less than three fathoms.

Strangers should not attempt to enter *Seal Harbor* by this channel, as *the ledge on the south side of the entrance is not buoyed.* The course in is S E. by E. between the two islets, keeping about six hundred yards from the southernmost, in which case carry in not less than five and a half fathoms; and when abreast of the north point of the entrance to the harbor, having it bearing N E. by N., haul to the westward and steer boldly in, carrying not less than eight fathoms if keeping nearly in the middle.

There is also another passage leading into *Seal Harbor* from the northward, which skirts the west shore of **Long Island**, leaving the rocky islet on the north side of the *North Channel* to the westward. This passage has six fathoms water, but is not fit for strangers, as there is a long line of ledges, bare and sunken rocks, extending from the islet over a mile to the northward, and some detached rocks in the passage which diminish its width to about fifty yards. *None of these are buoyed*, and the passage is never used except by small vessels with experienced local pilots on board.

Above *Seal Harbor* there are no anchorages of importance on the west shore of **Long Island.**

NORTH SHORES OF PENOBSCOT BAY FROM BELFAST TO CAPE JELLISON.

From *Belfast Bay* the shore takes a general course of about N E. ½ E. for a little over a mile and a half to the town of **Searsport**, which is situated at the head of a large cove on the north shore, and affords good anchorage and shelter in all winds except those from the southward. The eastern side of the harbor is formed by

SEARS ISLAND,

formerly called **Brigadier Island,** which separates this harbor from **Cape Jellison** and

the *Harbor of Stockton.* **Sears Island** is a mile and three-quarters long; lies **N.** by **E.** and **S.** by **W.**, and is of moderate height. Its southern half is well wooded with a variety of trees, while the rest of the island has alternate woods and cleared fields, and there are one or two houses. At its north end it is connected by a causeway with the mainland.

SEARSPORT HARBOR.

Searsport is a small village, of little importance, but is very conspicuous in appearance, being situated amidst beautifully cultivated fields backed by high, wooded lands, most of the houses and churches being painted a brilliant white. There are no dangers in entering it except *Brigadier Island Ledge*, before mentioned, (see page 343,) which is bare two hours before low water, and extends off in a southwesterly direction from the southwest point of **Sears Island** about one-third of a mile off. It is marked by *a black spar-buoy* (No. 1) placed in seventeen feet water on its south end. It is to be left to the eastward by vessels entering *Searsport Harbor*, and to the northward by those bound up *Penobscot River.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SEARSPORT HARBOR.

I. *Through West Penobscot Bay.*—When off **Great Spruce Head** keep about the middle of the bay until the southern end of **Sears Island** bears N E. ½ E., when steer N E. ½ N. about for the western point of that island. When within about seven-eighths of a mile of it, with **Turtle Head** bearing S. by E., steer N. by W., which course will lead safely up to the anchorage. This course passes about three-quarters of a mile to the northwestward of *Brigadier Island Ledge.*

II. *Having come through East Penobscot Bay, to enter Searsport Harbor.*—From off **Dice Head**, having it bearing EAST, nearly half a mile off, steer N W. ½ N. until **Turtle Head** bears S. by E., when N. by W. will lead safely to the anchorage.

III. *To enter Searsport Harbor from Penobscot River.*—Keep about three-quarters of a mile from the southern end of **Sears Island** until past the *black buoy* on *Brigadier Island Ledge*, when bring **Turtle Head** to bear S. by E. and steer N. by W., as before.

STOCKTON HARBOR.

On the west side of **Sears Island**, between it and **Cape Jellison**, is formed a large cove, affording convenient anchorage and shelter in all winds except those from the southward. The village of **Stockton** is situated on its north shore, although at some distance back from its head, and the cove is usually known as *Stockton Harbor.* It has a population of between two and three thousand, but is of little commercia importance. There is, however, some fishing interest, and considerable business in building of fishing and other vessels.

The eastern point of entrance to this harbor is formed by **Squaw Point,** sometimes known as **Sandy Point.** It is a sandy bluff, about twenty feet high, and from it makes out a long ledge, bare at half-tide, called *Squaw Point Ledge.* This is the only danger in the approach to **Stockton,** and is easily avoided by keeping the **Sears Island** shore aboard.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING STOCKTON HARBOR.

I. *From West Penobscot Bay.*—Pass three-quarters of a mile to the southward of **Sears Island,** and when the harbor is open steer **N.** by **E.** ½ **E.**, and anchor at discretion. These directions lead about a quarter of a mile to the southward of *Brigadier Island Ledge,* and in the best water.

II. *From East Penobscot Bay.*—With **Dice Head Light** bearing E. by S. ½ S., distant three-quarters of a mile, steer N. by W. ½ W. for the southern end of **Sears Island**. Continue this course until **Turtle Head** (the northern extremity of **Long Island**) bears S W. ½ W., when steer N. by E. ½ E., as before.

PENOBSCOT RIVER,

the most important tributary of *Penobscot Bay*, is about one hundred and thirty miles long, and flows into the northeastern part of the bay, at its head. The southeastern point of entrance is called **Dice Head,** and the northern point **Cape Jellison.** Between the two the river is about four miles and three-quarters wide, but it rapidly diminishes in width, and at **Wetmore Island,** a little over eight miles above **Dice Head**, it is only about half a mile wide. Hence to **Bangor,** which is about thirty miles above **Dice Head**, it is in no place over a mile wide, and through most of its length but little over a quarter or half a mile in width. At **Bangor** the distance between the wharves on opposite sides of the river is about an eighth of a mile.

Bangor, at the head of tide-water and navigation, is the commercial centre for the river trade. It is built upon the west bank, about thirty miles above **Dice Head**, and is the centre of one of the largest lumber-trades on the coast of **Maine.** The population is about fifteen thousand.

DICE HEAD,

the southern point of entrance, is easily recognized, in coming up the bay, by the white light-tower on its summit. It is about five miles above **Cape Rosier** and about three miles to the eastward of **Turtle Head**, and forms also the north point of entrance to *Bagaduce River*, upon which is situated the town of **Castine.** It is a steep, rocky bluff, wooded on the edges with a thick growth of fir and spruce, and quite bold to, the rocks rising almost perpendicularly from the water.

DICE HEAD LIGHT

is an eight-sided stone tower, sheathed with wood and painted white, and attached to the keeper's dwelling, which is painted brown. The tower is forty-two feet high, and shows a fixed white light of the fourth order from a height of one hundred and thirty feet above the sea, and visible seventeen miles. Its geographical position is

Latitude - - - - - - - -	44° 22′ 57″ N.
Longitude - - - - - - - -	68° 49′ 09″ W.

CAPE JELLISON,

forming the north point of entrance to *Penobscot River*, is an irregularly-shaped peninsula, which makes in a southerly direction for about two miles into the bay. It is of moderate height, gently sloping, and diversified with wooded and cleared lands, and is also pretty thickly settled. **Squaw Point**, its southwestern point, has been already described as the eastern point of entrance to *Stockton Harbor*. It is sometimes called **Sandy Point**, a name derived from its appearance, which is that of a sandy bluff with perpendicular faces. (See page 349.)

FORT POINT,

sometimes called **Old Fort Point,** is the southeastern point of **Cape Jellison**, and is nearly three miles to the eastward of **Squaw Point** and about six miles to the northward and eastward of **Dice Head.** It is easily recognizable by the large, white hotel, with cupola, which stands a little way back of the pitch of the point, and by the light-house on the eastern end of the point, which is known as

FORT POINT LIGHT,

a square, white tower, twenty-seven feet high, attached to a low, brown dwelling-house, and which shows a fixed white light of the fourth order of Fresnel from a height of one hundred and three feet above the sea, and visible fifteen miles. The geographical position of this light is

Latitude - - - - - - - -	44° 28′ 01″ N.
Longitude - - - - - - - -	68° 48′ 42″ W.

Fort Point is steep, rocky, bare of trees, and about eighty feet high. The **large, square, stone beacon** which will be seen to the southeastward of it is on *Fort Point Ledge*, and is to be left to the southward.

On the east bank of the river, from **Dice Head** to **Wetmore Island**, the shore is of moderate height and nearly flat, and is composed for the most part of cultivated lands interspersed with occasional groves of trees. This part of the shore is formed by the townships of **Castine** and **Penobscot**, and, in common with most of the land in the vicinity of the river, is thickly settled.

On the north side of **Fort Point** makes in a large cove, known as

FORT POINT COVE,

which affords excellent anchorage and good shelter. This cove makes nearly in an EAST and WEST direction, and is about two miles wide at its mouth between **French Point**, or **Sandy Point**, on the north, and **Fort Point** on the south. Its shores are composed of high lands, with a gradual decline to the water, and are for the most part cultivated. **French Point** is almost exactly opposite to the southern end of

WETMORE ISLAND,

a large island, between four and five miles long, which lies in the middle of the river, about eight miles above **Dice Head**. Here the river divides—a channel passing on each side of the island, that to the westward, however, being considered the main channel. **Wetmore Island** lies NORTH and SOUTH; is of moderate height, diversified with wooded and cleared lands, and well settled. The eastern channel of the river passes on the east side of this island to the small settlement of **Orland**, about five miles above the **Divide**, and then joins the main channel at the north end of the island, forming the harbor of **Bucksport**.

The west bank of the river from **French Point** to the point opposite **Bucksport** is composed of high, gently-sloping, well-cultivated, and thickly-settled shores. Nearly a mile above **French Point** is a settlement on the shores of a small cove known as *Mill Cove;* and about a mile above *Mill Cove* is another smaller indentation, called *Gondola Cove.* The **square, stone beacon** which is seen about half way between these two coves is on *Odom Ledge*, which is out at half-tide, and may be passed on either side, though it is usual to pass to the eastward of it.

About seven miles above **Fort Point**, on the west bank of the river, and opposite to the village of **Bucksport**, will be seen a large, unfinished granite work, known as **Fort Knox.** It is built upon a steep point covered only with grass and bushes, and forms a very conspicuous landmark.

BUCKSPORT HARBOR

lies on the east bank of the river, directly opposite to **Fort Knox**, and is formed by the passage between the township of **Bucksport** on the north and **Wetmore Island** on the south, by which the east branch of the river unites with the west. The village of **Bucks-**

port occupies the whole of the north bank of this passage. It has a small fishing-trade, with some lumber and manufacturing interests. The harbor affords good anchorage for vessels of the largest size, there being not less than five fathoms in the channel. Here the river takes a turn to the westward, having a general course N. by W. ½ W., to the village of **Frankfort,** about five miles above. The west bank, from **Fort Knox** to *Marsh Bay*, a little over three miles above, is gently sloping, partly wooded, and partly cultivated.

MARSH BAY

makes in on the west bank about eleven miles above **Fort Point** and three and a half to the northward of **Bucksport.** The river here spreads out to the width of a little over a mile, with deep water in the channel, which is diminished in width, however, by flats. Into the southwestern part of the bay flows *MARSH RIVER,* a narrow stream of little importance, which separates into two branches about three-quarters of a mile above its mouth, the north branch leading to the village of **Treatville** and the south branch to that of **Prospect. Frankfort** lies on the west bank of the river, just above *Marsh Bay.* The shores in its vicinity and on both banks are undulating, cleared, and under cultivation, with occasional groves of trees. Both banks are steep-to, four fathoms being found within fifty yards of the shore. Above **Frankfort** the course of the river is about N E. to **Oak Point;** the west shore being mostly composed of gently-sloping, cleared, and cultivated lands, backed by woods, while the east bank is steep and high, partly wooded and partly cultivated. Both banks are steep-to, five fathoms being found within fifty yards of the shore.

There is good anchorage anywhere between *Marsh Bay* and **Oak Point,** and not less than five fathoms in mid-channel.

At **Oak Point** the river turns to the eastward for about half a mile, then to the northward for about a mile, and then to the northwestward a mile and a half.

BALD HILL COVE,

a small settlement on the west bank, is a little over five miles above **Frankfort.** The banks are steep, rocky, partly wooded and partly cleared, in many places showing high sandy or clay bluffs, steep-to, and thickly wooded; where the bluffs are rocky fir and spruce trees are frequently seen growing out of their perpendicular faces.

From *Bald Hill Cove* the river takes a course nearly N N E. between two and three miles, passing between the village of **Orrington** on the east and **Lower** and **Upper Corners** on the west bank. It gradually diminishes in width from about half a mile at *Bald Hill Cove* to about six hundred yards at **Upper Corners,** but has deep water in the channel, with somewhat steep banks.

At **Upper Corners** the river turns about N E., having a general course in that direction for a little over two miles to **Brewer Village,** which is built on the east bank, about a quarter of a mile below the southern limit of **Bangor.** The water shoals to four fathoms about two miles below **Bangor,** and the channel hugs the western shore. The banks are high, steep, diversified with wooded and cleared land, and very thickly settled. Many saw-mills line the west bank.

From **Brewer Village** the general course of the river is about N E. by N. between the town of **Brewer** on the east and the **City of Bangor** on the west. The banks are low and sandy. One mile and three-quarters above **Brewer Village** makes in the *KENDUSKEAG RIVER,* which divides the town of **Bangor** into two parts; and a little above this the *Penobscot River* is crossed by a bridge, which marks the head of tide and for the most part the head of navigation.

Three and a half fathoms may be taken up *PENOBSCOT RIVER* to abreast of the city of **Bangor.** There was formerly better water, but even the present depth is gradually diminishing, owing to the immense deposit of saw-dust and slabs from the mills. If some means be not taken to prevent this, the channel of this noble river will, in the course of a short time, become so obstructed and diminished in depth as to be unfit for navigation by any but small vessels.

DANGERS
IN APPROACHING AND ENTERING PENOBSCOT RIVER.

I. *From West Penobscot Bay.*—If coming from *West Penobscot Bay*, the first danger met with will be found off the south end of **Sears Island**, and is marked by *a black spar-buoy.* This is

BRIGADIER ISLAND LEDGE,

which extends off in a southwesterly direction from the southwest point of the island, its southern end being one-third of a mile from shore. It is bare two hours before low water. The buoy is marked No. 1, placed in seventeen feet water on the south end of the ledge, and is to be left to the northward.

On the south side of the passage is another obstruction, known as

TURTLE HEAD SHOAL,

a detached ledge, with about thirteen feet at low water, which lies about one hundred yards to the northward of Turtle Head, and *is not buoyed.* There is deep water between it and the head, but the passage is not fit for strangers.

LEDGE OFF STEELE HEAD.

If standing to the eastward on a wind, beware of approaching the eastern bank of the river above **Dice Head,** as there is a dangerous ledge off **Steele Head,** about two miles and a half above **Dice Head.** This ledge makes off to the northwestward about three-quarters of a mile, and *is not buoyed.* Its extent is not yet fully known, but as little as two feet at low water has been found upon it. It is therefore necessary to give it a wide berth.

On the north side of the entrance, off **Squaw Point,** (the southwestern point of **Cape Jellison,**) lies

SQUAW POINT LEDGE,

bare at half-tide, which extends off in a southwesterly direction, and *is not buoyed.* It is not dangerous except to vessels standing to northward on a wind. When past it, **a square, stone monument** will be seen ahead, about two miles off, and lying to the southwestward of **Fort Point.** This is on

FORT POINT LEDGE,

bare at half-tide, which lies about S E. by E. from the light-house, distant about five-eighths of a mile. It lies N N W. and S S E., and is to be left to the southward, the channel leading between it and **Fort Point.** The monument is a stone beacon of the natural color, and is surrounded by a wooden spindle. When past it, *a black nun-buoy* will be seen off the eastern extremity of **Fort Point.** This is on

FORT POINT REEF,

which extends in an easterly direction from **Fort Point,** and must be left to the westward. The buoy is of the second class, marked No. 3, and is placed in seven feet water on the eastern end of the ledge. In winter the *nun-buoy* is replaced by a spar.

When past *Fort Point Reef* there are no dangers until up with **French Point**, (or **Sandy Point** as it is sometimes called,) the northern point of entrance to *Fort Point Cove*, when *a black spar-buoy* will be seen lying about S S E. from the point. This is on

SANDY POINT LEDGE,

which has about seven feet at low water. The buoy is marked No. 5, and is placed on the southeast point of the ledge. When past it, **a square, stone beacon** will be seen about a mile and three-quarters up river. This is on

ODOM LEDGE,

which is out at one-quarter ebb, and lies about midway between *Mill* and *Gondola Coves*. It is a detached ledge, and may be passed on either side, though it is usual to pass to the eastward of it. The beacon is painted *black*, with the letters O. L. in *white* on each side of it.

When past *Odom Ledge*, there are no dangers until past **Bucksport** and up with *Marsh Bay*, when there will be seen *a red spar-buoy* about opposite to *Marsh River*. This is on

FRANKFORT FLATS,

which extend off from **Drachm Point** on the east bank, a little below **Frankfort**, and about half way across the river. The buoy is marked No. 2, is placed in twelve feet water on the west point of the flats, and is to be left to the eastward. When past it there are no dangers until beyond **Oak Point**, when there will be seen ahead **an iron spindle, painted red, with a cylinder and cask on top.** This is on

BUCK LEDGE,

which is out at half-tide, and is to be left to the eastward. It is about three miles above **Frankfort**, and is the last obstruction met with in the approaches to **Bangor**.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PENOBSCOT RIVER.

I. *Through West Penobscot Bay.*—When up with the *black buoy* on *Brigadier Island Ledge* steer E N E., which course leads along the south shore of **Cape Jellison** in not less than eight fathoms, passing to the northward of the **beacon** on *Fort Point Ledge* and to the eastward of the *black buoy* on *Fort Point Reef*. Wishing to anchor in *Fort Point Cove*, steer boldly in after rounding the buoy, as there is nothing in the way except *Sandy Point Ledge*, on the north side of the cove. There is suitable anchorage for the largest vessels.

But if bound up the river: When past *Fort Point Reef Buoy* steer over toward **Wetmore Island**, keeping about the middle until within about half a mile of its southern point, when steer **NORTH**, keeping the west shore of **Wetmore Island** aboard and passing to the eastward of the beacon on *Odom Ledge*. When past this ledge haul to the eastward and steer along the west shore of the island, heading about midway between **Fort Knox** and the northwest point of **Wetmore Island**, with the houses in the west part of **Bucksport** directly ahead, the course being about **N.** by **E.** ½ **E.** Wishing to anchor in *Bucksport Harbor*, there is nothing in the way but to round the north point of **Wetmore Island** to the eastward and anchor off the village. Not less than five fathoms can be taken as far up as **Fort Knox**, and to the anchorage off **Bucksport**.

But if bound up river: At **Fort Knox** the river turns more to the westward, having a course about **N.** by **W.** ½ **W.** toward **Frankfort**. Keep the middle of the river until nearly up with the south point of the entrance to *Marsh River*, when the *red spar-buoy* on *Frankfort Flats* will be seen, which must be left to the eastward. Should the buoy not

be seen, steer over to the westward until **McKenzie Point** (first point on the east shore north of **Bucksport**) is shut in behind the southeast point of entrance to *Marsh River*, and run on this range until the next reach of the river is fairly open. If, however, the buoy is visible, pass to the westward of it, and when the reach is fairly open steer N E., carrying not less than five fathoms, past **Frankfort**, with good anchorage all the way. When up with **Oak Point**, steer E. by N. for about a third of a mile until the next reach is fairly open, when the **red spindle** on *Buck Ledge* will be seen about a mile ahead. The course through this reach is about N. by E. with not less than five fathoms, passing to the westward of the **spindle** on *Buck Ledge*. Continue it for about a mile, or until the next reach (leading up to *Bald Hill Cove*) is fairly open, when steer N W. by W., keeping about in mid-river. At *Bald Hill Cove* the course changes to N N E. for about a quarter of a mile, and then N E. for three-quarters of a mile, to **Bragdon Castle.** Through the next reach the course is N N E. for about two miles, passing the village of **Orrington** on the east and **Lower** and **Upper Corners** on the west, and carrying not less than four and a half fathoms. At **Upper Corners** the river turns to the northeastward, the course being about N E. toward **Brewer Village**, keeping the western shore aboard. About two miles above **Upper Corners** the water shoals to four fathoms, the channel still keeping the west shore. At **Brewer Village** the river turns a little more to the northward, running about N. by E. ½ E. for a third of a mile; then N E. by E. half a mile; and thence having a general course N N E. for nearly a mile, to the usual anchorage off the mouth of *Kenduskeag Stream*. Not less than three and a half fathoms at low water can be taken to the anchorage off the town. The bottom is saw-dust.

DANGERS
IN APPROACHING AND ENTERING PENOBSCOT RIVER.

II. *Coming through East Penobscot Bay.*—When nearly up with *Parker Cove*, (which is on the west shore of **Long Island**, just to the northward of *Sabbath Day Harbor*,) *a black spar-buoy* will be seen to the westward. This is on

LONG ISLAND LEDGE,

which has six feet at low water, and lies about S W. from **Dice Head Light.** The buoy is placed in twenty-six feet water on the east side of the ledge, and is to be left to the westward. When past it there are no dangers until to the northward of **Dice Head** and abreast of *Perkins Cove*, when look out for the

LEDGE OFF STEELE HEAD.

This ledge makes off from **Steele Head** to the northwestward about three-quarters of a mile, *and is not buoyed.* Its extent is not yet fully known, but as little as two feet at low water has been found upon it. It is therefore necessary to give it a wide berth.

Above this the dangers are common to all the channels, and have been already described. (See page 353.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PENOBSCOT RIVER.

II. *Through East Penobscot Bay.*—When off **Dice Head**, having the light-house bearing E. by S. ½ S., distant four-fifths of a mile, steer N. by E. ½ E. toward **Cape Jellison** until within half a mile of it, with **Fort Point Light** bearing N E. by E. ½ E.; then steer E N E., passing to the northward of the **beacon** on *Fort Point Ledge* and to the eastward of the *buoy* on *Fort Point Reef;* then follow the directions given for the river.

The course N. by E. ½ E. toward **Cape Jellison** passes three-eighths of a mile to the westward of the ledge off **Steele Head.**

LIGHT-HOUSES.

Name.	Latitude N.	Longitude west from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Dice Head Light....	44° 22′ 57″	68° 49′ 09″	$4^h\ 35^m\ 16.6^s$	Fixed.	130 ft.	17
Fort Point Light....	44° 28′ 01″	68° 48′ 42″	$4^h\ 35^m\ 14.8^s$	Fixed.	103 ft.	15

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PENOBSCOT BAY.

As before mentioned, there are several channels leading into this bay. The principal passages are as follows: 1st, *THE MAIN CHANNEL OF EAST PENOBSCOT BAY;* 2d, *THE EASTERN CHANNEL INTO WEST PENOBSCOT BAY;* 3d, *THE SOUTH* or *MAIN CHANNEL*, also leading into *West Bay;* 4th, *THE MIDDLE CHANNEL;* and 5th, *THE WESTERN* or *MUSCLE RIDGE CHANNEL.* Besides these, there are the passages or thoroughfares used by coasters, of which the principal are *EGGEMOGGIN REACH* and *DEER ISLAND THOROUGHFARE*, leading into *East Penobscot Bay; FOX ISLANDS THOROUGHFARE, FISHERMAN ISLAND PASSAGE*, and *TWO-BUSH CHANNEL*, leading into *West Penobscot Bay.*

I. *To come from the eastward and enter East Penobscot Bay by the Main Channel.*—Bring **Saddle-Back Light-House** to bear **N W.** by **N.** and steer for it until within one-quarter of a mile, when a **NORTH** course will lead up to **Eagle Island Light**, with soundings varying all the way from eleven to fifty fathoms. *On this course, wishing to enter Isle au Haut Thoroughfare*, when the western extremity of **Kimball Head** bears **N E.**, distant two miles and a half, in about twelve fathoms, the course in is **N E.** by **E.** ½ **E.**, after which follow the directions given for this harbor.

But wishing to proceed up the bay: Continue the **NORTH** course for **Eagle Island Light**; give it a berth of about eight hundred yards to the westward; and when it bears **WEST** steer **N N W.**, which course will lead up the middle of the channel, past **Butter Spruce Head** and **Beach Islands** on the west and **Bradbury** and **Pickering Islands** on the east. When exactly between the **Bard Islands** and the high hill on the southeast head of **Hog Island**, the former bearing **W.** by **S.** ½ **S.** and the latter **E.** by **N.** ½ **N.**, steer **N W.** until **Dice Head Light** bears **N E.** by **N.** ½ **N.**, with **Hughes Head** (the northeastern point of **South Ilesboro'**) bearing **W.** by **N.** ½ **N.**; when in nineteen fathoms, brown mud, steer **N.** by **E.** ½ **E.** up the bay.

Wishing to enter Castine Harbor on this course: When **Dice Head Light** bears **N E.** by **N.** steer for it until within half a mile, when **E.** by **N.** should be steered for the beacon on *Hosmer Ledge*, and the directions for the harbor, on page 301, followed; but wishing to enter *Penobscot River*, continue the **N.** by **E.** ½ **E.** course past **Dice Head** and over toward the **Cape Jellison** shore, and when within half a mile of it, with **Fort Point Light** bearing **N E.** by **E.** ½ **E.**, steer **E N E.**, and follow the directions given for the river. On the above courses not less than ten fathoms will be found as far as the mouth of *Penobscot River*, and they lead well clear of all dangers in the bay.

II. *Coming from the eastward, to enter West Penobscot Bay by the East Channel:* The eastern channel passes to the southward of **Isle au Haut**, between it and **Matinicus Seal Island**, and is nearly seven miles wide, with very deep water. **Saddle-Back Light** marks the northern boundary of this channel, and **Matinicus Seal Island** the southern; and it is unobstructed with the exception of a dangerous rock, called

THE BAY LEDGE,

which is bare at half-tide, and has deep water all around it. It may be passed on either hand, but it is usual for vessels using this channel to pass well to the southward of it.

Bay Ledge bears from **Matinicus Rock Lights** N. by E. ½ E., distant ten miles and three-quarters; and from the middle of **Green Island**, (entrance to *Carver Harbor*,) SOUTH, distant four miles. A *nun-buoy* of the second class, painted red, is placed about fifty feet S W. from the ledge, in good water, and is to be left to the northward.

To come from the eastward and enter by this channel: With **Saddle-Back Light** bearing N W. by N., about five and three-quarters miles distant, in forty-two fathoms water, mud and gravel, steer W. by N. ¾ N., which course will lead, with not less than seventeen fathoms, past the *Bay Ledge*, leaving it about two-thirds of a mile to the northward, and will carry fourteen fathoms into the main channel. When in this channel, with fourteen fathoms water, with **Matinicus Island** bearing S. ¾ W., distant about five miles, **Heron Neck Light** N E. ½ N., four and a quarter miles, and **Owl's Head** N N W., distant about nine miles and three-quarters, steer N N W., carrying not less than eight fathoms, and join the *Middle Channel* abreast of **Fisherman Island**, in forty-two fathoms water. **Heron Neck Light** will now bear S E. by E. ¾ E., distant about five and three-quarters miles, and seen just open to the southward of **Hurricane Island**; and the middle of **Fisherman Island** will bear W. ¾ N., distant nearly two miles. Now steer N. ¾ E., which course will lead, with not less than twenty-seven fathoms, to abreast of *Camden Entrance.*

When **Negro Island Light** bears W. by N., one mile and a quarter distant, in forty-five fathoms water, steer N E. ½ N., which course will lead, with not less than sixteen fathoms, through *West Bay* to abreast of **Turtle Head**. Continue the course, which leads for the southern end of **Sears Island** until up with the buoy on *Brigadier Island Shoal*, which leave to the northward, and steer E N E., which course will lead along the south shore of **Cape Jellison** in not less than eight fathoms, passing to the northward of the beacon on *Fort Point Ledge* and to the eastward of the *black buoy* on *Fort Point Reef.* When past this buoy, follow the directions for the river. (See page 354.)

On the above courses, to enter Rockland Harbor: On the N. ¾ E. course, when **Owl's Head Light**, bearing N W. by N. ½ N., distant three miles, is seen just clear of the north end of **Munroe Island**, in fifty-one fathoms, steer N N W., which course will lead, with not less than eighteen fathoms, up to **Owl's Head**. Continue it past the head, and when the light bears S W. by S. ¼ S., **Atlantic wharf** will bear W. by N. ¼ N., steer that course, and follow the directions for the harbor. (See page 329.)

On these courses, to enter Rockport Harbor: When on the N. ¾ E. course and **Owl's Head Light** bears N W. by N. ¼ N., as before, steer N by W., which course will lead, with not less than twelve fathoms, up to *Rockport Entrance.* When the beacon on *Porterfield Ledge* bears N E. by E. ¼ E., about a quarter of a mile off, steer N. ¾ E. into the harbor, carrying from nine to eleven fathoms.

On the above courses, to enter Camden Harbor: On the N. ¾ E. course, when the southern end of **Mark Island** bears E. ½ S. (or is exactly abeam) **Negro Island Light** will bear N N W., and in twenty-nine fathoms, steer N. by W. ¾ W., carrying not less than nine fathoms, and when up with the entrance follow the directions for the harbor. (See page 337.)

On the above courses, to enter Gilkey Harbor: When on the N. ¾ E. course the southern end of **Mark Island** bears E. ½ S. (or is exactly abeam) and **Negro Island Light** bears N N W., as before, steer N E. ¼ E., which course will lead straight into the harbor, with not less than eight fathoms.

On the above courses, to enter Lincolnville Harbor: When on the N. ¾ E. course **Negro**

Island Light bears W. by N., one mile and a quarter distant, and in forty-five fathoms water, steer N E. by N. ½ N., which course will lead straight into the harbor.

On the above courses, to enter Gilkey Harbor by the North Channel: On the N E. ½ N. course, through *West Penobscot Bay*, when **Grindel Point Light** bears E. ½ N. steer for it, carrying not less than five fathoms, until within a little over five hundred yards of it; then steer S E. by S., and follow the directions for this entrance. (See page 345.)

On the above courses, to enter Seal Harbor: When on the N E. ½ N. course, through *West Penobscot Bay*, **Grindel Point Light** bears E. ½ N., as before, steer N E. by E. ½ E., which course will lead, with not less than eight and a half fathoms, into the harbor.

On the above courses, to enter Belfast Harbor: On the N E. ½ N. course, through *West Penobscot Bay*, when abreast of **Great Spruce Head**, in thirty-three fathoms water, it is usual to alter the course more to the northward, steering about N E. by N. ½ N., and keeping about three eighths of a mile from shore. When up with **Brown's Head** the beacon on *Steele Ledge* will be seen, and the *red buoy* on *Harbor Shoal Ledge* to the southward of it. Pass to the southwestward of the buoy, and follow the directions given for the harbor. (See page 342.)

III. *To come from the eastward and enter Penobscot Bay by the South Channel.*—This channel leads between **Matinicus Seal Island** on the east and **Wooden Ball Island** on the west, and is about three miles wide, but obstructed by dangerous ledges between the two islands. These are known as

THE MALCOLM LEDGES,

dry at low water, bearing E. ½ N. from the northern extremity of **Wooden Ball Island**, distant a mile and one-third, and W S W. from the western end of **Matinicus Seal Island**, a mile and a half distant, so that they lie nearly in the middle of the passage. *They are not buoyed*, and great care must be taken to avoid them. The usual course is to pass between them and **Wooden Ball Island**, as the latter is bolder-to than **Seal Island**. Thirty-three fathoms are found in the passage between the ledge and **Wooden Ball Island**. When past these ledges the channel is clear; but if standing to the eastward on a wind, in beating up the bay, beware of

THE BAY LEDGE,

which is bare at half-tide and has deep water all around it. It may be passed on either hand, but it is usual for vessels using this channel to pass well to the westward of it.

Bay Ledge bears from **Matinicus Rock Lights** N. by E. ½ E., distant ten miles and three-quarters; and from the house on **Green Island**, (entrance to *Carver Harbor*,) SOUTH, distant four miles. *A nun-buoy of the second class, painted red*, is placed about fifty feet S W. from the ledge, in good water, and is to be left to the eastward.

To enter by this channel: If coming from the eastward, bring **Matinicus Rock Lights** to bear WEST and run for them until within about six miles, and in forty-three fathoms water, with **Northeast Point** of **Matinicus** in range with the southwestern end of **Wooden Ball**, on a bearing of N W.; steer N N W., which course leads directly for **Owl's Head Light**. When the middle of **Fisherman Island** bears W. ½ N., about two miles off, and **Heron Neck Light** S E. by E. ½ E., about five miles and three-quarters off, steer N. ½ E., which course will lead, with not less than twenty-seven fathoms, to abreast of *Camden Entrance*. Above **Camden** follow the directions given for *West Bay*, on page 356.

The above courses pass about a third of a mile to the westward of the *Malcolm Ledges;* a mile and a half to the eastward of the shoals off **No Man's Land**; and a mile and a half to the westward of the *Bay Ledge;* and leaves **Robinson Rock** (to the southward of **Long Island**) a mile and a quarter to the eastward.

IV. *To enter Penobscot Bay by the Middle Passage.*—This channel passes to the westward of **Matinicus Island**, between it and the **Green Islands**, and is nearly five miles wide, but is obstructed by several dangerous ledges lying to the southward and westward of **Ragged** and **Matinicus Islands**. Of these, the first met with is

SOUTHEAST LEDGE,

which has one foot at low water; lies S. ¾ W. from **Ragged Island**, distant nearly two miles, and N W. by W. from **Matinicus Rock Lights**, distant one mile and a half. It is marked by a *spar-buoy, painted red and black in horizontal stripes*, and placed in good water about a hundred yards to the southwestward of the rock. *Southeast Ledge* is quite bold-to, with from seven to ten fathoms all around it, and may be passed on either hand by giving the buoy a berth of one hundred yards. There is also a passage between this ledge and **Ragged Island** with five fathoms, but it is not safe for strangers.

BANTAM LEDGE.

The next danger met with in this channel is a *small ledge*, bare at half-tide, called *Bantam Ledge*, or *The Bantam*, which lies about two miles and a quarter N W. by W. ½ W. from the south end of **Ragged Island** and nearly five miles N W. ¼ N. from **Matinicus Rock Lights**. It is quite bold-to, and may be passed on either hand, but it is usual to pass to the westward of it. It is marked by a *spar-buoy, painted red and black in horizontal stripes*, placed in good water one hundred yards south from it.

LEDGES WEST OF MATINICUS ISLAND.

Nearly two miles W. ¾ N. from the north end of **Matinicus** lie two small ledges, called *Foster Ledges*, close together, with six and thirteen feet water on them, and surrounded by deep water. From the *Bamtam Buoy* they bear N N E., and from **Outer Green Island** S E. ¾ S., distant three miles and a quarter. *They are not buoyed*, but the sailing-line passes about a mile to the westward, between them and

THE PIGEON GROUND,

a piece of flat ground, extending nearly E. by N. and W. by S. for about two miles, with from three to three and three-quarters fathoms. Its northeastern end bears from the north end of **Matinicus** W. ¾ N., distant three miles and three-quarters; from the ledges west of **Matinicus** it bears W. by N. ¾ N., distant a mile and a half; and from **Outer Green Island** S. by E. ¼ E., distant two miles. *There is no buoy.*

OUTER GREEN ISLAND LEDGES,

are dry in places at low water, and lie about a mile S S E. from **Outer Green Island**; are marked *by a spar-buoy, painted red and black* in horizontal stripes, placed on their southern end. There is a passage between them and the island, but it is not fit for strangers. The sailing-lines pass about two-thirds of a mile to the eastward of these ledges.

THE NORTHERN TRIANGLES

lie to the northward of **Little Green Island**, at an average distance of three-quarters of a mile. **Little Green Island** is about seven-eighths of a mile to the northwestward of **Outer Green Island**, with deep water on all sides of it. It is low and bare, and about three hundred yards long. The *Northern Triangles* are a series of detached ledges to the northward of it, which are dry in places at low water, and generally break heavily at half-tide. They lie E. by S. and W. by N., covering a space one mile and one-eighth in length by three-eighths of a mile in breadth, and are marked by a *nun-buoy* of the first class, painted black, and placed in ten fathoms E N E. from them. These ledges bear from the northern end of **Metinic Island** E. by N. ¼ N., nearly four miles distant, and from

Great Two-Bush Island S E. by S. ¾ S., two and a half miles distant. They are not in the way of vessels using this channel unless they are standing to westward on a wind.

There is also a dangerous ledge, bare at low water, lying about three-quarters of a mile to the northward of **Outer Green Island**, from which it bears N. by E. ¾ E. It is a very small rock, is quite bold-to, and *is not buoyed.* When past this and the *Northern Triangles*, there are no more dangers in this channel.

To enter by the Middle Passage: Bring **Matinicus Rock Light** to bear N E. by E. ½ E., distant six miles, and **Monhegan Light** to bear N W. by W. ¾ W., distant fifteen miles, and steer N. by E., which course will lead, with not less than thirteen fathoms, to abreast of **Fisherman Island.** When the middle of **Fisherman Island** bears W. ⅞ N., about two miles off, and **Heron Neck Light** S E. by E. ¾ E., about five and three-quarters miles off, steer N. ¾ E., which course will lead, with not less than twenty-seven fathoms, to abreast of *Camden Entrance.* Above **Camden**, follow the directions given for *West Bay*, on page 356.

The above courses pass a mile to the westward of the *Bantam;* about a quarter of a mile to the eastward of the *Pigeon Ground;* a little over a mile to the westward of the *Ledges* west of *Matinicus;* three-quarters of a mile to the eastward of *Outer Green Island Ledges;* a mile to the eastward of the bare ledge north of **Outer Green Island**; and a mile and three-quarters to the eastward of the *Northern Triangles.*

On the above courses, to enter Fox Islands Thoroughfare: When on the N. ¾ E. course **Owl's Head Light** bears N W. by N. ½ N., three miles distant, and seen just clear of the north end of **Munroe Island**, and in about fifty-three fathoms, steer N E. by E. ¼ E., which course will lead, with not less than six and a half fathoms, up to the *red buoy* on the north end of *Inner Bay Ledges.* Pass to the northward of this buoy and continue the course, having **Brown's Head Light** a little on the eastern bow, and carrying not less than seven fathoms until between **Brown's Head** and the **Sugar Loaves**; after which keep the eastern shore aboard and follow the direction for the *Thoroughfare.* (See page 290.)

These courses pass one hundred yards to the northward of the *red buoy* on the north end of *Inner Bay Ledges;* a quarter of a mile to the northward of the *red buoy* on *Dogfish Ledges;* and the same distance to the southward of *Fiddler Ledge.*

On the above courses, to pass through the Middle Passage into East Penobscot Bay: This passage, before described, (see page 359,) leads between **Long Island** on the north and **North Haven** (the northernmost of the **Fox Islands**) on the south, and is about two miles and a half wide at its western end. It has deep water, and is almost entirely unobstructed. To enter it from *West Bay:* On the N. ¾ E. course, bring **Owl's Head Light** to bear W. ½ N. NORTHERLY, distant nearly two miles, when, in forty-three fathoms, steer N E. ¼ E., which course will lead, with not less than twenty-five fathoms, into *East Penobscot Bay.* When, in twenty-five fathoms, the southern end of **Job Island** bears N W., distant a little over two miles, steer N E. by N., carrying not less than twenty-five fathoms, until **Dice Head Light** becomes visible, when, if bound into *Castine Harbor*, bring the light to bear N E. by N. and steer for it until within half a mile, when steer E. by N. into the harbor, and follow the directions given on page 301.

These courses pass a little over half a mile to the eastward of *McIntosh Ledge;* a little over three-quarters of a mile to the eastward of the *Ledges* east of **Lasell Island**; about a mile to the westward of **Egg Rock**; and three-quarters of a mile to the westward of the large bare ledge west of **Mark Island.**

Or when on the N E. by N. course, in thirty fathoms, with **Hughes Head** bearing N. by E. nearly, and the southern extremity of **Long Island** (which will be in range with **Job Island**) bearing W. by S. ¾ S., steer N E., which course will lead, with not less than eighteen fathoms, into *East Bay.* When, on this course, **Hughes Head** bears W. by N. ¼ N. and **Dice Head Light** N E. by N. ¾ N., steer N. by E. ¼ E., which will lead to the mouth of

Penobscot River; after which, if bound up, follow the directions given for the river. (See page 354.)

The above N E. course passes half a mile to the westward of the large bare ledge west of **Mark Island.**

Bound into Eggemoggin Reach: When on the N E. course **Hughes Head** bears N W. by N. ½ N., **Cape Rosier** will bear E N E., and there is fourteen fathoms, steer for the **Cape,** which approach closely, and when up with it follow the directions given for the *Reach,* on page 252.

V. *To enter Penobscot Bay by the Muscle Ridge Channel.*—Directions for this channel have already been given in full on page 325, but are repeated here for the sake of the completeness of the directions for the bay. This channel, as before mentioned, (see page 313,) begins at **White Head Island,** skirts the west shore of the bay, winding among the numerous islands and ledges in the vicinity of the **Muscle Ridges,** and terminates at **Owl's Head,** the whole distance being seven miles and three-quarters It is the most commonly used of all the entrances to the bay by vessels coming from the westward. A full and detailed description of this channel, its islands and shoals, will be found on pages 313 to 327.

To enter by this channel: Vessels coming from the southward, intending to enter *Penobscot Bay* by the *Muscle Ridge Channel,* pass about midway between **Monhegan** and the **George Islands,** on a course about E. ½ N., until **Monhegan Light** bears S. by W. ½ W., distant three miles, with thirty-one fathoms, rocky bottom. The course is then N E. by E., passing two hundred yards to the westward of the bell-boat near **South Breaker,** three hundred yards to the eastward of **Whitehead Light,** and two hundred yards to the westward of the **spindle** on *Yellow Ledge,* until up with the *red and black can-buoy* on *Lower Gangway Ledge,* which leave to the westward about two hundred and fifty yards, when there will be eight fathoms, hard bottom. Now steer N E. ½ E., passing to the westward of *Hurricane Ledge Buoy;* to the eastward of the buoy on *Garden Island Sunken Ledge,* and of the **spindle** on *Garden Island Ledge;* to the westward of **Channel Rock;** between **Otter Island** and the **spindle** on *Otter Island Ledge;* and to the eastward of *Ash Island Ledge.* When abreast of the eastern end of **Ash Island,** about three hundred yards distant, with eleven fathoms water, steer N. by E. ½ E. to the southern entrance of *Owl's Head Bay.* On this course, when the southern end of **Sheep Island** bears E S E., with nine fathoms, hard bottom, steer N E. through the bay. This course passes to the westward of the *red buoy* on *Sheep Island Bar;* to the eastward of the **spindle** on *Dodge Point Ledge;* and to the eastward of *Owl's Head Ledge,* and leads safely into *West Bay.* On this course, when abreast of **Owl's Head,** having it bearing W. by N. ½ N., about four hundred and fifty yards off, in about eighteen fathoms water, steer N N E., which course will lead, with not less than fifteen fathoms, to abreast of *Camden Entrance.* When **Negro Island Light** bears W. by N. a mile and a quarter distant, steer N E. ½ N., following the directions for *West Bay.* (See page 356.)

On this N N E. *course, to enter Rockland Harbor:* Round **Owl's Head** at a distance of a quarter of a mile, and when the light bears S W. ½ S. steer W. by N. ½ N. toward **Atlantic Wharf,** following the directions for the harbor. (See page 330.)

To enter Rockport Harbor: When in thirty fathoms, with **Jameson Point** bearing W N W. and **Owl's Head Light** S W. by S., steer N. by W., carrying not less than twelve fathoms to the entrance. When in twelve fathoms, with the **beacon** on *Porterfield Ledge* bearing N E. by E. ½ E., distant half a mile, steer N. ½ E. into the harbor.

To enter Camden Harbor: When nearly abreast of **The Graves,** in twenty-six fathoms, having **Negro Island Light** bearing N N W., and **The Graves** N W. ½ W., distant a little over half a mile, steer N. by W. ½ W., which will lead, with not less than nine

fathoms, up to the entrance, after which follow the directions for the harbor. (See page 337.)

To enter Gilkey Harbor by the Southern Entrance: When in twenty-three fathoms, **Negro Island Light** bears NORTH, distant three miles, steer N E. ¼ E., which will lead, with not less than nine fathoms, into the harbor and up to the anchorage.

Having come through Muscle Ridge Channel, to enter Fox Islands Thoroughfare: On the N E. course through *Owl's Head Bay*, bring **Owl's Head Light** to bear N W. by N. ½ N.; when there is twelve fathoms, steer E. ¾ S., which will lead, with not less than eight fathoms, to the western entrance to the *Thoroughfare*. When the **beacon** on *Fiddler Ledge* bears N W. ½ N., distant about six hundred and fifty yards, in eleven fathoms, steer N E. by E. ½ E., with **Brown's Head Light** a little on the eastern bow. When between **Brown's Head** and the **Sugar Loaves**, follow the directions given for the *Thoroughfare*, on page 290.

These courses pass a little over a quarter of a mile southward of *Drunkard Ledge;* a third of a mile southward of *Fiddler Ledge;* and a quarter of a mile to the northward of the *red buoy* on *Dogfish Ledge*.

Bound into East Penobscot Bay: When **Owl's Head Light** bears N W. by N. ½ N., as before, steer N E. by E. ½ E., which course will lead, with not less than twenty-five fathoms, into *Middle Passage*. When **Robinson Rock** bears N W. by N. ½ N., (or is exactly abeam,) and a little over a mile and a quarter distant, the western extremity of **Crabtree Point** (the north point of entrance to *Fox Islands Thoroughfare*) will bear SOUTH, and there will be forty-five fathoms water. Now steer N E. ¼ E. through the *Middle Passage*, carrying not less than twenty-five fathoms, until the southern extremity of **Job Island** bears N W., a little over two miles distant, when steer N E. by N., carrying not less than twenty-five fathoms, until **Dice Head Light** becomes visible, when, if bound into *Castine Harbor*, bring the light to bear N E. by N. and steer for it until within half a mile, when steer E. by N. into the harbor, and follow the directions given on page 301.

These courses pass a little over half a mile to the eastward of *McIntosh Ledge;* a little over three-quarters of a mile to the eastward of the *Ledges* east of **Lasell Island**; about a mile to the westward of **Egg Rock**; and three-quarters of a mile to the westward of the large bare ledge west of **Mark Island**.

Or, when on the N E. by N. course, in thirty fathoms, with **Hughes Head** bearing N. by E. nearly, and the southern extremity of **Long Island** (which will be in range with **Job Island**) bearing W. by S. ¼ S., steer N E., which course will lead, with not less than eighteen fathoms, into *East Bay*. When on this course **Hughes Head** bears W. by N. ½ N. and **Dice Head Light** N E. by N. ¾ N., steer N. by E. ¼ E., which will lead to the mouth of *Penobscot River*, after which, if bound up, follow the directions given for the river. (See page 354.)

The above N E. course passes half a mile to the westward of the large bare ledge west of **Mark Island**.

Bound into Eggemoggin Reach: When on the N E. course **Hughes Head** bears N W. by N. ½ N., **Cape Rosier** will bear E N E., and there is fourteen fathoms, steer for the **Cape**, which approach closely, and when up with it follow the directions given for the *Reach*, on page 252.

VI. *To enter Penobscot Bay by the Two-Bush Channel.*—This passage, much used by coasters, leads between **Great Two-Bush Island** on the north and **Little Green Island** on the south, and between the two is three miles and a quarter wide, but is obstructed by the *Northern Triangles* and other dangerous ledges, which reduce the available width to a mile and three-quarters. Throughout this width there is in no place less than five and three-quarters fathoms, but the sailing-lines pass in not less than ten. To use this channel in coming from the westward it is necessary either to pass to the northward

of **Monhegan**, between it and the **George Islands**, as if intending to pass through the *Muscle Ridge Channel;* or to pass outside of **Monhegan**, and between **Metinic** and **Little Green Islands.** In the former case, it is usual to pass about midway between **Monhegan** and the **George Islands** on a course about E. ½ N. until **Monhegan Light** bears S. by W. ½ W., distant three miles, with thirty-one fathoms, rocky bottom; steer N E. by E. ½ E., carrying not less than fifteen fathoms, until the northern end of **Metinic** bears S E. ½ S., distant two and a quarter miles, and **Tennant Harbor Light** bears N. ½ W., distant two miles and three quarters, in sixteen fathoms; then steer E. by N., which course will lead, with not less than ten fathoms, into *West Bay.* When **Little Green Island** bears S. by W. ½ W., distant a little over two miles and a half, and **White Head Light** N W. by W. ½ W., distant four miles, steer N E. ¾ N., carrying not less than eight fathoms. Continue this course, which passes along the east shore of the **Muscle Ridge Islands**, until **Fisherman Island** bears W. ¼ N., distant nearly two miles, and **Heron Neck Light** (north side of entrance to *Carver Harbor*) bears S E. by E. ¾ E., distant about five and three-quarters miles, when, in forty-two fathoms, steer N. ¾ E., following the directions given for the bay and the different harbors on both sides, on page 356.

The above courses pass nearly a mile to the southward of the *Crow Island Ledges*, (which make off to the westward of **Two-Bush** about a mile and a quarter;) a mile and three-eighths to the northward of the *Northern Triangles;* and about the same distance from the east shores of the **Muscle Ridge Islands.**

VII. *To enter Penobscot Bay by the Fisherman Island Channel.*—Vessels using this passage come through the *Muscle Ridge Channel*, but leave it when to the northward of **Ash Island**, passing to the eastward, between **Sheep Island** on the north and **Fisherman Island** on the south, through a passage a mile and an eighth wide.

Sheep Island, on the north side of the channel, has been already described as a low island, with sandy faces and nearly level surface, having its southern half wooded with stunted spruce and the northern half cleared. It is three-eighths of a mile to the southward of **Munroe Island**, (the northernmost of the **Muscle Ridge Islands.**)

Fisherman Island lies a little over a mile south of **Sheep Island**, and is rocky, about forty-five feet high, with both ends bare, but dotted with a few stunted fir on its northern and eastern faces.

Not less than five fathoms at low water may be taken through *Fisherman Island Channel;* but it is obstructed by several dangerous ledges. Of these, the first met with is

NORTHWEST LEDGE,

which is marked by a *spar-buoy, painted red and black* in horizontal stripes. It bears from the southeastern end of **Sheep Island** S W. ¼ S., distant half a mile, and from the southwest end of **Fisherman Island** N N W., seven-eighths of a mile. There is eight feet at low water on this ledge, and there is good water all around it, but it is usual to pass to the southward of it. The buoy is placed on top of the ledge, in eight feet water.

On the south side of the passage will be seen *a red spar-buoy* north of **Fisherman Island.** This is on

GRINDSTONE LEDGE,

with six feet at low water. This is a detached ledge, extending in a N E. and S W. direction, at an average distance from **Fisherman Island** of three hundred and fifty yards. From four to five fathoms may be taken between the ledge and **Fisherman Island**, but the channel is not safe for strangers. The buoy is on its northeast end, in five fathoms, and is left well to the southward by vessels using this passage.

On the north side of the channel, almost exactly opposite to *Grindstone Ledge*, will be seen *a black spar-buoy.* This is on the southern end of

SHEEP ISLAND SHOAL,

a mass a rocks extending off from the southern end of **Sheep Island** for one-third of a mile, with bare spots at low spring tides one-quarter of a mile from shore. The buoy is in four fathoms, and is to be left well to the northward.

To pass from Muscle Ridge Channel into Penobscot Bay by the Fisherman Island Passage: When abreast of the beacon on **Ash Island Point** and about three hundred yards from it, (see directions for *Muscle Ridge Channel*, page 325,) steer **N E. ½ N.** for the southeastern point of **Sheep Island.** When **Owl's Head Light** bears **N E.** by **N. ½ N.**, three miles and one-quarter distant, and the west end of **Fisherman Island E. ½ S.**, one mile distant, with nine fathoms water, steer **E.** by **N. ½ N.**, which course leads, with not less than five fathoms, safely through the passage. When in twenty-three fathoms, with **Fisherman Island** bearing **S W.** by **S.**, steer **N E.** by **N.**, if bound up the bay, carrying not less than twenty-eight fathoms, until **Owl's Head Light** bears **W S W.**, a little over two miles distant, when, in thirty-eight fathoms, **N. ½ E.** will lead up the bay to abreast of **Camden Entrance.**

Or, if bound into East Penobscot Bay: On the course **N E.** by **N.**, when **Owl's Head Light** is just opened to the northward of **Munroe Island** on a bearing of nearly **N N W.**, and in thirty-seven fathoms, steer **N E. ½ E.**, which course will lead through to the *Middle Passage* with not less than twenty-five fathoms; and when the southern end of **Job Island** bears **N W.** steer **N E.** by **N.**, and follow the directions given for this passage, on page 360.

Or, if bound into Fox Islands Thoroughfare: Continue the course **E.** by **N. ½ N.**, which leads through the passage across the bay, and it will bring up with the *red buoy* on the north end of *Inner Bay Ledges.* Pass to the northward of this buoy, and steer **N E.** by **E. ½ E.** until between **Brown's Head** and the **Sugar Loaves**, after which follow the directions for the *Thoroughfare.* (See page 290.)

The above courses pass five hundred yards to the southward of *Northwest Ledge;* the same distance to the northward of the *red buoy* on *Grindstone Ledge;* and a quarter of a mile to the southward of the *black buoy* on *Sheep Island Shoals.*

VIII. *To enter Penobscot Bay by passing either to the westward of* **Metinic Island**, *or between it and the* **Green Islands.**—Of these channels, the eastern one leads close along the east shore of **Metinic Island**, leaving the *Southern Triangles* and the other dangers in the passage to the eastward, and thence into *Two-Bush Channel.* Vessels using it may pass either inside or outside of **Monhegan**, but it is more frequently used by those which have come outside. The western channel passes between **Metinic** and the main land, but closer to the former.

METINIC ISLAND

lies about nine miles and a half to the westward of **Matinicus** and about the same distance **E N E.** from **Monhegan.** It lies **N N E.** and **S S W.**, and is nearly two miles long, with an average width of a quarter of a mile. Its northern end is bare of trees, and the summit dotted with scattered houses. The middle of the island is thickly wooded, while the southern end is low, bare of trees, and has a few houses on it. Near its southern end, and about six hundred yards east of it, is a small island called **Hog Island;** and one-eighth of a mile **N E.** from this another and much smaller one, called **The Knubble.** Both are surrounded by shoals, and there is no safe passage between them and **Metinic.**

Three-eighths of a mile **S S W.** from the south end of **Metinic** lies a low, grassy islet, called **Metinic Green Island.** It is about two hundred and fifty yards in diameter, and its shores are foul; but there is a passage with three and three-quarters fathoms between it and **Metinic Island** by keeping within one hundred and seventy-five yards of the former. This passage is, however, unfit for strangers, and is very little used by

any one on account of the dangerous ledges which extend to the southward from the south end of **Metinic** to a distance of a quarter of a mile.

On the west side of **Metinic**, about five-eighths of a mile from it, lies a bare rocky islet called **Black Rock.** It is bold-to on all sides, and may be safely passed on either hand, as there is equally good water on both sides.

The north end of **Metinic Island** bears from **White Head Light** S. by W. ½ W., distant five miles.

MONHEGAN ISLAND AND LIGHT-HOUSE.

This, the westernmost of the outlying islands off *Penobscot Bay*, does not belong properly to the bay; but as it is the usual land-fall made by vessels from the westward, it is proper to describe it here. It is situated in

Latitude - - - - - - - - 43° 46′ N.
Longitude - - - - - - - - 69° 18′ W.

Is distant from **Cape Ann** (**Thatcher Island**) about eighty-four miles on a N E. ½ E. course; from **Seguin** nineteen miles on an EAST course; and from **Matinicus Rock Lights** about twenty-one miles on a W. by N. course.

Monhegan lies N E. and S W., and is a mile and a third long. It is high, with steeply sloping shores, which are quite bold-to. Its northeastern end is called **Green Point,** and is high and wooded. A little to the southward of it, on the eastern face of the island, is a bluff, precipitous head, called **Black Head.** Thence the surface gradually descends toward the southwestern end, which is low and thickly wooded, and is known as **Lobster Point.**

About the middle of the island, on a bare summit a hundred and forty feet high, is built a light-house, called

MONHEGAN LIGHT.

It is a gray stone tower, thirty-six feet high, connected with the keeper's dwelling by a white porch, and it shows a flashing white light of the second order of Fresnel from a height of one hundred and seventy-five feet above the sea. The flash is at intervals of one minute, and should be visible from a vessel's deck, on a clear night, nineteen miles. It is usual to look for it immediately after passing **Seguin.**

The geographical position of **Monhegan Light-House** is

Latitude - - - - - - - - 43° 45′ 52″ N.
Longitude - - - - - - - - 69° 18′ 57″ W.

Close in with the west shore of **Monhegan**, about two hundred yards off, lies a small bare island called **Manana Island.** It is about a quarter of a mile long in a N N E. and S S W. direction, and is bare of all vegetation except grass. Upon it is situated the

FOG-SIGNAL
FOR THE WESTERN APPROACH TO PENOBSCOT BAY.

This is a six-inch steam fog-whistle placed in a one-story building about half a mile from the light-house, and gives two blasts of five seconds each per minute. The interval between the blasts is eight seconds, and there is a pause of forty-two seconds after each second blast. The geographical position of the fog-whistle is

Latitude - - - - - - - - 43° 45′ 46″ N.
Longitude - - - - - - - - 69° 19′ 36″ W.

Between the north end of **Manana** and the western face of **Monhegan** are two bare islets, which form, with **Manana** and **Monhegan**, a small harbor of refuge, called *MON-*

HEGAN HARBOR. It has from sixteen feet to seven fathoms in it, and there are no dangers, but it is open to the southward. From north, east, and west winds it is well protected.

About a quarter of a mile to the northeastward of **Manana**, and two hundred yards from the west shore of **Monhegan**, lies a small bare island, called **Inner Duck Rock**; and on the north side of this islet makes in what is known as *Deadman Cove*, in which anchorage may be found in from two to seven fathoms, in fine weather or with easterly winds.

Vessels approaching *Penobscot Bay* from the westward, inside of **Monhegan** should not approach its west shore nearer than a mile, to avoid the

DUCK ROCKS,

four bare, rocky islets, which lie off the northern and northwest shores of **Monhegan** at distances varying from a quarter to half a mile. The most easterly islet is called **Eastern Duck Rock**; the two westernmost, **Western Duck Rocks**; and the one in-shore, in the mouth of *Deadman Cove*, **Inner Duck Rock.**

There is also a sunken ledge, with six feet at low water, two hundred and seventy-five yards north of the **Western Duck Rocks.** It is called *Sunken Duck Rock*, and is marked by a *red spar-buoy* (No. 2) placed in five fathoms water on its north side.

On one of the **Western Duck Rocks**, twelve feet above high water, is built **a dry beacon**, consisting of a wooden tripod fifty-seven feet high, with its upper half covered in and painted red. From it **Monhegan Light-House** bears S S E., seven-eighths of a mile, and the fog-signal on **Manana** S. by W., three-quarters of a mile distant.

On the north side of the passage, between **Monhegan** and the **George Islands**, is a very dangerous ledge, known as

OLD MAN LEDGE,

dry at two-thirds ebb; lies nearly one mile S. ½ W. from the southern end of **Allen Island** and four miles and three-quarters N. by E. ½ E. from **Monhegan Light.** About sixty yards from its southern end is placed an *iron nun-buoy* of the second class, *painted black*, and marked No. 1, in five fathoms at low water. There is a good channel with nine fathoms to the northward of this ledge, between it and another dangerous ledge, called the *Old Woman*, which lies half a mile to the northward of the *Old Man.* It is dry at half-tide, and has, near its southern extremity, three feet at mean low water. *It is not buoyed.*

After passing the **George Islands**, if intending to enter *Two-Bush Channel* by passing to the westward of **Metinic**, the first danger met with will be found about five miles to the eastward of the *Old Man*, and will be recognized by the *red nun-buoy* on its western side. This is the

ROARING BULL,

sometimes called *Black Ledge*, and must be left to the westward by vessels using this passage. From the southern end of **Metinic Island** it bears W. ½ N., distant three miles; from **Burnt Island**, the easternmost of the **George Islands**, E. by S. ½ S., three miles and three-quarters; and from **Monhegan Light-House** N E. by E., seven miles and three-quarters. It has deep water all around it, and is about two hundred and fifty yards long in a N. by E. and S. by W. direction. The buoy is a nun of the second class, is marked No. 4, and placed in fifteen fathoms about one hundred yards to the northwestward of the dry part of the ledge. Vessels using this passage should pass about five hundred yards to the eastward of this buoy.

On the eastern side of the channel, about a mile and three-quarters S E. ½ S. from *Roaring Bull*, is a very dangerous ledge, called

SOUTH-EAST BREAKER,

an extensive shoal, being about half a mile long in an E N E. and W S W. direction, and part of it is dry at low water. There are also many sunken rocks scattered over its surface, separated by small channels with about two fathoms of water. From the southern end of **Metinic Island** it bears S W. by W. ½ W., two miles and a quarter distant, and from **Monhegan Light** E N E., a little over seven and a half miles distant. *It is not buoyed*, and by vessels passing to the westward of **Metinic** is to be left to the southward and eastward. The sailing-lines pass three-quarters of a mile to the westward of it.

HOOPER SHOAL,

a very small, detached rock, with seventeen feet at low water, which lies a mile and three-quarters N E. from *Roaring Bull* and two miles to the westward of **Metinic Island** shore. *It is not buoyed*, and the sailing-lines pass three-eighths of a mile to the eastward of it.

BLACK ROCK

lies on the eastern side of this passage, about a mile and a quarter S E. by E. from *Hooper Shoal;* is a bare, rocky islet, about two-thirds of a mile from the west shore of **Metinic**, and is bold-to on all sides. From the southern end of **Metinic** it bears N W. by N. ½ N., a little over three-quarters of a mile distant, and from the *Roaring Bull* E. by N., two miles and a half distant. There is a good passage on each side of it, and the channel between it and *Hooper Shoal* is a mile and a quarter wide. Three-eighths of a mile S W. by W. ½ W. from **Black Rock** is *a small kelp rock with fourteen feet at mean low water.*

A mile and a quarter N W. by N. ½ N. from **Black Rock**, and two thirds of a mile N E. from *Hooper Shoal*, lies

METINIC ISLAND LEDGE,

with eight feet at mean low water, and from four to seven fathoms all around it. From **White Head Light-House** it bears S W. ½ S., distant five miles and a quarter, and from the north end of **Metinic** W. by N., distant nearly two miles. *It is not buoyed*, and must be left to the westward by vessels using this passage.

SHOALS OFF THE NORTH END OF METINIC.

Off the northern end of **Metinic** are several ledges with deep channels among them. The northernmost, known as *Wheeler Rock*, is a third of a mile N E. by N. ½ N. from the northeast point of **Metinic**, and has five feet at mean low water. A quarter of a mile S W. ½ W. from this ledge is *Wheeler Big Rock*, bare at half-tide, and there is a passage with three and three-quarters fathoms between them. *Neither of these rocks is buoyed*, and to avoid them vessels must not approach the north end of **Metinic** nearer than half a mile. After passing **Metinic** this channel joins *Two-Bush Channel*, when there are no dangers.

To pass to the westward of **Metinic Island** *and* **Black Rock** *and enter Penobscot Bay through Two-Bush Channel:* With **Monhegan Light** bearing S. by W. ½ W., a little over three miles distant, steer E. ½ N., carrying not less than twelve fathoms, until **Marshall Point Light** (at the entrance to *Herring Gut*) bears N N W., distant nearly five miles. The depth will be eleven fathoms, with the buoy on *Roaring Bull* bearing N. by W., about three-quarters of a mile off, and the course will be N E., carrying not less than six and a half fathoms, until **Tennant Harbor Light** bears N W. ½ N., when the depth will be six-

teen fathoms, and E. by N. will lead safely through *Two-Bush Channel.* Continue this course until the middle of **Little Green Island** bears S. by W. ½ W., distant a little over two miles and a half, and **White Head Light** N W. by W. ½ W., distant four miles, when steer N E. ¾ N., and follow the directions for entering the bay by this channel, given on page 362.

The above courses pass a mile and three-eighths to the southward of the *Old Man;* half a mile to the eastward of the *Roaring Bull;* seven-eighths of a mile westward of the *South-East Breaker;* three-eighths of a mile to the eastward of *Hooper Shoal;* nearly seven-eighths of a mile to the westward of **Black Rock**; and three-eighths of a mile to the eastward of *Metinic Island Ledge.*

To pass outside of **Monhegan** *and enter Two-Bush Channel by the passage between* **Metinic Island** *and* **Black Rock**: Intending to enter by this passage, give **Lobster Point** (the southwest point of **Monhegan**) a berth to the northward of about five-eighths of a mile (twelve hundred yards) and steer E N E. On this course, the first danger met with is

GULL ROCK LEDGE,

a kelp ledge, with three and three-quarters fathoms, which lies seven-eighths of a mile S E. by E. from **Lobster Point**, and *is not buoyed.*

The course passes about two hundred yards to the northward of it. When past it, there are no dangers until up with

HADDOCK LEDGE,

a detached rock, with thirteen feet at mean low water, which lies two miles and a half S W. from **Metinic Green Island** and seven miles and a half E. by N. ¼ N. from **Monhegan Light.** From *South-East Breaker* it bears SOUTH, one mile and one-third distant, the channel passing between them. Vessels using this passage pass, therefore, to the southward of the *South-East Breaker*, which has been already described above.

When up with *South-East Breaker* the course turns to the northward, and care must be taken to avoid a dangerous breaker southwest of **Metinic Green Island.** This is a dry shoal an eighth of a mile SW. by W. ½ W. from **Metinic Green Island**, and always shows itself, even at high water. *It is not buoyed*, but the sailing-lines pass five hundred yards to the westward of it. When past this, there are no dangers except **Black Rock** and the *Fourteen-feet Spot*, already described above.

The west shore of **Metinic Island** is bold-to, and may be approached anywhere within three hundred and fifty yards with not less than five fathoms water.

To enter by this passage, give **Lobster Point** a berth to the northward of five-eighths of a mile and steer E N E., carrying not less than seven fathoms, until within a mile and one-eighth of **Metinic Green Island**, with the southern end of **Metinic** bearing N. by E. ¾ E., distant a mile and a half. The depth will be twenty fathoms, coarse sand, and the course is N N E., carrying not less than eight fathoms, until **Tenant Harbor Light** bears N W. ¾ N., when E. by N. will lead safely through *Two-Bush Channel* into *West Penobscot Bay.*

Or on the N N E. *course*, when the northern extremity of **Metinic Island** bears E. by S. ½ S., three-quarters of a mile distant, steer N E. by E. ¾ E., carrying not less than six fathoms, until the middle of **Little Green Island** bears S. by W. ½ W., distant a little over two miles and a half, and **White Head Light** N W. by W. ½ W., distant four miles, when steer N E. ¾ N., and follow the directions for entering the bay after coming through *Two-Bush Channel.*

Of the above courses, the E N E. course passes one-eighth of a mile to the northward of *Gull Rock Ledge;* nearly three-quarters of a mile to the southward of *South-East Breaker;* and about half a mile to the northward of *Haddock Ledge.* The N N E.

course passes nearly six hundred yards to the westward of *Metinic Green Island Breaker;* half a mile to the eastward of the *Kelp Ledge* southwest of **Black Rock**; and a quarter of a mile to the eastward of **Black Rock.** The N E. by E. ¾ E. course passes three-eighths of a mile to the northward of **Wheeler Big Rock,** and a quarter of a mile to the northward of *Wheeler Rock.*

Having come outside of Monhegan, to pass to the eastward of **Metinic,** *between it and the* **Green Islands,** *and enter Penobscot Bay:* Vessels using this passage pass five-eighths of a mile to the southward of **Lobster Point,** as though intending to pass through *Black Rock Channel,* but continue the course to the eastward of **Metinic,** and then haul to the northward, passing along the eastern shore of that island. On the E N E. course they pass between *South-East Breaker* and *Haddock Ledge,* as before described, (page 369,) and when steering to the northward, along the east shore of **Metinic,** look out, first, for

GREEN POINT SHOAL,

with three and three-quarters fathoms, which lies one mile and a half N E. by E. ¾ E. from the southern end of **Metinic** and three-quarters of a mile from its eastern shore. It breaks in heavy weather, *is not buoyed,* and is dangerous only to vessels of large draught. The sailing-lines pass three-eighths of a mile to the eastward of it.

On the eastern side of the channel, bearing about E. ½ N. from **Green Point Shoal,** and distant a mile and a quarter, lie very dangerous ledges, known as

THE SOUTHERN TRIANGLES,

three distinct ledges, with deep water between them; the two easternmost extending in a NORTH and SOUTH direction, and together covering an area half a mile long by an eighth of a mile in width; and the westernmost lying half a mile W. by S. from the dry part of the southern ledge, with a channel between them with from seven to eighteen fathoms. These ledges are bare at low spring tides, and always break. The westernmost, which obstructs this channel, bears S. ½ E. from **White Head Light,** distant five miles and a half, and from the north end of **Metinic** S E. by E. ¾ E., one mile and seven-eighths distant. The sailing-line passes three-quarters of a mile to the westward of it.

The *Southern Triangles are not buoyed,* but a buoy has been recommended to be placed on their east and west ends.

One mile and a quarter N. by E. ½ E. from the northern end of the *Southern Triangles* lies

ALDEN ROCK,

sometimes called *Bud Rock,* a pinnacle rock, with four feet at mean low water, which bears E. by N. ¾ N. from the north end of **Metinic,** distant two miles and three-quarters; N W. ¾ W. from **Little Green Island,** distant one mile and three-eighths; and S. ¾ W. from **Great Two-Bush Island,** distant two miles and three-eighths. It is a very small rock, and has from seven to eleven fathoms on all sides of it. *It is not buoyed,* but should be, for the convenience of vessels using this channel.

To enter by this channel: Pass five-eighths of a mile to the southward of **Lobster Point,** and when **Monhegan Light** bears N. by E. ½ E., distant one mile and an eighth, steer E N E., which course continue past the southern end of **Metinic,** with not less than nine fathoms, until it bears W. by N. ½ N., and **White Head Light** N. ½ E., the latter being distant six miles and five-eighths. The depth will be fifteen fathoms and the course N N E., which will lead, with not less than eight fathoms, into *Two-Bush Channel.* When in this channel, with **White Head Light** bearing N W. by N. ¾ N., distant nearly two miles and three-quarters, and **Tennant Harbor Light** N W. by W. ½ W., distant four miles and three-eighths, steer E. by N. until the middle of **Little Green Island** bears S. by W. ½ W. and **White Head Light**

N W. by W. ½ W., when the depth will be eleven fathoms, and steer N E. ¾ N., following the directions for entering the bay by *Two-Bush Channel.*

The above courses pass one-eighth of a mile to the northward of *Gull Rock Ledge;* five-eighths of a mile to the southward of *South-East Breaker;* half a mile to the northward of *Haddock Ledge;* five-eighths of a mile to the southward of *Metinic Green Island Breaker;* three-eighths of a mile to the eastward of *Green Point Shoal;* three-quarters of a mile to the westward of the westernmost of the *Southern Triangles;* and one mile to the westward of *Alden Rock.*

LIGHT-HOUSES IN PENOBSCOT BAY.

Name.	Latitude N.	Longitude W. from Greenwich. In arc.	Longitude W. from Greenwich. In time.	Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
	° ′ ″	° ′ ″	h m s			Feet.	
Saddle-Back Ledge Lt	44 00 51	68 43 35	4 34 54.3	Fixed.	.....	51	12
Heron Neck Light ..	44 01 30	68 51 43	4 35 26.9	Fixed, R.	.....	92	14
Deer Id. Thor'fare Lt	44 08 03	68 42 12	4 34 48.8	Fixed.	.....	52	12
Eagle Island Pt. Lt ..	44 13 03	68 46 04	4 35 04.3	Fixed.	.....	106	15
Pumpkin Island Lt ..	44 18 32	68 44 34	4 34 58.3	Fixed.	.....	27	9
Matinicus Rock Lts {	43 47 00	68 51 18	4 35 25.2	Fixed.	.....	85	14
	43 47 00	68 51 18	.....	Fixed.	.....	90	14
White Head Light ..	43 58 42	69 07 28	4 36 29.9	Fixed.	.....	70	13
Owl's Head Light ...	44 05 31	69 02 39	4 36 10.6	Fixed.	.....	100	15
Brown's Head Lt ...	44 06 41	68 54 34	4 35 38.3	Fixed.	.....	39	11
Negro Island Lt	44 12 04	69 02 56	4 36 11.7	Fixed.	.....	52	12
Grindel Point Lt	44 16 53	68 56 35	4 35 46.3	Fixed.	.....	39	11
Dice Head Light ...	44 22 57	68 49 09	4 35 16.6	Fixed.	.....	130	17
Fort Point Light ...	44 28 01	68 48 42	4 35 14.8	Fixed.	.....	103	15
Monhegan Id. Lt ...	43 45 52	69 18 57	4 37 15.8	Fl'g W.	1m 00s	175	19

TIDES IN PENOBSCOT BAY.

	Herring Gut.	Rockland.	Tennant Harbor.	Rockport.	Castine.	Fox Islands Thoroughfare.
Corrected Establishment	10h 58m	11h 02m	10h 45m	11h 08m	11h 11m	11h 01m
Mean Rise and Fall of Tides	9.3 ft.	9.6 ft.	9.4 ft.	9.8 ft.	9.3 ft.	9.7 ft.
Mean Rise and Fall of Spring Tides	10.0 ft.	10.9 ft.	10.0 ft.	10.5 ft.	.....	10.3 ft.
Mean Rise and Fall of Neap Tides .	8.5 ft.	8.3 ft.	8.8 ft.	9.2 ft.	.....	9.1 ft.
Mean Duration of Rise	6h 12m	6h 20m	5h 56m	6h 14m	6h 24m	6h 11m
Mean Duration of Fall	6h 13m	6h 06m	6h 29m	6h 11m	6h 01m	6h 14m

VARIATION OF THE COMPASS.

The magnetic variation for 1875 will be as follows:

Western Entrance to Penobscot Bay ..... 14° 55′ W.
Near the Green Islands ..... 14° 45′ W.
Eggemoggin Reach ..... 15° 20′ W.
Near Inner Bay Ledges ..... 15° 00′ W.
Off Castine Harbor ..... 15° 20′ W.

CHANNELS AND HARBORS
AMONG THE MUSCLE RIDGE ISLANDS.

There are many passages through and among this group of islands, but they are, without exception, unsafe for strangers to attempt. The chart will best show the difficulties which would here beset one unacquainted with the numerous ledges and shoals with which these channels abound.

There is, however, a good anchorage, easy of access for weather-bound vessels, in a deep bight between the *Clam Ledges* on the north and **Hewell** and **Grafton Islands** on the south. Vessels coming from the northward may round **Fogg Island** close-to, and steering for about the middle of **Hewell Island**, anchor at discretion in from three to six fathoms, soft bottom. Vessels coming from the southward may, when abreast of *Lower Gangway Ledge*, in the *Muscle Ridge Channel*, in eight fathoms water, steer **E. ¾ N.**, passing between **Hurricane Island** and *Hurricane Ledge* with not less than seven fathoms water, and anchor as before, in from three to five fathoms, soft bottom. Or they may round *Hurricane Buoy* and steer E. ¾ S., with not less than six fathoms, to the anchorage.

HOME HARBOR.

This harbor, already described, (see page 313,) lies between **Hewell** and **Pleasant Islands**, and has from two to eight fathoms water. The approach to it is much obstructed, and it is therefore unsafe for strangers, who should not attempt it except in cases of extreme necessity. For such cases the following directions are given:

1st. DANGERS.—The approach to this harbor from the bay is between *Halibut Rock* on the north and *Two-Bush Reef* on the south. The former, which is bare at low water, lies half a mile S. by E. of the southern end of **Andrews Island**, with deep water all around it. *It is not buoyed.* After passing it there will be seen a small rocky island, bearing S E. by S. ¾ S. from the eastern end of **Pleasant Island**, about a quarter of a mile distant. It has no name. When past it, the northern side of the channel is marked by two rocky islets, bearing S E. ¾ S. from the southeastern point of **Hewell Island**, and known as **Hewell Island Rocks.** They are two detached rocks, in the middle of the passage, with six fathoms water between them, and from three to eight fathoms on all sides of them. The northwestern rock has a channel nearly two hundred yards wide, and with six fathoms water between it and **Hewell Island**, and another with seven fathoms between it and *Pleasant Island Ledge.* This latter is the channel generally used, and is a hundred and thirty yards wide in its narrowest part. Between the two rocks three fathoms may be taken at mean low water.

Vessels entering *Home Harbor* to the northward of **Hewell Island Rocks** pass to the southward of a couple of rocky islets connected at low water, and called by the common name of **Yellow Ledge.** This ledge bears E. ¾ S. from the southeastern end of **Hewell Island**, distant a quarter of a mile, and **N E. by N.** from the easternmost of the *Hewell Island Rocks*, distant three hundred and twenty-five yards. The channel between **Yellow Ledge** and **Hewell Island Rocks** has a depth of from seven to nine fathoms.

Pleasant Island Ledge makes off in an easterly direction from the northeastern point of **Pleasant Island** to the edge of the main channel, a distance of three hundred and twenty-five yards, and *is not buoyed.*

2d. SAILING DIRECTIONS.—I. *To come into Home Harbor by the Main or South Channel.*—Bring the extreme southern point of **Andrews Island** to bear **N W. ¾ N.** and the centre of **Crow Island W. by N. ¾ N.**, when the depth will be from sixteen to eighteen fathoms. **Steer N W. by W. ¾ W.**, passing half a mile to the southward of *Halibut Rock*, and enter the channel midway between **Hewell Island Rocks** and *Pleasant Island Ledge.*

This course continued will lead safely to the anchorage, and there will not be less than eight fathoms until up with the entrance to the harbor. The water shoals gradually toward the head of the harbor until a depth of three fathoms is found, when vessels even of the lightest draught should anchor, as the soundings decrease rapidly from three fathoms to four feet.

In approaching the northwestern point of **Pleasant Island** keep that point aboard to avoid the three rocky islets which lie on the north side of the channel off the southern shore of **Hewell Island**. Three fathoms at low water may be taken to within fifty yards of this point.

II. *By the North Channel.*—Steer W N W. for the southeastern end of **Hewell Island**, passing to the southward of *Halibut Rock* two hundred yards, and midway between the **Yellow Ledge** and **Hewell Island Rocks**. On this course there is not less than eight fathoms, and when abreast the westernmost **Hewell Rock** and about one hundred and fifty yards of the southeastern point of the island, the depth will be eight fathoms, and the course WEST for the northwestern end of **Pleasant Island**. Anchor at discretion, in from four to eight fathoms. The bottom is soft, and is good holding-ground.

This is a good harbor of refuge in southerly and southwesterly winds, and for all northerly winds from N W. to N E. In any northerly wind a good anchorage is made by rounding the southeastern point of **Hewell Island** and shooting up into the cove that makes in to the westward of that point. Here from two to four fathoms, soft bottom, may be found. With southerly winds vessels anchor in mid-channel, near the northeastern point of **Pleasant Island.**

COAST FROM WHITE HEAD LIGHT TO MOUTH OF ST. GEORGE RIVER.

Westward from **White Head Island** is a deep bay with many islands and ledges, which extend to **Hart Neck**, on the south side of the entrance to *Tennant Harbor*, a distance of two miles and three-eighths. It contains within its limits *RACKLIFF* and *WHEELER BAYS* and *LONG COVE*, in all of which there is good water for vessels of twelve feet draught. To the westward of **White Head Island** lie, first, **Norton Island,** (see page 315,) and to the northward of this **Rackliff Island,** separating *Seal Harbor* from *Rackliff Bay.* **Rackliff Island** lies to the southwestward of **Fogg Point,** (see page 315,) from which it is distant one-eighth of a mile; and **Spruce Head Island** (see page 314) lies about five hundred yards to the southeastward of the same point, *Seal Harbor* lying between the two islands.

The main shore from **Fogg Point** turns abruptly to the westward, its general course being W. ½ N. for one mile and a quarter to **Elwell Point,** which is the eastern point of entrance to a long cove making up to the northward and eastward, called *HARRINGTON COVE.* But although this is the general course of the shore-line, it is very much indented by deep coves.

The character of the shores is much the same as that to the eastward of **Fogg Point,** partly wooded, partly cleared, rocky, and from twenty to forty feet high.

South of **Elwell Point** extends a group of islands which separates *Rackliff Bay* from *Wheeler Bay.* This group is known as the

ELWELL GROUP.

There are four of them. The most northerly, called **Calf Island,** lies two hundred and twenty-five yards SOUTH from **Elwell Point,** and its length north and south is three hundred and seventy-five yards. It is merely a bare, rocky island, about twenty feet high, and surrounded by ledges and bare rocks.

The middle and largest island is called **Elwell Island**; is six hundred yards long, and lies N. by E. and S. by W.; but it is of very irregular shape, being only about fifty yards wide in the centre, over two hundred yards at its northeastern end, and four hundred at its southwestern end. Between it and the northern island (one hundred yards off) there is eleven feet of water; but this runs into a pocket to the northward of **Elwell Island**, and is stopped by a flat which is bare at low spring tides.

HEN ISLAND.

Between two and three hundred yards W. by N. from the centre of **Elwell Island** is the third of the group, which is simply a bare rock about one hundred and fifty yards in diameter. It is called **Hen Island.**

EAGLE ISLAND,

the most southerly of the group, lies three hundred and fifty yards S S W. from the southern end of **Elwell Island.** It is also bare and rocky; lies EAST and WEST, and is two hundred and twenty-five yards long.

RACKLIFF BAY

is contained between these islands on the west and **Rackliff Island** on the east. It lies N. by E. and S. by W., is three-quarters of a mile long, and three-eighths wide at its widest part. Good anchorage may be found in it, but the harbor is of no importance, and the entrance to it is so obstructed by ledges as to render it almost impossible for any one unacquainted to enter. No sailing directions need be, or in fact could be, given unless the ledges should be buoyed.

WHEELER BAY

lies west of *Rackliff Bay*, and is contained between the main land, which here runs to the southward, (S. by W. from *Harrington Cove* to **Clark Point,**) and the **Elwell Islands.** It thus forms a wide and deep bay of irregular shape, its general course being NORTH and SOUTH. Its western shores are very much indented by coves, but these are all shallow and of no importance. *Wheeler Bay* is one and a quarter miles long, and has an average width of half a mile. Its shores are rocky, mostly wooded with spruce and fir, and vary in height from twenty to fifty feet. It is of little importance as a harbor of refuge, as so much better ones exist near it, and its approaches are so barricaded by ledges and shoals as to render it difficult of access, even to one thoroughly acquainted with the harbor.

DANGERS.

The principal dangers in the approaches to *Wheeler* and *Rackliff Bays* are the

NORTON ISLAND LEDGES,

which extend off from the southern end of **Norton Island** nearly across both bays, a distance of one mile and a quarter. They are a group of ledges, with deep-water channels between them, through which, however, only those well acquainted with the shoals dare to venture. The most easterly of these ledges runs N. by E. and S. by W., its northern end being two hundred yards west of the southwest point of **Norton Island.** This ledge is half a mile long, and both ends of it are distinctly marked by bare rocks. Although there are slue channels across this ledge, no one should attempt to cross between the two islets. Two hundred yards N N W. from the northern end of this ledge lies a shoal with seven feet on it. Between **Norton Island** and the easternmost ledge a narrow channel with nineteen feet at low water exists; and between the easternmost ledge and the "*Seven-feet Shoal*" the same amount of water may be carried.

The **Middle Ledge** begins three hundred yards W S W. from the southwestern extremity of **Rackliff Island**, and runs S S W. for three quarters of a mile. Its southern extremity is marked by a large bare rock about two hundred and fifty yards long. Between the middle ledge and the eastern ledge over three fathoms may be carried, but the channel is narrow.

One quarter of a mile W. by S. from the dry middle ledge lies another bare shoal, which is, however, of small extent. A channel with from three to eight fathoms water, and over three hundred yards wide, passes between this shoal and the middle ledge.

One and a quarter miles from **Norton Island**, and nearly four hundred and fifty yards W. by N. from the small bare ledge just mentioned, lies the westernmost ledge, which is composed of two bare rocks lying N. by E. and S. by W. from each other, and surrounded by shoals. Between this ledge and the small one east of it a channel over two hundred and fifty yards wide passes, with from four to eleven fathoms water. A five-feet rock lies N. by E. from the northern end of this shoal, at a distance of two hundred yards. There is a depth of four fathoms between it and the western shore.

CLARK POINT LEDGES,

sometimes called *Clark Island Ledges*, are bare at low water, lie in a group of three, S S W. from **Clark Point**, and distant from it nearly three-eighths of a mile, and *are not buoyed.*

GENERAL SAILING DIRECTIONS.

No detailed sailing directions can be given for these harbors; but it may be remarked in general that the best entrance to both bays is to the westward of the westernmost of the *Norton Island Ledges.* This channel is three-eighths of a mile wide, and has from five to eight fathoms at low water. Its western boundaries are the three small islands which separate it from *Long Cove*, and which, beginning at the southernmost, are **Northern Island, High Island,** and the **Spectacles.**

To enter by this channel: When abreast of **Tennant Harbor Light-House** steer N E. ¼ N., passing midway between the islands and the western end of *Norton Island Ledges*, and continue this course until the southern ends of **Norton** and **White Head Islands** are in range. Then steer N. by E. ¼ E., and anchor in four fathoms, soft bottom.

For the passages between the ledges the chart will be the best guide.

Vessels entering by the southwestern channel must be careful to give **Clark Island** (the large island north of the **Spectacles**) a berth of at least three-eighths of a mile to avoid the flats which make off from its eastern end.

To enter Rackliff Bay by the same channel: When on the course N E. ¼ N. **White Head Light** bears E. by S. ¾ S., steer E. ½ N. for the southern end of **Rackliff Island**, which will just hide the northern point of **Norton.** When abreast of **Eagle Island** steer E N E., and anchor at discretion, in from three to four fathoms, under **Rackliff Island.**

ISLANDS SEPARATING LONG COVE FROM WHEELER BAY.

CLARK ISLAND.

From **Clark Point** the main shore-line runs W. by N. for three-quarters of a mile to the entrance to *Clark Cove.* Off this shore, at a distance of only one hundred and thirty yards, lies **Clark Island,** extending N N W. and S S E., nearly three-quarters of a mile long, and with an average width of three-eighths of a mile. The northeastern shore is low, and slopes very gently to the water, and patches of the land are under cultivation, while several houses occupy the southeastern and northeastern faces. The southwest shores are high and steep, rising to a height of eighty feet above sea-level. The channel into *Clark Cove* runs close under this shore.

Two hundred and fifty yards to the southeastward of **Clark Island** there is a long narrow islet lying E. by N. and W. by S., and connected at low water with **Clark Island.** It is three hundred and seventy-five yards long, and is not named, being considered by the inhabitants as part of **Clark Island.**

SPECTACLE ISLANDS

lie nearly three hundred yards S S W. from **Clark Island.** They are two very small, irregularly-shaped islets, separated at high water by a very narrow passage, but united at low water.

HIGH ISLAND.

This rocky island lies S. by W. from the **Spectacles,** and distant from them two hundred and seventy-five yards, and is nearly round, with a diameter of four hundred yards, and is covered with stunted fir trees.

NORTHERN ISLAND.

About one hundred and seventy-five yards S W. from **High Island** lies **Northern Island,** irregular in shape, and nearly five hundred yards long. It is of moderate height, rocky, and covered with a very stunted growth of fir. The crest of the island is only forty feet above sea-level, and there is a single house near the west end, from which to the point the land is low and bare except for a solitary spruce tree here and there.

This island forms the northern point of the entrance to *Tennant Harbor*, and the eastern point of *Long Cove.*

TENNANT HARBOR.

This excellent harbor lies five miles N N W. from **Metinic Island** and three miles W S W. from *Seal Harbor.* It is an arm of the bay, running EAST and WEST, and is one and a quarter miles long, with an average width of four hundred and fifty yards. The entrance is between **Northern Island** on the north, and a rocky island, called **Southern Island,** on which the light-house is built; and the southern side of the harbor is formed by a well-cleared and settled peninsula called **Hart Neck.** Not only the southern shores, but the western and northern are well-settled, the village of **Tennant Harbor** occupying the northwestern shores.

SOUTHERN ISLAND

lies one-quarter of a mile SOUTH from **Northern Island,** and forms the southern point of entrance to *Tennant Harbor.* It extends E S E. and W N W.; is six hundred yards long, and varies in width from one hundred to two hundred and seventy-five yards. Its eastern end, on which the light-house is built, is nearly seventy feet high, but the tower is built part of the way up the slope. The land is bare, and slopes gently from the eastern to the western end, where it is quite low, and there are a few lone pine trees on the summit.

TENNANT HARBOR LIGHT-HOUSE.

On the eastern end, forty feet above sea-level, is built the light-house, the guide to *Tennant Harbor.* It is a white tower, twenty-six feet high, showing a revolving red light of the fifth order of Fresnel from a height of sixty-six feet above sea-level. The lantern and the keeper's dwelling are both painted red.

This light flashes at intervals of half a minute, and is visible thirteen miles. Its geographical position is

Latitude - - - - - - - -	43° 57′ 39″ N.
Longitude - - - - - - - -	69° 11′ 06″ W.

DESCRIPTION OF SHORES OF TENNANT HARBOR.

HART NECK.

This peninsula, as before mentioned, forms the southern side of the harbor. It is mostly cleared, and slopes gradually from its crest (which is from sixty to eighty feet above high-water mark) to the water's edge. The houses on the summit appear, to a vessel coming from the eastward, over the western end of **Southern Island**, and the northeastern end of the **Neck**, as seen from seaward, is fringed with a low growth of spruce trees.

North shores of the harbor: After passing between **Southern** and **Northern Islands** a large cove opens from behind **Northern Island**, extending about N E. to the southwestern side of **Clark Island**. This is

LONG COVE,

a mile long, with an average width of eight hundred yards. The entrance to it is between **Northern Island** on the east and the eastern end of the peninsula, on which the village of **Tennant Harbor** is built, which forms the western side of the entrance. Between these two points the entrance is three-eighths of a mile wide, but is contracted and obstructed by a group of small islets extending off from the western shore to a distance of three hundred and seventy-five yards, and the deepest water is exactly midway between the most easterly of these islets and the western shore of **Northern Island**. The course in is N. by E. ½ E. from this point, and nine feet at low water can be taken up to the southwest end of **Clark Island**.

There is also a passage between the **Spectacles** and **Clark Island** by passing about one hundred and fifty yards to the eastward of **High Island**, and when abreast of its southeastern point steering for the middle of the south end of **Clark Island** until exactly between the **Spectacles** and the small islet which lies to the southeastward of **Clark Island**; then keep the southwestern shore of **Clark Island** aboard, and anchor at discretion.

The eastern point of the peninsula, on which the village of **Tennant Harbor** is built, is sixty feet high, but slopes gradually to the water. To a vessel coming from seaward it appears as a thickly-wooded point covered with a thick growth of pine, birch, maple, etc. On its southern end a wharf is built out, and a warehouse stands at its head.

The settlement appears a little to the left of this point and directly ahead, at the head of the cove. The land is low, cleared, and dotted with houses, the whole being backed by thick woods.

DANGERS

IN APPROACHING TENNANT HARBOR.

I. *Coming from the eastward*, there are no dangers except the *South Breaker*, which lies eight hundred yards **SOUTH** from **White Head Light-House**. It has been already described, (see page 274,) and is marked by a *bell-buoy*, and also by a *large red nun-buoy* placed on its southwestern end.

II. *Coming from the southward*, there are no dangers except

HART LEDGE,

which lies about four hundred and fifty yards from the shore of **Hart Neck** and nearly one mile **SW. ½ S.** from **Tennant Harbor Light-House**. It is composed of two bare rocks about two hundred yards **N E.** and **SW.** from each other, but lying so close to the shore it is of little importance.

These are all the dangers met with in the approaches to this harbor. The only ledge of any importance in the harbor is

HARBOR LEDGE.

It lies one hundred and fifty yards off the northern shore of **Hart Neck** and nearly three-quarters of a mile W N W. from the light-house; has two feet at mean low water, and is marked by *a black spar-buoy.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING TENNANT HARBOR.

I. *Coming from the northward and eastward.*—Round **White Head** close-to, in about eight fathoms, and bring **Tennant Harbor Light** to bear W. ¼ N., when steer for the light, carrying not less than six fathoms, until within half a mile of it; then steer W. by N. ½ N. into the harbor, and anchor at discretion, in from two to four fathoms.

Coming from the eastward: Come in by *Two-Bush Channel,* (see page 362;) bring **White Head Light** to bear N W. by W. ½ W. and **Tennant Harbor Light** to bear W. by N. ¼ N., with eighteen fathoms water, and steer for the latter until **White Head Light** bears N E. ¼ E., with fifteen fathoms, muddy bottom, when steer W. by N. ½ N., as before.

Coming from the southward: Steer N E. ¼ E., for **White Head,** until **Tennant Harbor Light** bears N. by E. and the south end of the large rocky island known as **Mosquito Island,** two and a half miles S W. from **Southern Island,** bears W. by N. ½ N. and is in range with **Marshall Point Light-House.** The depth at this point is fourteen fathoms, and the course N. by E. ¼ E., carrying not less than ten fathoms, and passing three hundred and fifty yards to the eastward of **Tennant Harbor Light.** Continue this course until the light-house bears W. by S. ¼ S., with ten fathoms, when steer N W. ¼ N., with not less than nine fathoms, for nearly a quarter of a mile, until the light-house bears S W. by S. ¼ S. Now steer W. by N. ½ N. to the anchorage.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Tennant Harbor Lt	43° 57′ 39″	69° 11′ 06″	$4^h 36^m 44.4^s$	Rev., red.	$0^m 30^s$	66 ft.	14

TIDES.

Corrected Establishment	$10^h 45^m$
Mean Rise and Fall of Tides	9.4 ft.
Mean Rise and Fall of Spring Tides	10.0 ft.
Mean Rise and Fall of Neap Tides	8.8 ft.
Mean Duration of Rise	$5^h 56^m$
Mean Duration of Fall	$6^h 29^m$

CURRENTS.

The tidal current has little effect on the courses inside the harbor, but in *Muscle Ridges* there is sometimes a strong current. This current, however, sets right up and down the channel, and does not affect the course, but only the speed of vessels. As the course into *Tennant Harbor* is almost directly across the axis of this channel, the effect will be to set vessels entering either toward the northern or southern shores. Mariners must therefore be careful, in passing along the southern shore of **White Head**

Island, that they are not set on to the long ledges which make off to the southward from that shore. By keeping the bearing of **Tennant Harbor Light**, however, all dangers will be avoided.

VARIATION OF THE COMPASS.

The magnetic variation for 1875 is 14° 40′ W., with an approximate annual increase of 2′.

From **Hart Neck** the coast takes a SW. course for two miles to **Mosquito Head.** The shore is merely bare rock, from twenty to eighty feet high, crested here and there with low fir trees.

MOSQUITO HEAD

is rocky, densely wooded with fir and spruce, and forms the east point of entrance to a large but shallow cove which here makes in to the northward for five-eighths of a mile, and is called *MOSQUITO HARBOR.* This cove has an average width of an eighth of a mile, with nine feet at low water in the channel for about half its length, and is unobstructed, but is little used except by very small coasters and fishing-boats. The best entrance to it leads close under **Mosquito Head**, between it and **Mosquito Island**, when from three to five fathoms may be carried; after which the water shoals gradually to the anchorage. There are no dangers, and it is only necessary to keep off the shores.

The course in is W. by N. ¾ N., keeping **Mosquito Head** rather the best aboard until the long tongue-like point on the west shore just above the village bears N. by E., when it may be steered for until past the small rocky island on the east shore, where anchorage will be found in thirteen feet at low water. Above this the water shoals rapidly to three feet.

The small settlement on the west shore of the cove is called **Mosquito Village**, and is inhabited principally by fishermen.

From *Mosquito Harbor* to the westward the coast has a general course W. by S. ½ S. for about a mile and five-eighths to **Marshall Point**, the eastern point of entrance to *Herring Gut*, which is also the eastern passage into *St. George River.* The shore is much like that to the eastward, being low, rocky, dotted here and there with small groves of spruce and fir, and with occasional cleared fields appearing well back from the shoreline. It cannot be closely approached, however, on account of the numerous ledges and shoals which lie along its face; and the approach to it is still further guarded by a number of islands and islets which stretch nearly from **Mosquito Head** to the main entrance to *St. George River.* Of these the largest and most noticeable is

MOSQUITO ISLAND,

which lies three-eighths of a mile SW. from **Mosquito Head**, is five-eighths of a mile long, of moderate height, in many places bare of trees and in others dotted with scattered clumps of spruce and fir. Its southern end is low and bare with the exception of two or three scraggy fir trees on its extreme point; and there is a lone house on the summit of the island, near its northern end.

There is no passage between **Mosquito Island** and the main shore except the channel between it and **Mosquito Head**, leading into *Mosquito Harbor*, as before described. A bar with five feet at low water joins the island to the main shore a little to the westward of the entrance to *Mosquito Harbor*, and there are several bare ledges to the westward of the bar, between the main land and **Mosquito Island.** The channel leading into *Herring Gut* from the eastward passes along the south shore of the island, between it and a group of islets known as **Hay Ledge** and **The Brothers**, and is about half a mile wide, with from three to eleven fathoms in it.

HAY LEDGE

is a small, bare, rocky island, lying half a mile to the southwestward of **Mosquito Island**, and may be approached from the eastward to within one hundred and fifty yards with five fathoms water. About five hundred yards W N W. from it are

THE BROTHERS,

a group of three rocky islets, bearing about W. by S. ½ S. from the southwestern end of **Mosquito Island**, distant five-eighths of a mile. They are all bare rocks with the exception of the southernmost and largest, which has a group of four or five fir trees on its northeastern end. There are no passages among them, but an excellent and unobstructed passage, with five fathoms, exists between them and **Hay Ledge**; and another, with from seven to eleven fathoms, between them and

THE GUNNING ROCKS,

which lie to the westward of them, about three eighths of a mile distant. The **Gunning Rocks** are two low, bare, rocky islets, lying in a N E. and S W. direction, and connected at low water. There are deep channels on all sides of them, the main entrance to *Herring Gut* from the eastward passing to the northward of them and the middle passage to the westward; but there are dangerous sunken ledges in their vicinity, and as a rule they should receive a good berth.

ST. GEORGE RIVER.

The entrance to this river is between **Marshall Point** on the east and **Gay Island** on the west, between which two points it is two miles and three-quarters wide, but obstructed by many islands and ledges, by which are formed three principal channels. The easternmost, called *HERRING GUT*, runs between **Marshall Point** and **Hooper Island**; the *MIDDLE* or *MAIN CHANNEL* passes between **Hooper Island** and the **George Islands**; while the westernmost, sometimes called the *NORTH CHANNEL*, enters between **Caldwell Island** (the northernmost of the **George Islands**) and **Gay Island**, the western point of entrance to the river.

But the approaches to this river, whether from the eastward or westward, are rendered extremely difficult to strangers by the outlying islands and ledges, which extend in a great mass from **Mosquito Head** to the westward, into *Muscongus Bay*, for a distance of nearly nine miles; and through and among which lead various passages, with water sufficient for vessels of the largest size, but most of which require local knowledge for their successful navigation. Of these there are five, however, by which with ordinary care the mouth of the river may be safely approached, viz: The *WESTERN PASSAGE*, which leads between **Harbor** and **Franklin Islands** in *Muscongus Bay*, and is three-eighths of a mile wide; the *OLD HUMP CHANNEL*, which crosses the shoals by a slue with not less than ten fathoms in it, and receives its name from the bare rocky islet known as the **Old Hump**; the *SOUTH CHANNEL*, which leads along the west shore of the **George Islands**, and is properly the main entrance to the river from the westward; the *MIDDLE CHANNEL*, which leads along the east shore of **George Islands**; and *HERRING GUT*, (before mentioned,) which leads close along the east shore, between it and **Hooper Island**. There is still another passage, very commonly used by coasters not only when bound into or out of *St. George River*, but also when bound along shore to the eastward or westward. It passes between **Thompson** and **Davis Islands**, (two of the **George Islands**,) has not less than four fathoms and three-quarters in the channel, and is known as the *DAVIS STRAITS PASSAGE*.

The general course of *ST. GEORGE RIVER* is N E. by E., and its length to **Thomas-**

ton, the head of navigation, is exactly ten miles. At **Thomaston** it receives the waters of two small streams, called *MILL RIVER* and *WARREN RIVER*, the town being situated on the peninsula embraced between the two. It is a thriving place, with considerable ship-building interest, but the principal trade is in lime.

MARSHALL POINT,

the eastern point of entrance to *St. George River*, is high and bare, but extends off into a low rocky ledge from six to ten feet above high water, on which the light-house is built. The eastern channel into *Herring Gut* passes close around this point, leaving the **Gunning Rocks** well to the southward and **Hart Island** and **Bar** well to the westward. This point is a little over two miles to the westward of **Mosquito Head**, and nearly seven miles to the westward of **White Head**, the west point of entrance to *Penobscot Bay*. On its eastern extremity is built the light-house called

MARSHALL POINT LIGHT-HOUSE,

which is the guide to the approach to *St. George River* through *Herring Gut*. The tower is of granite and brick and twenty-four feet high, and is connected with the keeper's dwelling, which stands on the higher ground behind it, by a covered way, painted brown. The upper half, which is of brick, is whitewashed, but the granite, which forms the lower part of the tower, remains of the natural color. The light is a fixed white light of the fifth order of Fresnel, is shown from a height of thirty-one feet above the sea, and is visible ten miles. Its geographical position is

Latitude - - - - - - - - -	43° 55′ 02″ N.
Longitude - - - - - - - -	69° 15′ 41″ W.

GAY ISLAND,

on the west side of the entrance to *St. George River*, is a mile and a half long and of very irregular shape, its southern shore, especially, being much indented by coves. Of these the largest and most important is *GAY COVE*, which has thirteen feet water in it, and penetrates the island to within about forty yards of its northern shore, thus almost cutting it in two. The island is of moderate height, with its eastern and western ends cleared, but the most of the south shore is wooded. It is separated from the main land to the northeastward of it by a narrow shallow passage, called *PLEASANT POINT GUT*, which has twelve feet at high water, and is used by small vessels in passing from *St. George River* into *Muscongus Bay*.

THE GEORGE ISLANDS.

This group of islands lies on the east side of *Muscongus Bay* and obstructs the approaches to the *St. George River*. It extends in a line nearly N N E. and S S W. for about five miles, and is composed of sixteen islands of various sizes, which, beginning with the southernmost, are named as follows: **Allen, Burnt, Benner, Davis, Thompson, Barter, McGee, Two-Bush, Bar, Seavey, Stone, Teal, Eagle, Caldwell**, and **Little Caldwell Islands.**

ALLEN ISLAND,

the southernmost and largest of the group, is nearly a mile and a half long in a N E. by N. and S W. by S. direction; has an undulating surface, part of which is under cultivation and part clothed with a very thick growth of spruce and fir. Its southern end bears N. by E. ½ E. from **Monhegan Light-House**, distant about five miles and a half.

BURNT ISLAND,

the next largest of the group, lies half a mile to the eastward of **Allen Island**; partly cul-

tivated and in places very thickly wooded. Between it and **Allen Island** eight fathoms may be taken, but the passage is obstructed by the dangerous *Dry Ledges,* which lie nearly midway between the two islands, the best water being found on the **Burnt Island** side. Off its northwestern end lies a small island connected with it at low water, and called **Little Burnt Island.**

BENNER ISLAND

lies off the northwestern end of **Allen Island,** from which it is separated by a passage about two hundred yards wide, with three and a half fathoms at low water. It is rocky, with a few fir and spruce trees scattered over its surface, lies N. E. and S. W., and is nearly seven hundred yards long.

DAVIS ISLAND

lies about three-eighths of a mile NNE. from **Allen Island,** and is half a mile long in a NE. and SW. direction. Its surface is rocky and covered only with thin grass, and there is a depth of from four to six fathoms all around it. On its southern side, between it and **Allen** and **Benner Islands,** is good anchorage in from four to eleven fathoms, in what is known as *GEORGE HARBOR,* and to the westward of it, between it and the **Thompson Islands,** is a passage from two hundred and seventy-five to five hundred yards wide, called *DAVIS STRAITS.* This passage has four and three-quarters fathoms, and is very frequently used by coasters.

THE THOMPSON ISLANDS

consist of one large and four small islands, extending nearly NNW. and SSE., the southernmost being about three hundred and fifty yards to the northwestward of **Davis Island** and forming the western side of the passage called *Davis Straits.* They are all very small with the exception of the northernmost, which is half a mile long, low, rocky, covered with a thin growth of fir and spruce, and has several houses on its eastern side. The others are for the most part bare, although some have scattered trees and clumps of fir upon them.

To the northeastward of the largest island are two others, lying **NORTH** and **SOUTH** from each other, very close together, and appearing as one island from nearly every point of view. The southernmost is called

BARTER ISLAND,

and is separated from the **Thompson Islands** by a passage five hundred yards wide, with eight fathoms water, but much obstructed by bare and sunken ledges.

The island lies NNE. and SSW., is over seven hundred yards long, wooded with spruce and fir, and on its north side is separated by a very narrow passage, dry at low water, and about one hundred and twenty-five yards wide, from

McGEE ISLAND.

This island lies N. by E. and S. by W., is nearly half a mile long, of moderate height, and well wooded. There is deep water close to it on all sides except the south and southwest, but strangers should not approach it closely. To the westward of it, and about one hundred and seventy-five yards off, lies **Two-Bush Island,** with a passage between them, through which twenty-five feet at low water may be taken with perfect safety.

From **Two-Bush** a long ledge, dotted with bare rocks, extends to the northeastward for a quarter of a mile, but is very bold-to and always visible.

BAR ISLAND

lies three-eighths of a mile to the eastward of **McGee Island**, with from three to seven fathoms between them, and is nearly three hundred yards long. Its name is derived from a long shoal, dry at low water, which extends to the northeastward from it nearly three hundred yards. It lies on the western side of the *Middle Channel*, with from three to seven fathoms all around it, and is bold-to on its eastern, western, and southern sides. To the northwestward of it, and at a distance of little over five hundred yards, lies

SEAVEY ISLAND,

about a quarter of a mile long, with a thin growth of fir trees upon it, and a group of houses on its northern end. Between it and **McGee Island** there passes a channel about three hundred yards wide, with from six to ten fathoms at low water; and between it and **Bar Island**, to the eastward, twenty-five feet may be taken, but the channel is narrow and dangerous.

About seventy-five yards to the northwestward of **Seavey Island** is a very small rocky island called **Ram Island**, and two hundred yards N E. from it, but connected with it at low water, lies

STONE ISLAND,

low, rocky, and bare, four hundred yards long in an EAST and WEST direction, and surrounded by shoal water. Nearly three hundred yards to the northward of it lie

THE EAGLE ISLANDS,

two small rocky islands, connected at low water, and surrounded by shoals and ledges. They are low, and with the exception of one or two fir trees on the larger island are entirely bare, and there is no passage between them and **Stone Island**.

TEAL ISLAND

lies about three hundred and seventy-five yards to the eastward of **Stone Island** and half a mile to the westward of **Hooper Island**, with the *Middle Channel* into *St. George River* between them. It lies N N E. and S S W., is nearly six hundred yards long, of moderate height, cleared at its northern end, but wooded with spruce and fir at its southern end. A passage with six fathoms, but narrow and dangerous, leads to the northward, between **Teal Island** on the east and **Stone** and **Eagle Islands** on the west, and joins the *North Channel* at the southwestern end of **Caldwell Island**.

A quarter of a mile north of **Teal Island** lies

CALDWELL ISLAND,

the northernmost of the **George Islands**. It extends N E. and S W., is over half a mile long, of an oval shape, for the most part bare of trees, but with a thin growth of fir and spruce on its southern and southwestern sides. About one hundred yards to the southeastward of it lie the **Little Caldwell Islands**, which are joined at low water, and are low, rocky, and entirely bare of trees. The *Middle Channel* into *St. George River* passes to the eastward of the **Caldwell Islands**, the *North Channel* to the westward of them, and both channels unite at the north end of **Great Caldwell Island**. This latter has bold water both on its eastern and western sides, and may be safely approached within one hundred yards with four fathoms.

A narrow and intricate channel, through which three and a half fathoms may be carried, passes close under the southern shore of **Caldwell Islands**, and thence between **Teal Island** and the **Little Caldwell Islands**, thus connecting the *North* and *Middle Channels*.

HOOPER ISLAND.

This island lies in the mouth of *St. George River*, close to its eastern bank, and forms the west shore of *Herring Gut*. Its southern end is three-quarters of a mile to the eastward of **Bar Island**, while its northern end lies about a thousand yards S E. by E. ½ E. from the **Little Caldwell Islands**. It extends nearly N E. and S W., is seven-eighths of a mile long, of moderate height, and for the most part bare of trees. However, the southern part of the island has its crest covered with a dense growth of fir, while the slopes are bare of trees and grassy except where a few lone trees dot the surface at long intervals. The northern end is lower than the southern, cleared, cultivated, and settled, while the eastern face of the island is almost all wooded. A bar, over which not more than nine feet can be carried, crosses from the northern end of **Hooper Island** to **Raspberry Island** on the eastern side of *Herring Gut*, and closes the passage to vessels of large draught except at the top of high water.

About five-eighths of a mile SOUTH from **Hooper Island**, and three-quarters of a mile S W. by S. ½ S. from **Marshall Point Light-House**, lies

HART ISLAND,

low, sandy, bare of trees, with a level surface, covered with grass, and with perpendicular sandy faces. It is nearly round, three hundred yards in diameter, and from it a long dry sand-spit, with scattered boulders upon it, extends nearly in a NORTH and SOUTH direction for a half a mile, and is called *Hart Bar*. Between this bar and **Hooper Island** there is an excellent passage with seven fathoms water, which is called the *Western Channel* into *Herring Gut*.

Hart Island is remarkable as being the only sandy island in this vicinity, all of the others being rocky.

DESCRIPTION OF SHORES
OF ST. GEORGE RIVER FROM MARSHALL POINT TO THOMASTON.

The east bank of the river above **Marshall Point** curves to the eastward and then to the northward and westward, forming the harbor of *Herring Gut*, a much-frequented anchorage for coasters. Upon this shore is built the village of **South St. George,** formerly called **Herring Gut Village.** It is a small settlement with some fishing interest, but of little importance otherwise, trade being absorbed by **Thomaston.** At the north end of the village there juts out a bluff point, with flat, grassy summit, and a line of wharves along its south side, called **Hutchinson Head.** A small cove makes in on its north side, called *Fish Cove,* and here is a marine railway, upon which vessels occasionally go for repairs.

In the middle of the channel, and near the northern end of the *Gut*, lies a bare islet, surrounded by shoals, called **Raspberry Island.** From this to **Hooper Island** extends a bar, over which nine feet can be taken; but there is also another passage between **Raspberry Island** and the eastern shore. This latter passage has also nine feet, but is narrow and crooked.

Blubber Island is a small rocky island with five or six spruce trees upon it, which lies off the northern shore of **Hooper Island** at a distance of two hundred and fifty yards, but there is no passage between the two.

A little over half a mile above **Raspberry Island**, and a mile and a quarter from **Marshall Point**, is

HOOPER POINT,

which is of moderate height, with wooded summit and slopes, but cleared near the

shore-line. It is comparatively bold-to, five fathoms being found within one hundred and twenty-five yards of the shore, and it forms the southern extremity of a large cove, called *DEEP COVE* on the charts, but now commonly known as

MARSHALL COVE.

This cove is contained between **Hooper Point** on the south and **Howard Point** on the north, the distance between the two being five-eighths of a mile. There is from three to five fathoms in it, but the anchorage is insecure, the bottom being rocky and covered with kelp of enormous size and length, where if an anchor be lost it is almost impossible to be recovered. At the head of the cove several ice-houses formerly existed, and some trade was carried on in that commodity, but they are now deserted and fast falling into ruins.

HOWARD POINT,

the north point of entrance to this cove, is five-eighths of a mile to the northward of **Hooper Point** and nearly two miles above **Marshall Point Light,** with an unobstructed channel between it and **Caldwell Island** seven-eighths of a mile wide, with from six to thirteen fathoms water. It is of moderate height, with somewhat steep slopes, thinly wooded with spruce and fir, and should not be approached nearer than one-eighth of a mile, as there are several outlying ledges.

A little above **Howard Point,** on the west bank of the river, will be seen the entrance to

PLEASANT POINT GUT,

which makes to the westward between **Gay Island** and the main land, forming a passage for small vessels at high water into *Davis Cove* and *Meduncook River.* The north point of its eastern entrance is called

PLEASANT POINT,

and is a mile and one-eighth above **Caldwell Island** and three-quarters of a mile **N.** by **W. ½ W.** from **Howard Point.** It is of moderate height, with gentle grassy slopes, backed by woods, and may be approached within two hundred yards with six fathoms water.

Nearly opposite to **Pleasant Point,** and three-quarters of a mile above **Howard Point,** on the east bank of the river, is

TURKEY COVE,

which makes in to the southeastward for about three-quarters of a mile with an average width of five hundred yards. It affords good anchorage in from two to three fathoms, soft bottom, with an easy and gradual approach; but is dry at low water one-quarter of a mile from its head. Its shores are for the most part cleared and under cultivation, and its north point, called

TURKEY POINT,

is grassy, low, and backed by woods. **Turkey Point** is a mile **N E.** from **Howard Point** and seven-eighths of a mile **E.** by **N.** from **Pleasant Point,** and should not be approached nearer than two hundred yards, as there are dangerous ledges near it. On its north side makes in a large but shallow cove nearly half a mile wide at its mouth, but which should not be entered, as it is shallow and obstructed, as in fact is the whole of the east shore from **Turkey Point** to *THE NARROWS.*

Nearly opposite to but a little above **Turkey Point,** and on the west bank of the river, is

STONE POINT,

a low, nearly level, grassy point, with several houses upon it, which lies seven-eighths

of a mile to the northward of **Pleasant Point** and forms the southwestern point of entrance to a large cove, called

MAPLE JUICE COVE,

which extends to the northward for a mile and three-eighths. The north point of the entrance to this cove is called **Burton Point,** and is very gently sloping, bare of trees, and grassy. The cove itself is full of shoals and unfit for strangers, although anchorage may be found for vessels of light draught anywhere between **Burton** and **Stone Points.** The latter must not be approached closely, as there is a dangerous ledge, known as *Henderson Ledge,* about an eighth of a mile from its eastern end, which is, however, *marked by a buoy.* About six hundred yards to the eastward of **Burton Point** is

BIRD POINT,

which is also cleared, but somewhat more abrupt than the former. Between the two is contained a small cove into which seven feet may be taken, but the point itself is shoal and should not be approached nearer than an eighth of a mile. It is the western point of the southern entrance to

THE NARROWS,

which are formed by the two banks of the river suddenly approaching each other, leaving a passage from five to six hundred yards wide and with thirteen fathoms water in it. This passage is about three-quarters of a mile long, entirely unobstructed, with steep shores on both sides, and has a strong tidal current. Its southern end is two miles and a half above **Caldwell Island** and about six and a half miles below **Thomaston.** At the northern end of the *Narrows* the river widens out rapidly, the eastern shore curving away to the eastward and southward and forming a long but shallow cove, known as

OTIS COVE,

which affords anchorage for vessels of light draught only. It has a general course about **SOUTH** for five-eighths of a mile; both banks being cleared; but the eastern shore is steep and its summit crowned with houses, while the western shore is much lower and nearly level. At **Bird Point,** on the west bank of the river, the shore is wooded, but above the *Narrows* it is for the most part cleared, with somewhat steep slopes, and well settled. It is very irregular in outline, being penetrated by several coves, which are, however, shallow and of little importance. A little over a mile above the north end of the *Narrows,* and about a mile and five-eighths above **Bird Point,** is

BAILEY POINT,

a long, low, flat, cleared point, which forms the southwestern point of the entrance to a large but very shallow cove, called

BROAD COVE.

This cove makes to the northward nearly a mile, and affords anchorage to vessels of light draught only. The north point of entrance to it is called **Bradford Point;** is low, gently sloping, and wooded, and between it and **Bailey Point** the entrance is three-quarters of a mile wide. **Bailey Point** is very shoal, and must not be approached nearer than three-eighths of a mile. **Bradford Point** may be approached within three hundred yards with over three fathoms, and within two hundred yards with two fathoms. Opposite to *Broad Cove,* on the east bank of the river, is a passage about three-eighths of a mile wide, which is the common entrance to the two coves, called *Cutler* and *Watts*

Coves. This entrance lies nearly three-quarters of a mile above *Otis Cove,* and is quite shallow, the best water being seven feet.

CUTLER COVE

runs to the northeastward for over a mile, with an average width of three hundred and fifty yards, but is nearly all bare at low water, and is of no importance. It makes in behind or to the eastward of a long narrow point of moderate height, with a clump of trees upon its summit, but with grassy and somewhat steep slopes, called **Watts Point.** This point is pretty bold-to on its western side, and may be approached within one hundred and fifty yards with five fathoms water. On its southern side, however, it is quite shoal, nine feet being the best water found between it and the south point of the common entrance.

The southernmost of the two coves is called

WATTS COVE.

Its course is about S S W. for three-quarters of a mile, for the most of which distance it is only about two hundred yards wide, and it is entirely bare at low water.

Between **Bradford** and **Watts Points** the river is half a mile wide, but above this gradually diminishes in width until, at **Fort St. George,** about a mile and a half above, it is only about three hundred yards wide, but with deep water in the channel. The shores are for the most part cleared and cultivated, with houses dotting the higher grounds; but there are occasional groves of trees and steep, rocky banks, especially on the western shore.

At **Fort St. George,** which is three miles below **Thomaston,** the land is cleared and nearly level on the summit, but with somewhat steep slopes, and extends off into a long, level point, with steep faces, which is the site of the old work. It is about seven miles above **Caldwell Island** and five miles above **Pleasant Point.**

Above **Fort St. George** the river rapidly widens to half a mile, and about seven-eighths of a mile above the fort it spreads out into a bay three-quarters of a mile wide, with a very narrow channel running through the middle of it, between dry flats. Both shores are cleared, cultivated, and settled, with nearly level surfaces, with somewhat steep banks. On the west of this bay, two miles above **Bradford Point,** makes in a large cove, called

HYLER COVE,

which is bare at low water, runs N N W., is half a mile long and five-eighths of a mile wide at its mouth. From the north point of the entrance to this cove the mouth of *WARREN RIVER* is distant a little over a mile and a half.

Above *Hyler Cove* both shores are low, cleared, and cultivated, though there are occasionally groves of trees, and a steep bluff, thinly wooded, at the south point of the entrance to *Warren River.* Nearly the whole width between the banks is occupied by immense flats, dry at low water, the channel being a mere thread passing between them. It has good water, however, not less than three fathoms being taken as far as the large fish-weir off **Hospital Point,** and eleven feet up to the town.

HOSPITAL POINT

is on the eastern side of the river, two miles and a half above **Fort St. George** and five-eighths of a mile below **Thomaston.** It is a long, low, flat and narrow point, entirely bare of trees, running in a N N E. direction, and has dangerous bare ledges extending from it to the northward to the edge of the channel. A large fish-weir extends from the western side of the point to the edge of the channel a distance of nearly a quarter of a mile, and serves as a guide to keep vessels off the flats. There are also several other fish-weirs on the west bank.

Above **Hospital Point** the river again spreads out into a wide and very shallow bay, into which empty *Mill* and *Warren Rivers*. *MILL RIVER* is a narrow stream, making in to the northward on the east side of the town of **Thomaston,** and is dry at low spring tides. *WARREN RIVER* makes to the westward, and **Thomaston** is built upon its north bank. It is narrow, not being over a hundred and twenty-five yards wide abreast of the town, but has eight feet at low water in the channel as far as the bridge, which is a quarter of a mile above its mouth.

DANGERS

IN APPROACHING AND ENTERING ST. GEORGE RIVER.

I. *Coming from the eastward through Herring Gut.*—There are two channels into *Herring Gut* from the eastward. That most commonly used passes between **Mosquito Island** and the **Brothers,** leaving **Hay Ledge** and the **Gunning Rocks** to the southward, and is partially marked by buoys. The other passes to the westward of **Gunning Rocks,** between them and **Hart Island,** and only the entrance is buoyed. Coming in by the former, the first danger met with lies almost exactly in the middle of the channel, and is called

BARTER SHOAL.

It is a small pinnacle rock, with fifteen feet at mean low water; lies six hundred yards off the south shore of **Mosquito Island** and the same distance due EAST from **Hay Ledge.** *It is not buoyed,* but is easily avoided by keeping either shore aboard. When past it, there are no precautions necessary except to keep off **Hay Ledge** and the **Brothers** until up with

MOSQUITO ISLAND LEDGE,

which lies on the north side of the channel, and will be easily recognized by the *black spar-buoy* on its southern end. It has seven feet at mean low water, and bears from the southwest end of **Mosquito Island** N W. by W. ½ W., three-quarters of a mile distant; from **Marshall Point Light-House** E. ¾ S., nearly seven-eighths of a mile distant, and must be left to the northward by vessels entering *Herring Gut* from the eastward. The buoy is marked No. 7, is placed in eighteen feet about twenty-five yards S E. from the shoal of the ledge, and is painted *black,* as a guide to vessels which have come through *Davis Straits* and are bound along shore to the eastward. When up with it, look out on the south side of the channel for the

GUNNING ROCK LEDGES,

which are two detached shoals with four and five feet water, the northernmost of which is a quarter of a mile N E. by N. from the northernmost of the **Gunning Rocks.** The other, which has five feet at low water, lies two hundred yards W S W. from the four-feet rock. There is deep water close to them, and *they are not buoyed,* but from the northern rock **Marshall Point Light-House** bears N W. by W. ½ W., nearly three-quarters of a mile distant. At night by watching this bearing, and in day-time by not approaching the **Gunning Rocks** nearer than five hundred yards, these ledges may be avoided. When past them a *black spar-buoy* will be seen ahead, near **Marshall Point,** and about half a mile off. This is on

MARSHALL POINT LEDGE,

which extends two hundred and fifty yards S S E. from **Marshall Point,** has eight feet at low water and no passage in-shore of it. The buoy is marked No. 5, is placed in three fathoms a little to the eastward of the ledge, and is painted *black,* as a guide to vessels which have come through *Davis Straits* and are bound to the eastward along shore.

Vessels bound into *Herring Gut* from the eastward pass about two hundred yards to the southward of it, and then steer to the northward, keeping not less than that distance from the buoy to enter the *Gut*. When past *Marshall Point Ledge* there are no dangers in the channel until up with the bar at the north end of **Hooper Island**; but if the wind be scant or ahead and it becomes necessary to beat in, look out, in the first place, for

HART BAR AND ALLEN LEDGE,

which lie on the west side of the channel, and *are very dangerous*. *Hart Bar* is a long shoal, composed of sand and gravel, extending in a nearly NORTH direction from **Hart Island** for about eight hundred yards, and for nearly the whole of that distance is dry at three-quarters ebb, and has several rocks out at low water, scattered along its eastern edge. About an eighth of a mile beyond the north end of the dry shoal lies *Allen Ledge*, which has two feet at low water, and is in reality the northern end of the bar. This ledge is marked by a *red spar-buoy*, No. 6, placed in three fathoms on its northern end. Vessels entering *Herring Gut* from the eastward pass well to the eastward of this buoy, leaving it on the port hand notwithstanding its color, as it is painted red as a guide to vessels which have come through *Davis Straits* and are bound to the eastward along shore. *Allen Ledge* is three hundred and fifty yards to the southward of the southeast point of **Hooper Island**, and one thousand yards NORTH from **Hart Island**.

On entering the *Gut*, if obliged to beat, do not stand too close to the eastern shore when near **Marshall Point**, as there is a rock awash at low water close to the shore on that side, and about an eighth of a mile to the northward of **Marshall Point Light**; also on the **Hooper Island** shore, about three-eighths of a mile to the northward of **Marshall Point Light** and three hundred yards from the island, there is another rock with five and a half feet at low water. *Neither is buoyed*, nor are they dangerous except to vessels beating through the *Gut*, which should use the lead constantly and go about as soon as the water shoals to seventeen feet on either side.

HOOPER ISLAND BAR.

This shoal, before described, (see page 383,) extends from the northeast point of **Hooper Island** entirely across the *Gut*. From the middle of it rises a bare rocky islet known as **Raspberry Island**, on each side of which there is a channel across the bar with nine feet at low water. The western passage, however, is the wider of the two, and quite straight, and is the one commonly used.

When over the bar there are no more dangers in the *Gut*, only in standing to westward on a wind, **Blubber Island** must not be approached nearer than one hundred and fifty yards, as it is quite shoal on its eastern and southern sides. The course leads to the northwestward toward the north end of **Caldwell Island**, and a *spar buoy, painted red and black* in horizontal stripes, will appear directly ahead. This is on

CHANNEL ROCK,

a detached ledge, with seven feet at low water, which lies a quarter of a mile **W. by N.** from **Hooper Point**, with from three to six fathoms on all sides. The buoy is placed on the rock and may be passed on either hand, but vessels which have come through the *Gut* usually pass to the eastward of it, between it and **Hooper Point**. When up with it, the course leads to the northward, past **Howard Point**, which should receive a berth of not less than an eighth of a mile to the eastward, to avoid the rocks which lie along its western face.

When up with **Turkey Point**, do not approach nearer its north end than four

hundred yards in any direction, as there are several sunken ledges and rocks awash off this side of the point.

Off **Stone Point**, *on the west side of the river*, and in the mouth of *Maple Juice Cove*, will be seen a *black spar-buoy*. This is on

HENDERSON LEDGE,

which has two feet at mean low water, and extends from **Stony Point** EAST for two hundred and seventy-five yards. The buoy is marked No. 5, is placed in fifteen feet on the eastern end of the ledge, and must be left to the westward.

Above this ledge there are no directions necessary other than to keep off the shores, and not to approach **Bird Point** nearer than three hundred yards until above the *Narrows* and off the mouth of *Otis Cove*, where *another black spar-buoy* will be seen ahead, nearly in mid-river. This is on

BAILEY LEDGE,

awash at mean low water in some places, and dry at low spring tides; it extends from **Bailey Point** S E. ½ S. for over one-third of a mile. The buoy is marked No. 7, and is placed in three fathoms about one hundred yards from the southeast end of the ledge. *Bailey Ledge* is sometimes called *Fullerton Ledge.*

A quarter of a mile N W. from **Watts Point** is a spot with eighteen feet at mean low water, nearly in the middle of the channel, and which is probably the northwestern end of the shoals which extend from *Cutler Cove* to within fifty yards of this spot. In the absence of positive information, vessels drawing over twelve feet should not, unless at high water, pass to the eastward of it.

Above **Fort St. George** the channel becomes narrow and keeps the western shore rather the best aboard, the water shoaling very abruptly on both sides. None but a very quickly-working vessel can beat through it above the fort, as it is not over a hundred and seventy-five yards wide in its widest part, and the flats, which are dry at low water, extend to the edge of the three-fathoms curve. With a fair wind low water is the best time to pass up this river, as not less than sixteen feet can be taken up to the *red buoy* off **Hospital Point**, and the limits of the channel are clearly defined by the bare flats on each side.

At *Hyler Cove* the channel turns now toward the middle of the river, with a width of about one hundred and twenty-five yards, but on approaching the north side of the cove it again hugs the western shore. Above this cove it keeps the middle of the river until up with **Hospital Point.** The *red spar-buoy*, which is seen about four hundred yards to the northwestward of this point, is on

HOSPITAL POINT ROCKS,

a line of ledges extending in a N W. by N. direction from the point to a distance of four hundred yards, and are composed of one rocky islet, from which to the northward and westward a line of ledges, dry at low water, extends. The buoy is placed on their northwestern end, and the channel passes to the westward of it, keeping the western shore aboard, and leads to the northeastward toward **a stone beacon**, about three-eighths of a mile off, which marks the western limits of the channel, at the entrance to *Warren River* and the eastern end of the *dry flat* which makes off from the south point.

The channel turns around this beacon to the westward, and runs along the wharf-line of **Thomaston** toward the bridge. It is exceedingly narrow, with but eight feet at low water, and not safe for strangers. From the beacon across to the east shore of *St. George River*, a distance of five-eighths of a mile, there is nothing but a mass of flats, dry at low water.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ST. GEORGE RIVER.

I. *Coming from the eastward, through Herring Gut, by the eastern passage.*—On the course S W. by W. from **White Head Light**, bring **Marshall Point Light** to bear W N W., with thirty fathoms water, and steer for the light, carrying not less than seven fathoms, until the northernmost of the **Gunning Rocks** bears S W. by S. ½ S. or is exactly abeam, when the depth will be nine fathoms and three-quarters, and the course is N. ½ W., with not less than four and a half fathoms, until past the *black buoy* on *Marshall Point Ledge* and **Marshall Point Light** bears N. by E. The depth will be four and a half fathoms, and the course for the mouth of the *Gut* is N. by W. ½ W., carrying not less than seven fathoms for a quarter of a mile, or until **Marshall Point Light** bears N E. by E. ½ E., two hundred and fifty yards distant. The depth will be eight fathoms, and the course thence to the anchorage off the village N E. by N. ½ N. Anchorage in from three to six fathoms may be had anywhere to the southward of **Hutchinson Head.**

But, intending to enter *St. George River*, when within one hundred yards of the western end of **Hutchinson Head**, in about five fathoms, steer N N W., which course will lead across the bar midway between **Raspberry Island** and the northeast end of **Hooper Island,** in not less than nine feet at low water. Continue it, steering exactly for the western extremity of **Hooper Point**, until **Blubber Island** bears W. by N., a quarter of a mile distant, when steer N W. ½ W. toward the north end of **Caldwell Island,** (with which the buoy on *Channel Rock* will be in range,) and carrying not less than seven fathoms water. Continue this course for three-eighths of a mile until within four hundred yards of *Channel Rock*, in twelve fathoms water, with the western end of **Howard Point** bearing **N. by E.**, when steer N. ½ W. for one mile and an eighth until past **Howard Point,** and the southern point of entrance to *Pleasant Point Gut* (which is also the northeast point of **Gay Island**) bears N W. ½ N. The depth will be fourteen fathoms, and the course thence is N E. ½ N., the *black buoy on Henderson Ledge* a little on the port bow. This course carries not less than thirteen fathoms, and leads up to **Turkey Point.** When the southern extremity of this point bears E. by S. ½ S., with a depth of thirteen fathoms, steer N E. ½ E. through the *Narrows*, carrying not less than four and a half fathoms, and steering directly for the buoy on *Bailey Ledge.* When within a quarter of a mile of this ledge, in seven fathoms water, alter the course to the eastward so as to pass to the eastward of the buoy in seven fathoms, and when past it steer N E. ½ E. toward *Fort St. George*, carrying not less than five fathoms. When within half a mile of the fort, in six and a half fathoms, the course is N E. ½ N. for a little over three-quarters of a mile, carrying not less than five fathoms, and keeping about the middle of the river; then N E. for five-eighths of a mile until off the entrance to *Hyler Cove*, in six fathoms, when the course is N E. by N. ½ N. across the mouth of the cove for about half a mile, with not less than five and a half fathoms. When abreast of the north point of entrance to the cove, in six fathoms, the course is N E. ½ N. for three-quarters of a mile, carrying not less than four fathoms, until the northern extremity of **Hospital Point** bears E. by N. ½ N., when the course is N E. by N. for nearly three-eighths of a mile to the *red buoy* on *Hospital Point Rock.* Pass to the westward of this in three and a half fathoms, and steer N E., carrying not less than seven feet to the **stone beacon** off the mouth of *Warren River.* Pass to the eastward of this **beacon,** in seven feet water, steer to the westward into *Warren River*, and run alongside the wharves.

The above courses pass one-eighth of a mile to the northward of *Barter Shoal;* one-quarter of a mile northward of **Hay Ledge**; one hundred and fifty yards to the northward of the **Brothers**; two hundred and fifty yards to the southward of *Mosquito Island Ledge;* nearly a hundred yards to the northward of the northernmost of the *Gunning*

Rock Ledges; four hundred yards to the northward of the **Gunning Rocks**; one hundred and seventy-five yards to the southward, and two hundred and fifty yards to the westward, of *Marshall Point Ledge;* a quarter of a mile to the eastward of *Allen Ledge;* about a hundred and fifty yards to the westward of the rock awash off **Marshall Point**; a hundred yards to the eastward of the five-feet rock off **Hooper Island**; three hundred yards to the eastward of *Channel Rock;* four hundred yards to the westward of **Howard Point**; the same distance to the eastward of the *buoy* on *Henderson Ledge;* three hundred and fifty yards to the eastward of **Bird Point**; fifty yards to the eastward of the *black buoy* on *Bailey Ledge;* seventy-five yards to the westward of **Fort St. George**; fifty yards to the westward of the *red buoy* on *Hospital Point Rocks;* and close to the eastward of the beacon off *Warren River Entrance.*

DANGERS
IN APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE EASTWARD.

II. *Through Herring Gut, by the channel between* **Gunning Rocks** *and* **Hart Island.**—The entrance only to this channel is buoyed; it is a little over half a mile wide, and will be recognized not only by **Hart Island** and the **Gunning Rocks**, between which it passes, but also by a *black can-buoy* nearly two miles SOUTH from **Marshall Point Light-House**, and which marks the western side of the entrance to this channel. This buoy is on the

OLD CILLEY LEDGE,

an extensive and dangerous ledge a mile and a half to the northeastward of **Burnt Island**, and dry at low water. It lies between the bearings of SOUTH and S S E. from **Hart Island**; its eastern end, on which the buoy is placed, bearing SOUTH from **Marshall Point Light-House**, distant one mile and seven-eighths, and S. ¾ W. from the westernmost **Gunning Rock**, distant a mile and a quarter. It extends W. by N. and E. by S., and about midway of its length is crossed by a very narrow channel with three fathoms of water. The buoy is placed in eight fathoms about seventy-five yards to the eastward of the ledge, and is to be left to the westward by vessels using this channel. When past it, there are no buoys until up with the *Marshall Point Ledge;* but there are several dangerous shoals, which will be described in order; and first is

SHOAL SPOTS NORTH OF OLD CILLEY LEDGE.

Of these there are five, but only two of them are dangerous to vessels entering by this passage. The first, which has seventeen feet at low water, lies three-eighths of a mile NORTH from the *black buoy* on the *Old Cilley Ledge* and over three-quarters of a mile S E. by S. from **Hart Island**. The second is nearly two hundred yards N W. from it, and has twelve feet at mean low water. From **Hart Island** it bears S E. by S. ½ S., three-quarters of a mile distant, and from **Marshall Point Light** S. ½ W., one mile and three-eighths distant. The other shoals lie to the westward of these, and have eighteen, fourteen, and sixteen feet, respectively.

BLACK ROCK,

which is the next danger met with in this passage, is a bare, rocky islet, surrounded by shoals, and lies three-quarters of a mile N. by W. ½ W. from the *black buoy* on the *Old Cilley;* S E. by S. from **Hart Island**, three-eighths of a mile distant; and S. ¾ W., a little over a mile from **Marshall Point Light-House**. The shoal water extends from the rock to the westward two hundred yards; to the northward over three hundred yards; and to the eastward one hundred and fifty yards. Four hundred yards to the northeastward of the dry rock is a kelp rock with fifteen feet water upon it, but *it is not buoyed.* The

sailing-lines pass to the eastward of this shoal as well as of **Black Rock**, and to the westward of

GUNNING ROCK SHOAL,

which lies on the eastern side of the channal, exactly opposite to **Black Rock**, from which it is half a mile distant, and S S E. from the westernmost **Gunning Rock**, three-eighths of a mile distant. From **Marshall Point Light** it also bears S S E., a little over a mile distant; the light-house being in range with the westernmost of the **Gunning Rocks**.

This shoal has four and a half feet water upon it, and is not marked in any way; but a buoy has been recommended to be placed upon its southwestern end.

When past *Gunning Rock Shoal*, a vessel drawing over twelve feet should watch the bearing of **Marshall Point Light** to avoid being set on to a

FIFTEEN FEET SHOAL,

which lies three hundred and fifty yards W. by S. from the western **Gunning Rock** and eight hundred yards E. by N. from **Hart Island**. It is a small detached rock, with six fathoms all around it, and may be passed on either hand, although the sailing-lines pass to the eastward of it. The name *Middle Shoal* has been suggested for this danger.

When past the **Gunning Rocks**, the west side of the channel is limited by

HART BAR,

bare at low water for a distance of seven hundred yards, and having a number of small rocks scattered along its extent. This bar runs in a nearly NORTH direction to the end of the dry spit, and then turns N N E. for about three hundred yards, and its north end is marked by a *red spar-buoy*, which, however, must be left to the westward by vessels using this passage. This north end of the bar is called

ALLEN LEDGE;

has two feet at mean low water; lies a thousand yards to the northward of **Hart Island** and three hundred and fifty yards to the southward of the southeast point of **Hooper Island**. The buoy is placed in three fathoms on the north end of the ledge, and the sailing-lines pass to the eastward of it, its color indicating that it is a guide to vessels bound to the eastward along shore. (See also page 388.)

On the east side of the channel, and opposite to the buoy on *Allen Ledge*, will be seen a *black spar-buoy*. This is on

MARSHALL POINT LEDGE,

which has eight feet at low water, extends S S E. from **Marshall Point** two hundred and fifty yards, and must be left to the eastward notwithstanding the color of the buoy, which is intended as a guide to vessels bound along shore to the eastward. The buoy is placed in eighteen feet on the southeast side of the ledge, is marked No. 5, and when past it the channel is clear to the entrance to the *Gut*.

For a description of the dangers in *Herring Gut* and *St. George River*, see pages 388 and 389.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE EASTWARD.

II. *Through Herring Gut, by the channel between* **Gunning Rocks** *and* **Hart Island.**—Bring **Marshall Point Light** to bear **N ½ W.**, distant two miles and a half, with thirty-four fathoms water, and steer for it, carrying not less than ten fathoms, until exactly between **Hart Island** and **Gunning Rocks**, the westernmost of the latter bearing **E. ½ N.**, or exactly

abeam, and one-eighth of a mile off. The depth will be six fathoms, with *Middle Shoal* about a hundred yards to the westward, and the course thence is N. by W., with not less than five fathoms, to the entrance to *Herring Gut.* On this course, when past **Marshall Point Light** and it bears S E. by E. ½ E., two hundred and fifty yards off, steer N E. by N. ½ N. toward **Hutchinson Head**, and follow the directions given for the *Herring Gut Passage*, on page 390.

The above courses pass a quarter of a mile to the eastward of the *black buoy* on the *Old Cilley;* nearly four hundred yards to the eastward of the *twelve-feet kelp rock* between the *Old Cilley* and **Black Rock**; five hundred yards to the eastward of **Black Rock**; a quarter of a mile to the westward of *Gunning Rock Shoal;* a hundred yards to the eastward of *Middle Shoal;* an eighth of a mile to the westward of *Marshall Point Ledge;* and nearly six hundred yards to the eastward of *Allen Ledge.*

There is still another passage into *Herring Gut*, through which fourteen feet may be taken by passing to the westward of the *Old Cilley*, and between **Black Rock** and **Hart Island**. To enter it, bring **Marshall Point Light** to bear N. by E. ½ E. and steer for it until within three hundred and fifty yards, when N. by W. ½ W. leads up to the mouth of the *Gut*, after which the directions for passing through the *Gut* are to be followed. On the above courses fourteen feet will be found half a mile SOUTH from **Hart Island** and a quarter of a mile S W. ½ W. from **Black Rock**; but in no other place is there less than three and a half fathoms. The course for **Marshall Point Light** passes half a mile to the westward of the *black buoy* on the east end of the *Old Cilley*, and a hundred and seventy-five yards to the westward of the west end of that ledge; two hundred and seventy-five yards to the westward of **Black Rock**; and the same distance to the eastward of the dry spit SOUTH from **Hart Island**. This channel, however, is not safe for strangers.

DANGERS
IN APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE EASTWARD.

III. *By the Middle Channel.*—This channel, before described, leads along the east shores of the **George Islands**, and is a mile and five-eighths wide at its entrance, between **Burnt Island** on the west and the *Old Cilley Ledge* on the east, and maintains this width until up with **Hooper Island**, where it contracts to three-quarters of a mile in width. This width it keeps, with little variation, until it joins the *Eastern Channel* off **Howard Point**.

There are no dangers in the mouth of the *Middle Channel*, but vessels beating in should beware, when standing to the eastward, of the *Old Cilley Ledge*, and of *Carey Rock* when standing to the westward. The

OLD CILLEY LEDGE,

before described, (see page 391,) lies on the east side of this channel, and extends in a nearly EAST and WEST direction between the bearings of SOUTH and S S E. from **Hart Island**. In this direction it covers a space nearly half a mile long, both ends being dry at low water; but a narrow channel, with three and three-quarters fathoms, divides it into two ledges nearly midway of its length. On the eastern end is placed a *black can-buoy* of the second-class in eight fathoms, but there is no buoy on the western end, though one has been recommended. To avoid it, when entering the *Middle Channel* give the buoy on the eastern end a berth to the eastward of three-quarters of a mile; or if beating in and standing to the eastward toward the ledge, go about as soon as **Marshall Point Light** opens to the eastward of **Hart Island**. There is a shoal with fourteen feet a quarter of a mile W. by N. ½ N. from the west end of the *Old Cilley*, but the above directions avoid this also.

CAREY ROCK

lies on the west side of the passage, five-eighths of a mile N. by E. from the northeast point of **Burnt Island**, and about four hundred yards SOUTH from the **Shag Ledges.** It is dry at half-tide, has from four to five fathoms all around it, but *is not buoyed.* The channel between it and the *Old Cilley* is nearly a mile and a quarter wide, with from seven to twelve fathoms.

SHAG LEDGES

are two bare rocky islets, three-quarters of a mile to the northward of **Burnt Island** and the same distance to the eastward of **Davis Island.** They lie nearly N E. and S W. from each other, about a hundred and fifty yards apart, but there is no passage between them, nor is it advisable to pass to the westward of them except in a vessel of very light draught. The northeasternmost ledge is quite bold-to on its eastern side—eight fathoms being found within one hundred yards of it.

When past the **Shag Ledges**, a *red spar-buoy* will be seen about three-quarters of a mile off, and bearing a little to the eastward of NORTH. This is on

THE SISTERS,

a group of three rocks, lying N W. and S E., at a distance of a mile and three-quarters in a N. by E. ½ E. direction from the northeastern point of **Burnt Island** and three-quarters of a mile W. by N. from **Hart Island.** From **Marshall Point Light** they bear S W. by W. ½ W., distant a mile and a quarter. Two of them are awash at low water, and the third, which is the westernmost, has three feet at mean low water, and is marked by a *spar-buoy painted red*, (No. 4,) and placed in twenty-one feet on its northwest side. There is a channel with nine fathoms to the eastward of the *Sisters*, but it is not a safe passage on account of the dangerous shoals to the westward of **Hart Island**, and which are called the *Hart Island Ledges.* They extend from the island due WEST for nearly three-eighths of a mile, some of them being awash at low-water, some having five feet upon them, and others from fourteen to eighteen feet; and in southerly weather they break with great violence.

When up with the *buoy on the Sisters*, look out for

OLD HORSE LEDGE,

which is on the west side of the channel, six hundred and fifty yards N W. ½ N. from that buoy, with a channel between them in which from eleven to seventeen fathoms is found. This ledge has two feet at mean low water, is bare at low spring tides, and bears from **Marshall Point Light** W. by S., one mile and three-eighths distant. *It is not buoyed*, but should be, as it obstructs the in-shore channel to the eastward as well as the entrance to *St. George River.*

Nearly six hundred yards W N W. from the *Old Horse Ledge* is a dry ledge known as the *Outer Shag*, but it is not in the way of vessels using this channel. It lies E. ½ S. from the southern end of **Barter Island**, distant half a mile; N W. by W. ½ W. from *Old Horse Ledge*, one-third of a mile; and N W. ½ W. from the buoy on the *Sisters*, distant five-eighths of a mile. The *Inner Shag*, also dry at low water, lies a quarter of a mile N W. from the *Outer Shag* and two hundred yards from the eastern shore of **Barter Island.** There is a good channel, with from six to ten fathoms, between the two ledges, but unfit for strangers except at low water.

When past the *Old Horse Ledge*, there are no dangers until up with the southern end of **Hooper Island**, when it is necessary to look out for

HOOPER ISLAND ROCKS,

which lie W S W. from the southern end of the island, from three hundred yards to a quarter of a mile from shore.

The Outer Ledge is a detached rock with five and a half feet at low water, and lies a quarter of a mile from the island, while the inner rock has sixteen feet, and lies three hundred yards from shore, with a six-fathom channel between it and **Hooper Island.** *Neither ledge is buoyed*, but both are covered with kelp, which shows itself at low water. A buoy has, however, been recommended to be placed upon the westernmost rock.

When past the **Hooper Island** rocks, the next danger met with is also on the eastern side of the channel, and consists of two rocks, known as

THE KELP LEDGES.

They lie NORTH and SOUTH from each other, off the west shore of **Hooper Island**, with deep water between them and the island, which channel is not, however, practicable. The *southern ledge* extends N E. and S W.; is awash at its northern end; has two feet in the middle and six feet at its southwestern end, which is a quarter of a mile from the **Hooper Island** shore. The northern rock is a small detached ledge with twelve feet, lies nearly NORTH from the western end of the southern rock, three hundred and fifty yards distant, and the same distance to the westward of the west point of **Hooper Island.** *Neither ledge is buoyed*, which, with the absence of a buoy on *Old Horse Ledge*, renders this channel, otherwise one of the deepest and best into *St. George River*, almost impracticable for strangers; but a buoy has been recommended to be placed in deep water well clear of the western end of the southern ledge. Above the *Kelp Ledges*, and between **Teal Island** and **Hooper Island**, the channel is clear from shore to shore; but when up with the **Little Caldwell Islands** look out, on the eastern side of the channel, for

MURRAY LEDGE,

a detached rock, with seventeen feet at low water, which lies three hundred and fifty yards EAST from the eastern end of the **Little Caldwell Islands.** There is deep water, that is, from five to ten fathoms, all around it, but the sailing-lines of this channel pass to the westward of it and close to the **Little Caldwell Islands.** *It is not buoyed.* When up with it *a spar-buoy, painted red and black* in horizontal stripes, will appear about a quarter of a mile off, bearing about N E. This is on

CHANNEL ROCK,

which is a common obstruction to this and the *Herring Gut Channel*, and is a detached rock with nine feet at mean low water, which lies a little over five hundred yards to the westward of **Hooper Point** and a quarter of a mile to the northeastward of *Murray Ledge.* The buoy is placed near the middle of the ledge, and may be passed on either hand; but vessels using this channel are accustomed to pass well to the westward of it.

From *Channel Rock* to **Howard Point** there are no dangers, and above **Howard Point** the dangers and sailing directions for *St. George River* are given, on page 390.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ST. GEORGE RIVER.

III. *By the Middle Channel, from the eastward.*—On the course from **White Head** bring **Marshall Point Light** to bear N. ¼ W., distant three miles, in thirty-two fathoms, brown mud, and steer N W. ¼ W. toward the north end of **Thompson Island**, carrying not less than seven fathoms, until **Marshall Point Light** opens to the northward of **Hart Island** and bears N E. ¼ N., nearly two miles distant. The depth will be fifteen fathoms, and the course thence is NORTH for **Teal Island**, carrying not less than eight fathoms, until **Marshall Point Light** is shut in behind the southern end of **Hooper Island.** If the light is

visible over the point, bring it to bear E. ¼ S.; and if not, bring the south point of **Hooper Island** to bear E. ½ S., with ten fathoms of water, soft bottom, and steer **N E. by N. ¾ N.**, which course will lead, with not less than five fathoms, up to **Howard Point**. When abreast of this point, with the north end of **Caldwell Island** bearing **W. ¾ S.** and the northeast end of **Gay Island N N W.**, steer **N. ¼ W.** until past **Howard Point** and the northeast end of **Gay Island** bears **N W. ¼ N.**, when follow directions given for the river, on page 390.

The above courses pass one-third of a mile to the southwestward of the western end of the *Old Cilley Ledge;* one-quarter of a mile to the southwestward of the *Fourteen-Feet Spot* west of the *Old Cilley;* three-eighths of a mile to the northeastward of *Carey Rock;* nearly six hundred yards to the eastward of **Shag Ledges**; two hundred yards to the westward of the *Sisters;* three hundred yards to the eastward of *Old Horse Ledge;* three-eighths of a mile to the westward of **Hooper Island Rocks**; the same distance to the eastward of the *Outer Shag;* three hundred yards to the westward of the *Kelp Ledges;* one hundred yards to the eastward of the **Little Caldwell Islands**; one hundred and seventy-five yards to the westward of *Murray Ledge;* and three hundred and fifty yards to the westward of *Channel Rock.*

Coming from the westward, to enter by this channel: When, on the course for **White Head**, **Monhegan Island Light** bears **S W. ¾ S.**, five and three-eighths miles distant, and **Marshall Point Light N.** by E. ¾ E., seen just to the eastward of **Hart Island**, the depth will be twenty-nine fathoms, brown sand, and the course is **NORTH**, carrying not less than eight fathoms until up with the south end of **Hooper Island**, in ten fathoms water. When this south point bears E. ½ S., or **Marshall Point Light E. ¼ S.**, steer **N E. by N. ¾ N.**, following the directions for the river.

The above courses pass six hundred yards to the eastward of *Carey Rock;* one-third of a mile to the eastward of the **Shag Ledges**; one hundred and fifty yards to the westward of the *red buoy* on the *Sisters;* two hundred and fifty yards to the eastward of *Old Horse Ledge;* three-eighths of a mile to the westward of *Hooper Island Rock;* and the same distance to the eastward of the *Outer Shag.*

There is deep water between **Burnt** and **Allen Islands**, but the passage is obstructed by the dangerous *Dry Ledges*, which lie exactly in the middle. Deep water (that is, from six to fourteen fathoms) may, however, be taken along the west shore of **Burnt Island** through a channel about three hundred yards wide, and shelter may be found in *GEORGE HARBOR*, between **Allen** and **Davis Islands**, there being nothing in the way. Or, a vessel may enter *ST. GEORGE RIVER* by this channel by steering toward the westernmost of the **Shag Ledges** as soon as past the western end of **Little Burnt Island**. The **Shag Ledges** should receive a berth to the eastward of about two hundred yards, which will give a depth of seven fathoms, and the western end of **Hooper Island** should be steered for until past the *red buoy* on the *Sisters* and the southern point of **Teal Island** bears **NORTH**. Steer that course until **Marshall Point Light** bears **E. ¼ S.**, and then steer **N E. by N. ¾ N.** up the river.

The least water found on the above sailing-lines is seven fathoms.

DANGERS
IN APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE WESTWARD.

I. *By the South Channel.*—This channel, as before described, leads along the west shore of the **George Islands**, and enters the river between **Caldwell Island** on the east and **Gay Island** on the west. It is a third of a mile wide at its narrowest part, but has many dangerous ledges both on its eastern and western sides, and several lying nearly

in the middle. Were the obstructions buoyed, this would be the best channel into the river, and as it is, strangers may, with due care, enter it in the day-time. Buoys have been recommended to be placed upon the various obstructions in this channel, which, when done, will render it perfectly safe. In approaching it from the southwestward the first danger met with is on the eastern side of the entrance, and is called the

OLD MAN LEDGE.

It is a very dangerous detached rock, dry two hours before low water, about one hundred feet long in a N N E. and S S W. direction, and is distant nearly a mile S. ½ W. from the southern end of **Allen Island**. It is bold-to, with a good channel on all sides of it, with less than seven fathoms, and breaks violently at all times. A second class *iron can-buoy, painted black*, and marked No. 1, is placed in five fathoms about sixty yards S S W. from the ledge, and is to be left to the eastward by vessels using this passage. Half a mile N. ½ E. from this ledge lies another, called

THE OLD WOMAN,

which is for the most part bare at low water, and a quarter of a mile long N E. by N. and S W. by S. Between it and the *OLD MAN* there is an unobstructed channel, nearly half a mile wide, with not less than seven fathoms; and on its north side, between it and **Allen Island**, a passage about one hundred and fifty yards wide, with not less than five fathoms. The *OLD WOMAN* breaks heavily at all times, and *is not buoyed*, but the sailing-lines leave both it and the *OLD MAN* well to the eastward.

SHARK ISLAND.

On the western side of the entrance, nearly opposite to the buoy on *Old Man Ledge*, is a bare rocky islet, two hundred and fifty yards long in a N E. and S W. direction, called **Shark Island.** There is deep water close to it on its eastern side, but dangerous ledges extend from it to the northward and northwestward for a quarter of a mile. These shoals, however, do not obstruct the *South Channel.* When past this island, look out for

LITTLE EGG ROCK,

also on the west side of the entrance. It is a bare rocky islet, bold-to on its eastern side, which lies W. by N. from the south end of **Allen Island**, seven-eighths of a mile distant; extends N. by E. and S. by W., and is one hundred and seventy-five yards long. It must not be approached on its southwest side nearer than three-eighths of a mile, as there are sunken ledges, with twelve feet at low water, extending in that direction for a third of a mile, *which are not buoyed.* They are generally known as *Little Egg Rock Shoals.*

The channel between **Little Egg Rock** and **Allen Island** is three-quarters of a mile wide, with from thirteen to twenty-two fathoms, and affords excellent beating-room, as the west shore of **Allen Island** is bold-to, six fathoms being found within one-eighth of a mile of it. But on the west side of the channel, about two-thirds of a mile to the northward of **Little Egg Rock**, is the southernmost of a very dangerous group of ledges, called

SEAL LEDGES,

which lie N E. by N. and S W. by S., covering a space nearly three-quarters of a mile long, with deep and wide channels separating the different rocks. The northernmost of these ledges is a large rock, dry at low water, and surrounded by shoals, which lies N. by E. from **Little Egg Rock**, a little over one mile distant, and from **Franklin Island Light-House** S E. ¾ S., one mile and three-quarters distant. From the north end of **Benner Island** the

dry part bears W. by S., distant a mile and a quarter, and NE. by N. from the southern ledge, distant seven hundred yards. This southern ledge, which has six feet at low water, lies nearly NNW. and SSE., is about four hundred yards long, and bears from **Little Egg Rock** N. ½ W., distant two-thirds of a mile, and from the southwest end of **Allen Island** NW., one mile distant. A third rock, with thirteen feet at mean low water, lies about a third of a mile to the eastward of the southern ledge and three hundred and fifty yards to the southward of the northern ledge. A channel with eleven fathoms passes between this and the northern ledge, and another, with seven fathoms, and a quarter of a mile wide, between it and the southern ledge.

About two hundred yards nearly NNE. from the dry part of the northern ledge is placed *a red spar-buoy*, No. 2, in four fathoms water, which is to be left to the westward by vessels passing through the *South Channel*, as it is colored and numbered for the use of vessels bound through *Davis Straits* to the eastward. When past it, there is a clear channel until up with the **Thompson Islands**, when it is necessary to look out for the

THOMPSON ISLAND ROCKS,

three detached ledges, running off the west shore of the large **Thompson Island** in a nearly W. by N. direction. The innermost, which is close to the shore, has six feet at low water; the middle one, which is three hundred and fifty yards to the westward, has five feet; and the outer and westernmost one, which lies a quarter of a mile WNW. from the middle rock, has eleven feet, and bears from the northwestern end of **Great Thompson Island** SW. by W. ½ W., five hundred and fifty yards distant. *It is not buoyed*, but a buoy has been recommended.

On the west side of the channel, about three-quarters of a mile WEST from the outer **Thompson Rock**, lie

THE KEGS,

two round rocks, bare at low water, NE. and SW. from each other, about two hundred yards apart, and surrounded by shoal water. Between the lines of three fathoms they cover a space three-eighths of a mile long, and their southern end bears from *Seal Ledge Buoy* N. ½ E., three-quarters of a mile distant; from the southwestern end of **Allen Island** N. by W., a little over two miles distant; from the north end of **Great Thompson Island** WSW., one mile and an eighth distant; and from **Franklin Island Light** E. by S. ½ S., one mile and a third distant. When **Franklin Island Light** bears W. ½ N. the north end of the *Kegs* has been passed.

Above **Thompson Island** the channel continues to the northward past **Barter, McGee,** and **Two-Bush Islands**, and when nearly up with the latter it is necessary to look out for a small ledge, with seventeen feet at mean low water, which lies nearly three-eighths of a mile NW. ½ W. from the southwest end of **Two-Bush**; and this island should not, therefore, be approached nearer than eight hundred yards to avoid the ledge. When up with it, a *red spar-buoy* will be seen bearing about NE. by E., a third of a mile distant. This is on

JENKS LEDGE,

a dangerous ledge, common to all the channels from the westward, and which lies a little over a mile and a quarter N. by E. ½ E. from the northwestern end of **Thompson Island** and three-eighths of a mile N. by W. ½ W. from the middle of **Two-Bush Island**. It is awash at low water, bare at low spring tides, and extends nearly NE. by E. for an eighth of a mile, with a good channel on both sides, the main entrance, however, lying to the northward of it. The channel between this ledge and **Two-Bush** has from six to nine fathoms, but is not safe for strangers, owing to the dangerous ledges between **Two-Bush** and **Eagle Islands**, while the main channel has from ten to eleven fathoms, is about five-eighths of a mile wide, and unobstructed.

BYER'S SHIP LEDGE.

Vessels beating up through this channel into *St. George River* must, if standing to the northward toward **Otter Island**, from the vicinity of *Jenks Ledge*, look out for *Byer's Ship Ledge*, which extends E. ½ S. from the northeastern end of that island six hundred and fifty yards, and is formed by a number of sunken ledges and bare rocks extending to the eastward from a rocky islet one hundred yards long, which lies two hundred and fifty yards from **Otter Island**. *There is no buoy on it*, but it lies two-thirds of a mile NW. by N. from *Jenks Ledge Buoy*.

Otter Island is the first island to the westward of **Gay Island** in *Muscongus Bay*, and lies off the mouth of *Meduncook River*, at a distance of little over a mile. It extends N E. and S W., is seven-eighths of a mile long, forty feet high at its southern end, and well wooded except at its northern end, which is cleared, with a gentle slope, and has several houses upon it. Off its southeastern side there is a dangerous ledge, with eight feet at low water, about four hundred yards from shore, and called *Otter Island Ledge*. *It is not buoyed*, nor is it in the way of vessels using this passage.

There is a good channel on either side of **Otter Island** leading into *Meduncook River*. That on the north side, which passes between **Otter** and **Cranberry Islands**, is called the *OTTER ISLAND PASSAGE*.

When up with *Jenks Ledge*, the channel turns to the eastward, leading between **Gay** and **Caldwell Islands**, but closer to the latter, and directly for the north end of **Howard Point**. On this course, when nearly up with **Gay Island** a *spar-buoy, painted red and black in horizontal stripes*, will be seen to the northeast, about one-third of a mile off, on

GOOSE ROCK LEDGE,

a detached rock, with eight feet at mean low water, which lies nearly in mid-channel between **Gay** and **Caldwell Islands**, and bears S E. by S. ¾ S. from the southwestern end of **Gay Island**, five hundred and fifty yards distant, and N E. ½ E. from *Jenks Ledge Buoy*, nearly a mile distant. The buoy is placed in seventeen feet about twenty yards to the southward of the rock, and is usually left to the northward.

There is a good passage on the north side of *Goose Rock Ledge* with seven fathoms water, but the main passage is to the southward, between the ledge and

GOOSE ROCK,

six hundred and fifty yards S. by E. ½ E. from it. This is in reality two rocks, joined at low water, and surrounded by shoals. They are always out, and bear from *Jenks Ledge Buoy* E N E., three quarters of a mile distant; S. by E. ½ E. from the southwestern end of **Gay Island**; and N W. ½ N. from **Eagle Island**, five-eighths of a mile distant. It is not safe to approach the dry rocks nearer than two hundred yards from any direction; but the channel between them and the buoy on *Goose Rock Ledge* is nearly a quarter of a mile wide, with from eleven to sixteen fathoms.

When past these ledges, the channel leads along the north shore of **Caldwell Island**, giving **Gay Island** a wide berth to avoid

GAY COVE LEDGE,

with six feet at mean low water, which lies in the middle of the channel, between *Gay Cove* and the northeast end of **Caldwell Island**. From the latter it bears N W. ½ N., a quarter of a mile distant, and from *Goose Rock Ledge* N E. by E. ½ E., distant three-quarters of a mile. There is good water on all sides of it, from seven to ten fathoms being found between it and **Gay Island**; but it is usual to pass to the southward of it, and accordingly it is marked by *a black spar-buoy*, No. 3, placed in three fathoms on its

southeastern end. When past it the channel is clear to **Turkey Point**; vessels drawing over twelve feet should not approach the southeast shore of **Gay Island** nearer than two hundred yards.

For dangers in the river above **Turkey Point**, see pages 383 to 385.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE WESTWARD.

I. *By the South Channel.*—On the course E. ½ N. from off **Seguin**, when **Monhegan Light** bears S. by E., distant two miles and three-quarters, the depth will be thirty-three fathoms, and the course for the entrance to the *South Chanel* N E. by N. ¾ N., carrying not less than fourteen fathoms. Continue it until between **Little Egg Rock** and **Allen Island**, in sixteen fathoms, with **Franklin Island Light** bearing NW. by N. ¾ N. and the middle of **Little Egg Rock** W. by N. ½ N., the latter being about five hundred yards distant. Then steer N. by E. ½ E., which will lead safely through the channel, with not less than ten fathoms, until up with *Jenks Ledge Buoy.* When abreast of this buoy, in ten fathoms, **Franklin Island Light** will bear S W. by W. ½ W. and the northern extremity of **Howard Point** E. by N. ¾ N.; steer that course, carrying not less than nine and a half fathoms, until nearly up with the north end of **Caldwell Island** and abreast of the *black buoy* on *Gay Cove Ledge*, in eleven fathoms of water, when steer N E. ½ E., carrying not less than twelve fathoms, until past **Pleasant Point**, and the southern extremity of **Turkey Point** bears E. by S. ½ S. The depth will be twelve and a half fathoms, and the course thence is N E. ¾ E. through the *Narrows;* after which follow the directions for the river.

The above courses pass one mile to the westward of the *Old Man;* a little over three-quarters of a mile to the eastward of **Shark Island**; three-quarters of a mile to the westward of *Old Woman Ledge;* one quarter of a mile to the eastward of **Little Egg Rock**; half a mile to the eastward of the southernmost of the *Seal Ledges;* four hundred yards to the eastward of the easternmost *Seal Ledge;* and three-eighths of a mile to the eastward of the *red buoy* on the northernmost; three hundred yards to the westward of the outer **Thompson Rock**; nearly half a mile to the eastward of the *Kegs;* nearly three hundred yards to the westward of the *Seventeen-Feet Rock* northwest of **Two-Bush Island**; one quarter of a mile to the westward and three hundred yards to the northward of *Jenks Ledge;* two hundred yards to the southward of *Goose Rock Ledge;* two hundred and fifty yards to the northward of **Goose Rock**; and an eighth of a mile to the southward of *Gay Cove Ledge.*

DANGERS
IN APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE WESTWARD.

II. *By the Old Hump Channel.*—This passage, already mentioned, (see page 379,) has its entrance between **Shark Island** on the east and **Eastern Egg Rock** on the west; runs in a N E. by N. direction, leaving **Shark Island**, the *Seal Ledges*, the **Old Hump**, and the *Kegs* to the eastward, and **Eastern Egg Rock** and the *Franklin Island Shoals* to the westward, and joins the *Western Channel* off **Otter Island**. It is about seven-eighths of a mile wide at its entrance, and in its narrowest part, which is abreast of the **Old Hump**, is six hundred yards in width. When nearly up with **Shark Island**,

EASTERN EGG ROCK

will be seen as a low, nearly flat, bare, rocky islet, extending nearly N N E. and S S W., and about three hundred and fifty yards long. Neither north nor south of it is there

any passage suitable for strangers, as on the north side extends the very dangerous *Franklin Island Shoals,* a mile and three-quarters to **Franklin Island,** while on the south side, four hundred yards S. by W. ½ W. from the rock, is a detached ledge with eight feet at low water, called *Egg Rock South Ledge.* Five and three-quarters fathoms may be taken between this ledge and **Eastern Egg Rock,** but the channel is not safe for strangers, as *the ledge is not buoyed.*

On the east side of the entrance **Shark Island** should receive a berth to the eastward of not less than one-third of a mile, to avoid

SHARK ISLAND SHOALS,

which extend in a northwesterly direction a quarter of mile from the rock, and are bare at one-quarter ebb. **Shark Rock,** as before described, (see page 397,) is a low, bare, rocky islet, about two hundred and fifty yards long N E. and S W., lying between the *South* and *Old Hump Channels,* marking the western point of entrance to the former and the western point of the latter, and bears from **Franklin Island Light-House** SOUTH, nearly three miles distant. From **Eastern Egg Rock** it is distant a mile and a quarter S E. by S., and from the **Old Hump** two miles S. by W. ½ W.

ANDREWS LEDGES

are the next dangers met with in this channel, and lie on its eastern side, three-quarters of a mile to the northward of **Shark Island** and half a mile S E. ¾ E. from **Eastern Egg Rock.** They are two small detached rocks, lying N W. by N. and S E. by S. from each other, about one hundred and seventy-five yards apart, and are not marked in any way. The northwestern rock bears N. ½ W. from **Shark Island,** distant three-quarters of a mile, and has five feet at mean low water, while the southern rock is awash. The space inclosed between **Little Egg Rock, Shark Island,** and *Andrews Ledges* has many shoal places, and is not safe for strangers, although it is traversed by deep channels.

When past *Andrew Ledges,* if beating to the windward, do not stand farther to the eastward than to bring the **Old Hump** N. ½ W., or **Franklin Island Light** N. by W. ¾ W., to avoid the

SEAL LEDGES,

the westernmost of which extends into this channel. This southern ledge, which has six feet at low water, lies nearly N N W. and S S E.; is about four hundred yards long, and bears from **Shark Island** N E. by N. ¾ N., a mile and a quarter distant; from **Eastern Egg Rock,** EAST, a mile and a half distant; from the **Old Hump** S. by E. ¾ E., three-quarters of a mile distant; and from **Franklin Island Light** S S E., two miles distant. Six fathoms may be taken between this ledge and the northeast ledge through a channel a quarter of a mile wide, but strangers must not attempt it. There is also an excellent passage, five-eighths of a mile wide, between the *Seal Ledges* and the **Old Hump,** which is used by vessels intending to pass through *Davis Straits.* Ten fathoms may be taken through it by keeping rather nearer to the *Seal Ledges* than the **Old Hump.**

On the west side of the channel, about three hundred yards to the northward of **Eastern Egg Rock,** there will be seen a *black spar-buoy* on

EGG ROCK NORTH LEDGE,

which is awash at low water; bears from **Eastern Egg Rock** N E. by N. ¾ N.; from **Shark Island** N W. by N. ¾ N., a mile and five-eighths distant; from the **Old Hump** W. by S. ¾ S., a mile and a third distant; and from **Franklin Island Light** S W. by S. ¾ S., nearly a mile and three-quarters. It is the southernmost of the *Franklin Island Shoals,* which occupy all the space between **Franklin Island** and the *black buoy* on this rock. The buoy is marked

No. 1, and is placed in four fathoms on the southern end of the rock, as a guide to vessels using the *Davis Straits Passage.*

FRANKLIN ISLAND SHOALS

are the worst obstructions in either the *Old Hump Channel* or the *Main Channel*, occupying a space nearly a mile and a half long by half a mile in width between **Franklin Island** and **Eastern Egg Rock.** They consist of a great number of detached rocks, some bare at low water, others with from one to seventeen feet upon them, and several bare at half-tide. The southernmost (*Egg Rock North Ledge*) has been already described, and is the only one which is buoyed; but in southerly weather most of the rocks show themselves by heavy breakers.

Next to the northward of *Egg Rock North Ledge* are the *Midway Rocks*, a group of five sunken ledges with from one to twelve feet at low water, and extending nearly EAST and WEST for three-quarters of a mile.

The easternmost rock, which is the most dangerous to vessels using this channel, is awash at low water, and bears from *Old Hump Ledge* W. ½ S., about five-eighths of a mile distant, and from **Franklin Island Light-House** S. ½ W., a mile and one-eighth distant. It is three hundred and fifty yards long between the lines of three fathoms; extends N E. by N. and S W. by S., and to avoid it vessels standing to the westward on a wind should go about as soon as **Franklin Island Light-House** bears N. ½ W., or the eastern extremity of **Otter Island** N E. by N. ½ N.

About two hundred and fifty yards N W. by W. from this rock lies *another with eleven feet* at mean low water; and a quarter of a mile to the westward of this is the *westernmost rock, which has twelve feet*, and bears S W. by S. ½ S. from **Franklin Island Light**, one mile distant. A quarter of a mile S S W. from it lies the southernmost ledge, with five feet at low water, which bears from **Franklin Island Light** S W. by S. ½ S., a mile and five-eighths distant, and from the *black buoy* on *Egg Rock North Ledge* N. ½ E. a quarter of a mile.

When past *Midway Rocks*, do not go to the westward of **Otter Island**, bearing N E. by N. ½ N., (as before,) to avoid the shoal water *between those rocks and Long Ledge.*

A mass of shoal ground extends from *Midway Rocks* for half a mile to the northeastward, almost joining the southern extremity of **Long Ledge**, and to the northward for about the same distance toward **Franklin Island.** This shoal ground is traversed by numerous narrow channels with from three to ten fathoms water in them, but they are, of course, entirely unsafe, and are never used. From ten to sixteen feet water is found upon the shoals.

Hough Ledge and **Round Ledge** form the western boundaries of the *Franklin Island Shoals*, and **Round Ledge** marks their northern end, but neither ledge is in the way of vessels using this passage.

OLD HUMP LEDGE,

which gives the name to this channel, lies on the west side, nearly abreast of *Midway Rocks*, from which it is distant half a mile. It is a bare rock, about one hundred and fifty yards square, with long ledges, bare at low water, extending from it a quarter of a mile to the northeastward, and it bears from **Franklin Island Light** S E. by S. ½ S., nearly a mile and a quarter distant, and N. by E. ½ E. from **Shark Island**, nearly two miles. Five fathoms may be carried to within one hundred and fifty yards of this rock on its western side, but in passing it to the northward it should receive a berth of not less than one-third of a mile. When abreast of it there will be seen, bearing about N. by W., a line of bare rocky islets in range with **Harbor Island**, and stretching along the west side of the channel. This is

LONG LEDGE,

dry at low water for three-eighths of a mile in length, and covering between the lines of three fathoms a space three-quarters of a mile long in a N E. by N. ½ N. direction. Its southern end bears from **Franklin Island Light-House** S E. by S. ½ S. a little over half a mile, and from **Old Hump Ledge** N W. by N. ¾ N., half a mile distant. Its northern end, which is awash at low water, bears from **Franklin Island Light-House** E. ½ N., five-eighths of a mile distant, and from **Otter Island** S W. by S., a mile and five-eighths distant. *There is no buoy on this or any other ledge in the Old Hump Channel except Egg Rock North Ledge.* On the eastern side of the *channel*, a mile N E. from the **Old Hump**, and abreast of the north end of **Long Ledge**, lie

THE KEGS,

already described on page 398 as two round rocks, bare at low water, and surrounded by shoals, lie between the *South* and *Old Hump Channels*, and bear from **Franklin Island Light-House** E. ½ S., one mile and a half distant. The shoal water surrounding them extends N E. and S W. for three-eighths of a mile, and *there is no buoy.* The western end of the shoal bears from the **Old Hump** N E. ½ N., distant one mile, and from the north end of **Thompson Island** W. by S. ½ S., one mile and an eighth distant. When up with it,

GANGWAY LEDGE

will be seen bearing about N N W., and distant five-eighths of a mile. This ledge is situated at the junction of the *Old Hump Channel* with the *Western Channel*, and about a quarter of a mile N E. ½ E. from the northern end of **Long Ledge**, with a channel of not less than five fathoms between them. It is a bare rock, surrounded by shoals; extends N E. and S W., and bears from **Franklin Island Light-House** E. by N. ½ N., nearly one mile distant, and from the southwestern end of **Otter Island** S W. by S. ½ S., one mile and three-eighths distant. It is quite bold-to on its eastern side, thirteen fathoms being found within one hundred and fifty yards.

When past **Gangway Ledge** the course leads more to the eastward, joining the *South Channel* abreast of *Jenks Ledge.* On this course there are no dangers in the channel; but if standing to the northward on a wind *the south end of* **Otter Island** *must not be approached nearer than a quarter of a mile,* to avoid *a shoal with twelve feet*, which extends from that point in a S S W. direction two hundred and fifty yards.

About three-eighths of a mile to the eastward of this shoal lies

OTTER ISLAND LEDGE,

with eight feet at mean low water. It is four hundred yards from the southeast shore of **Otter Island**; *is not buoyed*, and is not in the way unless a vessel is standing to the northward on a wind. The sailing-lines pass from three-eighths to half a mile to the southward of it.

BYERS SHIP LEDGE

is a rocky islet about one hundred yards long, which lies one-eighth of a mile to the southeastward of the north end of **Otter Island.** From it a dangerous ledge, for the most part bare at low water, extends in an E S E. direction nearly four hundred yards, and *is not buoyed.* Vessels standing to the northward in this vicinity should, in order to avoid this ledge, go about as soon as **Franklin Island Light** bears S W. ¾ W. or the western end of **Gay Island** N E. ¾ E.

On the south side of the channel, when nearly up with **Two-Bush Island**, look out for *a small ledge with seventeen feet at mean low water*, which lies nearly three-eighths of

a mile N W. ¾ W. from the southwest end of **Two-Bush**, which island should not, therefore, be approached nearer than eight hundred yards to avoid the ledge. When up with it, *a red spar-buoy* will be seen bearing about N E. by E., a third of a mile distant. This is on

JENKS LEDGE,

a dangerous ledge, common to all the channels from the westward, and which lies a little over a mile and a quarter N. by E. ¼ E. from the northwestern end of **Thompson Island** and three-eighths of a mile N. by W. ¼ W. from the middle of **Two-Bush Island.** It is awash at low water, bare at low spring tides, and extends nearly N E. by E. for one-eighth of a mile, with a good channel on all sides. Vessels using this passage, however, pass first to the westward and then to the northward of it.

Both *Jenks Ledge* and the *Seventeen-feet Ledge* are in the *South Channel*, the dangers in which have already been described, on page 396.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE WESTWARD.

II. *By the Old Hump Channel.*—On the E. ½ N. course from off **Seguin** bring **Pemaquid Light** to bear N W. ¼ W., five miles and three-quarters distant, when the depth will be thirty-nine fathoms, and the course is N E. by N. ¼ N. for about eight miles, which leads safely through the channel with not less than seven fathoms, and up with **Gangway Ledge.** When past the ledge, in eleven fathoms water, with **Franklin Island Light-House** bearing W. by S. ½ S., steer N E., carrying not less than eleven fathoms, until the southwest end of **Otter Island** bears W. ½ N. nearly, and **Two-Bush Island** S E. ¾ S., and the *buoy* on *Jenks Ledge* is nearly abeam. At this point is the junction of this and the *South Channel* with the *Western Channel*, and the course is E. by N. ¾ N., with not less than nine fathoms, nearly for the north end of **Howard Point.** On this course, when nearly up with the north end of **Caldwell Island** and abreast of the *black buoy* on *Gay Cove Ledge*, in eleven fathoms of water, steer N E. ½ E., carrying not less than twelve fathoms, until past **Pleasant Point** and the southern extremity of **Turkey Point** bears E. by S. ¼ S. The depth will be twelve and a half fathoms, and the course thence is N E. ¾ E. through the *Narrows*, after which follow the directions for the river.

The above courses pass five-eighths of a mile to the westward of *Shark Island Shoals;* half a mile to the eastward of *Egg Rock South Ledge;* three-eighths of a mile to the westward of *Andrews Ledges;* nearly half a mile to the eastward of **Eastern Egg Rock** and *Egg Rock North Ledge;* five-eighths of a mile to the eastward of the southernmost of the *Midway Rocks;* three-quarters of a mile to the westward of the *Seal Ledges;* a quarter of a mile to the eastward of the easternmost of the *Midway Rocks;* about three hundred and fifty yards to the westward of the *Old Hump Ledge;* five hundred and fifty yards to the eastward of **Long Ledge**; half a mile to the westward of the *Kegs;* two hundred and fifty yards to the eastward of **Gangway Ledge**; about seven hundred yards to the northward of the *Seventeen-feet Shoal* off **Two-Bush**; three-eighths of a mile to the eastward of *Otter Island Ledge;* a quarter of a mile to the westward, and then four hundred yards to the northward, of *Jenks Ledge Buoy;* half a mile to the southward of **Byers Ship Ledge**; two hundred and fifty yards to the northward of **Goose Rock**; an eighth of a mile to the southward of *Goose Rock Ledge;* and the same distance to the southward of *Gay Cove Ledge.*

THE WESTERN PASSAGE.

This, which is the most commonly used of all the channels into the *St. George River*, enters from *Muscongus Bay*, between **Crane Island** on the north and **Franklin Island** on the

south, and is eight hundred yards wide, with a depth of not less than ten fathoms up to *Jenks Ledge*, where it joins the *South* and *Old Hump Channels.*

CRANE ISLAND,

on the north side of the entrance, is low, nearly flat, and rocky, and has one or two trees upon it. It lies N E. and S W., is about a quarter of a mile long, and is separated from **Harbor Island** (which lies to the northeastward of it) by a narrow channel with about twelve feet at low water.

FRANKLIN ISLAND,

on the south side, is low and rocky, with a few stunted fir trees upon it; extends N N E. and S S W., and has a light-house upon its west shore, near the northern end. This light-house, which is the guide to *St. George River* and *Meduncook River*, is called

FRANKLIN ISLAND LIGHT-HOUSE.

It is a white tower, thirty-five feet high, and shows a fixed white light, varied by flashes every minute and a half, from a height of fifty-four feet above the sea. This light is of the fourth order of Fresnel, is visible twelve miles, and is in

Latitude - - - - - - - - - - 43° 53′ 31″ N.
Longitude - - - - - - - - - 69° 22′ 30″ W.

The tower is connected by a brick work-room with the keeper's dwelling, which is painted brown. On the north side of the channel, and just to the northeastward of **Crane Island**, lies

HARBOR ISLAND,

a low rocky island, three-quarters of a mile long in a N. by E. and S. by W. direction. On its western side there is a somewhat remarkable hillock, about sixty feet high, with a wooded summit, and on the south end there is a grove of spruce, but the rest of the island is bare of trees and thinly covered with grass. On its eastern side lies

HALL ISLAND,

also low, and with a grove of trees at its northern end. There is no passage between it and **Harbor Island**—the two being connected at low water by bare ledges.

When past **Franklin Island**, the channel turns to the eastward and passes about midway between the **George Islands** and

OTTER ISLAND,

which lies off the mouth of the *Meduncook River*, in a N E. and S W. direction, and is about seven-eighths of a mile long; is forty feet high at its southern end, and well wooded except at its northern end, which is cleared, with a gentle slope, and has several houses upon it.

DANGERS
IN APPROACHING AND ENTERING ST. GEORGE RIVER
FROM THE WESTWARD.

III. *By the Western Passage.*—In this channel, when past **Pemaquid Point** (the western point of *Muscongus Bay*) the first danger met with is called

NEW HARBOR SUNKEN LEDGES,

and is marked by a *black spar-buoy.* It is a group composed of three ledges, lying about N N E. and S S W. from each other, and separated by narrow and crooked channels. The northernmost rock, which has nine feet at low water, bears from **Pemaquid Light**

E. by N. ½ N., a little over three miles distant, and from **Franklin Island Light-House** W. by S. ½ S., three and a half miles distant.

The middle one lies two hundred and seventy-five yards S S W. from this, with eleven feet water; bears from **Pemaquid Light** E. by N. ½ N., distant nearly three miles, and from **Franklin Island Light** W. by S. ½ S., three miles and five-eighths. The southern rock, which has fifteen feet at low water, lies seventy-five yards S. by W. ½ W. from the middle one; bears from **Pemaquid Light-House** E. by N. ½ N., two miles and seven eighths distant, and from **Franklin Island Light** W. by S. ½ S., three miles and three-quarters distant. Besides these, there is a small rock, bare at low water, which lies to the northeastward of the buoy, about two hundred yards distant.

The buoy is placed in three fathoms on the southern end of the ledge, is marked No. 1, and is to be left to the northward. When up with it,

EASTERN EGG ROCK

will be seen, bearing nearly EAST, and about two miles off. It is a low, nearly flat, bare, rocky islet, extending nearly N N E. and S S W., and about three hundred and fifty yards long. Neither north nor south of it is there any passage suitable for strangers, as on the north side extend the very dangerous *Franklin Island Shoals*, a mile and three-quarters to **Franklin Island**; while on the south side, four hundred yards S. by W. ½ W. from the rock, is a detached ledge, with eight feet at low water, called *Egg Rock South Ledge*. Five and three-quarters fathoms may be taken between this ledge and **Eastern Egg Rock**, but the channel is not safe for strangers, as *the ledge is not buoyed*. **Eastern Egg Rock** bears from the *black buoy* on *New Harbor Sunken Ledges* E. by S., two miles and three-quarters distant, and from **Franklin Island Light-House** S W. by S. ½ S., two miles distant. About three hundred yards to the northward of **Eastern Egg Rock** will be seen another *black spar-buoy*. This is on

EGG ROCK NORTH LEDGE,

the southernmost of the *Franklin Island Shoals*. It is awash at low water; bears from **Eastern Egg Rock** N E. by N. ½ N., three hundred yards distant, and from **Franklin Island Light-House** S W. by S. ½ S., nearly a mile and three-quarters distant. The buoy is marked No. 1, and is placed in four fathoms on the southern end of the rock as a guide to vessels using the *Davis Straits Passage*, but by those using this channel is left well to the eastward.

On the north side of the channel, nearly opposite to **Eastern Egg Rock**, lies a bare rocky islet, called

WESTERN EGG ROCK.

It lies N E. and S W., is two hundred and fifty yards long, and bears from **Franklin Island Light-House** W. by S., two miles distant. It is surrounded by shoals, and must not be closely approached, especially on its northeastern side, as there is a very dangerous rock, known as *Western Egg Rock Ledge*, over five hundred yards E. ½ N. from it. This ledge breaks heavily at all times, and *is not buoyed*. It is bare at low water, and bears from **Franklin Island Light** W. by S. ½ S., a mile and five-eighths distant. A buoy has been recommended to be placed on its eastern end. On the eastern side of the channel, next to the northward of *Egg Rock North Ledge*, lie the

MIDWAY ROCKS,

already described on page 402 as forming part of *Franklin Island Shoals*. Only the northernmost and southernmost rocks obstruct this channel, and they are very rarely approached except by vessels beating in or out, as the sailing-lines pass three-quarters

of a mile to the northward of them. The southernmost ledge, which is first met with, has five feet at low water, bears from **Franklin Island Light** S W. by S. ¾ S., a mile and three-eighths distant, and from the *black buoy* on *Egg Rock North Ledge* N ¾ E., a quarter of a mile.

About five hundred yards N N E. from this rock lies the northernmost rock, with twelve feet water. It bears S W. by S. ½ S. from **Franklin Island Light**, one mile distant, and is four hundred yards S W. ½ S. from

HOUGH LEDGE,

which is also one of the *Franklin Island Shoals.* This ledge is about seven hundred yards long between the lines of three fathoms; lies N E. by N. and S W. by S.; its northern end being distant from **Round Ledge** three hundred yards and from **Franklin Island Light** nearly half a mile. This northern end has nine feet at low water, while the middle of the ledge has eight feet, and the southern end is bare at low water, and is three-quarters of a mile S S W. from **Franklin Island.** Next to the northeastward of *Hough Ledge* lies the northernmost of the *Franklin Island Shoals*, called

ROUND LEDGE.

It is a bare rocky islet, sixty yards in diameter, surrounded by shoal water, and bears from **Franklin Island Light** S. by W. ½ W., nearly half a mile distant, with a channel between the ledge and the island through which twelve fathoms may be carried. After passing **Franklin Island** there are no dangers in the channel, but vessels standing to the southward on a wind must look out, on the south side of the passage, for **Long** and **Gangway Ledges.**

LONG LEDGE

is a line of bare rocks, surrounded by shoals, extending in a N E. by N. ½ N. direction, and covering between the lines of three fathoms a space three-quarters of a mile long. Its northern end, the only part which obstructs this channel, is awash at low water, and bears from **Franklin Island Light-House** E. ¾ N., five-eighths of a mile distant, and from **Otter Island** S W. by S., a mile and five-eighths distant. *It is not buoyed.* Above, five hundred yards N E. ½ E. om it, lies

GANGWAY LEDGE,

at the junction of this passage with the *Old Hump Channel.* It is a bare rock, surrounded by shoals, extends N E. and S W., and bears from **Franklin Island Light-House** E. by N. ½ N., nearly one mile distant, and from the southwestern end of **Otter Island** S W. by S. ½ S., one mile and three-eighths distant. When past this ledge the course leads more to the eastward, joining the *South Channel* abreast of *Jenks Ledge.*

On this course there are no dangers in the channel; but if standing to the northward on a wind, *the south end of* **Otter Island** *must not be approached nearer than a quarter of a mile to avoid a shoal with twelve feet*, which extends from that point in a S S W. direction two hundred and fifty yards.

About three-eighths of a mile to the eastward of this shoal lies

OTTER ISLAND LEDGE,

with eight feet at mean low water. It is four hundred yards from the southeast shore of **Otter Island,** *is not buoyed*, and is not in the way unless a vessel is standing to the northward on a wind. The sailing-lines pass from three-eighths to half a mile to the southward of it.

BYERS SHIP LEDGE

is a rocky islet, about one hundred yards long, which lies one-eighth of a mile to the

southeastward of the north end of **Otter Island.** From it a dangerous ledge, for the most part bare at low water, extends in an E S E. direction nearly four hundred yards, *and is not buoyed.* Vessels standing to the northward in this vicinity should, in order to avoid this ledge, go about as soon as **Franklin Island Light** bears S W. ¾ W., or the western end of **Gay Island** N E. ¾ E.

On the south side of the channel, and nearly opposite to **Byers Ship Ledge,** will be seen a *red spar-buoy,* on

JENKS LEDGE,

a dangerous ledge, common to all the channels from the westward, and which lies a little over a mile and a quarter N. by E. ¼ E. from the northwestern end of **Thompson Island** and three-eighths of a mile N. by W. ¼ W. from the middle of **Two-Bush Island.** It is awash at low water, bare at low spring tides, and extends nearly N E. by E. for one-eighth of a mile, with a good channel on all sides of it. Vessels using this passage, however, pass first to the westward and then to the northward of it.

Jenks Ledge is in the *South Channel,* the dangers in which have been already described. (See page 396.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ST. GEORGE RIVER FROM THE WESTWARD.

III. *By the Western Passage.*—When on the E. ¼ N. course from off **Seguin, Pemaquid Light** bears N E. by N. ¼ N., four miles and three-quarters distant, the depth will be thirty fathoms, and the course is N E. ¾ E. for eleven miles, carrying not less than ten fathoms, until **Franklin Island Light** bears S W. by S. ¼ S., with twenty-eight fathoms, soft bottom. Then steer N E. by E. ¾ E. until nearly up with the *red buoy on Jenks Ledge,* the southwest end of **Otter Island** bearing W. ¼ N., distant five-eighths of a mile, and **Two-Bush Island** S E ¼ E., stant three-quarters of a mile. This is the point of junction of the *South Old Hump* and *Western Channels,* when steer E. by N. ¾ N., carrying not less than ten fathoms, until nearly up with the northeast end of **Caldwell Island** and abreast of the *black buoy* on *Gay Cove Ledge,* in eleven fathoms of water, when steer N E. ¼ E., carrying not less than twelve fathoms, until past **Pleasant Point** and the southern extremity of **Turkey Point** bears E. by S. ¼ S. The depth will be twelve and a half fathoms, and the course thence is N E. ¾ E. through the *Narrows,* after which follow the directions for the river.

The above courses pass one mile to the southward of the *black buoy* on *New Harbor Sunken Ledges;* one mile and a quarter to the westward of *Egg Rock South Ledge;* one mile to the westward of **Eastern Egg Rock;** seven-eighths of a mile to the northward of *Egg Rock North Ledge;* three-quarters of a mile to the northward of the southernmost of the *Midway Rocks;* half a mile to the southward of *Western Egg Rock Ledge;* two-thirds of a mile to the northward of the northernmost of the *Midway Rocks;* a little over half a mile to the northward of the dry part of *Hough Ledge;* half a mile to the northward of **Round Ledge;** half a mile to the northward of the north end of **Long Ledge;** three-eighths of a mile to the northward of **Gangway Ledge;** three-eighths of a mile to the southward of *Otter Island Ledge;* half a mile to the southward of **Byers Ship Ledge;** four hundred yards to the northward of *Jenks Ledge Buoy;* two hundred and fifty yards to the northward of **Goose Rock;** an eighth of a mile to the southward of *Goose Rock Ledge;* and the same distance to the southward of *Gay Cove Ledge.*

COASTERS' PASSAGE THROUGH DAVIS STRAITS.

Vessels using this passage enter from the eastward, between Mosquito Island and the Brothers; pass to the northward of the Gunning Rocks, to the southward of Marshall

Point Light, between **Hooper** and **Hart Islands**; and then turning to the southwestward, across the *Middle Channel*, into *St. George River*, passing between *Old Horse Ledge* and the *Sisters*, and enter *Davis Straits*. When through the *Straits* the course turns to the westward, crossing the *South Channel*, passing between **Old Hump Ledge** and the *Seal Ledges*, and then between **Eastern Egg Rock** and *Egg Rock North Ledge*, and joins the *Western Passage off New Harbor Sunken Ledges, in Muscongus Bay*. The whole distance from **Mosquito Island** is exactly ten miles.

DANGERS IN THIS PASSAGE.

In coming from the eastward, the first danger met with lies almost exactly in the middle of the channel, and is called

BARTER SHOAL.

It is a small pinnacle rock, with fifteen feet at mean low water; lies six hundred yards off the south shore of **Mosquito Island** and the same distance due **EAST** from **Hay Ledge**. *It is not buoyed*, but is easily avoided by keeping either shore aboard. When past it, there are no precautions necessary except to keep off **Hay Ledge** and the **Brothers** until up with

MOSQUITO ISLAND LEDGE,

which lies on the north side of the channel, and will be easily recognized by the *black spar-buoy* on its southern end. It has seven feet at mean low water, and bears from the southwest end of **Mosquito Island** N W. by W. ½ W., three-quarters of a mile distant; from **Marshall Point Light-House** E. ¾ S., nearly seven-eighths of a mile distant; and the course passes to the southward of it. *The buoy is painted black*, marked No. 7, and is placed in eighteen feet water about twenty-five yards S E. from the shoal of the ledge. When up with it, look out on the south side of the channel for the

GUNNING ROCK LEDGES,

which are two detached shoals with four and five feet water—the northernmost of which is a quarter of a mile N E. by N. from the northernmost of the **Gunning Rocks**. The other, which has five feet at low water, lies two hundred yards W S W. from the *four-feet rock*. There is deep water close to them, and *they are not buoyed*, but from the northern rock **Marshall Point Light-House** bears N W. by W. ½ W., nearly three-quarters of a mile distant. At night by watching this bearing, and in day-time by not approaching the **Gunning Rocks** nearer than five hundred yards, these ledges may be avoided. When past them, *a black spar-buoy* will be seen ahead near **Marshall Point**, and about half a mile off. This is on

MARSHALL POINT LEDGE,

which extends two hundred and fifty yards S S E. from **Marshall Point**, has eight feet at low water, and no passage in-shore of it. *The buoy is painted black*, marked No. 5, is placed in three fathoms a little to the eastward of the ledge, and the course passes to the southward of it.

When past *Marshall Point Ledge*, a *red spar-buoy* will be seen bearing about W. by N. ½ N., and three eighths of a mile distant. This is on

ALLEN LEDGE,

at the north end of *Hart Bar*. *Hart Bar* is a long shoal, composed of sand and gravel, which extends in nearly a **NORTH** direction from **Hart Island** for about eight hundred yards, and for nearly the whole of that distance is dry at three-quarters ebb, and has

several rocks, out at low water, scattered along its eastern edge. About one-eighth of a mile beyond the north end of the dry shoal lies *Allen Ledge*, which has two feet at low water, and is in reality the north end of the *Bar*.

The buoy on *Allen Ledge* is marked No. 6, and placed in three fathoms on its northern end. The course passes to the northward of it, between it and **Hooper Island**. When past it, the next danger met with lies to the southwestward of **Hooper Island**, and is called

HOOPER ISLAND ROCKS.

They lie W S W. from the southern end of the island, from three hundred yards to a quarter of a mile from shore. The outer ledge is a detached rock with five and a half feet at low water, and lies a quarter of a mile from the island, while the inner rock has sixteen feet, and lies three hundred yards from shore, with a six-fathom channel between it and **Hooper Island**. *Neither ledge is buoyed*, but both are covered with kelp, which shows itself at low water. A buoy has, however, been recommended to be placed upon the westernmost rock.

When past these ledges the course turns more to the southwestward, leading directly for the northeast entrance to *Davis Straits;* and about half a mile in a S W. ½ W. direction there will be seen *a red spar-buoy*. This is on

THE SISTERS,

before described, on page 394, as a group of three rocks lying N W. and S E., at a distance of a mile and three-quarters in a N. by E. ½ E. direction from the northeastern point of **Burnt Island**, and three-quarters of a mile W. by N. from **Hart Island**. From **Marshall Point Light** they bear S W. by W. ½ W., distant one mile and a quarter. Two of them are awash at low water, and the third, which is the westernmost, has three feet at mean low water, and is marked by a *spar-buoy, painted red*, (No. 4,) and placed in twenty-one feet on its northwest side. When up with the *buoy on the Sisters*, look out for

OLD HORSE LEDGE,

which is on the north side of the channel, six hundred and fifty yards N W. ½ N. from that buoy, the channel passing between them with from eleven to seventeen fathoms. This ledge has two feet at mean low water, and is bare at low spring tides, and bears from **Marshall Point Light-House** W. by S., one mile and three-eighths distant. *It is not buoyed*, but should be, as it obstructs not only this channel but the *Middle Passage* into *St. George River*.

When past the buoy on the *Sisters*, the next danger met with lies on the south side of the channel, five-eighths of a mile S W. by W. from that buoy. It is called

GIG ROCK,

and is a small pinnacle rock, with five feet at mean low water and deep water all around it, *and is not buoyed*. From **Marshall Point Light-House** it bears S W. by W. ½ W., nearly two miles distant, and from the north point of **Davis Island** E. by N. ½ N., five-eighths of a mile distant. The course passes well to the northward and westward of it.

On entering *Davis Straits a black spar-buoy* will appear in mid-channel, off the north end of **Davis Island**. This is on

GRIFFIN LEDGE,

a detached rock, with fourteen feet at mean low water and eleven at lowest tides, lying at the northeastern end of the *Straits*, with a channel on each side of it. That which passes to the eastward of it is, however, the widest and the one commonly used, and

has four and three-quarters fathoms at low water. The buoy is marked No. 3, and is placed in four fathoms on the southeastern side of the ledge. Vessels of heavy draught must not attempt to pass to the westward of it, as the shoal water is close to it on that side. When through the *Straits* the course turns abruptly to the westward, crossing the *South Channel*, and soon *a red spar-buoy* will be seen about a mile off, and bearing about W. by S. This is on the northeast end of the

SEAL LEDGES,

which lie between *South* and *Old Hump Channels* and form a very dangerous obstruction. These are a group of ledges lying N E. by N. and S W. by S., covering a space nearly three-quarters of a mile long, with deep and wide channels separating the different rocks. The northernmost is a large rock, dry at low water, and surrounded by shoals, which lies N. by E. from **Little Egg Rock**, a little over one mile distant, and from **Franklin Island Light-House** S E. ¾ S., one mile and three-quarters distant. From the north end of **Benner Island** the dry part bears W. by S., distant one mile and a quarter, and N E. by N. from the southern ledge, distant seven hundred yards. This southern ledge, which has six feet at low water, lies nearly N N W. and S S E.; is about four hundred yards long, and bears from **Little Egg Rock** N. ¼ W., distant two thirds of a mile, and from the southwest end of **Allen Island** N W., one mile distant.

About two hundred yards nearly N N E. from the dry part of the northern ledge is placed *a red spar-buoy*, No. 2, in four fathoms of water, and is to be left to the southward by vessels using this passage. It may here be remarked that all of the buoys in this channel are colored and numbered, as for vessels coming from the westward; and therefore those coming from the eastward must leave *red buoys* on the port hand and *black buoys* on the starboard. When up with *Seal Ledge Buoy*,

OLD HUMP LEDGE

will be seen, bearing about W. by N. ¾ N., and five-eighths of a mile distant. It is a bare rock, about one hundred and fifty yards square, and bears from **Franklin Island Light** S E. by S. ¼ S., nearly a mile and a quarter distant, and N. by E. ¼ E. from **Shark Island**, nearly two miles. It should not be approached on its south side nearer than two hundred yards, but the sailing-lines pass a quarter of a mile to the southward of it. When past it, look out for the *black spar-buoy* on

EGG ROCK NORTH LEDGE,

awash at low water; bears from **Eastern Egg Rock** N E. by N. ¾ N., three hundred yards distant; from **Shark Island** N W. by N. ¾ N., a mile and five-eighths distant; from the **Old Hump** W. by S. ¾ S., a mile and a third distant; and from **Franklin Island Light** S W. by S. ¾ S., nearly a mile and three-quarters. It is the southernmost of the **Franklin Island Shoals**, which occupy all the space between **Franklin Island** and the *black buoy* on this rock. The buoy is marked No. 1, and is placed in four fathoms on the southern end of the rock, and the course passes to the southward of it, between it and **Eastern Egg Rock**. This is the narrowest part of the channel westward of *Davis Straits*—being less than three hundred yards in width.

By not going to the northward of the range of this buoy and the **Old Hump Ledge**, vessels may avoid the *Midway Rocks*.

After passing *Egg Rock North Ledge* there are no dangers in this channel; but if standing to northward on a wind, it is necessary to look out for

NEW HARBOR SUNKEN LEDGES,

the *black buoy* on which lies two miles and three-quarters W. by N. from **Eastern Egg**

Rock. These are three shoals lying about N N E. and S S W. from each other, and separated by narrow and crooked channels. The northeasternmost rock, which has nine feet at low water, bears from **Pemaquid Light** E. by N. ½ N., a little over three miles distant, and from **Franklin Island Light-House** W. by S. ¼ S., three and a half miles distant. The middle one lies two hundred and seventy-five yards S S W. from this, with eleven feet water; bears from **Pemaquid Light** E. by N. ¼ N., distant nearly three miles, and from **Franklin Island Light** W. by S. ½ S., three miles and five-eighths distant. The southern rock, which has fifteen feet at low water, lies seventy-five yards S. by W. ½ W. from the middle one; bears from **Pemaquid Light** E. by N. ½ N., two miles and seven-eighths distant, and from **Franklin Island Light** W. by S. ¾ S., three miles and three-quarters distant. Besides these there is a small rock, bare at low water, which lies to the northeastward of the buoy, about two hundred yards distant.

The buoy is placed in three fathoms on the southern end of the ledge, is marked No. 1, and the course passes well to the southward of it.

SAILING DIRECTIONS
FOR THE DAVIS STRAITS PASSAGE, COMING FROM THE EASTWARD.

On the course from **White Head Light** to the southwestward, bring **Marshall Point Light** to bear W N W. and steer for it, passing between **Mosquito Island** on the north and **Hay Ledge** and the **Brothers** on the south, and carrying not less than six and three-quarters fathoms. On this course, when within five-eighths of a mile of the **light-house**, in nine fathoms and three-quarters, and the northernmost of the **Gunning Rocks** bears S W. by S. ¾ S., (or is exactly abeam,) a quarter of a mile off, steer W. ½ N. for a little over half a mile, which will lead past *Marshall Point Ledge* with not less than six fathoms. When **Marshall Point Light** bears N. ¾ W., steer W. by N. ½ N. for three-eighths of a mile, which leads up to the *red buoy* on *Allen Ledge* with not less than four fathoms water. Pass to the northward of this buoy and steer W. by S. ¾ S., carrying not less than eight fathoms, until the middle of **Hart Island** bears S E. ½ S. and the southwestern point of **Hooper Island** bears **NORTH.** The depth will be eight and a half fathoms, and the course thence S W. by W. ½ W. across the *Middle Passage* to *St. George River*, which course will lead, with not less than six and a half fathoms, to the entrance to *Davis Straits.* When up with the *buoy* on *Griffin Ledge* pass to the eastward of it, and steer S W. ¾ W. for about a quarter of a mile, until the west end of **Otter Island** opens to the westward of **Thompson Island** on a bearing of N W. by N. ¾ N. This course leads through the *Straits* with not less than four fathoms and three-quarters.

From the above bearing of the west end of **Otter Island** steer W. ¾ S., carrying not less than eight fathoms, until up with the *red buoy* on the northeast end of *Seal Ledges.* Pass to the northward of this and steer W. by S., which course will lead, with not less than four fathoms, past **Eastern Egg Rock** and into *Muscongus Bay.* On this course, when **Franklin Island Light** bears N E. by E. and **Pemaquid Light** W. ¼ N., with eighteen fathoms water, steer S W. ¾ W., carrying not less than twenty fathoms, until **Pemaquid Light** bears N E. by N. ¼ N., when the depth will be forty-one fathoms, and W. ¾ S. will lead safely past **Seguin.**

The above courses pass two hundred and seventy-five yards to the northward of *Barter Shoal;* about a quarter of a mile to the northward of **Hay Ledge**; two hundred yards to the northward of the **Brothers**; four hundred yards to the southward of *Mosquito Island Ledge;* a little over a hundred yards to the northward of *Gunning Rock Ledges;* one hundred and fifty yards to the southward of *Marshall Point Ledge;* about one hundred yards to the northward of the *buoy* on *Allen Ledge;* one hundred and seventy-five yards to the westward of the *buoy* on the *Sisters;* a quarter of a mile to the southeastward of *Old Horse Ledge;* an eighth of a mile to the westward of *Gig Rock;*

Approaches to St. George's River from Muscongus Bay, Franklin Island Light bearing N.E. by E. distant 4 Miles.

Approaches to Muscongus Sound, Pemaquid Light bearing W.½N. distant 3 Miles.

View from the Eastward of Monhegan Island, the Light bearing W.N.W. distant 4 Miles.

Approaches to Muscongus Bay. Monhegan I. Light bearing E.S.E. distant 4 Miles.

about fifty yards to the eastward of *Griffin Ledge Buoy;* one hundred and seventy-five yards to the northward of the *red buoy* on *Seal Ledges;* four hundred yards to the southward of the **Old Hump**; about fifty yards to the southward of the *black buoy* on *Egg Rock North Ledge;* and one mile to the southward of *New Harbor Sunken Ledges.* Or, when up with the *red buoy* on *Seal Ledges*, N E. by E. ½ E. will lead safely out, with not less than six fathoms, between **Eastern Egg Rock** and **Shark Island**, passing three-eighths of a mile to the northward of *Andrews Ledge* and a quarter of a mile to the southward of *Egg Rock South Ledge.* This course continue until **Pemaquid Light** bears N E. by N. ½ N., with forty-one fathoms, when W. ¾ S. will lead safely past **Seguin.**

LIGHT-HOUSE.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ″ ′	° ′ ″	h m s			Feet.	
Marshall Point Lt.	43 55 02	69 15 41	4 37 02.7	Fixed.	.....	31	11
Franklin Isl'd Lt.	43 53 31	69 22 30	4 37 30.0	F. V. F.	1^m 30^s	54	12
Pemaquid Lt	43 50 12	69 30 22	4 38 01.5	Fixed.	.....	75	14

TIDES.

	Herring Gut.	Thomaston.
Corrected Establishment	10^h 58^m	11^h 12^m
Mean Rise and Fall of Tides	9.3 ft.	9.4 ft.
Mean Rise and Fall of Spring Tides	10.0 ft.	10.3 ft.
Mean Rise and Fall of Neap Tides	8.5 ft.	8.6 ft.
Mean Duration of Rise	6^h 12^m	6^h 05^m
Mean Duration of Fall	6^h 13^m	6^h 20^m

CURRENTS.

No regular observations have as yet been made for the determination of the strength and direction of the tidal currents in the *St. George River* and *Muscongus Bay.* Its strength varies with the direction of the wind, but a maximum velocity may be given of a knot and a half for flood-tide and two knots for ebb. With a northerly wind a strong current may be expected to set down the river on the ebb; with a southerly breeze the velocity of the flood will be increased. The tidal current of the river is strongest in the *Narrows*, owing to the sudden contraction of the passage at that place and to the depth of water in the channel. The ebb-tide especially, owing to the natural fall of the bed of the stream, runs here with considerable velocity. The tide sets directly up and down the channel, and therefore does not interfere with the courses of vessels in the river; but in approaching the entrance among the islands which surround it, it will be necessary in many cases to catch a head range in order to make the course good, as the current, both of flood and ebb, sets across the axis of the channels.

VARIATION OF THE COMPASS.

The magnetic variation for 1875, in the vicinity of the *St. George River*, is 14° 25′ W., with an approximate annual increase of 2′.

MUSCONGUS BAY.

This is the first bay to the westward of *Penobscot Bay.* Its entrance lies in

Latitude - - - - - - - - 43° 50′ 00″ N.
Longitude - - - - - - - - 69° 23′ 30″ W.

and is contained between **Allen Island** on the east and **Pemaquid Point** on the west. Between these two points it is about eight and two-fifths miles wide.

The eastern side of the bay is formed by the **George Islands.** Into its northeastern corner empties the *St. George River.* To the westward of *St. George*, and separated from it by **Gay Island**, is the entrance to *Meduncook River*, which empties into the bay on its northern side.

MEDUNCOOK RIVER has a general course about N E. for two miles and a half. It is properly an arm of the bay, and not a river, and is at present of no commercial importance. Two islands, **Friendship Long Island** and **Morse Island**, lie between it and the entrance to *Medomak River*, the most important arm of the bay, which leads up to the town of **Waldoboro'**.

The small town of **Friendship** lies on the north shore of *Muscongus Bay*, occupying the western side of a long and narrow cove which makes in to the westward of *Meduncook.* This cove has good anchorage, with from three to six fathoms water, soft bottom, and is called *FRIENDSHIP HARBOR.*

To the westward of *Friendship Harbor* is a wide cove called *Hatchet Cove*, nearly three-quarters of a mile wide at its entrance; but the channel is exceedingly narrow, nearly two-thirds of its width being occupied by flats and ledges. These shoals make out from the eastern side, and the channel runs close along the western shore. Only fifteen feet can be carried into the anchorage, which is about three-quarters of a mile from the mouth of the cove. Next to the westward of *Hatchet Cove* is *MEDOMAK RIVER*, which empties into the northwestern part of *Muscongus Bay.* The entrance to this river is between **Martin Point** (the western point of entrance to *Hatchet Cove*) on the east and **Hog Island** on the west. Between these two points the entrance is a little over two and a half miles wide. But in the middle of the mouth of the river lie two islands, called **Cow Island** and **Bremen Long Island**, which divide the entrance into an eastern and western channel. These channels have a general course N N E. to the northern end of **Bremen Long Island**, at which point they unite. Thence the general course is about N E. by N. for a little over two miles, then N W. for a mile and a half, and finally N E. by N. a mile and a half to **Waldoboro'.**

Waldoboro' is a little over eight miles in a straight line from the mouth of *Medomak River.*

In the extreme northwestern corner of *Muscongus Bay* is another cove or indentation called *Greenland Cove.* It is separated from *Medomak River* by a peninsula called **Hockomock.**

Southwest from **Hog Island** lies a large island called **Muscongus Island.** It is two miles and a half long, and lies about N E. and S W. These two islands form the eastern shores of *MUSCONGUS SOUND.*

The entrance to *Muscongus Sound* is on the western side of the bay, between **Pemaquid Neck** on the west and the southern end of **Muscongus Island** on the east. It is seven-eighths of a mile wide, and the *Sound* runs about N E., very gradually narrowing to the mouth of *Greenland Cove*, a distance of a little over four and a quarter miles.

It is thus seen that *Muscongus Bay* is an irregularly shaped bay, making in in a N E. direction to the westward of *Penobscot Bay;* that it is bounded on the east by the **George Islands** and on the west by a peninsula of the main land separating it from *John Bay* and the *Damariscotta River;* and that two important rivers flow into it, the *Saint George* and the *Medomak.* If is full of islands, ledges, and shoals.

DESCRIPTION OF

THE NORTHERN AND WESTERN SHORES OF MUSCONGUS BAY FROM GAY ISLAND TO PEMAQUID POINT, INCLUDING ISLANDS IN THE BAY AND THE SHORES OF THE SEVERAL RIVERS AND COVES.

The **George Islands**, lying on the eastern side of this bay, have been already described, on pages 380 and 381, under the general head of *Saint George River*. They are seven in number, and beginning at the southernmost are named **Allen, Burnt, Benner, Davis, Thompson, Barter,** and **McGee.** To the northward of **McGee Island** is **Gay Island,** (described on page 380,) and between them is the main entrance to *Saint George River*.

Gay Island is separated from the main land by a narrow and crooked strait called *Pleasant Point Gut;* (see page 380.) At its eastern end this gut has good water, but at its western end it is dry. It connects *St. George River* with

DAVIS COVE.

This is an indentation in the eastern shores of *Meduncook River*. It runs N E., and is three-quarters of a mile long. At its mouth it is a little over half a mile wide, and gradually narrows to its head. There are no obstructions. The southeastern shore is the boldest, but both shores may be approached quite closely. Three fathoms at low water may be carried for a quarter of a mile into the cove. The shores are moderately high, partially bare and partly wooded. The wooded hills on the northern part of the peninsula give the shores the appearance, when viewed from a distance, of being well wooded.

MEDUNCOOK RIVER.

The entrance to this river is between **Gay Island** on the east and **Morse Island** on the west, and is a little over a quarter a mile wide. The channel runs N E. past **Morse Island**; then NORTH toward **Crotch Island,** three-quarters of a mile; leaving **Crotch Island** to the westward, it passes between it and the eastern shore until past the northern end of the island; here it takes an abrupt turn to the northward and westward through a narrow, crooked, and much obstructed passage, which runs about N. by W. for a quarter of a mile past the northern end of **Crotch Island.** Hence the courses are, first N E. by E., then about N E. ½ N., and then about N N E. to the head of navigation. Seven feet at low water may be carried up this river two miles from its mouth.

MORSE ISLAND

lies on the western side of the entrance to *Meduncook River*. It is about half a mile long and a quarter of a mile wide, extends in a N E. and S W. direction, is moderately high, with spruce and pine trees upon it. Its eastern face is bold, except off the northeastern point of the island, where dry ledges extend to the eastward for over six hundred yards. The northern end of **Morse Island** is bare of trees and occupied by a few houses. This island is separated, on the west, from **Friendship Long Island** by a passage six hundred yards wide. This strait or passage is, however, so completely filled with bare rocks, sunken ledges, and ledges bare at low water, as to render it useless at low water for anything larger than a boat. Its northern end is bare at low spring tides.

CROTCH ISLAND

lies about three-quarters of a mile N E. from **Morse Island,** extends in a N E. and S W. direction, and is about five-eighths of a mile long. On its northern side a long narrow cove makes in in a S W. direction, nearly dividing the island into two parts, hence its name. This cove is dry at low water. **Crotch Island** is low, and presents the same characteristics as the other islands, the trees being mainly spruce. The eastern shore has

only a few scattered trees, the woods standing a little back from the water's edge. The main channel lies on the eastern side, between it and the main land. It is one hundred and fifty yards wide in its narrowest part. On the western side of the island there is a passage a quarter of a mile wide, separating it from the western shore of the river, but this passage is mostly occupied by flats and shoals, the channel being only one hundred and fifty and in some places only seventy yards wide, with seven feet at low water. It is very crooked, also, and not available except at high water.

After passing **Crotch Island**, a long and narrow cove, running in on the eastern side of the river, is reached. Its general course is N E., and it is nearly three-quarters of a mile wide. Two fathoms at low water may be carried some distance into this cove, but the upper half of it is dry before low water. It is called *Hornbarn Cove.*

BACK RIVER.

On the western shore of *Meduncook*, three quarters of a mile above **Crotch Island**, the river sends off another branch, known as *Back River.* It is crooked and for the greater part of its length narrow, but at its entrance it is three-eighths of a mile wide. *Back River* is almost entirely bare at low water.

Meduncook River is very dangerous navigation for strangers, being full of flats and ledges. At low water these ledges show themselves, but there is then but little water in the channel itself.

The shores are hilly and the surface undulating. Part of the land is cleared, part bare, and much of it wooded with pine, spruce, birch, &c. A high hill on the eastern shore, bearing EAST from the northern end of **Crotch Island**, is known as **Hornbarn Hill;** and one on the western shore, bearing WEST from the same point, is called **Meduncook Hill.**

Both shores are very thinly settled.

FRIENDSHIP LONG ISLAND

extends in a N E. and S W. direction, and is two miles long. Its surface is hilly and diversified, partly cleared and partly wooded. The highest point is about the middle of the island, where the summit is over one hundred feet high and thickly wooded.

Friendship Long Island separates *Meduncook River* from *Medomak River.* The long cove (with good water) making in along its northwestern shore is called *Friendship Harbor*, and to the westward of that harbor is another, called *Hatchet Cove.*

A narrow passage leads into *Meduncook River* from *Friendship Harbor*, between the northern point of **Friendship Long Island** and a small island to the northward and eastward, called **Garrison Island.** This passage at high water is two hundred and fifty yards wide, but the channel at low water is only seventy yards between the lines of three fathoms. The best water is in the middle of the passage.

There is no passage between **Garrison Island** and the main land. At low water the island is connected with **Bradford Point**, northeast from it, by dry ledges.

HATCHET COVE.

The entrance to this cove is between **Jameson Point** on the east and **Martin Point** on the west. A group of islets extend in a N E. direction up the middle of this cove from its entrance half way to its head. They are small and bare. The first one met with on entering the bay is called **Ram Island;** the remainder are known generally as the **Sand Islands,** being at low water joined together by dry ledges. The channel into the cove passes to the westward of these islets, hugging the western shores very closely. The shores of *Hatchet Cove* present the same appearance as those adjacent, being high and hilly, partly cleared and under cultivation, and partly wooded. The western side

of the cove is the most thickly settled. The land rises gradually to a height of one hundred feet, and is partly cleared and settled and partly wooded with pine trees. Behind the clearings, however, and to the westward, thickly-wooded hills appear, rising a hundred feet above sea-level, and covered to their summits with spruce and pine. These hills are on the eastern shore of *Medomak River.*

Jameson Point is cleared and partly under cultivation. There are one or two pine trees near its southern end. The land rises gradually from this point to the summit, which is sixty feet high, and has several houses on it.

Martin Point is only twenty feet high, and thickly wooded. The land to the northward and eastward is partly bare and partly wooded; and half a mile above the point is a round hill eighty feet high, and wooded with oak and pine to its summit.

MEDOMAK RIVER,

as before mentioned, (page 414,) enters between **Martin Point** and **Hog Island**, and is two miles and a half wide at its mouth. It is full of islands, which divide the entrance into several channels. The middle of the river is occupied by two islands lying N N E. and S S W. from each other, with a passage between them over five hundred yards wide. The most southern island, called

COW ISLAND,

lies N E. and S W., and is nearly three quarters of a mile long, only of moderate height, and wooded with the usual growth of spruce trees. It is separated by a channel between five and six hundred yards wide from

BREMEN LONG ISLAND,

which island lies N. by E. and S. by W., occupying about the middle of the river; is a little over two miles long, high and rocky, and traversed in a NORTH and SOUTH direction by a chain of hills varying in height, but highest near its southern end. This end is separated by a small cove into two points: the eastern point is forty feet high, bare of trees, and cultivated, with several houses upon it. The western point is low and wooded with spruce.

The eastern face of the island is also the steepest. There are houses and patches of clearing scattered along both eastern and western shores, but the summits are generally thickly covered with trees.

The channel to the eastward of **Bremen Long Island** is wide, deep, and clear until approaching the northern end of the island, when there will be seen another island in the middle of the passage, and two or three islets to the eastward of the first. The largest island is called

HUNGRY ISLAND,

the channel running between it and **Long Island.** **Hungry Island** lies between five and six hundred yards to the eastward of **Long Island.** The channel between them is called *FLYING PASSAGE*, and is the eastern channel into *Medomak River.* Off the northeastern point of **Long Island** it is very narrow, two ledges making out from the eastern and western shores, leaving a channel only about eighty yards wide with over four fathoms water. **Hungry Island** will appear as a narrow and wooded island, rising gradually to a bare summit about eighty feet high. As it is passed, however, it will be seen to be a long narrow island, extending about N N E., a mile in length. Much of its surface is free from trees and partially cultivated. The northern and southern ends are wooded with a variety of trees, pine, as usual, predominating. The centre and northeastern faces are cleared and cultivated. In the middle of the island the land is

only forty feet high, the highest land being near the northern and southern ends—the former rising to seventy, and the latter to eighty feet above high-water mark.

WHARTON ISLAND

lies two hundred and seventy-five yards to the eastward from **Hungry Island.** The channel between has fourteen feet at low water and leads into *Back River Cove,* and thence into *Medomak River* again. **Wharton Island** is low and thickly wooded, and will appear from the southward as a very narrow, wooded, rocky islet.

WOLSGROVER ISLAND.

One hundred and twenty-five yards to the northward and eastward from **Wharton Island** is a low and sparsely-wooded island, called **Wolsgrover Island,** connected at low water with **Wharton Island.**

These two islands form the western side of a long narrow cove, making in between them and the eastern shore of *Medomak River,* called *Delano Cove.* Seven feet at low water may be taken from the head of this cove through a narrow passage between the main land and the northeastern point of **Wolsgrover Island** into *Back River Cove.*

The western shores of *Medomak River* thus far are high, steep, and thickly wooded. The highest hill, called **Delano Hill,** is one hundred and eighty feet above sea-level. It lies near the head of the cove, and is wooded to its summit except on its north side, which is cleared.

JONES NECK.

Passing through *Flying Passage,* a neck of land extending about N E. is seen ahead. Its southwestern and northwestern ends are wooded, and its centre cleared, with two or three houses near the highest part. The land slopes gently from both ends toward the summit, which is only fifty feet high and bare of trees. This is **Jones Neck.** It is a peninsula five-eighths of a mile long, connected with the main land at its northeastern extremity by a very narrow and low neck, over which may be seen two small islands lying to the northward. Thus **Jones Neck** looks like an island when viewed from a distance.

The main land to the eastward of it, rising to a height of seventy feet, thickly wooded, forms the northern shore of a wide passage called *Back-River Cove,* the southern side of which is formed by **Hungry, Wharton,** and **Wolsgrover Islands.** Into this cove empty two rivers, the southern one a mere creek, called *Goose River,* the other a small stream, bare at low water, called *Back River.*

The southwestern point of **Jones Neck** is called **Jones Point.** The channel runs to the westward, between it and the northern point of **Bremen Long Island,** where it joins the western or *HOCKOMOCK CHANNEL.*

MILLER ISLAND.

Passing **Jones Point,** a small island is seen in mid-river to the northward, called **Miller Island,** low and bare, and a little over two hundred yards long. It bears S. by W. from **Havenner Point,** distant a little over a quarter of a mile.

Havenner Point is the southern extremity of a large peninsula called **Dutch Neck,** forming part of the western shore of the river. From the point the land rises gently to the northward until it attains a height of one hundred feet, and is thickly wooded except on the southern slope, which is cleared, and has one or two houses on it.

The channel passes to the eastward of **Miller Island,** and is entirely unobstructed until up to a small rocky islet about one hundred yards long, which lies three-quarters

of a mile N E. from **Miller Island** and four hundred and fifty yards N. by E. from **Locust Island**, (the westernmost of the two islands north of **Jones Neck.**) This islet is called *Havenner Ledge.* It is nearly in mid-river, and there is no passage to the westward of it. To the southward ledges, dry at low water, extend nearly over to **Locust Island**; and the channel is further narrowed by rocks lying off the northern end of that island, so that it is here only about forty-five yards wide between the lines of three fathoms.

DUTCH NECK.

The western shores of the river (here called **Dutch Neck**) are hilly and undulating and tolerably well settled. Nearly the whole neck is cleared and cultivated, even to the summits of the hills. These are in no place, however, over one hundred and forty feet high. The eastern face of the neck slopes gradually toward the river until it is only about twenty feet above high-water mark, when it falls precipitously to the water.

PITCHER POINT

is a mile and a quarter above **Jones Neck**, on the eastern bank of the river. The shores between are thickly wooded, and rise gradually from the water to the height of sixty feet. **Pitcher Point** is, however, low and wooded with pine and oak. It forms the southern point of the entrance to a small shallow cove called *Pitcher Cove.*

When abreast of *Pitcher Cove*, *Long Cove*, also on the eastern side of the river, is opened, running N E., and bare at low water. The southern and eastern shores of *Pitcher Cove* are partially cleared and settled; the northern shore is wooded. The southern shore of *Long Cove* is also wooded, but the western side is cleared, and the north shore partially. The crests of the hills back of both coves are completely cleared and tolerably well settled.

FARNSWORTH POINT,

the northern point of entrance to *Long Cove*, is three-quarters of a mile N E. by N. from **Pitcher Point**; is low and thickly wooded, but the crest of the point is cleared.

HOLLIS POINT.

From **Farnsworth Point** to **Hollis Point**, also on the eastern bank of the river, is N. by W. ½ W., and the distance one mile and one-eighth. **Hollis Point** is the northern point of entrance to *Sampson Cove*, which makes in to the southward and eastward of it about half a mile in a N E. direction, and is bare at low water.

The eastern shore of *Medomak River* from *Long Cove* to *Sampson Cove* presents a cleared surface interspersed with patches of woodland, (now mainly oak, birch, &c.) The land rises gradually up to the summit of the hills, which are generally crowned with houses. Both shores of *Sampson Cove* are cleared and settled, and from **Hollis Point** to **Waldoboro'** the land on both sides of the river is entirely under cultivation, and houses are more thickly clustered until up to the town itself.

WOLTZ POINT.

On the western shore of the river, nearly three-quarters of a mile N W. by W. from **Holles Point**, is **Woltz Point**. It is low and bare, and with the whole of the surrounding land is under cultivation. **Woltz Point** is the northeastern extremity of **Dutch Neck.**

From **Woltz Point** the shore (on the west side of the river) turns abruptly to the westward, running about N W. ½ W. for five-eighths of a mile to

MEETING-HOUSE COVE,

a narrow arm of the river, bare at half-tide, and having a general course into the land

about S W. From its northern point of entrance the general course of the western bank is N E. ½ N., one mile and three-quarters to **Waldoboro'**.

HOFFSE POINT

lies on the northeastern side of *Medomak River*, about one mile above **Hollis Point** and nearly opposite to the mouth of *Meeting-House Cove.* From **Hollis Point** to **Hoffse Point** the shore runs about W N W., but at the latter point it turns abruptly and runs, first about NORTH, and then N E. by N., a little over a mile and a half to **Waldoboro'**. **Hoffse Point** is wooded; but beyond it the eastern bank of the river is cleared, cultivated, and well settled.

Waldoboro' is a town of two or three thousand inhabitants. It occupies the eastern bank of the river, which, at the town, is quite narrow, and bare at low water. A bridge sixty yards long connects the town with the settlement on the west bank. There is considerable ship-building here.

WESTERN ENTRANCE TO MEDOMAK RIVER.

This is the best entrance to the river, for although much obstructed at the southern end, it is straighter, wider, and has deeper water than the eastern passage. It passes along the western side of **Cow Island**, between it and **Hog Island** on the west; runs about N N E. along the western side of **Bremen Long Island**, between it and a small island on the western side of the river, called **Oar Island**; then about N E. by N. through a narrow but deep channel embraced between **Bremen Long Island** on the east and the peninsula of **Hockomock** on the west, called *HOCKOMOCK CHANNEL*, and joins the eastern channel at the northern end of **Bremen Long Island**. There are many ledges and rocks in the southern part of this channel, but there is plenty of water, and by using it vessels avoid the sharp turn around the northern end of **Bremen Long Island**, where, with a strong tide-way, it is almost impossible to make the course good past **Jones Point**. *Hockomock Channel* is wider than *Flying Passage*, and its course being nearly the same as that of the tidal current enables vessels easily to avoid the ledges on either hand.

HOG ISLAND

separates this passage from *Muscongus Sound;* is nearly a mile and a half long, and lies in a N E. by N. and S W. by S. direction, its northern end being separated from the southern point of **Hockomock** by a passage two hundred and fifty yards wide, called the *LOWER NARROWS.* Through this passage thirteen feet at low water may be carried into *Muscongus Sound.*

Hog Island is of moderate height, being nowhere more than sixty feet high, partially wooded, but in many places bare of trees. The eastern face rises gradually to the crest of the hills, the western face is somewhat more bluff and precipitous. The southern point of the island is low and wooded with spruce. The northeastern end is also wooded, but the summit of the island has only scattered groves of trees. Between the south end of **Hog Island** and the north end of **Muscongus Island** is a passage three-eighths of a mile wide, but it is obstructed by a shoal extending all the way across, called *Muscongus Island Bar.* Five feet at low water may be carried across this bar into *Muscongus Sound.* The bottom is soft and grassy, with scattered rocks here and there.

Between **Hog Island** and **Bremen Long Island** the middle of the passage is occupied by a line of dry rocks surrounded by shoal water. The southernmost of these rocks lies EAST from the middle of **Hog Island**, distant about three-eighths of a mile, and thence they extend due NORTH for three-quarters of a mile to within two hundred and twenty-five yards of the southwestern extremity of **Oar Island**. Five fathoms at low water may

be taken between **Oar Island** and the northern end of this ledge. There is good water to the westward of these rocks, between them and **Hog Island**.

OAR ISLAND

lies N E. and S W., and is a little over half a mile long. Its highest point, near its northeastern end, is but thirty feet above high-water mark, well wooded with a variety of trees, but both the southern and northern ends are quite bare. It is separated from the western shore of the river by a passage called *KEENE NARROWS*, only ninety yards wide at its narrowest part, and dry at low water. The southeastern shore of **Oar Island** is tolerably bold. The western side of **Bremen Long Island** is, on the contrary, fringed with a line of islets, bare rocks, and reefs, dry at low water, extending from its southern end along the shore nearly to its northern point. They lie at various distances from the shore, from three-eighths of a mile to a hundred yards, and there is no passing between them and **Long Island** except at high water.

HOCOKMOCK CHANNEL.

About a mile above **Oar Island** the passage between **Long Island** and the main land narrows very much, and from this point to where it joins the eastern channel it is called *Hockomock Channel.* In its narrowest part (about one-third of the distance from its southern entrance to its northern end) it is about three hundred yards wide; but at this same point the channel between the lines of three fathoms is only one hundred yards wide, with a strong tidal-current setting through, especially during ebb-tide. The western shores of **Bremen Long Island**, which form the eastern boundary of this channel, are lower than the eastern shores, and mostly cleared land. The land rises very gradually, not attaining its highest point (one hundred feet) until about midway between the eastern and western shores of the island.

On the other side of the channel **Hockomock Peninsula** presents a gently-sloping shore, in some places wooded and in others cleared and cultivated. To the westward the land rises to a thickly-wooded crest one hundred and twenty feet high. These woods are mostly spruce, pine, and hemlock, but a variety of trees line the shores.

The northeastern point of this peninsula is called **Heath Point**, and here the shore turns abruptly to the westward and runs for about three-quarters of a mile W S W. Then it turns as abruptly as before and runs N. by E. for three-quarters of a mile. Thence it holds a general course about EAST, though much interrupted by creeks and branches for a mile, and then takes a turn to the southward to **Havenner Point.** Thus is formed a large but shallow cove, called *Broad Cove.* It is nearly all dry at low water. On its northern and eastern shores it receives three creeks or branches—*Western Branch, Eastern Branch,* and *Havenner Cove.* *Western Branch* empties into the northwestern corner of the cove, and is dry at low water. *Eastern Branch* comes in at the northeastern corner, is nearly half a mile wide at its mouth and three-quarters of a mile long, with a general course about N N E. Eight feet at mean low water may be taken up this creek half a mile from its mouth. *Havenner Cove* opens out of the eastern side of *Broad Cove*, and is dry at low water.

JOHNSON ISLAND.

About one hundred yards S W. from **Havenner Point** is a low island, with a very few scattered trees upon it, known as **Johnson Island.** It lies N N E. and S S W., and is nearly a quarter of a mile long. Off its southern end lie a number of bad sunken ledges, called *Johnson Island Rocks.*

MUSCONGUS ISLAND

lies off the western shore of *Muscongus Bay*, and forms the eastern boundary of the lower

part of *Muscongus Sound.* It is separated from **Hog Island** on the north by a passage three-eighths of a mile wide. **Muscongus Island** lies N N E. and S S W., and is a little over two and a half miles long. The highest part of the island is near its northeastern end, where there is a wooded hill seventy feet high. The shores are gently sloping, the surface diversified, partly under cultivation and partly wooded—the eastern shore with pine and spruce, the western with pine interspersed with oak, birch, &c. A small settlement occupies this island.

Two hundred yards south of its southern end is a small rocky island with a sparse growth of spruce upon it, called **Bar Island.** It is connected with **Muscongus** at low water.

Off its northeastern end, at the same distance, is another low rocky islet, also wooded, called **Indian Island.** East of the centre of **Muscongus Island**, half a mile distant, is another low rocky island, called **Killick-Stone Island.**

One quarter of a mile EAST from **Killick-Stone** is another islet, twenty feet high and three hundred yards long, known as **Thief Island.** There are three or four small groves of spruce trees on it. It is sometimes called **Little Round Island.**

MARSH ISLAND

lies off the eastern side of **Muscongus Island**, near its southern end, at a distance of one-eighth of a mile. It lies N. by E. and S. by W., is five-eighths of a mile long and about one-fifth of a mile broad. Its surface is low, being in no place higher than fifty feet above the sea, and is almost entirely bare of trees. Its few trees are upon the western side near the southern end, and there are two or three houses near the northwestern end.

MARSH HARBOR

lies between the eastern shore of **Muscongus Island** and the western shore of **Marsh Island.** It is an excellent anchorage, with from three to eight fathoms at low water, somewhat open to the southward, and is easy of access even to strangers.

Two hundred yards WEST from its southern point is a small island, about one hundred yards in diameter and partly wooded, called **Thrumbcap Island.**

MUSCONGUS SOUND.

This body of water, which affords a good roadstead for vessels, and out of which open several good harbors, lies along the western shore of *Muscongus Bay.* It is contained between **Muscongus** and **Hog Islands** on the east and **Pemaquid Neck** on the west. Its entrance is three-quarters of a mile wide, but is obstructed by several ledges. After passing these obstructions the channel-way is nearly clear to *Muscongus Harbor*, three miles and a half from the entrance to the *Sound.* This is a most excellent channel, with few ledges, and those easily avoided.

Muscongus Sound runs N E. by N. and S W. by S., and is four miles and a quarter long from its mouth to the southwestern point of **Hockomock Peninsula.** Here it terminates in a long and shallow cove, which runs N N E. one and a half miles farther, called *Greenland Cove.*

The western shores of *Muscongus Sound* begin on **Pemequid Neck,** at a wooded point known as **Brown's Head.** The land here rises to a height of one hundred and forty feet, and is thickly wooded to its summit with oak, birch, &c., interspersed with pine and hemlock.

Three-eighths of a mile to the northward of **Brown's Head** is a small cove called *Brown's Cove.* At the head of this cove is a small clearing, and a few houses on

the shore. Thence the land is thickly wooded for a mile to another small clearing a quarter of a mile above, which is the site of a large porgy-oil factory. Three-eighths of a mile above the factory is the southern point of entrance to *Round Pond Harbor*.

ROUND POND HARBOR

is a round cove, about three-eighths of a mile in diameter, affording good and convenient anchorage in all winds, with from thirteen to eighteen feet at low water, soft bottom, and good holding-ground. Its shores are low and cleared. The village of **Round Pond** occupies the western and northern sides of the harbor.

Northward of *Round Pond* the shore stretches in the same general direction, N E. by N., for nearly a mile and a half to another cove called *MUSCONGUS HARBOR*. The land is cleared for a few hundred yards to the northward of *Round Pond*, then thickly wooded to within half a mile of *Muscongus Harbor;* thence to the southern shore of the latter is cleared land backed by trees, the crest of the hill being thickly wooded. The highest land is here one hundred and fifty feet above high-water mark; but it does not attain that height short of a quarter of a mile back from the water's edge, as the slope is gentle though regular.

MUSCONGUS HARBOR

is a narrow cove, about three hundred and seventy-five yards long, running about W. by S. into the eastern shore of **Pemaquid Neck**, a mile and a half N E. by N. from *Round Pond*. It is protected from easterly winds by **Hog Island**, and is entirely unobstructed. It is, however, only fit for light-draught vessels, as it is very shallow. Six feet at low water may be carried into the cove for about half its length. Beyond that distance, to the head of the harbor, there is only one or two feet at mean low water; and at low springs this portion is all dry. Its shores are cleared and somewhat thickly settled.

Northward of *Muscongus Harbor* wooded land again appears, and the shore runs in the same general direction, about N E. by N. The land rises to the westward to a bare summit two hundred and forty feet high, which is about three-eighths of a mile back from the shore-line. This is called **Muscongus Hill.**

GREENLAND COVE.

Muscongus Sound terminates in a long cove contained between **Hockomock** on the east and **Pemaquid Neck** on the west. Exactly in the middle of the entrance, and forming the proper northern boundary of the *Sound*, is a low island with a few scattered trees upon it, called **Ram Island.** It is a quarter of a mile long, and extends in a N E. by N. direction. A long line of ledges makes off about S. by W. from its southern end for three-eighths of a mile. These ledges are called *Half-Tide Ledges,* and are dry at low water.

Greenland Cove is a little over a mile long, and half a mile wide at its mouth, measuring from **Hockomock Point** to **Pemaquid Neck**. But this entrance is obstructed by **Ram Island,** which divides the passage into two channels. The eastern and deepest channel is two hundred and seventy-five yards wide from shore to shore; the western channel is three hundred yards wide. By the eastern channel, that is, between **Hockomock** and **Ram Island,** two fathoms at mean low water may be carried into the cove to about half a mile beyond **Ram Island.** By the western channel, eleven feet may be taken to the same point. Beyond this point there is from one to three feet at low water to the head of the cove.

The shores on both sides of this harbor present the same general features as those of *Muscongus Sound.* They are partly cleared and partly wooded, with a few houses here and there on the summits and slopes. The highest land is on the western side,

near the head of the cove, where it rises to the height of one hundred and sixty feet. The land at its head is low and marshy.

EASTERN SHORE OF PEMAQUID NECK, FROM BROWN'S HEAD TO PEMAQUID POINT.

From **Brown's Head** to the southward the shore runs about S W. to another cove, called *Long Cove*, which runs into the land in a N. by E. direction for a quarter of a mile. The character of the shores is the same as that to the northward. The highest land is about midway between the eastern and western shores of the **Neck**, and is a thickly-wooded hill two hundred feet above the sea.

LONG COVE

is a good harbor, but open to the southward. Three fathoms at mean low water may be carried nearly to the head of the cove. The entrance is clear, with ten fathoms in the channel, and bold shores. *Long Cove* is three hundred and fifty yards wide at its mouth.

NEW HARBOR

lies a little more than half a mile to the southward and westward of *Long Cove*. The land between them is thickly wooded and about seventy feet high. The entrance is two miles and three-quarters above **Pemaquid Point**, and is two hundred and seventy-five yards wide.

New Harbor runs about WEST for nearly three-quarters of a mile; its average width is one hundred and seventy-five yards; the depth of water to convenient anchorage ten feet at mean low water. In the mouth of the cove there is a depth of six fathoms, but this deep channel is very narrow and crooked.

From the southern side, near the entrance, a narrow arm runs about W S W. for nearly four hundred yards, having a width of nearly one hundred yards. Fourteen feet at mean low water may be taken into it for about one hundred yards. Beyond that it is all shoal. This cove is called *Back Cove*.

The shores of *New Harbor* are cleared and settled. The approach to it from the southward is obstructed by three small islands lying nearly north and south from each other, close to the shore. The two southernmost are merely bare rocks one quarter of a mile from shore, and called *New Harbor Dry Ledges*. The northernmost is an islet with a few spruce trees on its summit, called **Little Island**. It is one hundred and seventy-five yards from shore. *There is, however, good water inside of all of these rocks.* From *New Harbor* to the southward the shores present the same general features, excepting that the land gradually decreases in height. One mile below *New Harbor*, and a mile and three-quarters above **Pemaquid Point**, is a somewhat steep bluff, sixty feet high, and wooded to within one hundred yards of the water's edge, called **Yellow Head.**

PEMAQUID POINT,

the western point of entrance to *Muscongus Bay*, is a low and bare point, forming the southwestern extremity of **Pemaquid Neck**, which separates *Muscongus Bay* from *John Bay* to the westward of it. Its extreme southwestern point is in latitude 43° 49′ 54″ N., and longitude 69° 30′ 31″ W. On the eastern side of the point, nearly half a mile above the southwestern extremity, is built

PEMAQUID LIGHT-HOUSE,

which is a guide to *John Bay*, *Muscongus Bay*, and the approaches to *St. George River*.

This important light-house is a white tower thirty-two feet high, showing a fixed white light of the fourth order from a height of seventy-five feet above the sea. This light should be visible in clear weather fourteen miles at sea. The light-house is connected by a covered way with the keeper's dwelling, which is a few yards to the westward of the tower. Its geographical position is

Latitude - - - - - - - - -	43° 50′ 12″ N.
Longitude - - - - - - - -	69° 30′ 22″ W.

ISLANDS IN THE LOWER OR SOUTHERN PART OF MUSCONGUS BAY.

Between **Pemaquid Point** and the **George Islands** *Muscongus Bay* is over eight miles wide. This space is studded with several large islands and many small ones, and is full of ledges and rocks. The easternmost, as well as the most southerly, is

LITTLE EGG ROCK,

already described in the approaches to *St. George River*, (page 397;) is a bare rocky island, lying **N.** by E. and S. by W., and is one hundred and seventy-five yards long. It bears **WEST** from the southern end of **Allen Island**, over three-quarters of a mile distant.

EASTERN EGG ROCK

is another bare rocky islet, the first met with to the westward of **Little Egg Rock**, from which it is distant one mile and three-quarters in a W N W. direction. It is three hundred and twenty-five yards long, and lies N N E. and S S W. A wooden tripod fifty-four feet high has been erected on the north end of the rock, six feet above high-water mark. The upper half is covered with boards and painted red. The bearings and distances are as follows:

	Miles distant.
Franklin Island Light-House, N N E.	$1\frac{3}{4}$
Davis Straits, E. by N. ¼ N.	$3\frac{5}{8}$
Monhegan Light-House, S. by E.	$6\frac{3}{8}$
Manana Fog-Signal, S. ¾ E.	$6\frac{1}{4}$
Pemaquid Light-House, W. ½ S.	$5\frac{5}{8}$

WESTERN EGG ROCK.

This rocky islet lies N E. and S W., one mile and three-quarters N W. ½ N. from **Eastern Egg Rock.** It is bare and two hundred and fifty yards long. To the eastward of it shoal water and bare ledges extend six hundred and fifty yards, and to the southward three hundred and fifty yards. **Franklin Island Light** bears E. by N. from this rock, two miles distant.

HADDOCK ISLAND.

Still proceeding to the northwestward, the next island met with is **Haddock Island**, lying near the western shore of the bay. It is low and rocky, a little over a quarter of a mile long, and covered with a growth of stunted spruce trees. **Haddock Island** lies N E. and S W., and is distant from **Western Egg Rock** a little over a mile in a N W. direction. It lies on the eastern side of the entrance to *Muscongus Sound*, and is the southernmost of the islands which guard the approaches to that roadstead.

ROSS OR POND ISLAND.

Six hundred yards N E. from **Haddock Island** is a low, bare, rocky island, nearly seven hundred yards long, named **Pond Island**, but called by some **Ross Island.** From the northern end of **Pond Island** the southern point of **Muscongus Island** bears N N W.,

distant over half a mile. Between **Haddock Island** and **Pond Island** is a wide channel with from four to seven fathoms at low water. Between **Pond Island** and **Bar Island** (off the south end of **Muscongus**) is another wide channel with ten fathoms leading into *MARSH HARBOR*. This channel is over six hundred yards wide between the lines of three fathoms. Seven fathoms at low water may be taken between **Marsh Island** and **Pond Island** by keeping close to the northern end of the latter.

The shores of **Pond Island** are bold, especially on the western side, where three fathoms at low water may be carried close to the land. **Bar Island**, however, is surrounded by shoal water, and must not be approached from the southward nearer than two hundred and seventy-five yards. The southern end of **Marsh Island** is also dangerous to approach, the ledges extending several hundred yards to the southward and westward from it, and two large ledges occupy the middle of the passage between it and **Pond Island**.

WRECK ISLAND.

In the middle of the entrance to *Medomak River*, one mile and a half E. by N. from **Pond Island**, lies a round, rocky island, covered with a thick growth of pine and oak trees, and called **Wreck Island**. It is about three hundred and twenty-five yards in diameter and about twenty feet high. Next to the eastward of it, five-eighths of a mile distant, is

HARBOR ISLAND,

lying in *Muscongus Bay;* is the most southerly of that long line of islands lying between the entrance to *Medomak* and *Meduncook Rivers*. It is also a guide to the entrance to *St. George River*, the western channel passing between it and **Franklin Island**, (see page 405.) It lies N. by E. and S. by W., and is three-quarters of a mile long and four hundred yards broad. From its southern end **Franklin Island Light** bears SOUTH, five-eighths of a mile distant.

Harbor Island is low except on its western side, where there is a small, rather steep hillock, about sixty feet high, with a wooded summit. This island is otherwise bare of trees with the exception of a pine grove near its southern end.

About one hundred and seventy-five yards to the southward of it is a low islet with a few scattered spruce upon it, known as **Crane Island.** Three hundred and twenty-five yards to the eastward of the northern end of **Harbor Island** is another islet, called **Hall Island,** lying N E. by N. and S W. by S., and connected with **Harbor Island** at low water by a reef of rocks. It is low, and has a grove of trees near its northern end. (See also page 405.)

FRANKLIN ISLAND,

a guide to *St. George*, *Meduncook*, and *Medomak Rivers*, lies about five-eighths of a mile (twelve hundred yards) SOUTH from **Harbor Island**, and is low and rocky. It extends N N E., and is nearly a quarter of a mile long. The crest of the island, forty feet above sea-level, has a few stunted spruce upon it, and there are a few more trees along its eastern face. The rest of the surface is bare. On the western shore, and near the northern end, is

FRANKLIN ISLAND LIGHT-HOUSE,

a white tower, thirty-five feet high, showing a fixed white light of the fourth order, varied by flashes, from a height of fifty-four feet above the sea. It is in

Latitude - - - - - - - -	43° 53′ 31″ N.
Longitude - - - - - - - -	69° 22′ 30″ W.

OTTER ISLAND.

Exactly two miles N E. from **Franklin Island**, in the mouth of *Meduncook River*, lies **Otter Island.** It is seven-eighths of a mile long in a N E. and S W. direction, and has an average width of a quarter of a mile. It is well wooded from its southern end to within about four hundred yards of its northern extremity. At its southern end it is forty feet high, but the centre of the island is quite low. The cleared land at its northern end is about thirty feet high, and has a few houses on it.

CRANBERRY ISLAND

is a large island, lying half a mile to the westward of **Otter Island**, three hundred yards to the southward of **Friendship Long Island**, and separates the approach to *Meduncook* from the entrance to *Medomak River*. It is of irregular shape, extends E N E. and W S W., and is over a mile long. The southern end is a small neck of land connected with the main portion of the island by a very narrow and low strip of sandy land, and is well wooded but low. The middle of the island is also wooded, but the northern end is cleared and thinly settled. The highest land is near the centre, and is sixty feet above high-water mark.

There is no passage between this island and **Friendship Long Island**, but an excellent channel a quarter of a mile wide exists between it and **Otter Island**, (see page 405.) On the western side of **Cranberry Island**, and close to its southern end, are two islets, named, respectively, **Cedar** and **Black Islands.** The former is about one hundred and fifty yards long, wooded, and low. It is so close to **Cranberry Island** as to appear part of it until approached very closely. **Black Island** is a little over two hundred yards to the westward of **Cedar Island.** It is a quarter of a mile long in a N E. and S W. direction; is about thirty feet high, and wooded with a growth of stunted spruce trees. Five feet at low water may be taken between it and **Cedar Island.**

About midway between **Cranberry Island** and **Thief Island**, and bearing about E. by S. ½ S. from the latter, is a low, bare, rocky islet called **Jones Garden.** It is about one hundred and fifty yards long. **Jones Garden** is in the middle of the entrance to *Medomak River*, and is about three quarters of a mile distant from **Cranberry** and **Thief Islands.**

The **George Islands** have already been minutely described, on pages 380 to 382.

DANGERS

IN APPROACHING MEDUNCOOK RIVER THROUGH MUSCONGUS BAY.

I. *Coming from the eastward.*—The best entrance to *Meduncook* for vessels bound from the eastward of the **George Islands** is along the western shore of those islands. Therefore, after passing between **Monhegan** and **Allen Islands**, the first danger met with is

LITTLE EGG ROCK SHOALS.

Little Egg Rock should not be approached nearer than one hundred yards on its eastern side. From its northern end shoal water extends to the northward two hundred and fifty yards. A shoal with twelve feet at mean low water lies S S W. from the islet, about six hundred yards distant. It is dangerous only to vessels bound in by this passage from the southward.

SEAL LEDGES.

Passing **Little Egg Rock**, there is seen to the northward a *red spar-buoy.* This is on the northern side of the most southerly of the *Seal Ledges*, and is intended as a guide

to the *Davis Straits* passage into *George River* and *Penobscot Bay*. Going into *Meduncook* by this passage, pass to the eastward of it. The southernmost *Seal Ledge* is five-eighths of a mile NORTH from **Little Egg Rock**. Its shoalest spot has six feet at mean low water. The buoy is marked No. 2.

Six hundred and seventy-five yards N E. by N. from this ledge is the northernmost *Seal Ledge*, a large rock, dry at low water, with several small detached rocks lying close to its northwestern and southeastern sides. One quarter of a mile S. by E. from this rock is another, a pinnacle rock, with thirteen feet. But for this thirteen feet rock the passage between the *Northern* and *Southern Ledges* would be unobstructed, and with eleven fathoms at mean low water. The *Seal Ledges* are marked only by breakers and the *red buoy* mentioned above.

THOMPSON ROCK

is on the eastern side of the entrance, being between five and six hundred yards S W. by W. ½ W. from the northwestern end of **Thompson Island** and a mile and a half N E. by E. from northernmost *Seal Ledge*. It has eleven feet at mean low water, *and is not buoyed.*

THE KEGS.

Due WEST from **Thompson Rock** three-quarters of a mile lie two round rocks, bare at low water, and surrounded by shoal water. They are N E. and S W. from each other, and about two hundred yards apart. Between the lines of three fathoms these rocks cover a space of three-eighths of a mile long by three hundred and seventy-five yards wide. *They are not buoyed.*

The northern end of this shoal bears E. ½ S., one mile and a half from **Franklin Island Light-House**, and W. ½ N., seven-eighths of a mile from the southwestern end of **Thompson Island**. This ledge is called the *Kegs*.

Past **Thompson Island**, the channel is clear until, when nearly up with **Two-Bush Island**, (off the northwestern end of **McGee Island**,) there will be seen to the eastward, and about half a mile distant, *a red spar-buoy* on

JENKS LEDGE,

a dangerous ledge, which also obstructs the entrance to *St. George River*, (see page 408,) lying three-eighths of a mile N. by W. ½ W. from **Two-Bush Island**; one mile and a quarter N. by E. ½ E. from the northwestern end of **Thompson Island**; and one mile S E. ¾ S. from the northeastern end of **Otter Island**. It is awash at mean low water, and bare at low spring tides. *A red spar-buoy* (No. 2) *is placed off the northwestern end of the ledge as a guide to St. George River.* Vessels bound into *Meduncook* must not go to the eastward of the *Jenks Ledge Buoy*, bearing N E. by E., as there is a spot with seventeen feet at mean low water six hundred yards S W. from that buoy.

OTTER ISLAND LEDGE

will be seen to the westward, and close to **Otter Island**, when past *Jenks Ledge*. This rock has eight feet at mean low water, and is about four hundred yards from the eastern shore of **Otter Island**, near its southern end. *It has no buoy*, but one has been recommended to mark it. The channel between *Otter Island Ledge* and *Jenks Ledge* is more than half a mile wide, with from seven to eleven fathoms at mean low water.

BYER'S SHIP LEDGE

is also on the western side of the channel, three-eighths of a mile to the northward and eastward of *Otter Island Ledge*. It is a bare rock, surrounded by shoal water, lying two hundred and fifty yards E. ½ S. from the northeastern end of **Otter Island**. Beyond this bare rock a long ledge, in places dry at low water, extends in the same direction

four hundred yards farther, so that the northeastern end of **Otter Island** must receive a berth of not less than seven hundred yards to avoid this ledge.

There is no buoy here, but one has been recommended to mark it.

After passing **Byer's Ship Ledge** the channel turns to the northeastward to enter *Meduncook*, passing between **Gay Island** on the east and **Morse Island** on the west. Here, if beating in or out, look out for

MOSS OR MORSE LEDGES,

dry at low water, and extending in a S W. by W. direction from the southern end of **Morse Island** for half a mile. *They are not buoyed*, and always show themselves. When past them the eastern shore of **Morse Island** is quite bold, but *two bare rocks lie off the western shore of* **Gay Island**, at a distance from it of over two hundred yards. These must be avoided by giving **Gay Island** a berth of three hundred yards, or, if the wind allow, hugging the eastern shore of **Morse Island.**

NORTHEAST POINT REEF.

After passing these rocks, keep over toward the **Gay Island** shore to avoid a long and dangerous reef extending due EAST for nearly six hundred and fifty yards from the northeastern point of **Morse Island.** It is dry at low water, and is called *Northeast Point Reef. It is not buoyed*, as it always shows. But to avoid it vessels should give this point of **Morse Island** a berth of at least seven hundred yards.

From this point there is a clear passage into *Davis Cove.* The channel up the river now passes between the main land on the east and **Crotch Island** on the west, but the western side of the channel is obstructed by

CROTCH ISLAND LEDGES.

Shoal water extends from the southwestern end of **Crotch Island** to the southward and westward one-quarter of a mile, and to the southward over three hundred yards. Along the southern edge of these shoals seventeen feet at low water may be carried in a line from Captain Davis's house (on southern point of entrance to *Davis Cove*) toward the middle of **Garrison Island.** This passage leads up between **Meduncook Peninsula** and the western side of **Crotch Island.** Only seven feet at low water can be taken through it, although the course toward **Garrison Island** will strike five fathoms. This, however, is a mere hole. This channel separates the flats making off from **Crotch Island** from an extensive shoal to the southward and westward, which extends NORTH and SOUTH from the southern end of **Meduncook Peninsula** to within three hundred and fifty yards of **Morse Island.** A channel, with not less than sixteen feet at low water and two hundred yards in width, leads between this flat and **Morse Island**, and along the northern shore of **Friendship Long Island** into *Friendship Harbor.*

This extensive flat is mostly dry at low water, and over its surface are scattered numerous ledges, to which, with those making off from **Crotch Island**, the common name *Crotch Island Ledges* has been given. They *are not marked by buoys.* To a vessel attempting this passage into *Friendship Harbor* the best advice that can be given is to hug the north and northeast shores of **Morse** and **Friendship Islands**, keep the lead going, and avoid less than two and a half fathoms. But strangers should never attempt this passage, or, indeed, the *Meduncook River* beyond **Crotch Island.**

The passage between the **Mainland** and **Crotch Island** is only a little over a hundred yards wide in its narrowest part, and between the lines of three fathoms at the same point the channel is only thirty yards wide. This point is about two-thirds of the way from the southern to the northern end of **Crotch Island.** The best water is in the middle of the river. There is here a strong tidal-current.

From the northern end of the eastern fork of **Crotch Island**, *ledges and flats, dry at low water*, extend about E N E. for two hundred and fifty yards, and from the western fork they extend in the same direction two hundred yards. One hundred and fifty yards to the northward of the northeastern end of these ledges is a detached rock with three feet at mean low water, but awash at low spring tides. About eighty yards E. by N. from the northwestern end of the same ledges is a rock dry at three-quarters ebb. Thus by the shoal water surrounding these ledges the channel is made very crooked and exceedingly narrow, being only forty yards wide between the lines of two fathoms.

After passing between the north side of **Crotch Island** and **Bradford Point** the channel turns to the northward. Both shores are flat, and the best water is in the middle of the river until off the mouth of *Back River*, where the flats make off for a quarter of a mile from shore, dry at low water, and there is a *two-feet rock* exactly in the middle of the channel one hundred and fifty yards to the eastward of the dry shoals. To avoid these, hug the eastern shore.

But, as none will ever attempt to pass up this river beyond **Crotch Island** unless familiar with the rocks and shoals, it is useless further to refer to those obstructions.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MEDUNCOOK RIVER.

I. *Coming from the eastward.*—Bring **Monhegan Light** to bear S. ½ W., distant four miles and a quarter, and **Franklin Island Light-House** N. by W. ½ W., distant three miles and three-quarters, when there will be twenty-one fathoms, hard bottom. Now steer N. by E. ¼ E. along the western side of the **George Islands**, passing to the eastward of **Little Egg Rock** three-eighths of a mile; to the eastward of *Seal Ledge Buoy* seven hundred yards; to the westward of **Thompson Rock** one-quarter of a mile; and to the eastward of the *Kegs* half a mile.

Continue this course, upon which there is not less than eleven fathoms, until up with *Jenks Ledge Buoy;* pass to the westward of it three-eighths of a mile, and when **Franklin Island Light** bears S W. by W. ¼ W. and the southern end of **Otter Island** W. ½ N., with eleven fathoms, soft bottom, steer N E. by N. ½ N. nearly, for the easternmost point of **Morse Island,** and continue this course, upon which the least water is six fathoms, until abreast of the southeastern point of the island and about two hundred yards from shore. Now steer N E. by E., between **Gay** and **Morse Islands,** keeping the latter best aboard to avoid the two bare rocks which lie off the shore of **Gay Island.** This course will carry, with nothing less than five fathoms, safely into *Davis Cove*, where anchor at discretion. But, *if bound up the river*, as soon as the entrance to **Pleasant Point Gut** begins to open from behind the northwestern point of **Gay Island,** and in five fathoms water, soft bottom, steer N. ¼ E. for the middle of **Crotch Island**; this course carries not less than five fathoms. When the middle of the passage between **Crotch Island** and the main land bears N E. steer that course, keeping carefully in the middle; and this course will carry safely into *Hornbarn Cove.* There will be found not less than twenty-one feet on the course; and in *Hornbarn Cove* from seven feet to four fathoms. But, *if bound farther up*, after passing to the northeastern end of **Crotch Island,** when exactly abreast of the fish-house on the eastern shore of the passage, steer N W. for one hundred and fifty yards, keeping the fish-house astern. This avoids the *three-feet rock* on the northern side of the channel, and there is not less than three fathoms. When past this rock, steer N. ¼ W. for two hundred and seventy-five yards, which course will lead through, between the dry ledges off **Crotch Island** and the rock off **Bradford Point,** with not less than three fathoms. After passing these obstructions steer N W. for three hundred yards, after which keep in the middle of the river until off the mouth of *Back River*,

when keep more over toward the eastern shore to avoid *Back River* flats. On these last courses there is a very narrow channel, and above *Back River* soundings of seven and nine feet.

No stranger should attempt to pass beyond *Hornbarn Cove.* An intimate knowledge only of the locality and extent of the various ledges and flats will enable a mariner to thread this narrow and crooked channel.

To pass into Friendship Harbor from Meduncook River: Bring the dwelling-house on the north side of the entrance to **Pleasant Point Gut** to bear S E. and steer N W. by W. ½ W. This avoids *Northeast Point Reef* and the *Crotch Island Ledges*, and there is not less than fifteen feet. On this course bring the southernmost point of **Garrison Island** to bear N. ½ E., with sixteen feet water, and steer N. ¾ W. until in the middle of the entrance to the passage between **Garrison** and **Friendship Long Islands.** Now steer N N E. up the middle of the passage, and there will be not less than twenty feet water. After passing through this passage the harbor is made, and anchor according to draught. The depths are from seven feet to four fathoms. But, *to round the northern end of Friendship Long Island and anchor on the western side*, continue the course N N E. until the southern point of **Crotch Island** begins to open from behind the northern end of **Garrison Island.** Then steer W. by S. ⅞ S. down the channel, taking care to keep about four hundred yards from the northern point of the island to avoid the shoal water which makes off from that point. On this course there is not less than fifteen feet, and deeper water can be had by keeping over toward **Jameson Point.**

DANGERS

IN APPROACHING MEDUNCOOK RIVER THROUGH MUSCONGUS BAY.

II. *Coming from the southward and southwestward.*—Vessels coming in from the southwestward will find a good channel, known as the *Old Hump Channel*, through the bay to the northward, by entering to the eastward of **Eastern Egg Rock,** between it and **Shark Rock**, and following that passage into *St. George River.* In approaching by this passage,

EGG ROCK SOUTH LEDGE

is first met, lying S. by W. ½ W. from **Eastern Egg Rock**, four hundred yards distant. It has eight feet at mean low water, and is the southernmost ledge of the *Franklin Island Shoals.* (See page 406.) This ledge bears S S W., two and one-eighth miles from **Franklin Island Light.** A good channel, two hundred and twenty-five yards wide, with six fathoms water, passes to the northward of *Egg Rock South Ledge*, between it and **Eastern Egg Rock.**

ANDREW ROCKS.

Guarding the eastern side of this entrance, and bearing from **Eastern Egg Rock** S E. ¾ E., nearly three-quarters of a mile distant, lie two dangerous rocks N W. and S E. from each other, two hundred yards apart. The western rock has five feet at mean low water. The eastern one is awash. There is from ten to thirteen fathoms close-to on all sides of them. A buoy has been recommended to be placed off the western rock.

FRANKLIN ISLAND SHOALS.

Passing between *Egg Rock South Ledge* and *Andrew Rocks*, pass to the eastward of a long line of detached rocks and long ledges extending from **Eastern Egg Rock** to **Franklin Island.** These are the *Franklin Island Shoals.* Exclusive of *Egg Rock South Ledge* they are four in number, viz: *Egg Rock North Ledge*, *Midway Rocks*, *Hough Ledge*, and *Round Ledge.* These ledges are separated by channels with from three to ten fathoms water, the two most commonly used being the passage between *Egg Rock*

North Ledge and **Eastern Egg Rock**, which has eight fathoms, and that between **Franklin Island** and **Round Ledge**, which has nine fathoms.

A minute description of these shoals has been given, on page 402.

The easternmost of the Midway Rocks lies on the western side of this channel, about a mile S. ¼ W. from **Franklin Island** and three quarters of a mile N E. from **Eastern Egg Rock**. It runs N E. by N. and S W. by S., is three hundred and fifty yards long, awash at low water, and is dangerous to vessels beating, as *it is not buoyed*.

OLD HUMP LEDGE.

When up with the *Midway Rocks*, there will be seen to the eastward a bare rock about one hundred and fifty yards square, with several smaller rocks to the northeastward of it. This is the **Old Hump Ledge**, giving the name to this channel.

Old Hump Ledge lies one and one-fifth miles S E. by S. ½ S. from **Franklin Island Light**, and N E. by N. ½ N., one mile and a quarter, from *Andrew Rocks*. To the northward and eastward a group of bare ledges is seen connected with the main rock at low water, and from them shoal water extends to the northward two hundred yards, at which distance lies a rock with twelve feet at low water.

There are passages with from six to fifteen fathoms water on both sides of the **Old Hump**.

LONG LEDGE.

After passing the **Old Hump**, the next ledge is on the western side of the channel, and is called **Long Ledge.** It is a group of bare rocky islets, forming, at low water, a dry ledge three-eighths of a mile long. Shoal water and rocks, bare at low water, extend to the northward of the **Dry Ledge** one quarter of a mile and to the southward one hundred and seventy-five yards. The northern end of **Long Ledge** is five-eighths of a mile E. ½ N. from **Franklin Island Light**. The southern end is a little over half a mile S E. by S. ½ S. from that light, and half a mile N W. by N. ¾ N. from the **Old Hump**, with the channel passing between them.

The western side of **Old Hump Ledge** is bold-to, and may be approached within one hundred yards in six fathoms. Three fathoms at mean low water may be carried safely to within one hundred and fifty yards of the eastern side of **Long Ledge**. Its northern end, however, should not be approached closely, as there are two rocks, bare at low water, on the extreme northern point of the shoal.

When up with **Long Ledge** the *Kegs* will appear to the eastward, the channel passing to the westward of them. They have been already described as one of the obstructions to this river, on pages 398 and 403.

GANGWAY LEDGE.

On the western side of the channel, the first ledge met with to the northward of **Long Ledge** is called **Gangway Ledge.** It bears N E. ½ E. from the northern end of **Long Ledge**, a little over five hundred yards distant.

Gangway Ledge is a rocky islet one hundred yards long, lying N E. and S W., and surrounded by shoal water. From it **Franklin Island Light** bears W. by S. ½ S., nearly one mile distant. The southwestern end of **Otter Island** bears N E. by N. ½ N., one mile and three-eighths distant.

After passing **Gangway Ledge** this channel joins the eastern channel, the dangers in which have been described on pages 387 to 389.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MEDUNCOOK RIVER.

II. *Coming from the southwestward, by the Middle or Old Hump Channel, through Muscongus Bay.*—Open **Franklin Island Light** to the eastward of **Eastern Egg Rock** on a

bearing of N N E., and steer on that range until **Pemaquid Light** bears W. by N. ¼ N.; when about one mile and a third from **Eastern Egg Rock**, and in about twenty-two fathoms water, hard bottom, steer N E. ⅛ N., which course will lead clear through the channel at a good distance from each and all of the obstructions, and in not less than three and a half fathoms. Continue this course until the southernmost point of **Otter Island** bears W. ¼ N., a little abaft the beam, and in eleven fathoms, when steer N E. by N. ¼ N. until abreast of the southeastern point of **Morse Island**, in six and a half fathoms water, when steer N E. by E., and proceed as directed for the *Eastern Channel*, (pages 430 and 431.)

The last two courses will carry not less than six and a half fathoms.

DANGERS

IN APPROACHING MEDUNCOOK RIVER.

III. *From the westward, through Muscongus Bay.*—This channel is also the western channel into *St. George River*. Its entrance is between **Eastern Egg Rock** on the east and **Western Egg Rock** on the west. It is wide and deep, and is very little obstructed. Between **Eastern** and **Western Egg Rocks** it is a mile and two-thirds wide.

NEW HARBOR SUNKEN LEDGES

do not properly belong to the obstructions of this channel, as vessels bound in with a free wind will not pass within a mile of them. But with the wind ahead, it is well to know how far to the northward and westward it may be safe to stretch in beating up toward the entrance.

These ledges are three in number, lying N N E. and S S W. The northernmost ledge has nine feet water, and bears E. by N. ¼ N. from **Pemaquid Light**, a little over three miles distant.

The middle one lies two hundred and seventy-five yards S S W. from the northernmost, and has eleven feet at mean low water. The shoal of this rock bears E. by N. ¼ N., a little less than three miles from **Pemaquid Light**.

The southernmost rock has fifteen feet at mean low water; lies seventy-five yards S. by W. ½ W. from the middle one; and bears from **Pemaquid Light-House** E. by N. ¼ N., two miles and seven-eighths.

These rocks are marked by a *black spar-buoy* (No. 1) placed one hundred yards E. by S. from the southernmost shoal. To avoid them, go about as soon as ten fathoms is struck.

ROCKS OFF NORTHEAST END OF WESTERN EGG ROCK.

From the northeastern end of **Western Egg Rock** a line of breakers extends about EAST for six hundred and fifty yards. Near the eastern end of this line there is a rock with four feet at mean low water. As a general rule, in approaching **Western Egg Rock** do not go inside of ten fathoms at low water, in order to avoid these shoals, which do not always show themselves.

The eastern side of this channel is bounded by the *Franklin Island Shoals*, which have been before described. They extend from **Franklin Island** to **Eastern Egg Rock**, a distance of two miles. To avoid them do not go inside of ten fathoms at low water.

DEVIL'S ELBOW.

Although belonging more strictly to the *Medomak River* obstructions than to this channel, mariners should know the position of this ledge that they may not, in stretching to the westward, go too far. The *Devil's Elbow* is a very dangerous rock, bare at

low water, which lies one mile N E. by N. from **Western Egg Rock**, and *is not buoyed*. There is a wide and good channel between it and **Egg Rock** with from seven to eighteen fathoms at low water.

To avoid this ledge when near it, do not go inside of the line of ten fathoms.

DEVIL'S BACK.

Between five and six hundred yards to the eastward of the *Devil's Elbow* is another ledge, bare at three-quarters ebb, called the *Devil's Back*. It bears from **Western Egg Rock** N E., distant a little over a mile; is quite bold, and may be safely approached in any direction to within one hundred and fifty yards with five fathoms water.

This channel now passes between **Franklin Island** on the southeast and **Crane Island** on the northwest. **Crane Island** should receive a berth of two hundred yards to the westward from vessels entering by this passage. **Harbor Island** may be approached on its southeastern side within two hundred yards with not less than six fathoms water. On its eastern side it must not be approached within less than five hundred yards, to avoid the ledges between it and **Hall Island**.

Hall Island should receive a berth of two hundred yards to the westward. This will give not less than ten fathoms water.

To enter *Meduncook River* by this passage, go on either side of **Otter Island**. The channel to the eastward joins at once the other channel, whose obstructions have been already described. To the westward, (that is, between **Otter** and **Cranberry Islands**,) keep the **Otter Island** shore aboard to avoid the

SHOALS OFF LITTLE ISLAND.

These shoals, mostly dry at low water, extend a quarter of a mile to the eastward of **Cranberry Island**. **Little Island** should therefore receive a berth to the westward of not less than one hundred and seventy-five yards.

SHOAL OFF OTTER ISLAND.

About a quarter of a mile above the southern point of **Otter Island** a shoal makes out from the western shore for about two hundred and fifty yards. Avoid both this and the shoals off **Little Island** by keeping about midway between the two islands in passing them.

SAILING DIRECTIONS
TO ENTER MEDUNCOOK RIVER.

Coming from the westward, by the western channel, through Muscongus Bay.—When **Pemaquid Light** bears N N E., distant one mile and a half, with twenty fathoms water, steer N E. by E. ½ E. This course leads clear of all dangers, up mid-channel (with not less than eleven fathoms) between **Franklin Island** and **Crane Island**, and joins the *Eastern Channel* about half a mile to the eastward of **Otter Island**. When the southern end of **Otter Island** bears W. ½ N., with eleven fathoms water, steer N E. by N. ½ N., and proceed as directed for the *Eastern Channel*. (Pages 430 and 431.) On this east course there will be nothing less than six and a quarter fathoms water.

MEDOMAK RIVER.

DANGERS.

I. *In approaching Medomak River from the eastward, through Muscongus Bay.*—Coming from the eastward, pass to the southward of **Allen Island**, and between it and **Monhegan**; or, if coming from any great distance to the eastward, pass to the southward of **Monhegan**. In either case the courses lead to the southward of **Little Egg Rock** and **Eastern Egg Rock**, and between this latter islet and **Western Egg Rock**.

Passing to the westward of **Eastern Egg Rock,** open to the northward a large but low, wooded island, with a smaller nearly bare island in range with it. These are **Harbor** and **Crane Islands.** Still farther to the westward will appear a low round islet, thickly wooded with oak and pine. This is **Wreck Island,** and the channel passes between it and **Harbor Island.**

Franklin Island Shoals bound the eastern side of this passage; *Western Egg Rock Shoals* lie on its western side. Passing these, leave the *Devil's Back* to the westward and **Crane Island** to the eastward; then ahead, and nearly in mid-channel, is *a rock with ten feet at mean low water*, called

HARBOR ISLAND ROCK,

lying off the western shore of **Harbor Island,** distant about six hundred yards from shore. Eleven fathoms may be carried between it and **Harbor Island** by keeping about three hundred yards from the latter. The widest channel, however, is between **Wreck Island** and the rock, where it is six hundred yards in width. *This rock is not buoyed.*

WRECK ISLAND LEDGES.

To the northeastward of **Wreck Island,** three hundred and fifty yards distant, lies a small bare rock, about one hundred yards in diameter, and E N E. from this rock another of about the same size. Shoal water surrounds both rocks, and extends from one to the other, so that vessels must not attempt to go between them. They may be approached on their eastern side within one hundred and fifty yards with six fathoms water.

Passing *Wreck Island Ledges*, if bound up through *Flying Passage*, or into *Hatchet Cove* or *Friendship Harbor*, the channel passes between **Black** and **Cranberry Islands** on the east and **Jones Garden** on the west. There are no rocks or ledges in the channel-way, but **Jones Garden** is surrounded by shoals. Bad ledges, with dry rocks and rocks awash at low water, extend NORTH from the island two hundred and fifty yards; N E. for the same distance; and EAST for two hundred yards. On the southwestern side of **Jones Garden,** at a distance of two hundred yards, is the northern end of a long ledge, called

GARDEN ISLAND SOUTH LEDGE.

It is nearly three hundred yards long in a N E. by N. and S W. by S. direction, and has two feet at mean low water. Vessels passing from *St. George River* to the *Medomak*, or the reverse, use the channel which leads south of **Otter Island,** between **Cranberry** and **Harbor Islands,** and between **Wreck Island** and **Jones Garden,** and must give the last-named island a berth of between five and six hundred yards to the northward. Vessels entering *Medomak River* through the western channel must leave **Jones Garden** three hundred and seventy-five yards to the eastward.

All of the ledges surrounding this island are known under the general name of *Garden Island Ledges.*

A sunken rock, with twelve feet at mean low water, lies one-quarter of a mile N W. from the southwestern point of **Cranberry Island.** After passing this the channel is clear until up to the

GULL ROCKS,

two small bare islets, connected at low water, lying close together, seven-eighths of a mile **N. ½ W.** from the southwestern point of **Friendship Long Island** and nearly half a mile **S W. ½ S.** from **Martin Point.** They may be passed on either hand by giving them a berth of one hundred and twenty-five yards. Bound into *Hatchet Cove* or *Friendship Harbor*, pass to the eastward of them. Bound into *Medomak River*, pass to the westward of them.

In *Friendship Harbor* there are no obstructions after passing **Gull Rocks**; stretch boldly to within one hundred and fifty yards of **Ram** and **Sand Islands** on the western side, and to within one hundred and seventy-five yards of **Friendship Island** on the eastern side, until up with **Jameson Point**, off which the shoal water extends to the southwestward nearly four hundred yards and to the southward two hundred and fifty. From this point to the head of the harbor both shores are flat and cannot be closely approached.

Martin Point should receive a berth to the northward of two hundred and fifty yards from vessels bound into *Friendship* or *Hatchet Cove.*

The eastern channel of *Medomak River,* after passing **Gull Rocks**, leads between **Cow Island** and **Bremen Long Island** on the west and **Martin Point** and the main land north of it on the east. The channel is wide, deep, and almost entirely unobstructed. Two hundred and seventy-five yards to the westward of **Martin Point** there is a *small pinnacle rock*, awash at mean low water and bare at low springs. It bears from **Gull Rocks** N. by E. ½ E., distant five-eighths of a mile. Three-eighths of a mile N N E. from this rock is another with three feet water, which lies in the mouth of a small cove making in between the main land and a small wooded island connected with it at low water. This rock is two hundred yards from shore and three hundred and fifty from the southern end of the small island. From this rock shoal water extends over one hundred yards to the westward. In beating, to avoid this rock, give the eastern shore a berth of four hundred yards.

There is *a fourteen feet spot* lying EAST from the southeastern point of **Bremen Long Island**, over six hundred yards distant.

After passing these obstructions, no further dangers are met with until near the passage between **Hungry Island** and **Bremen Long Island**, called *FLYING PASSAGE.* Here give the southwestern end of **Hungry Island** a berth of two hundred yards to avoid the shoals extending to the southward and westward from it.

At the northern end of **Bremen Island** the shoals extend to the eastward two hundred and fifty yards, and are for the most part dry at low water; and from **Hungry Island**, exactly opposite to the northern end of **Bremen Island**, they extend over two hundred yards to the westward, also dry at low water. Thus the channel is narrowed to a width of only seventy-five yards, through which, especially during ebb-tide, the current rushes with great velocity.

After passing between these two ledges there is found, to the westward, another bad shoal, partly dry at low water, which lies three hundred yards due WEST from the northern point of **Bremen Long Island.** Its eastern side may be approached within seventy-five yards, but in passing to the northward it must be left two hundred and fifty yards to the southward.

Another large shoal, with three feet at mean low water, lies in the middle of the western entrance to *Back River Cove,* exactly in line between the northern end of **Hungry Island** and the southern point of **Jones Neck.** It lies N E. by E. and S W. by W., and is a quarter of a mile long. There is a channel with over three fathoms on each side of it. This shoal is left about two hundred yards to the northward and eastward by vessels bound up *Medomak River*, the course, as soon as through *Flying Passage*, leading to the westward, between **Jones Neck** and **Bremen Long Island.** When between these two islands, this channel unites with the *Western Channel* or *Hockomock Passage.*

After passing the shoal which lies EAST from the northern end of **Bremen Long Island,** giving the north point a berth of over four hundred yards, haul in to the southward, to avoid *a bad shoal* which extends off from **Jones Neck** three hundred and fifty yards in a southerly direction, with from seven to fifteen feet water, and two hundred and fifty yards in a southwesterly direction, dry at low water. When up with this

shoal, the southern side of the channel is bounded by *a long ledge* which makes out in a N W. direction from the northwestern point of **Bremen Long Island** nearly three eighths of a mile, or seven hundred yards. After passing between these two shoals there are no more obstructions until near the northern end of **Jones Neck**, where there is a shoal with fourteen feet, two hundred and seventy-five yards from shore. Above this the first obstruction met with is

HAVENNER LEDGE.

Three-quarters of a mile N E. from **Miller Island**, and four hundred and fifty yards N. by E. from **Locust Island**, (the westernmost of the two islets north of **Jones Neck**,) is a bare rock, about one hundred yards long, called **Havenner Ledge.** It lies nearly in mid-river, and from it the dry shoals extend to the northward to the shores of **Dutch Neck**; to the southward nearly three hundred yards, or within one hundred and sixty yards of the northern end of **Locust Island.** From this latter island ledges extend to the northward one hundred and fifty yards, thus narrowing the channel to a width of only forty-five yards. To the eastward of the rocky islet forming the middle of **Havenner Ledge** the shoals extend four hundred yards; so that vessels after passing the southern point of the ledge must hug the eastern shore to avoid it. But on the western side of the rock the ledges are bold, and a long cove is formed between these shoals on the east and the western shore of the river on the west, in which there is good anchorage in from three to four fathoms, protected from all except southerly winds.

Neither this ledge nor any other of the obstructions in *Medomak River* have been buoyed by the Light-House Board. It has been considered that no stranger would attempt to pass up this river without a pilot, (as indeed none should through the eastern passage,) and buoys were therefore considered unnecessary. As, however, the western channel is by no means difficult of access, especially with a fair tide, a system of buoys has been suggested for the river, among which one is proposed on the southern point of **Havenner Ledge**, and one on the northern point of the ledge north of **Locust Island.** Thus the exact width of the *Narrows* will be marked, and vessels need only keep midway between the two buoys.

After passing **Havenner Ledge** through the *Narrows* the channel runs between large flats, in many places bare at low water, which make off from both shores. The *western* edge of the channel is marked by stakes which extend nearly to **Hoffse Point.** *These stakes are all on the western side of the channel with the exception of two—one off* **Hollis Point,** *close to the shore, and one about a quarter of a mile below* **Hoffse Point,** *directly opposite to the last stake on the west side of the channel, which is off* **Woltz Point.** These have been all placed by private enterprise. The staking of the eastern side of the channel also has been recommended.

Above **Woltz** and **Hoffse Points** there are no stakes. The channel has less than six feet at low water, and runs between dry mud-flats all the way to **Waldoboro'.** It is only practicable at high water, and then only with a pilot.

SAILING DIRECTIONS
FOR ENTERING MEDOMAK RIVER BY THE EASTERN PASSAGE.

When to the westward of **Allen Island**, bring **Pemaquid Light** to bear **W. by N. ½ N.** and steer for it until **Franklin Island Light** is brought almost on with the eastern side of **Eastern Egg Rock**, and in nineteen fathoms, hard bottom. Then steer **N. ½ E.**, carrying not less less than nine fathoms, until **Franklin Island Light** is brought in range with the middle of **Crane Island** on a bearing of **S E. by S.**, in eighteen fathoms, between **Harbor** and **Wreck Islands** and near *Harbor Island Rock*, which will be to the northeast. Now steer **N E. ½ N.** for about seven-eighths of a mile, carrying not less than eleven fathoms,

and, if bound up the river, when the north end of **Hall Island** bears S E. ½ E., (exactly abeam,) steer N N E. NORTHERLY toward **Hungry Island**, carrying not less than six and a half fathoms. When within three-quarters of a mile of the island, in seven and a half fathoms, the northern end of **Bremen Long Island** will be seen a very little open to the southward of **Jones Point** and bearing N. ½ E. Steer that course, carrying not less than five fathoms, and be careful not to bring the points in range nor to open them too widely. With the flood-tide the tendency will be to open them, and therefore keep a starboard helm. Keep this course and range until about a quarter of a mile to the northward of the southern point of **Hungry Island** and abreast of the entrance to a cove on the eastern side of **Bremen Island**, when the *Narrows* of *Flying Passage* will be open to the northward; with a fair wind and a good knowledge of the position of the ledges shoot the passage with safety. The least water on this course is four and a half fathoms. But a stranger must not attempt this passage, at least so long as the numerous ledges are not buoyed. At young flood, when the worst shoals show themselves, it might, perhaps, be safely done, but it is not advisable.

Bound into Friendship Harbor: When **Franklin Island Light** is in range with the middle of **Crane Island** on a bearing of S E. by S., (as before,) N E. ½ N. will lead, with not less than seven fathoms, up to the entrance. When past **Gull Rocks**, and the middle of the harbor bears E. by N. ¾ N., that course will lead safely in, and anchor in from three to five fathoms.

The above courses into *Medomak River* pass three hundred and fifty yards to the westward of *Egg Rock South Ledge;* a quarter of a mile to the westward of **Eastern Egg Rock**; about five hundred yards to the westward of *Egg Rock North Ledge;* three-eighths of a mile to the westward of *Midway Rocks;* over half a mile to the westward of *Hough Ledge;* one-eighth of a mile to the westward of *Harbor Island Rock;* and five hundred yards to the westward of **Gull Rocks**.

The course through *Flying Passage* is N E. by N. ½ N., keeping exactly in the middle of the stream. Being through the passage, bring the western point of the northern end of **Bremen Long Island** to bear W. by S., when the northern point of the long shoal lying on the southern side of the channel will be exactly in range with the point. Then steer W N W. for a white house on the western shore of the river, which cannot be mistaken, for there is no other near it. On this course there will not be less than three fathoms, and when the southern end of **Miller Island** bears NORTH, steer N. ¾ E. until abreast of that point and about two hundred yards from the island. Now in mid-channel, with about eight fathoms water, steer N E., with the dry rock of **Havenner Ledge** a little to the eastward. When up with the entrance to the *Narrows*, and in about seven fathoms water, the northern end of **Locust Island** will bear S E. ½ E., and the course will be E. by S. ¾ S., with not less than three fathoms. Here great care must be taken, as the channel is only about forty-five yards in width, and the ebb-tide sets directly on to the *Locust Island Ledges*, and the flood on to **Havenner Ledge**. This passage should only be attempted by sailing vessels on the young flood, when the shoals show themselves; what little tide there is will be favorable, and its set more easily overcome.

After passing the *Narrows* keep over toward the eastern shore, steering about E N E. to avoid the eastern side of **Havenner Ledge**. On this course, when **Hollis Point** (low and cleared) bears N. by E. ¾ E., steer N E. by N. ½ N. until abreast of **Farnsworth Point**. Afterwards track the stakes along as far up the river as they go. The water deepens after passing the *Narrows*, over ten fathoms being found off *Pitcher Cove* and seventeen fathoms just below it. Not less than three fathoms can be carried up to abreast of **Farnsworth Point**, but above that the soundings gradually diminish. Thirteen feet may be carried as far as **Woltz Point**, and two feet up to **Waldoboro'**. The channel is narrow and crooked.

At **Waldoboro'** vessels lie alongside the wharves, where they are aground at one-quarter ebb.

Fourteen feet at low water may be taken to the eastward of **Hungry Island** through a very narrow channel between it and **Wharton** and **Wolsgrover Islands.** This channel leads into *Back River Cove.*

Seven feet at low water may be taken to the eastward of **Wharton** and **Wolsgrover Islands** by keeping the eastern shore of the river close aboard.

Neither of these passages is fit for strangers.

DANGERS IN APPROAHING MEDOMAK RIVER FROM THE WESTWARD, AND IN ENTERING THROUGH THE WESTERN OR HOCKOMOCK CHANNEL.

II. *Coming from the westward*, after passing **Pemaquid Point**, go to the northward or the southward of *New Harbor Ledges.* The safest way for strangers is to go to the southward. These ledges have been already described, on page 433. After passing them the channel leads to the northward, along the western shore of **Western Egg Rock,** and when up with this islet there will be abeam *a sunken ledge with eight feet at mean low water*, bearing about W N W., and called

HADDOCK ISLAND KELP LEDGE.

This shoal lies nearly half a mile SOUTH from **Haddock Island** and about a mile W N W. from **Western Egg Rock.** Between it and **Haddock Island** is a good channel with eight fathoms. To avoid it, vessels when stretching toward it should go about in six fathoms water.

HADDOCK ISLAND LEDGE

is five-eighths of a mile N E. from *Kelp Ledge*, and bears E S E. from the north end of **Haddock Island,** one-quarter of a mile distant. It has two feet at mean low water, and is awash at low spring tides.

DEVIL'S LIMB AND DEVIL'S ELBOW.

These two ledges are on the eastern side of the entrance, the first met with on that side after passing **Western Egg Rock.** The *Devil's Elbow* is dry at low water, and bears N E. by N. from **Western Egg Rock,** one mile distant. The *Devil's Limb* lies nearly six hundred yards N W. from the *Devil's Elbow* and one mile N. by E. ½ E. from **Western Egg Rock.** It is also dry at low water. There is a good channel with eight fathoms water between the two shoals.

POLIN LEDGES.

When up with the *Devil's Limb*, there are ledges to the northward, and one directly ahead. Only one of these will show, except at low water, when the one ahead will break. These three ledges are called **Polin Ledges.** They lie to the southward of **Marsh Island,** and are distinguished as follows:

The most easterly is nearly in mid-channel, lying NORTH from the *Devil's Limb* half a mile, and S E. by S. ½ S. from the south point of **Marsh Island** the same distance. It has six feet on it, and good water all around. This ledge is called *Polin East Ledge.*

The most southerly rock, and the first one met with by vessels after passing *Devil's Limb*, lies a little over half a mile S S W. from the southern point of **Marsh Island.** It has eleven feet at mean low water. Between this ledge and **Pond Island** there is a

good channel with from six to eight fathoms, which communicates with *Marsh Harbor* and *Muscongus Sound.* This ledge is called *Polin South Ledge.*

The northernmost is a small bare islet, lying a quarter of a mile northward of the *South Ledge* and three-eighths of a mile S. by W. ½ W. from the southern end of **Marsh Island.** Shoal water extends from the dry rock E N E. and W S W., over three hundred yards each way. This ledge is called **Polin Dry Ledge.** Seven fathoms may be safely carried between it and the *South Ledge*, and five fathoms between it and **Marsh Island.**

These ledges are all on the western side of the channel.

THRUMBCAP LEDGE.

Thrumbcap Island is about a hundred yards in diameter, with a few trees near its northwestern end. It bears W S W. from the southwestern point of **Marsh Island,** two hundred yards distant, and shoal water extends from it to the southward three hundred yards. Two hundred and seventy-five yards SOUTH from **Thrumbcap Island** there is only seven feet at mean low water, and the edge of the shoal is very abrupt. Thus the passage between this and **Polin Dry Ledge** is narrowed to one hundred and seventy-five yards between the lines of three fathoms.

After passing **Polin Ledges** and **Thrumbcap Ledge** the channel is clear until past **Wreck Island,** with the exception of a *thirteen-feet ledge* which lies three hundred yards N W. from **Wreck Island,** and has good water on all sides of it. After passing it, come to **Wreck Island Ledges,** (already described on page 435,) which pass to the westward of. Abreast of the southern rock there is a detached rock lying on the western side of the channel, called

ROUND ROCK.

This rock has twelve feet at mean low water, and bears S W. by S. from **Thief** or **Little Round Island,** distant five-eighths of a mile, (about twelve hundred yards;) N W. ½ N. from the southernmost of the **Wreck Island Ledges,** distant nearly three-quarters of a mile; and N N W. from the northern end of **Wreck Island,** three quarters of a mile. There is good water all around it, and it may be passed safely in every direction by giving it a berth of a hundred and seventy-five yards.

The shores of **Marsh** and **Wreck Islands** are bold. **Marsh Island** may be safely approached within fifty yards; **Wreck Island** within a hundred and fifty. **Little Round Island** or **Thief Island** is also bold, except at its southern end, where the ledges make out to the southward nearly two hundred yards, and are dry at low water.

When up with **Thief Island, Jones Garden** and the *Garden Island Ledges* are to the eastward. These have been already described, on page 435.

Vessels beating up this channel, after passing to the northward of **Thief Island,** may stretch from **Friendship Long Island** on the east to **Muscongus Island** on the west. But when nearly up with the small island known as **Indian Island,** which lies off the east shore of *Muscongus*, they must, if passing to the southward of it, give it a berth to the northward of nearly a quarter of a mile; and if passing to the eastward of it, a berth of over three hundred yards. This will avoid the ledges and shoals which extend from the island in those directions. But if passing to the northward of **Indian Island,** give it a berth of two hundred and fifty yards to avoid the dry ledge making off from its northern end.

After passing **Thief Island,** the next obstructions met with are

COW ISLAND SUNKEN LEDGES,

on the eastern side of the channel, and are three in number, distinguished as the *North,*

Middle, and *South Ledges.* *The southernmost of the group* has three feet at mean low water, and lies three-quarters of a mile S W. ½ S. from the southern end of **Cow Island** and one mile N E. by N. from **Thief Island.** There is good water between it and the northern ledges.

The Middle Ledge lies three hundred yards NORTH from the *South Ledge,* and has thirteen feet water. There are six fathoms between them.

The northernmost rock is six hundred yards N N E. from the southernmost and the same distance S W. from **Cow Island,** and has eight feet at mean low water. The southern end of **Cow Island** has shoal water extending three hundred and fifty yards to the southward from it. There is, however, a channel with four fathoms between the southern end of this shoal and the northernmost of the *Sunken Ledges.*

COW ISLAND DRY LEDGES.

From the western side of **Cow Island,** and from the small, low, wooded island (called **Calf Island**) lying WEST from its southern end, dry ledges and ledges bare at low water extend to the westward five-eighths of a mile, (about twelve hundred yards.) Thus they occupy just one-half the width of the channel. They are called **Cow Island Dry Ledges,** to distinguish them from the sunken ledges to the southward. These rocks are on the eastern side of the channel.

On the western side, directly opposite to them, is a small bare rock, surrounded by shoal water, called

COOMBS LEDGE.

It is five-eighths of a mile EAST from the northern point of **Muscongus Island** and three-quarters of a mile N N E. from **Indian Island.** Between it and **Cow Island Dry Ledges** the channel is half a mile wide.

The eastern and southern sides of **Coombs Ledge** are quite bold, but from its northern end a shoal makes to the northward two hundred and seventy-five yards. Vessels in beating should therefore leave this rock at least three hundred and fifty yards to the southward when passing it on its northern side.

INNER LEDGE

lies off the eastern shore of **Muscongus Island,** near its northern end, at a distance of a quarter of a mile from shore, bearing W S W. from **Coombs Ledge,** a little over a quarter of a mile distant; and between the two shoals is a channel with five fathoms, and about four hundred yards broad. *Inner Ledge* has five feet at mean low water.

Passing to the eastward of **Coombs Ledge, Cow Island Dry Ledges** are reached, which pass to the westward of, giving the westernmost bare rock a berth of from two to three hundred yards. When abreast of this rock **a dry ledge** will be seen to the westward, making off the eastern side of **Hog Island** near its southern end. This is

HOG ISLAND LEDGE,

a dry rock, connected at low water with the shore, from which it is distant two hundred and seventy-five yards. With this exception the eastern side of **Hog Island** is quite bold.

After passing this ledge several rocky islets are seen ahead, in the middle of the river. These are called

MIDDLE LEDGES.

The southern end of these ledges bears EAST from the middle of **Hog Island,** distant three-eighths of a mile. It is formed by the shoal water making off from the

southern end of a small low island with a few trees on it. This islet is the southernmost of a group of three, lying north and south from each other, and all connected by bare ledges at low water. All three islets are more or less wooded, and all are surrounded by shoals. The shallow water extends to the northward of the northernmost islet a quarter of a mile, and to the southward of the southernmost over two hundred yards. But three-eighths of a mile to the northward of the northernmost islet is a low, wooded island about two hundred yards long, and surrounded by shoal water. The trees are mainly oak, birch, and maple. To the northward of this island the ledges extend nearly three hundred yards toward the southern point of **Oar Island**, and at the same distance there is a rock awash at low spring tides. This rock is only two hundred and twenty-five yards SOUTH from **Oar Island**. Four fathoms may be taken between the southern group of islets and this northern island of the **Middle Ledges**; but the channel is narrow and unsafe.

A channel with six fathoms and a little over one hundred yards wide leads between the southwestern end of **Oar Island** and the northern point of the **Middle Ledges**, and then passes between the northern end of **Hog Island** and **Hockomock Point** into *Muscongus Sound*. The passage between **Hockomock** and **Hog Island** is called the *LOWER NARROWS*. **Middle Ledges** may be approached quite closely on their eastern side, but on no other. The eastern shore of **Oar Island** is also tolerably bold, and may be approached within one hundred and twenty-five yards with over three fathoms, except at its northern end. At this point a shoal makes out to the eastward nearly three hundred yards.

Along the western shore of **Bremen Long Island**, which here forms the eastern boundary of this channel, a line of islets extends from near the south point of the island for about two-thirds of its length. These islets are connected by ledges, some bare at low water, others with from three to ten feet on them. There is no passage between them and **Bremen Long Island**. An apparent channel, with from three to seven fathoms, which enters to the eastward of the southern end of these shoals, is only a pocket, and ends in a dry shoal about a mile above its mouth.

No particular name has ever been given to these ledges and islets, but they are generally known as **Long Island Ledges**.

They are easily avoided by passing one hundred yards to the westward of the islets, except the northernmost and largest islet, called **Clam Island**, which must be left to the eastward two hundred and seventy-five yards to avoid the shoal water making off from its western shore.

After passing **Clam Island** keep over toward the low bare point to the northward, which makes out from the peninsula of **Hockomock**. It can be approached within one hundred and twenty-five yards with not less than three fathoms, and when at this distance, keep over toward the middle of the passage to avoid the shoals and ledges which line the eastern shore of **Hockomock**. These dangers extend off from the land to distances varying from one hundred to two hundred and seventy-five yards, and from the bare point before mentioned for three quarters of a mile to the northward along the shore. As there are also some shoal places along the **Long Island** shore, the best rule to avoid both is to keep the middle of the passage while passing through its southern half, and then incline toward the eastern side until up with the northwestern point of **Long Island**, after which hug the **Hockomock** shore.

NORTHWEST POINT LEDGES.

From the northwestern point of Bremen Long Island to the point of union of the *Eastern* and *Western Channels*, the eastern side of *Hockomock Passage* is formed by a

long shoal, dry in various places at low water making out from the northwestern point N N E. for half a mile. Nearly nine hundred yards from the point there are only two feet at low water. The name given to these extensive shoals is *Northwest Point Ledges.*

To avoid them, keep the **Hockomock** shore aboard and steer for **Miller Island.**

SAILING DIRECTIONS
TO ENTER MEDOMAK RIVER BY THE WESTERN PASSAGE.

With **Pemaquid Light** bearing N N E., distant one mile and a half, and in twenty fathoms water, steer N E. by E. ⅜ E. Then, intending to pass to the westward of **Western Egg Rock**, when **Pemaquid Light** bears W. ½ S. SOUTHERLY, and in nineteen fathoms, steer N E. by N. nearly, until abreast of **Thief Island**, which pass to the eastward of, about four hundred yards off, and steer N E. ¼ N., carrying not less than six and a half fathoms, and passing between **Cow Island** and **Gull Rocks.** On this course, when the passage between **Cow Island** and **Bremen Long Island** is fairly open on a bearing of W. by N. ⅜ N. and the north point of **Cow Island** bears W. ⅞ N., in eight fathoms water, steer N N E. NORTHERLY for **Hungry Island**, and follow the directions given for the river.

But, wishing to enter *Hockomock Channel*, when abreast of **Thief Island**, (as before,) steer N. ¼ W., carrying not less than seven fathoms, until exactly between the southern point of **Hog Island** and the southern end of **Cow Island**, the latter seen over the wooded islet which forms the most southerly of the **Dry Ledges**, on a bearing of W. by N. ½ N. and E. by S. ½ S., and in thirteen fathoms water, steer N E. by N. ¼ N. for the westernmost of the **Long Island Ledges**, (a small round islet with a few trees upon it.) Keep this islet just clear to the westward of the extreme western point of **Clam Island**, and on this range pass over three hundred yards to the westward of the **Cow Island Dry Ledges** and one hundred and fifty yards to the eastward of the southern point of the **Middle Ledges**, and carry not less than seven fathoms. (The best water is close along the southeastern side of these rocks.) On this course, when the southern point of the wooded islet forming the northern **Middle Ledge** is exactly in range with the northern end of **Hog Island**, and in six fathoms, rocky bottom, steer N. by E. ¼ E. until past the westernmost of the **Long Island Ledges**, and bring the southwestern end of **Oar Island** to bear N W. by W. ½ W. On this course there will not be less than four fathoms. Then steer N E. ½ N. for the western point of **Clam Island**, carrying not less than four and a half fathoms, until up with the northeastern end of **Oar Island**, when steer N. ½ E., passing midway between the two islands, in not less than four fathoms. When, on this course, the northwestern point of **Bremen Long Island** bears N E. by E., steer N E. ⅞ E., almost exactly for it. It will be in range with the middle of **Jones Point**, and this range will keep clear of the shoals on either side. Keep this course and range for about three-quarters of a mile, carrying not less than seven fathoms. When abreast of a small cove on the eastern shore, and **Miller Island** bears N E. by N. ¼ N., steer that course, which will carry safely through the passage in not less than seven fathoms; and when the northeastern point of **Bremen Long Island** bears S E. by S., a N E. course will lead up to the *Upper Narrows* in not less than seven fathoms. Then follow the sailing directions given for the river, on page 438.

The above courses pass four hundred yards to the southward and westward of the *black buoy* on *New Harbor Sunken Ledges;* half a mile to the westward of **Western Egg Rock**; three-eighths of a mile to the eastward of *Haddock Island Kelp Ledge;* about six hundred yards to the eastward of *Haddock Island Ledge;* four hundred yards to the westward of the *Devil's Limb;* the same distance to the eastward of the *Outer Polin Ledge;* an eighth of a mile to the eastward of *Round Rock;* and either one-quarter of a mile to the eastward, or three-eighths of a mile to the westward, of *Cow Island Sunken Ledges*, according as the main channel or the *Hockomock Passage* is used.

Wishing to pass to the eastward of **Western Egg Rock**, continue the course NE. by E. ¾ E., from off **Pemaquid Point**, until past **Western Egg Rock** and the centre of the rock bears NW. ¾ W., between five and six hundred yards off, with eighteen fathoms water. Then steer NE. ¾ N., carrying not less than six fathoms, until **Franklin Island Light** is brought in range with the middle of **Crane Island**, on a bearing of SE. by S.; there will be eighteen fathoms. Steer NE. ½ N., and follow the directions previously given for the river.

The entrance to *Broad Cove* passes between **Miller** and **Johnson Islands** on the north and the northern side of **Hockomock Peninsula** on the south; but it is narrow and obstructed by shoals. No strangers should ever attempt this passage. The chart will be the best guide for the entrance, as no intelligible sailing directions can be given.

It is always hazardous for strangers to attempt the entrance to *Medomak River* by either passage. But in cases where such action becomes necessary the above directions for the *Western* or *Hockomock Channel* will be found to lead clear of all the dangers if due attention be paid to keeping the ranges. The passage should be attempted by sailing vessels only with a fair tide; as in the *Hockomock Passage* the ebb current runs with great velocity, and disaster might ensue if the vessel should not be able to stem the current. There is no anchorage in this narrow passage, the bottom being hard, with from six to twelve fathoms, not affording good holding-ground, and the tidal-current being apt to tail on to one of the numerous ledges on all sides. It is, therefore, best to enter on young flood, when the current is comparatively weak and nearly all of the ledges show themselves.

After passing the *Upper Narrows*, the current is weaker and the channel easily tracked by following the stakes.

The mean rise and fall of tides in both *Meduncook* and *Medomak Rivers* is ten feet.

Vessels wishing to enter *Medomak River* coming from *St. George River* use the passage which leads along the southern side of **Otter Island** and between **Harbor** and **Cranberry Islands.** This is a wide and deep channel, and is obstructed only by two pinnacle rocks, one with thirteen and one with seventeen feet, which lie in mid-channel between **Cranberry** and **Hall Islands.** The *seventeen-feet rock* lies three hundred yards N. by E. from the northern end of **Hall Island**, and the *thirteen-feet rock* lies three hundred yards NE. by E. from the *seventeen-feet rock*, or nearly six hundred yards NNE. from **Hall Island.** The channel between them has eleven fathoms.

To pass from St. George River into Medomak River by this passage: When abreast of *Jenks Ledge Buoy*, pass four hundred yards to the northward of it and steer W. by S. ¾ S. for the bare islet south of **Hall Island.** On this course there will not be less than ten fathoms; and when the southwestern point of **Otter Island** bears N. ¾ E., about three-eighths of a mile off, and the northern point of **Harbor Island** W. ¾ N., with ten fathoms water, steer W. by N. ½ N., leaving **Cranberry** and **Black Islands** to the northward and **Hall** and **Harbor Islands** to the southward, carrying not less than ten fathoms. This course leads between the *thirteen* and *seventeen-feet rocks*, in eleven fathoms water. When to the westward of them, **Franklin Island Light** opens to the westward of **Hall Island.** Keep this course until about a quarter of a mile from **Wreck Island Ledges** and in about eleven fathoms. Then **Jones Garden** will bear N. by E. ½ E., and the northernmost of the **Wreck Island Ledges** WEST. Then steer NW. by N. until the southern point of **Thief Island** bears W. ½ S., about a quarter of a mile distant, and in thirteen fathoms, when steer N. ½ W., and proceed as before directed.

MUSCONGUS SOUND.

DANGERS.

After rounding **Pemaquid Point**, the first obstruction met with is a three-fathom ledge, called

PUMPKIN COVE LEDGE.

It lies off the mouth of *Pumpkin Cove*, nearly half a mile from shore, and bears N E. by E. ¾ E. from **Pemaquid Light**, distant one mile. It is only dangerous in heavy southerly or easterly gales.

Passing to the eastward of this ledge, come to

NEW HARBOR DRY LEDGES,

two bare rocky islets between five and six hundred yards from the eastern shore of **Pemaquid Neck** and nearly a mile to the northward of *Pumpkin Cove Ledge*, lying N E. by N. and S W. by S. from each other, two hundred yards apart. Both are quite bold on their eastern sides, but vessels passing to the southward must give them a berth of four hundred yards not only to clear the shoal water which extends to the southward from the southern rock, but also to avoid, in standing in-shore, *the dry ledge to the westward of them*, which is only two hundred and seventy-five yards from the shore, about a quarter of a mile above *Yellow Head.*

There are several rocks inside of **New Harbor Dry Ledges** and to the southward of **Little Island**; therefore strangers should always go to the eastward of these ledges, where they will be out of all danger.

The northernmost of the two bare islets forming **New Harbor Dry Ledges** bears SOUTH from **Little Island** one quarter of a mile.

Little Island should receive a berth to the southward of two hundred and fifty yards, and to the northward of two hundred yards, from vessels beating in or out.

SALT POND LEDGE.

This ledge, also on the western side of the entrance, lies off the mouth of *Long Cove*, to which it is the only obstruction. It is a small rock with thirteen feet at low water; lies three hundred and fifty yards from shore, bears N E. ¾ N., three-eighths of a mile from **Little Island**, and E N E., six hundred yards from the southern point of the entrance to *New Harbor.* The entrance to that harbor passes between this ledge and **Little Island.**

Passing the entrance to *Long Cove*, and well to the westward of *Haddock Island Kelp Ledge*,

WEBBER SUNKEN LEDGE

is next reached. It is on the eastern side of the channel, although in the middle of the entrance; has seven feet at low water, and lies N W. ¾ N. from the southern point of **Haddock Island**, distant three-eighths of a mile, or nearly eight hundred yards. To the northward from it, N. by E. ¾ E., two hundred and fifty yards distant, is another ledge, dry at low water, and called *Webber Dry Ledge.* Six fathoms may be carried between these two shoals, and they may be passed on either hand; but the main channel is to the westward of them, along the eastern shore of **Pemaquid Neck.**

Two hundred and fifty yards N. by E. ¾ E. from *Webber Dry Ledge* is a *fourteen-feet rock*, known as *Webber North Ledge.* Four fathoms may be taken between it and the *Dry Ledge.*

BROWN'S HEAD LEDGE.

This shoal has thirteen feet at low water. It is a small rock, three-eighths of a mil eS. by E. ¾ E. from **Brown's Head** and a quarter of a mile N W. from *Webber Dry Ledge.* There is a good channel to the eastward, between it and the *Webber Ledges;* but the main channel passes to the westward, between it and **Pemaquid Neck.**

BAR ISLAND AND BAR ISLAND ROCK.

When past *Brown's Head Ledge, Muscongus Sound* is entered. The eastern point of the entrance is **Bar Island**, the small island off the southern end of **Muscongus**. This island is surrounded by shoal water. On its southern and western sides it must not be approached nearer than between five and six hundred yards, to avoid *Bar Island Rock*, a detached rock with eleven feet at mean low water, situated a quarter of a mile S W. by W. from the southern point of the island. The main channel, however, does not approach this shoal closely, and it is therefore dangerous only to those vessels endeavoring to pass into the *Sound* by the passage between **Pond** and **Muscongus Islands**, and to vessels beating in or out.

After passing **Brown's Head**, there is to the eastward, well over toward **Muscongus Island**, another shoal, called

BAR ISLAND LEDGE,

which has a rock, dry at three-quarters ebb, near its centre, and lies one-quarter of a mile WEST from the southern end of **Muscongus Island** and three-quarters of a mile N E. from *Brown's Head Ledge.* Four fathoms may be carried between it and **Muscongus Island**, but the main channel passes well to the westward of it.

After passing *Bar Island Ledge* there are no obstructions or dangers for nearly a mile. The channel inclines toward the eastern side of the *Sound*, and the first danger met with pass to the eastward of. It is called

POLAND SOUTH LEDGES.

These are two rocks lying EAST and WEST from each other, one hundred and twenty-five yards apart, and six hundred yards from the western shore, (or **Pemaquid Neck.**) The easternmost has twelve, the westernmost nine feet at mean low water. They lie one mile N E. ¾ N. from *Brown's Cove* and seven-eighths of a mile N. ¾ E. from *Bar Island Ledge.* The channel passes to the eastward of them.

POLAND NORTH LEDGE,

bare at low water, lies three hundred and twenty-five yards off the shore of **Pemaquid Neck** and six hundred yards NORTH from the easternmost of the *South Ledges.* Five fathoms may be carried between it and the shore.

From *Poland North Ledge* to the entrance to **Round Pond** the channel is clear. But it may be remarked that the western face of **Muscongus Island**, opposite to *Round Pond Harbor*, is flat, the shoal being caused by a curve in the shore-line to the eastward, forming a cove, which is flat and full of ledges dry at low water. Vessels should give this part of the eastern shore of the *Sound* a berth of not less than six hundred yards. The water shoals abruptly from three to one and a half fathoms, and even five feet.

Strangers and vessels of any draught greater than four feet must not attempt at low water to cross between **Hog Island** and **Muscongus**; for this space is entirely occupied by a shoal, bare in places at mean low water, and with only five feet in its deepest part. At high water those acquainted with the channel use this passage, if bound to the eastward, to avoid the longer passage around **Muscongus Island**, and to enable them to keep to windward longer in northerly winds. There is a depth of fifteen feet there at high water, but the channel is very narrow. Strangers should, therefore, never attempt it without a pilot. This shoal is called *Muscongus Island Bar.*

When past *Muscongus Bar*, there is a clear channel to *Muscongus Harbor.* Approaching this harbor from the southward, care must be taken to give the southern point of the entrance a berth of two hundred and fifty yards, to avoid a ledge making

out about three hundred yards below this point, and which extends two hundred yards from shore. After passing this ledge the entrance to the harbor is plain and unobstructed.

HALF-TIDE LEDGE,

bare at three-quarters ebb, lies exactly in the middle of the channel. It bears N E. by E. ½ E., half a mile from the southern point of the entrance to *Muscongus Harbor* and S W. by S. ½ S. from the middle of **Ram Island**, distant three-eighths of a mile.

RAM ISLAND LEDGES,

from the southwestern end of **Ram Island Dry Ledges**, extend over a hundred yards; and thence, to within seventy-five yards of *Half-Tide Rocks*, a long ledge, dry at low springs, extends. This and the dry ledges, joining **Ram Island**, are known as **Ram Island Ledges**. *Half-Tide Ledges* belong properly to this line of shoals.

In the channel to the westward of these ledges seventeen feet may be carried up as far as **Ram Island** by keeping close to the western edge of the shoals. In the main channel, to the eastward, three fathoms may be taken up beyond the northern point of **Ram Island** into *Greenland Cove.*

Vessels intending to pass through the *Lower Narrows* must beware of *a rock with five feet at mean low water*, which lies in the western entrance four hundred and thirty yards S. by W. ½ W. from the low bare point making out from the western side of **Hockomock Point.** This low bare point may be known by its appearing like an island when seen from the southward. A long ledge, dry at half-tide, makes out to the southward from it to a distance of three hundred yards. So that vessels entering from the westward must hug the **Hog Island** shore to avoid them.

The northern end of **Hog Island** has a shoal making off to a distance of about three hundred yards, thus nearly closing the *Narrows.* The channel is here only twenty-five yards wide, with thirteen feet at mean low water.

SAILING DIRECTIONS.

I. *Coming from the eastward.*—Bring **Pemaquid Light** to bear W. by N. ½ N., and steer for it until **Franklin Island Light** bears N E. ½ E., with thirteen fathoms. Then steer N. by W. ¾ W., if bound up the *Sound*, or N W. by N. ½ N., if bound to *New Harbor.* When off the entrance to *New Harbor* the course in is about W. ½ N., but it is not safe for strangers to enter without a pilot. If bound up the *Sound*, when on the N. by W. ¾ W. course **Pemaquid Light** bears W. by S. nearly, in ten fathoms water, nearly abreast of the *black buoy* on *New Harbor Sunken Ledges*, steer N. ¾ E., which will lead, with not less than five fathoms, up to the entrance to the *Sound.* When past *Webber Dry Ledge*, and in seven and three-quarters fathoms, with the southern end of **Bar Island** bearing E. ¾ N., steer N E. by N. ¾ N. until nearly up with *Round Pond Harbor*, after which keep the middle of the passage.

To enter Long Cove: When, on the course N. by W. ¾ W., (as above,) **Pemaquid Light** bears W by S. nearly, and nearly abreast of the *black buoy* on *New Harbor Sunken Ledges*, steer N. W. by N. ¾ N., which will lead, with not less than ten fathoms, up to the mouth of the cove. The course in is N. by E. ½ E., and anchor in from three to six fathoms.

This is a comfortable anchorage in easterly winds, and around by N. to S W. winds. If the wind be ahead, and not too fresh for good working, the wide channel by which it is approached from the southward, between *New Harbor Sunken Ledges* and *New Harbor Dry Ledges*, affords ample beating-room, and the cove itself has a clear channel. The only danger is *Salt Pond Ledge*, which lies between this entrance and that to *New Harbor.*

To enter Round Pond Harbor: This entrance is narrowed by a ledge, with from three to ten feet at low water, extending from the south point of the entrance toward the channel for about two hundred yards. Give this south point a berth of about two hundred and seventy-five yards, and steer boldly in on a WEST course, with not less than three fathoms, until well inside the entrance; safely pass within sixty yards of the north point with eighteen feet, and after passing it anchor at discretion.

This is a most excellent harbor for vessels of twelve feet draught or less. There is excellent anchorage in fourteen feet on the south side.

Muscongus Harbor is perfectly open, and no directions are needed.

II. *To come through Davis Straits and enter New Harbor.*—The course through *Davis Straits* is S W. ¾ W., passing to the southward of *Griffins Ledge Buoy* close-to, (see page 412,) and when fairly through the passage, and about three hundred and twenty-five yards from **Davis Island**, steer W. ¾ S., carrying not less than five fathoms, and passing three hundred and fifty yards to the northward of **Benner Island** and two hundred and thirty yards to the northward of the *red buoy* off *Seal Ledges*, when steer W. by S. ½ S. for the passage between **Eastern Egg Rock** and *Egg Rock North Ledge.* On this course there is not less than four fathoms. When abreast of the *black buoy* off the south end of that ledge, and in eight fathoms water, steer W N W., which course will lead safely to the mouth of *New Harbor.*

This passage, however, is only safe for those who are acquainted with the localities of the various ledges.

III. *Coming from the westward.*—Pass **Pemaquid Light** at a distance of a mile and a half, and when it bears N N E., with twenty fathoms, steer N E. ¾ N., which will lead into the *Sound* with not less than twelve fathoms water. When past *Bar Island Ledge*, with the southern end of **Muscongus Island** bearing S E. by E., steer N E. by N. ¾ N., and follow the directions given above for the *Sound.*

To enter New Harbor, keep the eastern side of the **Dry Ledges** and **Little Island** aboard until exactly off the entrance, with the middle of the passage bearing W. ¾ N.; then, if drawing less than twelve feet, or if it be high water, steer W. ½ S. into the mouth of the harbor. This course leads to the southward of a bad sunken rock, with three feet at mean low water, lying exactly in the middle of the entrance. When within about seventy-five yards of the western point of entrance to *Back Cove* the shoals which so contract the entrance are cleared, and a N W. course will lead to a convenient anchorage in from twelve to fifteen feet at low water.

To enter Long Cove on the N E. ¾ N. course, when **Franklin Island Light** bears E. ½ N. and abreast of **Little Island**, steer N. by E. This course passes to the eastward of *Salt Pond Ledge*, and leads safely up to the anchorage near the head of the cove, and there will not be less than five fathoms.

The passage of the Lower Narrows is unsafe for strangers. It may be made by keeping the northwestern shore of **Hog Island** aboard until past the *five-feet rock* which obstructs the entrance, and then gradually inclining toward the **Hockomock** shore until within about sixty yards of it. Then keep from sixty to seventy yards distant until fairly through the passage, when an E. by S. ½ S. course will lead into *Medomak River* between **Oar Island** and the wooded island south of it, and will avoid the rock in mid-channel by giving it a berth of nearly a hundred yards to the southward. (See *Middle Ledges*, page 441.) Thirteen feet at mean low water may thus be taken through the *Lower Narrows.*

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s			Feet.	
Monhegan Light	43 45 52	69 18 57	4 37 15.8	Revolv.	1^m 00^s	175	20
Franklin Island Lt	43 53 31	69 22 30	4 37 30	F. V. F.	1^m 30^s	54	12
Pemaquid Light	43 50 12	69 30 22	4 38 01.5	Fixed.	.....	75	14

TIDES.*

	Medomak River.	New Harbor.
Corrected Establishment, or average time of High Water after Moon's meridian passage	10^h 56^m	11^h 07^m
Mean Rise and Fall of Tides, or Rise of Mean High Water above Mean Low Water	10.0 Ft.	8.9 Ft.
Rise of High Water, Spring Tides, mean average	11.4 "	.....
Rise of High Water Neap Tides, above mean average	8.6 "	.....
Mean Duration of Rise	5^h 58^m	6^h 20^m
Mean Duration of Fall	6^h 27^m	6^h 05^m

CURRENTS.

Sailing vessels entering *Meduncook River* must wait for flood-tide to pass through the narrow channel between **Crotch Island** and the main, unless they have a strong fair wind. The channel, though straight, is narrow, and does not afford anchorage, and the current runs very swiftly. Young flood is the best time to enter this river, because on the strength of the flood a vessel might, in passing along the north shore of **Crotch Island**, be set on to the rocks off the mouth of *Hornbarn Cove*, and if ebb be not spent before reaching this part of the channel there will be danger of grounding on the dry ledges which make off from the northern end of **Crotch Island**.

In the passage between **Bremen Long Island** and **Cow Island** the northern shore should always be kept aboard, whether the tide be ebb or flood. A range for passing through this channel may always be caught with some object on **Hog Island**. The southern side of this passage is shoal, the best water being on the north shore, close under **Bremen Long Island**. In entering *Medomak River* by *Flying Passage* sailing vessels should manage so as to enter the passage at slack water, or on the first of the flood. Thus they will be enabled safely to shoot the very narrow passage between the northern end of **Bremen Long Island** and **Hungry Island**; the current will keep them from being set on the ledges which make off from the northeastern point of the former, and in passing to the westward, between **Jones Point** on the north and **Bremen Island** on the south, they will have a wider channel, and will be able to hug the southern shore until they are past the ledges south of **Jones Point** and bring **Miller Island** to bear. Then they may safely shoot the passage between *Jones Point Ledges* on the east and *Northwest Point Ledges* on the west, into the main channel.

But in passing through the *Narrows* the greatest caution must be exercised, and no stranger should attempt the passage even on young flood and with a fair wind, for the channel is not fifty yards wide, and the flood sets on to **Havenner Ledge**, and the

* Rusults from partial observations only.

ebb on to *Locust Island Ledges.* The current runs with great rapidity, especially the ebb, for the greater portion of the large volume of water above the *Narrows* has to pass through this very contracted channel, making the *Narrows* the most dangerous part of the whole river channel. Once through the *Narrows*, however, the flood will be favorable as far as **Hollis Point.** Above this point it is not safe to go without a pilot.

The passage of the *Lower Narrows* should never be attempted by strangers on account of the rapid current and the shoals which make off from the northern end of **Hog Island.** The flood sets nearly directly through this passage, but the ebb sets more across and toward **Hog Island.**

Vessels bound into **Round Pond** must keep the northern side of the entrance close aboard, whether the tide be ebb or flood. Flood and ebb currents will be equally apt to set a vessel coming from the southward on to the rocks off the south side of the entrance, unless she keeps well over toward the other shore.

JOHN BAY

is the first bay to the westward of *Muscongus Bay*, **Pemaquid Neck** separating the latter from it. Its entrance lies in

Latitude - - - - - - - - 43° 49′ 00″ N.
Longitude - - - - - - - - 69° 31′ 00″ W.

and is contained between **Pemaquid Point** on the east and **Thrumbcap** and **Rutherford Islands** on the west, these islands separating *John Bay* from the mouth of the *Damariscotta River* to the westward.

The entrance to *John Bay* is one mile and a half wide. Thence the bay extends in a northerly direction and with nearly the same width for two miles and three-quarters to its head, where it sends off two arms, one to the northward called *John River*, and the other to the northeastward called *Pemaquid River*.

This bay is entirely unobstructed from its mouth to **John Island,** two miles and a quarter to the northward, and the shores are quite bold. Above **John Island** there are several dangers obstructing the entrance to *Pemaquid* and *John Rivers.* They will be treated of in the proper place.

The eastern shore of this bay is formed by *Pemaquid Neck.* At the southern end of the neck, called **Pemaquid Point,** the land is low and bare, but along its western side, from the point to the entrance to *Pemaquid Harbor*, it is generally thickly wooded. Along this shore it slopes very gradually back from the shore-line, attaining a height of about one hundred and sixty feet three-quarters of a mile from the edge of the shore.

Above **Pemaquid Point** the land runs about **NORTH** for two miles and a half, with rocky shores, wooded to the water's edge; then it turns abruptly to the westward for about a quarter of a mile, with a sandy beach, ending in a low point, bare of trees, but occupied by several houses. This point is called

FISH POINT.

It forms the eastern side of the entrance to *Pemaquid Harbor*, which lies between **Fish Point** on the east and the partially-wooded point known as **Thurston Point** on the west. **Fish Point** is the site of a large porgy-oil factory, to which the buildings belong.

Between this and **Thurston Point** is an excellent anchorage, with six and seven fathoms water, in the mouth of the river. It is called *PEMAQUID HARBOR.*

The western shores of *John Bay* are formed by a line of islets with a large island behind them, extending from the entrance to the mouth of *John River*, where the main land, forming the peninsula of **Bristol,** begins. These islands, beginning with the most southerly, are called **Thrumbcap Island, Thread of Life Ledges, Turnip Island, Crow**

VARIATION OF THE COMPASS IN MUSCONGUS BAY.

The magnetic variation for 1875, off *Muscongus Bay*, is 14° 18′ W. Approximate annual increase, 2′.

Approaches to John's Bay, Pemaquid Light bearing N.E.¼ N. distant 1¾ Miles.

Island, Hay Island, Birch Island, and the large island to the westward of these islets **Rutherford Island.** Close to the northern point of **Rutherford Island** is a small island called **Davis Island.**

THRUMBCAP ISLAND

will appear as two low islets, joined at low water by the ledges between them. The southern islet is irregular in shape, with a diameter of about two hundred and fifty yards. The northern islet is long in proportion to its width, being a quarter of a mile long by one hundred and fifty yards in width. It is forty feet high, and partly wooded with spruce trees. There is a single house on the southern islet.

THREAD OF LIFE LEDGES

are a group of dry rocks half a mile in extent, and surrounded by shoal water. They lie just to the northward of **Thrumbcap,** and between it and another group of bare islets, called

CROW ISLANDS.

These are three in number, lying N N E. and S S W. from each other, and united at low water by dry ledges. They are quite small, the largest being little over one hundred yards square. Three fathoms may be taken between the southernmost of these islets and the **Thread of Life Ledges,** through a very narrow channel, not safe for strangers. Between the **Crow Islands** and the eastern shore of **Rutherford Island** is a narrow but good passage, leading behind the **Thread of Life Ledges** and **Thrumbcap Island** into *Damariscotta River* or to sea. It is called the *THREAD OF LIFE.* To the northward of **Crow Island** it leads behind **Hay** and **Birch Islands,** into a small shallow cove called *Little Harbor.*

HAY ISLAND

is eight hundred yards to the northward of **Crow Island.** The passage between them has from five to seven fathoms, and is unobstructed. **Hay Island** is nearly three hundred yards long and about one hundred broad. It has a few trees near its southern end, and is separated from **Rutherford Island** by the *Thread of Life Passage,* which is here one hundred and fifty yards wide. From its southern end a line of bare ledges extends about two hundred and seventy-five yards to the southward.

BIRCH ISLAND.

This island is only one hundred yards to the northward of **Hay Island.** It is nearly five hundred yards long and one hundred wide, and is thickly wooded. It is separated from **Rutherford Island** by *Little Harbor,* which is here only seventy-five yards wide and quite shoal. About seventy-five yards to the northward of **Birch Island** is a bare rocky islet about one hundred yards long, which at low water is connected with the shore of **Rutherford Island.** In fact, all of these islets and rocks which extend along the eastern shore of **Rutherford Island** are parts of one long ledge, which crop out here and there, forming, according to the height and size of the peaks, ledges, dry rocks, and islets.

Little Harbor is only of use for light-draught vessels. At low spring tides it is almost entirely bare.

RUTHERFORD ISLAND.

This large island lies N E. and S W., between *John Bay* and the *Damariscotta River.* It is about two miles long and of an irregular shape. The southern point of this island is low and covered with trees, but much of the eastern shore is cleared and sparsely settled, except near the northern end, where there is a wooded bluff about sixty feet in height. The highest land on **Rutherford Island** is a wooded hill one hundred and thirty feet above the sea, nearly in the middle of the island.

Little Harbor is formed by a narrow cove making in on the eastern shore of **Rutherford Island** in a northerly direction. It is very shoal, and therefore of little importance except to light-draught vessels. On the southwestern side of the island there is a long and deep cove, forming an excellent harbor. This is called *Christmas Cove.*

TURNIP ISLAND.

This islet lies off the southern end of **Rutherford Island**, two hundred yards distant. It is small, very low, and has a very few spruce trees upon it. The *Thread of Life* passes to the eastward of it, into *Damariscotta River.*

Rutherford Island is separated from the main land to the northward by a narrow passage called *THE GUT.* This passage is, however, closed by a bridge, across which runs the county road.

DAVIS ISLAND

lies about two hundred yards to the northward of **Rutherford Island.** It is nearly a quarter of a mile long, lying in a N E. and S W. direction. The summit is forty feet above the sea, and the whole island is thickly wooded with pine, spruce, oak, and birch trees.

Between **Davis** and **Rutherford Islands** is a small low islet, with a single house upon it, known as **Gammay Island.** There is no passage between it and **Rutherford Island.**

MAC FARLING COVE.

Davis Island lies on the eastern side of this cove, which is formed by a long and irregular curve in the western shore of *John Bay*, just below the entrance to *John River.* It is three-quarters of a mile long in a NORTH and SOUTH direction, extending from the western point of entrance to *John River* to the *Gut.* It has excellent anchorage, although the approaches to it are somewhat obstructed, but the cove itself is free from all dangers. Its northern and southern shores are both cleared and have a few houses built upon them, but the western shore is thickly wooded, and the land rises rather steeply to a height of one hundred and fifty feet.

At the southern end of *MacFarling Cove* there is a large porgy-oil factory, which is built on the western side of the entrance to the *Gut.* The buildings belonging to this factory are seen between **Rutherford North Point** and **Davis South Point,** by vessels passing up the bay, as soon as the passage between **Davis** and **Gammay Islands** is opened.

The peninsula which separates *Damariscotta* and *John Rivers* is occupied by the town of **Bristol**, and is called **Bristol Neck.**

The northern shores of *John Bay* are formed by a neck of land or peninsula separating *John River* from *Pemaquid River.* The southern part of this peninsula is thickly wooded, and the land attains a height of one hundred and sixty feet about half a mile back from the shore. Its southeasterly point is low, cleared, and cultivated, and has one or two houses upon it. The eastern portion of this peninsula, that is, that part which lies nearest to *Pemaquid River*, is well settled, and much of the land is under cultivation. Its southwestern point is called

THURSTON POINT,

and forms the eastern point of the entrance to *John River.* It is low and partly cleared and settled, the cleared land backed by thick woods. On its southern side it is dangerous of approach, and should receive a berth of at least a quarter of a mile to avoid the ledges which make off from it.

JOHN ISLAND.

Vessels coming into *John Bay* from seaward will see ahead, in range with **Thurston Point**, a wooded island whose shores rise gradually from the water to its summit, which

is sixty feet above sea-level. This is **John Island**, situated midway between the northern end of **Rutherford Island** and **Fish Point**. It lies NORTH and SOUTH, is six hundred and seventy-five yards long and over two hundred yards wide, with bold shores except on the northern side, where shoal water extends to the northward two hundred yards.

The northern end of **John Island** is bare of trees except a solitary one standing on the extreme northern point. The land is also quite low and bare, forming a contrast to the southern part, which is sixty-feet high and thickly wooded.

The entrance to *Pemaquid Harbor* is between this island and **Thurston Point**, but it is obstructed by

BEAVER ISLAND,

a rocky islet with a few spruce trees on it, lying about three hundred yards to the northward of **John Island**. It extends in a NORTH and SOUTH direction for one hundred yards, and is fifty yards wide. The main channel into **Pemaquid River** passes between this islet and **Thurston Point**, and is more than two hundred yards wide. But there is also an excellent channel to the southward, between it and **John Island**, which is about one hundred yards wide, with five fathoms. Vessels may safely pass through this passage by giving **John Island** a berth of two hundred and fifty yards and keeping about seventy-five yards to the southward of **Beaver Island**.

DESRIPTION OF SHORES OF PEMAQUID RIVER AND HARBOR.

Pemaquid River empties into the northeastern corner of *John Bay*, which is called *Pemaquid Harbor*. This harbor is an excellent anchorage, with from five to seven fathoms, and well sheltered. It is contained between **Fish Point** on the S E. and **Thurston Point** on the N W. The eastern shores are low, cleared, and settled; the western partly cleared and partly wooded. Three-eighths of a mile N N E. from **Fish Point** is

PARTRIDGE POINT,

the eastern point of the entrance to *Pemaquid River*. It is low and cleared; its summit, thirty feet above sea-level, is occupied by a dwelling-house and barn belonging at present to Captain Partridge; and a little to the westward are seen the remains of an old earthwork. The mouth of the river between this point and the western point of entrance is not quite one hundred and fifty yards wide; but the channel is clear, and after passing between the two points expands into a bay between five and six hundred yards wide, called *INNER HARBOR*. This is a most secure anchorage in all winds, and has three fathoms at low water.

From *Inner Harbor* the general course of the river is E. ½ N. for a little over half a mile, when it turns abruptly and runs about NORTH a mile farther to the head of navigation. The eastern shores are partly wooded, but mostly cleared and under cultivation; the land low, and sloping gently up to the base of the wooded hills behind it, which are over two hundred feet in height. The western shores are also mainly cleared and settled, but the rise of the land is more abrupt, attaining a height of one hundred and forty feet at seven hundred yards from the river bank.

At the head of *Pemaquid River* is situated the village of **Pemaquid Falls**, which also occupies the eastern bank. The river is, however, dry at low water three-eighths of a mile below the village.

Pemaquid River is shoal and the channel narrow and crooked. The course of the latter is, however, pretty well marked by the eel-grass which fringes it on both sides. By keeping clear of the grass vessels will pass in good water until they enter the second reach of the river. Beyond this the water is very shoal and the channel obstructed by rocks.

A shallow cove, about a quarter of a mile long, called *Graveyard Cove,* runs to the southward behind **Partridge Point.** Its name is derived from the small burial-ground on the northern end of the point. The cove is almost entirely bare at low water.

At the end of the first reach of the river, and directly opposite to **Old Fort Point**, is another long and narrow cove, called *Coombs Cove.* It is three-eighths of a mile long in a N E. by E. direction, and is bare at low water.

The shoals in this river are mostly mud-flats.

JOHN RIVER.

DESCRIPTION OF ITS EASTERN AND WESTERN SHORES.

John River empties into the northwestern part of *John Bay.* Its entrance is between **Thurston Point** on the east and **MacFarling Point** on the west. Both of these points have been already described. Between them the mouth of the river is five-eighths of a mile wide.

From **Thurston Point** the eastern shore of *John River* has a general course about N N E. for a mile and a half to the mouth of a long and narrow cove, called *Eastern Branch.* There are a few patches of clearing along the shore in this distance, but it is mostly wooded to the water's edge. The shores rise regularly, but not steeply, to the summit of the ridges, which vary in height from one hundred to one hundred and sixty feet. On the southern side of the entrance to *Eastern Branch*, however, the land is partially cleared, and a few houses are seen.

EASTERN BRANCH,

sometimes called *Foster Cove,* is the eastern arm, as its name implies, of the *John River.* It is seven-eighths of a mile long, and has an average width of three hundred and fifty yards. Its course is N. by E.

A small island lies on the northern side of the entrance to this stream, called **Foster Island.** It bears SOUTH from the S E. point of the peninsula separating *Eastern* from *Western Branch,* and is joined to the point at low water. Seen from the river it appears as a low islet, bare of trees except at its northwestern end, with one dwelling-house and a barn near its summit. It lies N N E. and S S W., and is nearly four hundred yards long. Thus the mouth of *Eastern Branch* is diminished to a width of a little over two hundred yards. Both shores of *Eastern Branch* are low and in most places cleared. The eastern bank is the higher, and is tolerably well settled. The western shore is quite low, and but few dwellings are visible upon it.

Six feet at low water may be carried up this cove for half its length. Beyond that it is dry at low water.

The western shore of *John River*, from **MacFarling Point** to the northward, presents a different appearance from the eastern side. The summit of the point is eighty feet high and wooded, but it descends on its north side to very low land, cleared and cultivated, and then rises again to a thickly-wooded summit fifty feet above high-water mark. This gives the land between **MacFarling Point** and **High Island** a saddle-like appearance when viewed from the eastward.

Three-quarters of a mile N N E. from **MacFarling Point** is a wooded island, called

HIGH ISLAND.

It is separated from the main land at high water by a passage seventy-five yards broad, and crossed by a bridge or causeway. At low water the ledges are dry and the island forms part of the main land.

High Island at its southern end and on its eastern face is one hundred feet high, the land rising steeply from the water's edge to the summit. It is wooded with pine

and spruce. The northern portion of the island is quite low, and has a few trees scattered along the edge of the shore-line. It lies NORTH and SOUTH, and is nearly half a mile along.

On passing **High Island** there will be ahead a low point thinly fringed with oak and birch, and between it and the northern point of **High Island** a passage several hundred yards wide is opened, leading into a large cove, which runs to the southward behind **High Island** and to the northward behind the low point above mentioned, which is called **Clarke Point.** This cove is known as

ROBINSON COVE.

Between its north and south points it is a mile and a quarter long; and as its entrance is at right angles to the course of the cove it affords a well-sheltered anchorage for light-draught vessels. The passage between **Clarke Point** and **High Island** is three hundred and fifty yards wide at high water, but at low water this is diminished to one hundred and seventy-five. Between the lines of two fathoms at low water the channel is one hundred yards wide in its narrowest part.

From the western shore of this cove, midway between its northern and southern ends, opens *Bradstreet Cove,* about six hundred yards long, with an average width of one hundred and fifty yards, and nearly all dry at low water. This cove is immediately opposite to the entrance to *Robinson Cove,* and in coming in look along its whole length. North of it the land is in no place over sixty feet high, and is cleared and settled. South of it steep wooded hills, with an outcrop of bare ledges over their surfaces, begin, and continue nearly to the southern end of the peninsula. Along the shore-line of *Robinson Cove,* however, the land is low and fringed with scattered trees. Twelve feet at mean low water may be taken into this cove to a comfortable anchorage near its southern end. But the northern portion is quite shoal.

From **Clarke Point,** proceeding up the river, the shores are found high, steep, and in many places cleared and settled. The crests of the ridges are in height from one hundred to one hundred and sixty feet, and it is upon these summits that the settlements usually appear. The general course of the shore is about N N E. for a mile and three-eighths to the head of the *Western Branch* of the river.

WESTERN BRANCH

has a length of about a mile and a half, a course about N N E., and enters between a small, low, wooded island, called **Peabow Island,** on the north and **Clarke Point** on the south, giving an entrance four hundred yards wide.

Peabow Island lies two hundred and seventy-five yards S. by W. from the southwestern point of the peninsula separating *Eastern* from *Western Branch.* It is sparsely wooded with spruce, but the main land itself is low and destitute of trees. The whole of the eastern shore of this branch is low and nearly cleared of trees, scattered groups only appearing. At the head of the cove, however, is a low and thickly-wooded shore, covered with pine, oak, and birch to the water's edge.

Eight feet at mean low water may be taken into *Western Branch* and carried up it for some little distance. The entrance is, however, obstructed by sunken rocks, and is not safe for strangers.

DANGERS
IN JOHN BAY, JOHN AND PEMAQUID RIVERS.

PEMAQUID LEDGE

has sixteen feet at mean low water and about fourteen at low spring tides; lies about a mile and an eighth S W. ½ S. from **Pemaquid Light** and about a mile off the south point

of **Pemaquid Neck.** The shoalest water is only in one small spot, the rest of the ledge having nothing less than four fathoms at low water.

THRUMBCAP LEDGE.

One-quarter of a mile E. by S. from the northern end of **Thrumbcap Island** is a ledge with three and a half fathoms at low water, upon which, in heavy southerly winds, the sea sometimes breaks. There is very deep water between it and **Thrumbcap Island.**

After passing this shoal the bay is entirely unobstructed until up with **John Island.** The eastern shores are bold, and may be safely approached within two hundred yards; while the **Thread of Life Rocks, Crow, Hay,** and **Birch Islands,** as well as **Rutherford Island** on the western side of the bay, may be approached almost anywhere within fifty yards with not less than three fathoms.

On the eastern side of the bay, when up with the southern end of **John Island,** there will be seen to the northeastward a group of ledges lying close in-shore, to the eastward of **Fish Point,** and a group of bare rocks directly ahead, about midway between **John Island** and **Fish Point.** The in-shore group, known as the

BEACH LEDGES,

lie a quarter of a mile from the shore, in the mouth of the cove with the sandy beach, (before described, page 450,) the north side of which is formed by **Fish Point.** These ledges are bare at low water and cover a space over three hundred yards square.

KNOWLES ROCKS

is the group of bare rocks seen directly ahead, dividing the eastern passage into two nearly equally wide channels. The best water is, however, between the rocks and **John Island.** This group is formed by four bare rocks, the easternmost one being the largest. Vessels may pass on either side by giving them a berth of one hundred yards, and will have not less than four fathoms water.

FISH POINT

should receive a berth of at least two hundred yards, to avoid a rock with one foot and a half at mean low tides, (and bare at low springs,) lying one hundred and fifty yards to the westward of the southern end of the point.

On the western side of the bay, the first obstruction met with, after passing **Thrumbcap** and **Thread of Life Ledges,** is **a small bare rock** about one hundred yards to the eastward of the northern point of **Rutherford Island.** It is called **Pollock Rock,** and is quite bold on all sides. Vessels may pass within twenty-five yards of it, on any side, with not less than three fathoms water.

CORVETTE LEDGE,

the first ledge met with after passing **Pollock Rock,** bears **E N E.** from the eastern point of **Davis Island,** two hundred yards distant, and has five feet at mean low water, or about three feet at low spring tides. The whole ledge within the lines of three fathoms is only ninety yards square. Five fathoms at low water may be carried to the westward, between it and **Davis Island.**

After passing *Corvette Ledge* the channel into *John River* leads between two bad ledges, one lying south of **Thurston Point** and the other **E S E.** from **MacFarling Point.** The former is known as

THURSTON LEDGES,

extending off from **Thurston Point** three hundred and fifty yards, and composed of two distinct groups. The eastern group is a line of five bare rocks, united at low water.

The western group lies one hundred yards to the westward of the others, with a twelve-feet channel between them. It is composed of two bare rocks, united only at low spring tides.

The shoal water surrounding these ledges makes it dangerous to approach the southern shore of **Thurston Point** nearer than four hundred yards. These ledges form an obstruction common to both *John* and *Pemaquid Rivers.*

The ledges off **MacFarling Point** are called

MACFARLING LEDGES,

and are the principal obstruction to the entrance of *MacFarling Cove* and *John River.* They are about five hundred yards E S E. from **MacFarling Point,** and are divided by a narrow channel with three fathoms into two groups. The westernmost rock of each group is bare; the others are all sunken, with from one to five feet at mean low water. The two groups cover a space three hundred and fifty yards NORTH and SOUTH by two hundred EAST and WEST.

The entrance to *MacFarling Cove* is between these ledges and *Corvette Ledge.* The main entrance to *John River* is between them and **Thurston Point**; but a good channel also exists between them and **MacFarling Point** with from four to eight fathoms, and perfectly clear.

In *John River* there are no obstructions, after passing **MacFarling Ledges,** until up to the *Divide.* The eastern shore is very bold until abreast of the northern point of **High Island,** when it should receive a berth of two hundred and fifty yards from vessels of heavy draught. The western shore is also bold until up to the southern end of **High Island.** Give the southeastern point a berth of one hundred and fifty yards, to avoid a *four-feet rock* lying one hundred yards to the eastward of it. Beyond this the eastern shore of **High Island** may be approached within fifty yards until up with the northeast point. Beyond that, the north point must receive a berth of three hundred yards, to avoid the flats and ledges which fill the space between the north and northeast points. At low water these always show themselves, and are easily avoided. It is impossible to give an intelligible description of the dangers in the *Eastern* and *Western Branches.* Both are shoal and of little importance, and strangers will never attempt them without a pilot. *The dangers in Eastern Branch* are all visible at high water, and are thus easily avoided. Seventeen feet may be carried into it past the southern end of **Foster Island.**

In the approaches to *Western Branch* there is a dangerous rock, with three feet at mean low water and one foot at low spring tides. It lies two hundred and fifty yards SOUTH from **Peabow Island,** and must be left to the eastward. **Clarke Point** must also receive a berth of a little over a hundred yards to the westward. After passing between this rock and **Clarke Point,** care must be taken to avoid *another three-feet rock* which lies nearly in mid-channel, being three hundred yards WEST from the southern end of **Peabow** and three hundred and thirty yards NORTH from **Clarke Point.** It may be passed on either hand, but the best channel is to the eastward of it. To avoid it, keep about two hundred yards to the westward of **Peabow Island.** Beyond this rock there are no obstructions, but there is a depth of only ten feet in the channel.

The same remarks apply to *Robinson Cove* that have been made in reference to the eastern and western branches of *John River*—that is, no intelligible description of the dangers can be given, but at low water the flats are dry, and at high water all that need be done to avoid them is to keep clear of the grass which marks them on both sides, leaving the channel clear and open. This eel-grass is the best pilot into both branches and *Robinson Cove.* It is generally safe to go where it is not.

SAILING DIRECTIONS.

1. *Coming from the eastward.*—From outside **Monhegan**, with the lights bearing N W. by N. ½ N., distant nearly two miles, the course for the entrance to *John Bay* is N W. by W., and the distance nine miles and a half. The course for vessels passing between **Monhegan** and **Allen Islands** is W. ¾ N., and the distance the same.

On the former course there is not less than twenty-two fathoms, and on the latter not less than twenty. On the former of these courses, bring **Pemaquid Light** to bear N E.; on the W. ¾ N. course, bring the same light to bear N N E., and steer in the former case N. by E. ½ E. for **John Island**, and in the latter N. ¼ W., which course will lead along the western side of the bay in not less than eight fathoms. When within a quarter of a mile of the island, in eight fathoms, if bound into *Pemaquid Harbor* or *River*, steer N E. by N. ¼ N. until past the southern point of the island, carrying not less than ten fathoms. Then steer N. by E., giving the east side of **John Island** a berth of one hundred yards. Continue this course, carrying not less than six fathoms, until the house and barn on **Partridge Point** (page 453) are in range on a bearing E. ¼ N., with five and a half fathoms, hard bottom. The houses will be visible just to the northward of the old earthwork on the pitch of the point. Steer E. ¼ N., keeping the range, and carrying from five and a half to six fathoms, and anchor in *Pemaquid Harbor* at pleasure, in from four to six fathoms, soft bottom.

These courses lead up the middle of the bay to **John Island**, leaving *Knowles Rocks* one hundred and fifty yards to the eastward and **Beaver Island** one hundred and seventy-five yards to the westward.

Now, if bound into Pemaquid River: On the E. ¼ N. course for **Partridge's house and barn in range**, when about one hundred yards from the shore there will be seen to the northward the **cupola on Captain Childs' house**, bearing N N E., and a large dwelling a little to the eastward of it close to shore. Steer N E. by N. NORTHERLY for that dwelling, and pass between the two points of entrance to the river in not less than seventeen feet at low water. When well into the broad bight which here makes in to the westward, a wharf on the eastern side of the river from behind **Graveyard Point** will be opened; bring this wharf to bear E. by S. ¼ S. and run for it. On this course not less than nine feet can be carried at mean low water. Continue it past **Graveyard Point** until striking three fathoms at low water and Partridge's house is in range with the eastern slope of the old earthwork; then steer N E. ¼ E., with this range astern, and keep as nearly as possible in the middle of the river until the second reach is opened and its head can fairly be seen; then steer N. ¾ W. and keep the eastern shore aboard. No sailing vessel drawing over four feet can pass, at low water, more than three hundred and fifty yards beyond *Coombs Cove*, and those drawing over seven feet cannot pass more than an eighth of a mile above that cove.

In general it may be remarked that the grass shows where the shoals are, and by keeping in the clear water there will be no danger.

If bound into John River: On the N. by E. ½ E. course, when within one-quarter of a mile of the south point of **John Island**, in eight fathoms water, steer N. ¾ W., which will lead clear of all dangers into the river, carrying not less than eleven fathoms. When abreast of the northernmost bare rock of **MacFarling Ledges**, in ten fathoms, steer N. by E. ¼ E., which will lead clear of everything to the mouth of *Western Branch*, or the entrance to *Robinson Cove*, in not less than four fathoms.

To enter the former, continue the course until within three hundred yards of **Peabow Island**, which will be directly ahead and in sixteen feet water, when steer N W. by N. ¾ N. for a dwelling-house, which will appear on that bearing just north of a large barn. (This house and barn are very conspicuous and cannot be mistaken.) This course

avoids both of the *three-feet rocks*, and has not less than eight feet. The grass is the best guide beyond these rocks, but the course N W. by N. ¾ N. may be continued until within two hundred yards of the western shore, when a N N E. course leads up the river, with about nine feet at low water, for a little over half a mile above **Peabow.**

To enter Robinson Cove: When the extreme northern point of **High Island** bears W. by S. ½ S., and in three and a half fathoms, steer W. ½ S., which will lead into the cove in not less than four fathoms. No more than eight feet can be taken up to abreast of the southern end of **High Island.** The bottom is soft.

To enter the Eastern Branch: Keep the eastern shore of *John River* aboard until past the middle of **High Island**, and there will be not less than four fathoms. Then, if drawing more than ten feet at low water, give the shore a berth of over two hundred yards to avoid the shoal water which makes off here to some distance. If of light draught, that is, six feet or less, the shore may be hugged closely until abreast of **Clarke Point.** Now bring the pine tree, which has sometimes a flag on it, on the southern point of **Foster Island** to bear N E. by N. and steer for it, avoiding the groups of bare rocks which lie off the southern point of the entrance, and carrying not less than seventeen feet. When about one hundred and fifty yards from the island, in three fathoms, steer E. ¼ N. for two hundred and fifty yards, when there will be four fathoms; then steer N. by E. ¾ E., and keep in the clear water between the lines of eel-grass. Six feet of water may be carried for about seven hundred yards above the south end of **Foster Island.**

To pass to the westward of **John Island** *and enter MacFarling Cove:* On the course N. ¾ W. past **John Island**, continue until the northernmost point of **Davis Island** bears WEST and in eleven fathoms, soft bottom, when steer W. by N. ¾ N., passing midway between **MacFarling** and **Corvette Ledges** with not less than nine fathoms. When into the cove, if bound into its southern part, behind **Davis Island**, there is nothing in the way from shore to shore; and, carrying not less than three and a half fathoms, proceed and anchor at convenience, in from three to four fathoms, soft bottom. It may be remarked, however, that the western side of **Davis Island** is more bold-to than the opposite side of the cove.

Vessels may pass out of *MacFarling Cove* into *John River* by keeping **MacFarling Point** close aboard and passing between it and **MacFarling Ledges.** The shore for some distance north of the point is very bold.

This cove may be entered by vessels coming down *John River* through this same channel. It is only needful to keep the western shore of the river close aboard to be clear of all danger.

MacFarling Cove is an excellent anchorage.

II. *Coming from the westward, to enter John Bay.*—The course from **Seguin Island** to clear the **Bantam** is E. ½ S. Continue this course past **Damiscove Island** until **Pemaquid Light-House** bear N E. ¾ N. and the southern end of **Damiscove** N W. ½ N., when steer N E. by N. ¾ N. for **John Island**, which will be in range with the middle of **Thurston Point.** Keep this course into the bay, and it will lead close along the eastern side of **Thrumbcap** and the **Thread of Life Ledges** with not less than ten fathoms water. Then, if bound up *John River* or into *MacFarling Cove*, when abreast of the middle of **Crow Island**, in twelve fathoms water, hard bottom, steer N. by E. ¼ E., which course leads safely up the river, with not less than nine fathoms, until past **MacFarling Ledges.**

If wishing to enter *Pemaquid Harbor* by passing to the westward of **John Island**, continue this N. by E. ¼ E. course until the house and barn on **Partridge Point** are almost exactly in range on a bearing of E. ¼ N. and visible just to the northward of the old earthwork; now, in eleven fathoms, steer E. ¼ N., keeping the range, and this course will lead safely through between **Thurston Ledges** on the north and **Beaver Island** on the south, in not less than eight fathoms, up to the harbor, where anchor at discretion, in from five

to six fathoms, soft bottom, or proceed up the river. But if wishing to pass to the eastward of **John Island**, when abreast of **Crow Island**, in twelve fathoms, hard bottom, steer N E. by N. ¼ N., which course will lead, with not less than nine fathoms, a little to the eastward of the southern point of **John Island**. When past this southern point, steer N. by E., giving the island a berth of one hundred yards and carrying not less than nine fathoms. Continue this course until up with the range on **Partridge Point**, when steer for it, and anchor as before directed.

Vessels beating in or out of this bay in the day-time need only to be told to keep off the shore on either side. There are no obstructions in the bay until past **John Island.** The shores are bold-to, and may safely be approached, in most places, to within fifty yards with not less than three fathoms water.

Vessels may stretch from shore to shore, only taking care to give themselves room to go about, and not to get becalmed under the land. The *Beach Ledges*, **Knowles Rocks**, and the north shore of **John Island** should each receive a good berth. The same caution applies to **Thurston Ledges** and the north and east shores of **Davis Island.**

At night, it is recommended to vessels in beating in or out to go about in ten fathoms on either shore, until within eight hundred yards of **John Island.** Here, in stretching across, a vessel will strike soundings of less depth than nine fathoms in mid-river, but will very soon deepen again to ten, twelve, and thirteen fathoms. The shoal soundings are on a bank with from five to nine fathoms, which runs **SOUTH** from the southern end of **John Island** nearly half a mile. Vessels should therefore cross this bank, and go about when they strike six fathoms on the eastern or eight fathoms on the western shore.

This is an excellent harbor of refuge for vessels bound to the westward during a S W. gale, as it is so free from obstructions that strangers may enter without fear by following the above directions.

LIGHT-HOUSE.

Pemaquid Light is a guide to this bay as well as to **Muscongus.** It is situated on the southeastern point of **Pemaquid Neck,** and shows a fixed white light, visible fourteen miles at sea.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Pemaquid Light-House..	43° 50′ 12″	69° 30′ 22″	$4^h38^m01.5^s$	Fixed.	75 ft.	14

TIDES.

The mean rise and fall of tides is nine and three-tenths feet, (9.3 ft.)

DAMARISCOTTA RIVER.

Next to the westward of *John Bay* is the mouth of the *DAMARISCOSTA RIVER.* This entrance lies between **Thrumbcap Island** on the east and **Linekin Neck** on the west, and is one mile and three-quarters wide. The middle of the entrance is in

Latitude - - - - - - - - 43° 49′ N.
Longitude - - - - - - - - 69° 34′ W.

Damariscotta River has a general course **N NE.** to the towns of **Newcastle** and **Damariscotta,** which are built upon its eastern and western banks nearly fourteen miles above

its mouth. The distance in a straight line from **Newcastle** to the mouth of the river is twelve and three-quarters miles.

The village of **Hodgdon Mills** is also situated on this river, on the west bank, at the junction of **Linekin Neck** with the main land.

In describing the approaches and entrances to this river it will be necessary to mention and describe a number of islands lying off the mouth, which, although they do not strictly belong to the *Damariscotta*, obstruct the entrance to it from the westward, and have rocks and ledges on all sides of them, the position of which it is requisite for the mariner to know.

Coming from the eastward, bound into the *Damariscotta*, when abreast of **Pemaquid Point, Thrumbcap Island** will be seen to the westward and northward, and just open to the westward of it, a small island, about forty feet high, and wooded with spruce trees. This is

INNER HERON ISLAND.

Viewed from the southward it appears smaller than it really is, as it lies **NORTH** and **SOUTH**, and consequently its width only is seen from that direction. Its northern end lies **S. by W.** from the southwestern point of **Rutherford Island**, distant three-eighths of a mile. Its southern end bears **N W. ½ N.** from the southern end of **Thrumbcap**, nearly three-quarters of a mile distant. Thus the island is situated nearly in the middle of the river, between **Linekin Neck** and **Thread of Life Ledges.**

The wooded shores of **Linekin Neck** will appear to the southward of **Inner Heron Island**, its surface undulating, the heights varying from twenty to one hundred and twenty feet.

A little to the southward of the southern end of **Linekin** will be seen a small island with a growth of stunted spruce trees on it. A round, hilly appearance is presented by its southern end, but its northern half is much lower, and groups of houses are on the summits. This is **Squirrel Island,** lying on the eastern side of the entrance to **Town's End.**

With its northern end nearly in range with the southern end of **Burnt Island** will appear a long low island, sparsely wooded with spruce trees, its centre being bare and so much lower than the northern and southern ends as to give the appearance of two islands separated by a narrow strait. This is

FISHERMAN ISLAND.

Its northern end is about eleven hundred yards (a little over half a mile) to the southward of **Linekin Neck,** leaving a good broad channel between them, called *FISHERMAN ISLAND PASSAGE.* The southern end of **Fisherman Island** is thirteen hundred yards **N. by E. ½ E.** from **Damiscove Island.**

RAM ISLAND.

This is a small low island with two spruce trees upon it, standing together. It lies one hundred yards west of the north end of **Fisherman Island.**

It is not visible from the eastward.

WHITE ISLANDS.

In range with the southern portion of **Fisherman Island,** and **W. by N.** from a vessel coming from the eastward, will appear an island about fifty feet high, with a few spruce trees on its summit. South of it, a few hundred yards distant, will be seen another island of a very remarkable appearance. Near its northern end are a few spruce trees, but the rest of the island is bare. The southeastern point of this island

terminates in a glaring white rocky bluff, ninety feet high; and this bluff presents so remarkable an appearance as to render it one of the best landmarks on the coast; it cannot be mistaken. These two islands are called **White Islands.**

The white bluff on the southern end of the southernmost island bears SE. by E. ½ E. from the southern point of **Fisherman Island**, distant one mile. The northern island is sometimes called **Jenny Island.** A channel with five fathoms passes between the two.

OUTER HERON ISLAND.

To the southward of the **White Islands** will appear another island of moderate height, and wooded with the usual growth of spruce trees. This is **Outer Heron Island**, half a mile long in a NORTH and SOUTH direction. Its southern point is almost entirely bare and very low. Its shores are very bold, as are those of the **White Islands.**

To the southward of **Heron Island** will appear the southern portion of a large island bare of trees. This is

DAMISCOVE ISLAND.

Its northern portion is hidden behind **Outer Heron Island**, but proceeding to the northward and westward, it is opened from behind the northern point of **Outer Heron**, and will appear very differently from the southern end. It presents a thickly-wooded slope, with a bare crest eighty feet above sea-level rising beyond it to the southward, whereas the southern portion of the island presents an undulating surface covered with grass, and varying in height from two feet above high-water mark to ninety feet at its southern extremity, where a green, bare hill attains this height, and slopes regularly toward the sea. On the extreme southern point is built a **beacon** as a guide to vessels bound into *Damiscove Harbor.*

Damiscove lies NNE. and SSW., and is a mile and three-quarters long. About the middle it is nearly separated into two islands; the northern and southern hills being joined only by a narrow isthmus so low that the sea runs over it at high spring tides. This isthmus is only twenty yards wide; seen at that time from a distance to the eastward **Damiscove** looks like two islands, one wooded and the other bare. On its southern side makes in *DAMISCOVE HARBOR*, a long and narrow cove with eleven feet at mean low water, much used by bay fishermen. Just clear of the southern end of **Damiscove** will appear a bare islet about forty feet high, and surrounded by ledges. It is called

PUMPKIN ISLAND,

and the following bearings and distances will be of use to the mariner who finds himself in this vicinity, for this is the outermost of all of the islands between **Monhegan** and **Seguin.**

Pumpkin Island bears from **Monhegan** W. by N. ¼ N., eleven and one-fifth miles. It bears from **Pemaquid Point** SW. five and three-eighths miles; from **Outer Heron Island** S. by W. ¼ W., one mile distant; from **Damiscove Point** E. by S. ¼ S., one and one-eighth mile distant; and from **Sequin Island** E. ½ N., nearly eight miles.

A low bare islet lies about two hundred yards south of the southern end of **Linekin Neck**, and is called **Green Island.**

Vessels bound into this river from the eastward pass between **Thrumbcap** and the **White Islands** and turn to the northward, passing between **Inner Heron Island** on the east and **Linekin Neck** on the west. They may pass to the eastward of **Inner Heron Island**, between it and the southeastern end of **Rutherford Island**, but the main channel is to the westward.

LINEKIN NECK,

forming the western shore of the lower part of *Damariscotta River*, is a peninsula three

miles long and three-quarters of a mile broad, separating this river from *Linekin Bay* to the westward. Its general direction is N E. by N. and S W. by S. Past its southern end, it is seen that the land is mostly wooded (though there are one or two clearings) and the surface undulating, varying in height from twenty to sixty feet.

Three-quarters of a mile above the southern point of the **Neck** a long and narrow cove makes in in a northerly direction for nearly seven-eighths of a mile. It is called *LITTLE RIVER*, and is used by vessels of light draught only. Near its mouth it runs between two wooded hills, the easternmost eighty feet high, with a gentle slope to the westward, the other one hundred and twelve feet high and quite steep. But after passing between these hills it runs through lower land, which is mostly cleared and cultivated.

The eastern side of the entrance to *Little River* is formed by a low islet, about a quarter of a mile long, called **Reed Island.** It is joined to the main land by a reef of rocks at low water.

From *Little River* to the northward the shores of the **Neck** are high, steep, and thickly wooded. The land varies in height from sixty to one hundred and sixty feet, and slopes precipitously toward the water. Heavy spruce and pine growth covers the surface.

FARNUM POINT,

nearly two miles above *Little River*, is a steep, wooded bluff, over eighty feet high, and here the land turns to the northwestward and runs for about half a mile to **Hodgdon Mills,** which is quite a settlement, situated on the shores of the cove formed by the junction of the eastern side of **Linekin Neck** with the main land. Quite a lumber trade goes on here, the mills being all saw-mills worked by water-power, furnished by a large salt-water pond.

On the eastern side of the river, after passing **Inner Heron Island,** the western shore of **Rutherford Island** is reached. The southeastern point, as before described, is low and sparsely wooded, and a little over half a mile to the northward of it there makes in, in a N E. direction, a large and deep cove, called *Christmas Cove.* This deep indentation nearly separates the southeastern part of the island from the main body and forms it into a long narrow peninsula.

Christmas Cove is three-quarters of a mile long. Seven fathoms may be carried several hundred yards past its mouth, and three fathoms can be taken well into the cove. It affords good anchorage.

The southwestern point of **Rutherford Island** is called **Foster Point.** It is well wooded but low. The western face is nearly all cleared, cultivated, and settled. The crest of the island is wooded, but the slopes toward the west are gentle, and are mostly under cultivation. This island is separated from

BRISTOL NECK

by a narrow passage, nearly dry at low water, called *THE GUT.* The southern point of **Bristol Neck** is covered with a scattered growth of pines, and the land rises very gently from the point to the northward. But on the western side of the **Neck** (which forms the eastern shore of *Damariscotta River*, opposite **Hodgdon Mills**) the shore is steep, thickly wooded, and nearly a hundred feet high. From its southern end it runs to the northward for nearly three-quarters of a mile, where, turning to the westward, then to the southward, it forms a large cove half a mile long and about a quarter of a mile broad, called *Jones Cove.*

Ten feet at low water may be taken well into this cove. The western point of its entrance, called **Jones Point,** is formed by a thickly-wooded bluff point, and thence the

land runs about **NORTH**, nearly a mile and a half, to the entrance to the *NARROWS*. This part of the eastern shore of the river is of a varied character. Midway between the southern point of the peninsula and the *Narrows* there is quite a large space of cleared land with several houses on the shore. The slope of the surface is very gentle, affording good opportunities for agriculture; but both north and south of this cleared spot the land is steeper, higher, and covered with trees.

On the western side of the river the shore runs about N. by E. from **Hodgdon Mills** for about three-eighths of a mile, and then turns to the westward, forming a deep cove with good anchorage and tolerably bold shores. The land is cleared and settled. This cove is called *Meadow Cove.*

Hence to the *Narrows* the western shore partakes of the same character, cleared slopes alternating with steep wooded declivities. The land varies in height from one hundred to one hundred and sixty feet.

WEBBER ISLAND,

In the middle of the river, a mile and a half above **Hodgdon Mills**, is an island of peculiar appearance. Seen from the southward its surface appears bare, except on the crest, where thick woods appear. The land rises very gradually to the summit, which is over one hundred feet high. This is **Webber Island**, by some called **Fort Island.** It lies **NORTH** and **SOUTH**, is nearly eight hundred yards long, of an oval shape. Although its southern slopes are bare and have a gentle inclination toward the water, the northern face is very thickly wooded and very steep; giving the appearance when seen from the northward of a round, high, and heavily-wooded bluff. On its southern point is an old block-house, from which the point has received the name of **Fort Point.**

Webber Island so narrows the main channel of the river as to leave a passage only one-eighth of a mile wide between its southern end and the eastern shores of the river. This passage is called *THE NARROWS.* Six fathoms at low water may be carried through it, but the channel is somewhat obstructed and the tidal-current runs very fast, especially on the ebb.

To the westward of **Webber Island**, between it and the western shores of the river, runs a narrow passage called the *Back Narrows.* Eight feet at low water may be taken through this channel, but it is so very crooked, narrow, and dangerous as to render it in the highest degree unsafe for strangers. It is almost closed at low water by a line of dry ledges making off from the northwestern point of **Webber Island**, leaving a channel only thirty yards wide between their northern end and the main shore. This is the shoalest part of the channel, three fathoms being found everywhere else through its whole length. Behind the northwestern end of **Webber Island** the western shore of the river runs into a small cove, nearly dry at low water, called *Wheeler Cove.* It is of no importance.

After passing through the *Narrows*, pass to the eastward of **Webber Island** and to the westward of a low sparsely-wooded island. The latter lies off the northern end of the long peninsula on the eastern side of the river, and is joined to it at low water by dry ledges. Passing to the northward of it, another island, quite low and thickly wooded with a variety of trees, is opened. These are called **Plummer Islands.** Between the two is a passage which leads to the southward behind the long peninsula just mentioned, and between it and **Bristol Neck.** Thus is formed a narrow cove, called

SEAL COVE,

nearly a mile and a half long, which heads near the northern end of *Jones Cove*, and is separated from it by a narrow neck of land only two hundred yards wide.

Three fathoms at low water may be taken into it three-quarters of a mile from its mouth. It affords excellent anchorage.

Three-eighths of a mile to the northward of *Seal Cove Entrance* is another cove, on the eastern shore of the river, known as

PETERS COVE OR LONG COVE.

The entrance is eight hundred yards wide between two low wooded points. The crest of the southern point, called **Plummer Point**, however, attains a height of one hundred and twenty feet about three-eighths of a mile to the southward of the cove.

On the northern side of the entrance lies an islet twenty feet high, thickly wooded, called **Peters Island.** There is no channel between it and the northern shore.

Peters Cove sends off two arms, one to the northward about three hundred yards long, and one to the southward over eight hundred yards long. Both are nearly bare at low water. Twelve feet at mean low water can be safely taken into this cove.

From the *Narrows* the general course of the river is N E. for two miles to **Miller Island**, which lies in the mouth of *Clark Cove.* The eastern shores are generally wooded, and the land rises gradually from the water to the crests of the ridges, which are mostly bare of trees and under cultivation. On the western shore the rise is more abrupt, and the slopes are dotted with scattered trees. Bare ledges crop out here and there near the crests of the ridges, but the edge of the shore-line is fringed with trees from **Webber Island** to abreast of **Miller Island.** The land varies in height from one hundred to one hundred and sixty feet above sea-level.

MILLER ISLAND,

a small, low, sparsely-wooded island, lies N W. and S E., in the middle of the river, two miles above the *Narrows.* Four hundred yards S W. from it is another small, low, wooded island, called **Carlisle Island.** There is not less than eight fathoms water on both sides of **Miller Island.**

CLARK COVE.

Half a mile above *Peters Cove* is the southern point of *Clark Cove*, which is formed by a long bend to the westward on the eastern shore of the river, leaving between **Miller Island** and the main a spacious anchorage, three-quarters of a mile long, with from three to five fathoms water and good holding-ground.

The northwestern point of this cove, called **McGuire Point,** is of moderate height and partly wooded. The shores are low, cleared, and settled.

The western shore of the river terminates opposite to **Miller Island** in a bare point, called **Carlisle Point,** which lies S S W. from **McGuire Point.** The distance between them, three-eighths of a mile, is here the width of the river. Passing between the two a long narrow cove is opened, running to the southward and westward behind **Carlisle Point.** This is

PLEASANT COVE,

a mile and a quarter long, and unobstructed. Its shores are low, with a very gentle rise to the crests of the ridges, and are mostly under cultivation. Twelve feet at low water may be carried nearly a mile up this cove.

LOWE COVE

opens on the northern side of **McGuire Point**; is about eight hundred yards long and about one hundred and fifty wide. Its course is EAST and WEST, and it is dry at extreme low tides.

On the western side of the river the shore has a general course N E. by N. for one mile and three-quarters, from *Pleasant Cove* to

SALT MARSH COVE,

which lies on the western shore, and is dry at low water. The shore between it and *Pleasant Cove* is generally steep and high, and the land in many places bare. The shore-line, however, is fringed with trees, behind which rise the cleared slopes, and beyond these are the wooded crests of the ridges. The northern side of the entrance to *Salt Marsh Cove* is formed by a steep hill, two hundred and twenty feet high. Its crest is bare, but the slopes are dotted with scattered trees. The southern side of the entrance is formed by a thinly-wooded point about sixty feet high, its summit bare of trees but under cultivation, with one or two houses on it.

Northeast of the entrance to this cove, nearly half a mile distant, are two small islands lying close to the western shore. The southernmost is a mere rock, with one or two trees on it; the other is about one hundred and fifty yards square, and thickly wooded. It is called **Merry Island.** There is no passage between it and the western shore.

From **Merry Island** steep wooded bluffs extend to the northward half a mile to *Briar Cove,* a small cove, dry at low water, making in on the western shore.

The eastern shores of the *Damariscotta,* from *Lowe Cove* to the northward, are of much the same character as the western shores, being composed of steep bluffs, partly wooded and partly under cultivation, until up with **Kelsey Point,** nearly abreast of **Merry Island.** Hence to the northward the slopes are much more gradual, and the land nearly all cleared, settled, and cultivated.

Kelsey Point is low and bare of trees near the shore-line, but the land behind it rises abruptly to a height of one hundred and sixty feet. A long fish-weir extends out just to the southward of the point. On its northern side a large semicircular cove makes in, called *Mears Cove.* Its northern point is called **Lower Fitch Point.** There is excellent anchorage in from three to five fathoms in this cove.

One mile and three-quarters above *Lowe Cove* a long low point makes out from the eastern shore, diminishing the width of the river to three hundred and fifty yards. This point is partly bare and partly wooded, with a woody crest sixty feet above high-water mark. It is called

FITCH POINT.

From its northern extremity, (which is low and thickly wooded,) opposite to *Briar Cove,* a line of bare ledges extends to the northwestward, which again narrows the channel to a width of only two hundred yards. Through all of these narrow channels the tidal-current runs with great velocity. The southern end of **Fitch Point** is known as **Lower Fitch Point.**

On the north side of **Fitch Point** is a shallow cove, called *Fitch Cove.* It is of no importance. Three-quarters of a mile above this cove is a low flat point, called **Whitey Point,** and on the north side of it makes in a small cove, bare at low water, called *Whitey Cove.*

Three-quarters of a mile above *Whitey Cove,* and nearly a mile and three-quarters above **Fitch Point,** is a small cove, bare at low water, called *Prentiss Cove.* It is on the eastern shore of the river, two miles and a half below **Newcastle Bridge,** and is easily known by a small, low, rocky island with a few scattered trees upon it, lying exactly in the middle of the entrance.

From *Briar Cove* to the northward the western shores of the river are nearly all cleared. The land in most places rises very gradually to the crests of the ridges; but here and there a steep bluff is met with, its slopes and crests marked by bare out

cropping ledges. Houses and cultivated fields crown the summits and occupy the sides of the hills, and proceeding up the river the land on both sides is seen to be more cultivated and better settled, until the towns of **Newcastle** and **Damariscotta** are reached.

Half a mile above *Briar Cove* is a large but shallow cove called *Dodge Cove,* and just beyond this another, called *Little Cove.* The latter is just opposite to **Whitey Point.** About half a mile above *Little Cove* is another cove, also called *Dodge Cove,* the round high headland separating them being known as **Dodge Point.** On the chart these coves are called *Upper* and *Lower Dodge Coves.*

On the north side of the *Upper Dodge Cove* is a bluff point with a thin growth of trees along its southern shore, called

PERKINS POINT,

two miles and a quarter above *Briar Cove* and two miles below **Newcastle Bridge.** It is one hundred feet high, mostly cleared and cultivated. A brick-kiln and yard occupy a portion of the low land on its north side, and several wharves are seen along its eastern face.

Above the bare ledges off **Fitch Point** the channel is clear for two miles and three-quarters, when it is again narrowed by an island and two bare ledges occupying the middle of the river. The island is called

HOG ISLAND.

It is two and three-quarters miles above **Fitch Point**; one mile and one-quarter below **Newcastle Bridge**; and is low, of irregular shape, and thinly wooded. At low water it is joined to the eastern shore by dry flats. Nearly three hundred yards to the westward of it lie two bare ledges surrounded by extensive shoals. These rocks are known as **Goose Ledges.** The channel runs to the westward of these shoals, but the width of the whole passage is only three hundred and fifty yards.

Hog Island lies off the mouth of a large but shallow cove on the eastern bank of the river, called *Huston Cove.*

The north point of the entrance to *Huston Cove* is called **Hall Point.** It is a low point, about a mile below **Newcastle Bridge** and nearly opposite to **Little Point,** on the west bank. The channel is here less than a hundred yards wide, and the whole width of the river at high water is but three hundred yards.

Just above **Hall Point,** and on the south side of the village of **Damariscotta,** is a large but shallow cove, called *Day Cove,* dry at low water. Part of the wharf-line of the village occupies its eastern and southern shores.

Thirteen feet at mean low water can be taken up as far as the **Goose Ledges,** but only ten feet can be carried to **Newcastle,** and that through a channel so narrow as to be impracticable except with a very favorable wind.

Newcastle, situated on the west bank of the river, is a town of eighteen hundred inhabitants. The principal business is ship-building and the lumber trade.

Damariscotta, on the eastern bank, has fourteen hundred inhabitants. The two towns are connected by **Newcastle Bridge,** which is a little over one hundred yards long.

DANGERS

IN DAMARISCOTTA RIVER AND APPROACHES.

I. *Coming from the eastward,* vessels usually steer between the **White Islands** and **Inner Heron Island.** The first danger met with, when bound for *Damariscotta Entrance,* on this course, is

PEMAQUID LEDGE,

already described, (on page 455.) It lies about a mile and an eighth S W. ½ S. from **Pemaquid Light** and about sixteen hundred yards S W. by S. ¼ S. from **Pemaquid Point.** It has sixteen feet at mean low water and fourteen at low spring tides. This, however, is only in one small spot, the rest of the ledge having nothing less than four fathoms.

PUMPKIN ISLAND EASTERN LEDGE

has sixteen feet at mean low water; lies eight hundred and fifty yards SE. by E. from **Pumpkin Island** and one mile and a half SOUTH from **Outer Heron Island.** *It is not buoyed,* and does not show itself except in heavy weather. This ledge is only in the way of vessels which keep outside of everything, steering for the southern end of **Damiscove.**

OUTER HERON ISLAND LEDGE

has fifteen feet at mean low water and thirteen at low spring tides. It bears E. by S. ¾ S. from the southern point of **Outer Heron Island,** one mile distant.

After passing **Thrumbcap Island,** go either to the eastward or westward of **Inner Heron Island.** The main entrance is, however, to the westward. If passing to the eastward, the eastern shore of the island must be kept aboard, to avoid the shoals surrounding **a small bare rock** lying one-quarter of a mile EAST from the southern point of **Heron Island,** or else the western shores of **Thrumbcap** and the **Thread of Life Ledges** must be kept aboard until nearly up to **Turnip Island.**

Two rocks, with six feet at mean low water and four feet at low spring tides, lie off the eastern shore of **Heron Island,** distant two hundred and seventy-five yards, and a little over two hundred yards N N E. and S S W. from each other. They are easily avoided by keeping either the eastern or western shores aboard. But *if bound in by the main channel,* the first obstruction met with, after passing **Thrumbcap,** is a small, round, bare rock called

THE BULLDOG.

It lies three hundred yards S S W. from **Inner Heron Island,** and has shoal water extending one hundred yards to the southward. To the northward, between it and the island, lies a shoal, bare at extreme low tides, called *Bulldog Ledge.*

INNER HERON ISLAND LEDGE.

Passing to the southward of the **Bulldog,** and continuing the course toward **Reed Island,** there will be seen to the northwestward a *red spar-buoy.* This is on the southwestern end of *Inner Heron Island Ledge,* in thirty feet water, and is marked No. 4. *Inner Heron Island Ledge* has two feet at mean low water, is dry at low spring tides, and lies W. ¾ S. from the southernmost point of **Inner Heron Island,** over four hundred yards distant.

The western shore of **Inner Heron Island** should receive a berth to the eastward of at least three hundred and fifty yards, to avoid a shoal which makes out from about the middle of the island. **Linekin Neck** is quite bold, but vessels standing across channel toward the neck must be careful, when nearing the south end of **Reed Island,** to give the island a berth to the northward of not less than five hundred yards to avoid *a bad rock, bare at three-quarters ebb,* which lies in the middle of the entrance to *Little River,* nearly three hundred yards from the shore of **Linekin Neck.** *This rock is not buoyed.*

After passing **Inner Heron Island,** vessels in beating must be careful to avoid a rock with fourteen feet at mean low water and twelve at low springs, which lies midway between the northern point of **Inner Heron Island** and the entrance to *Christmas Cove.* It is nearly seven hundred yards N E. by N. ¼ N. from the former.

After passing *Christmas Cove* there is a clear channel until nearly up with the *Gut.* There is *an eight-feet ledge* lying off the entrance to the *Gut*, about two hundred and fifty yards from the shore of **Rutherford Island**, *which is not buoyed.*

KELP LEDGE.

Opposite to the entrance to the *Gut*, and on the west bank of the river, is **Farnum Point**, or **Farnum Head** as it is sometimes called. Just to the northward of this point, and between it and **Hodgdon Mills**, is a bad kelp ledge making out from the shore. It is bare at mean low water, and out of water two feet at low spring tides. It is called *Kelp Ledge.* Its eastern end is about one hundred and fifty yards from shore. It is much dreaded by coasters and fishermen, and should have a buoy upon it.

After passing **Hodgdon Mills** and coming abreast of *Meadow Cove*, a *black spar-buoy* will be seen ahead. This is on

WESTERN LEDGE,

which lies exactly in the middle of the river, about three-eighths of a mile (six hundred and fifty yards) to the southward of **Webber Island**. It is dry at low spring tides and awash at mean low water. A *black spar-buoy*, marked No. 1, is placed in three fathoms about one hundred yards to the southward and eastward of the ledge, and vessels usually pass to the eastward of it. But as there is equally good water on both sides of the rock, shipmasters will do well to bear in mind that they may safely consider this buoy as an obstruction buoy, and pass it on either hand, according as the wind or tide serves. Those passing to the westward of it should remember that the *shoal water of the ledge extends to the northward from the buoy nearly two hundred and fifty yards*, and therefore, in passing between it and **Webber Island**, the buoy should receive a berth of three hundred yards to the southward.

After passing *Western Ledge*, a *red spar-buoy* will be seen close to the eastern shore of the *Narrows.* It is on

EASTERN LEDGE,

lying near the southern entrance to the *Narrows* and about sixty yards from the eastern shore, has three feet at mean low water, or about one foot at low spring tides, extends N N E. and S S W., and is one hundred yards long. A *red spar-buoy*, marked No. 6, is placed on the ledge, and vessels may go close to it, passing to the westward, with not less than three fathoms water. Light-draught vessels may go between this ledge and the eastern shore of the *Narrows*, carrying not less than ten feet at low water. This shore is very bold, and may be approached close-to with twelve feet at low water.

NORTHERN LEDGE

lies at the northern end of the *Narrows*, and has five feet at mean low water. *It is not buoyed*, but a buoy has been recommended. It is about one hundred yards square, and bears from **Fort Point** E N E. two hundred and fifty yards, and one hundred yards N. ½ E. from the northeast point of the *Narrows.* This is a very dangerous ledge, the more so that *it is not buoyed.* It may be avoided, however, by keeping the eastern shore of **Webber Island** aboard, giving it a berth of one hundred and eighty yards after passing **Fort Point** until past the small cove which makes in on the north side of that point. The ledge is then well to the southward.

The three rocky islets lying near the eastern shore of the river, opposite **Webber Island**, are surrounded by shoal water, and must receive a berth to the eastward of one hundred and twenty yards. Three fathoms at low water may, however, be carried to the eastward of them, but the passage is crooked and obstructed by bad rocks. It is not recommended.

After passing to the northward of **Webber Island**, no dangers are met until up with **Carlisle Island**, the low, wooded island lying off the western shore, near **Miller Island**. It should receive a berth of one hundred and fifty yards to the westward to avoid the ledges on its eastern side. Vessels passing to the southward of **Miller Island**, into or out of *Clarke Cove*, must give the southern point of the island a berth of two hundred and fifty yards, to avoid the long ledge which makes off from it.

After passing **Miller Island**, there will be seen ahead a long line of rocks, dry at low water, extending along the western shore of the river. These are the

PLEASANT COVE LEDGES,

extending from the western point of the entrance to *Pleasant Cove* in a N E. by N. direction for half a mile. The northern end of this line of ledges is a quarter of a mile from the western shore, and immediately opposite to the mouth of *Lowe Cove*. These ledges may be approached on their eastern side within one hundred yards anywhere along their whole length, and their northern point may be passed either to the eastward or the northward within seventy-five yards. The main body of these ledges is connected with the western shore by flats, dry at extreme low tide; but there is a cove to the westward of the northern point, called *Wadsworth Cove*, in which good anchorage may be had in sixteen feet at low water, soft bottom. This cove may be advantageous for vessels bound up or down with light winds when they meet the adverse tide and are not able to get into *Clarke Cove*.

The next obstruction met with, after passing *Pleasant Cove Ledges*, is a small bare rock surrounded by shoal water, lying one hundred and sixty yards off the western shore, three-quarters of a mile above *Pleasant Cove Ledges*, and three-eighths of a mile (over seven hundred yards) below the entrance to *Salt Marsh Cove*. There is no passage between it and the western shore. It may be approached, however, on its northern and eastern sides within one hundred yards, in not less than five fathoms. Passing this rock, there will be seen ahead, near the eastern bank, a *red spar-buoy*, which is on the western side of

KELSEY LEDGE,

which lies two hundred and twenty-five yards from the eastern shore of the river, and bears from **Kelsey Point** S W. by W. ½ W., three hundred yards distant. It is marked by a *red spar-buoy*, No. 8, placed on its western side in three fathoms water. There is, however, a good channel about one hundred yards wide to the eastward of the ledge, with not less than four fathoms water. *Kelsey Ledge* has three feet at mean low water and one foot at low spring tides.

In passing between **Kelsey Point** and **Merry Island** keep the former aboard, to avoid the ledges which make off from the southern end of **Merry Island** one hundred and seventy-five yards and from the western shore of the river three hundred and fifty yards. The eastern shore of **Merry Island** is, however, quite bold.

Off the southern end of **Fitch Point**, a little over one hundred yards from shore, lies a small rock, bare at low water, and with shoal water fifty yards to the westward of it. All of this point is shoal, and several rocks lie off its western face. They are known under the common name of **Fitch Point Rocks**. To avoid them, keep the western shore of the river aboard, or give the eastern shore a berth of two hundred and fifty yards to the eastward.

A small bare rock lies off the entrance to *Briar Cove*, but it is quite close to the shore, and is bold on its eastern side. It is therefore not likely to be troublesome to vessels.

THE LEDGES.

This dangerous line of rocks is the worst obstruction in the *Damariscotta River.* It is composed of four or five bare rocks, which at low water are united into one large ledge, extending from the northern end of **Fitch Point** in a N N W. direction four hundred yards, thus diminishing the width of the river to about one hundred and seventy-five yards. The western shore is, however, quite bold.

The ebb-tide sets directly on to these ledges, and the current rushes through the narrow passage which here forms the channel of the river with great velocity. Great care must be taken in coming up the river on the flood to hug the western shore closely, to avoid being set on to the western point of the ledges. Once by this point the current will itself lead clear of all danger. The same precaution must be carefully observed in coming down the river on the ebb-tide, to avoid being set on to the northwestern end of the rocks, upon which the tide sets exactly. This is a dangerous passage, and should not be attempted by strangers unless with a good free wind and on the first and last quarters of either tide. Coming down the river with a good wind, take the last quarter of the ebb to pass the **Ledges**, which will give time to reach the *Narrows* at or before slack water. Going up, take the first of the flood past the **Ledges**, unless familiar with the set and strength of the current and pressed for time. In such a case take half-flood through the *Narrows* and last quarter-flood past the **Ledges**, which will carry to **Newcastle** by high water.

After passing the **Ledges** the channel inclines toward the eastern shore, but the shores are not so bold as those to the southward of the **Ledges**. A little over half a mile beyond them there is a small bare rock lying on the eastern side of the river, one hundred and fifty yards from shore. If the vessel be of heavy draught, (twelve feet or more,) this rock should receive a berth of one hundred yards to the eastward. Light-draught vessels may go close to it.

Beyond this rock both shores are shoal, the eastern shore being still the boldest. But three fathoms at low water can be carried only to **Perkins Point**, two miles above the **Ledges**.

There is a shoal with three feet at low water lying off the eastern shore, about three-quarters of a mile above the small bare rock just mentioned, and two hundred and fifty yards from shore.

Off **Perkins Point** the flats extend to the eastward over four hundred yards with less than six feet water. There are no shoals, however, outside of the two-fathom line. The lead is the best guide for vessels in keeping off either shore, for no intelligible description can be given of the course of the channel or of the dangers which lie on both sides of it. It may be remarked, however, that after passing **Perkins Point** the western shore becomes the boldest, and two-thirds of the width of the river is occupied by extensive flats making off from the eastern shore.

GOOSE LEDGES.

Nearly three hundred yards N W. from **Hog Island** lie two bare rocks N E. and S W. from each other, and surrounded by ledges dry at low water, called the **Goose Ledges,** and the southern dry rock is called **Goose Rock.** The channel runs to the westward of them, and they should receive a berth of one hundred and fifty yards.

After passing **Goose Ledges** the channel runs between flats nearly all dry at low water. No intelligible description can be given of its course and the dangers on either side. The chart is the best guide for the former and the lead for the latter.

Ten feet at low water can be carried up to **Newcastle** through a very narrow channel.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING DAMARISCOTTA RIVER.

I. *Coming from the eastward.*—From outside of **Monhegan** the course for the entrance to the **Damariscotta** is N W. ¾ W. until **Foster Point** opens to the westward of **Inner Heron Island** and the southern end of the latter bears N N E., one mile distant. On this course the least water is fourteen fathoms.

The course for vessels having come through the *Muscle Ridges*, and bound for the *Damariscotta*, is, when between **Monhegan** and **Allen Islands**, W. ¾ N., to the same bearing of **Inner Heron Island.** On this course the least water is twenty-four fathoms.

From this bearing and distance steer N. ¼ E., carrying not less than thirteen fathoms water, until abreast of the *red spar-buoy* off *Inner Heron Island Ledge,* which pass to the westward of three hundred and fifty yards, and steer N. by E. ¾ E., carrying not less than five fathoms, past **Inner Heron Island,** *Christmas Cove*, **Foster Point,** and **Rutherford Island** until up with the north end of **Farnum Point,** which pass to the eastward of two hundred and fifty yards; and if bound to **Hodgdon Mills** steer N W. by N. ¼ N., with not less than five fathoms, and anchor at discretion, when off the village, in from two to five fathoms, soft bottom.

But if bound up the river, when the north end of **Farnum Point** bears N N W., in six fathoms water, steer N. ½ W., keeping the eastern shore aboard and carrying not less than seven fathoms water, and when past **Hodgdon Mills** there will be seen ahead the *black buoy* on *Western Ledge.* Continue the course N. ½ W. until within three hundred yards of this buoy and the **Block-house** on **Fort Point** bears N. ¾ E., with ten fathoms water, when steer N. by E. ¼ E., carrying not less than nine fathoms, to the entrance to the *Narrows.* When abreast of *Eastern Ledge Buoy*, in about ten fathoms water, pass to the westward of it seventy five yards, and the course thence through the *Narrows* is N E. by N. ½ N. with not less than five fathoms. The course must be varied to the eastward or westward according as the tide is flood or ebb; and made good, leaves *Northern Ledge* a hundred yards to the eastward. Continue it until past the **Plummer Islands** and the entrance to *Seal Cove* is fairly open, bearing S. ¾ E. Then steer N E. by N., which will lead, with not less than seven fathoms, to the anchorage in *Clark Cove.* But if wishing to pass to the westward of **Miller Island** and continue up the river, when on the course N E. by N. the westernmost point of **Miller Island** bears N. ¼ E., and in about ten fathoms, steer for it, carrying eight and nine fathoms, until abreast of the southern end of **Carlisle Island**, in nine fathoms. Pass to the eastward of it two hundred yards off, and steer N. by W. ¼ W., carrying not less than seven fathoms, and passing to the westward of **Miller Island** nearly two hundred yards. Continue this course until past *Lowe Cove*, passing to the eastward of *Pleasant Cove Ledges* two hundred and fifty yards. When past **Wentworth Point,** (the northern point of *Lowe Cove,*) and in mid-river, steer N E. by N. ¾ N. This course continued for about one mile will carry up mid-channel, in not less than seven fathoms water, to the buoy on *Kelsey Ledge*, and past the mouth of *Salt Marsh Cove.* When past the buoy, which must be left about two hundred yards to the eastward, and **Kelsey Point** bears E. ¼ S., four hundred yards off, steer E. by N. ½ N., between the **Merry Island Rocks** and the eastern shore, carrying not less than eight fathoms; and when the centre of **Merry Island** bears N N W., with eight fathoms, steer N. by E. ½ E. for seven-eighths of a mile, until abreast of **The Ledges.** This course has not less than six fathoms, and leaves *Fitch Point Rocks* and **The Ledges** over a hundred yards to the eastward.

Now, when abreast of the northwestern end of *The Ledges* and about midway between them and the western shore, in seven fathoms water, steer N E. by E. for a few hundred yards, carrying not less than seven fathoms, until past *The Ledges*, when steer

N E. by E. ¾ E. toward **Whitey Point**, on the eastern shore, carrying not less than eight fathoms water.

Remember that it is a N E. by E. course *made good* that leads safely past these ledges. The course steered must be varied according to the state of tide.

Continue the N E. by E. ¾ E. course for three-quarters of a mile, and bring the bare summit of the bluff on **Perkins Point** to bear N E. ¾ N., when it will be seen exactly in range with the easternmost extremity of the point below it, when there will be eight fathoms. Then steer N E. one mile, carrying from three to seven fathoms, until abreast of the south point of *Prentiss Cove,* when edge off a little to the eastward, steering N E. ¾ E. for three-eighths of a mile, (seven hundred yards,) to avoid the flats off **Perkins Point.** Continue this course, on which there will not be less than sixteen feet, until past the pitch of that point and there will be seen a brick-kiln on the long pier making out just to the northward of the point. Bring this pier in range with the western end of the large barn on the higher land behind, when the two objects will bear N W. ¾ N. and there will be sixteen feet water. Then alter the course to N. by E., and steer that course for six or seven hundred yards, carrying not less than fourteen feet, after which steer still more to the westward, gradually approaching the western shore, to avoid the extensive flats which here make off from the eastern side of the river. Continue to hug the western shore, (never approaching it nearer than one hundred and fifty yards, however,) with not less than thirteen feet, until up with the **Goose Ledges.** Pass to the westward of these, giving them a berth of one hundred and seventy-five yards, and steer N E. ¾ E. for a white spire with a clock-dial on it, in the town of **Damariscotta.** Continue this course, with nothing less than ten feet water, for about five-eighths of a mile (twelve hundred yards) until **Newcastle** church-spire (which is painted brown) bears N. by E. ¾ E. and in fourteen feet water, when steer for the spire, keeping it in range with **Jacks Point** (the long point which makes out near the south end of the town) until within two hundred yards of the latter. On this course there is not less than ten feet. Then alter the course to the eastward just so as to keep clear of the wharf-line, and steer for the western end of **Newcastle Bridge.** Anchor off the town in three fathoms at low water, if off the mouth of the *Cove,* and midway between the two piers, built on the edge of the flats, which mark the eastern and western limits of the channel.

PASSAGE BETWEEN WHITE ISLANDS AND OUTER HERON ISLAND.

Vessels coming from seaward may, if finding it more convenient, pass into the *Damariscotta* by the wide and safe passage between **White Islands** on the east and **Outer Heron Island** on the west, and thence between the **White Islands** and **Fisherman Island.** In this channel (which is called the *WHITE ISLAND CHANNEL*) there are several

DANGERS.

The first met with is

PUMPKIN ISLAND EASTERN LEDGE,

which pass to the eastward of. It lies eight hundred and fifty yards S E. by E. from **Pumpkin Island,** has sixteen feet at mean low water, and is not buoyed. Passing it,

NORTHEAST LEDGE

is reached, a little over a quarter of a mile N E. from the northern end of **Pumpkin Island.** It has eight feet at mean low water and six feet at low spring tides. A little over two hundred yards NORTH from it is *another rock, with ten feet* at mean low water; and four hundred yards farther to the northward is still another, *with eleven feet.* In fact, all the space between **Pumpkin Island** and **Outer Heron** is very much obstructed,

and strangers must be careful to give both islands a wide berth in passing to the eastward of them.

OUTER HERON ISLAND LEDGE

has fifteen feet at mean low water and thirteen at low spring tides. It bears E. by S. ½ S. from the southern point of **Outer Heron Island**, one mile distant, and *is not buoyed.* Pass to the westward of it in using this channel.

About midway between **Outer Heron Island** and **Pumpkin Island** are two ledges, dry at low water, called

HERON ISLAND SOUTH LEDGES,

lying SOUTH and S. by W. ½ W. from the middle of **Outer Heron**, distant, respectively, six hundred and fifty and eleven hundred and fifty yards; *are not buoyed*, but are dangerous only to vessels passing between **Heron** and **Pumpkin Islands**, or to vessels in beating in or out. Strangers will never attempt the former passage; and it is, therefore, only necessary to remark that in beating a vessel must not stand farther to the westward than to bring the eastern end of **Outer Heron Island** to bear N. ½ W. This will avoid all of the *Pumpkin Island Ledges* as well as the *Heron Island South Ledges.*

After passing *Outer Heron Island Ledge* the channel is clear until up with

HYPOCRITE LEDGE,

sometimes called **Hypocrite Reef.** It is formed by two long, narrow, and bare islets from ten to twenty feet high, and connected at low water by dry shoals and breakers.

Its southern end lies five-eighths of a mile (thirteen hundred yards) N. ½ W. from **Outer Heron Island**, and is marked by a *black spar-buoy*, not numbered. From this buoy the ledge extends in a N N E. direction about seven-eighths of a mile along the whole length of **Fisherman Island.** Both sides are quite bold. Seven fathoms may be carried between it and **Fisherman Island** by keeping the western side of the reef close aboard, to avoid the dry ledges to the eastward of the island.

After passing this ledge the channel is clear to *Inner Heron Island Ledge*, which lies to the westward of the southern end of **Inner Heron Island**, (see page 468.) For description of this and the other dangers common to all channels into the *Damariscotta*, see pages 467 to 471.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING DAMARISCOTTA RIVER.

II. *From the southeastward, through White Island Passage.*—When **Pemaquid Light** is made, bring it to bear N E. by N. ½ N. and run for it until the southern point of **Damiscove Island** (called **Damiscove Point**) bears N W. ½ N., when steer N. ½ W. for the southern end of **Linekin Neck.** This course will carry through between **White Islands** and **Outer Heron Island** in not less than nine fathoms water. When abreast of the northern point of the southern **White Island**, in about twenty fathoms water, steer N N E., which will lead up to the *red buoy* off **Heron Island Ledge** with not less than thirteen fathoms water. Pass to the westward of this buoy three hundred and fifty yards, and steer N. by E. ½ E. past **Inner Heron Island.** Above this point follow the directions previously given, (page 468.)

PASSAGE BETWEEN DAMISCOVE AND OUTER HERON ISLAND.

This passage is an excellent entrance for vessels coming from the westward, passing to the southward of **Damiscove.** It is wide and deep, having not less than twelve fathoms, and the shores of both islands are bold.

DANGERS.

In approaching the *Damariscotta* outside of **Damiscove**, the first danger met with is the

BANTAM ROCK,

dangerous to vessels bound into the *Sheepscot*, into *Booth Bay*, or into the *Damariscotta*. It bears S W. by S. ¼ S. from **Damiscove Point**, distant a mile and a quarter, and is bare at low water. The shoal of this rock lies E N E. and W S W., and is three hundred and seventy-five yards long.

Off its southwestern end is placed an *iron nun-buoy* of the second class, painted red, and marked No. 2. This buoy is in deep water about one hundred yards from the rock.

It has been recommended that this buoy be superseded by a first-class *can-buoy* of the same color.

Passing *Bantam Rock* and the southern end of **Damiscove**, haul up along the eastern side of the latter, and in doing so there will be seen on the east side a group of bare ledges lying to the north and west of **Pumpkin Island**. These are

PUMPKIN ISLAND WESTERN LEDGES,

consisting of two small bare rocks surrounded by large ledges dry at low water. The two bare rocks lie N E. by E. and S W. by W. from each other, six hundred and fifty yards apart. *The southwestern rock* is half a mile N W. ½ N. from the southern point of **Pumpkin Island**. From it the shoal water extends NORTH two hundred and seventy five yards and SOUTH nearly four hundred yards. *The northeastern rock* lies over eight hundred yards N W. by N. ½ N. from the northern end of **Pumpkin Island**. From it the shoal water extends N N E. two hundred yards and W. by S. four hundred yards. *Neither of these ledges is buoyed.* Vessels in passing to the southward of the southern ledge must give it a berth of at least a quarter of a mile.

In beating in this passage, it is not safe for strangers to go to the eastward of the southwestern point of **Outer Heron Island**, bearing N E. by N.

After passing the *Pumpkin Island Ledges* this channel is clear to the **Hypocrite**, where it joins the *White Island Passage.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING DAMARISCOTTA RIVER.

III. *Coming from the westward, between* **Damiscove** *and* **Outer Heron Island.**—The course from **Seguin** to **Monhegan** is E. ¼ S. This course clears the *Bantam*, leaving it more than half a mile to the northward. On this course, when the southeast point of **Damiscove Island** bears N. by E. ¾ E., nearly two miles distant, and there is about twenty fathoms, steer N E. by N. ¼ N., carrying not less than twelve fathoms water, and passing two hundred yards to the eastward of the *black buoy* on the southern end of **Hypocrite Ledge.** Continue this course until up with the *red buoy* on *Inner Heron Island Ledge*, which pass to the westward of two hundred and fifty yards, and proceed as directed on pages 472 and 473.

FISHERMAN ISLAND PASSAGE.

This channel leads to the eastward and westward, between the southern end of **Fisherman Island** and the **Wood End of Damiscove.** It is much used by coasters and fishermen, is three-eighths of a mile wide between the lines of three fathoms, and is unobstructed throughout that width. The bottom is very irregular, soundings varying from three to twenty-five fathoms being found on it. Vessels using this channel coming from the westward usually pass inside of **Seguin** and leave the **Island of Southport** about three-quarters of a mile to the northward. This passage is obstructed by several

DANGERS.

Coming from the westward and passing the mouth of the *Sheepscot River*, intending to pass through the *Fisherman Island Passage* into the *Damariscotta*, there will be seen lying just clear of the southern end of **Southport Island**, called **Cape Newagen,** two bare rocky islets, called

THE CUCKOLDS.

They are particularly dreaded by mariners who are caught by night or in a fog in their vicinity. They lie about three hundred and fifty yards S S E. from **Cape Island,** (the small island which lies close in with **Cape Newagen**,) and are EAST and WEST from each other. They are about one hundred or one hundred and fifty yards in diameter, and are quite bold; but a heavy sea breaks upon them almost continuously, even in the calmest weather.

After passing the **Cuckolds** there are no obstructions until up with the **Hypocrite Reef**, except that from the southern end of **Fisherman Island** a ledge extends to the southward with from fourteen to seventeen feet at low water. It is known as

FISHERMAN ISLAND POINT,

extends to the southward three hundred and fifty yards, *and is not buoyed.* It is not dangerous, however, for vessels usually keep over toward the **Wood End of Damiscove**, and this channel is rarely used by those drawing over twelve feet of water.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING DAMARISCOTTA RIVER.

IV. *Coming from the westward, through Fisherman Island Passage.*—Vessels using this passage are accustomed to pass to the northward of **Seguin**, and between the **Black Rocks** and the **Sisters**, and when abreast of the former, in about fourteen fathoms, hard bottom, bring the northern end of **Fisherman Island** to bear E. by N. ½ N., and the **Cuckolds** will be seen in range with it. Then steer E. ⅝ N., which will lead safely through the passage with not less than twenty-nine feet water, and up to the *black buoy* on the southern end of **Hypocrite Reef.** When abreast of this buoy, and in nineteen fathoms, steer N E. by N. ½ N. until up with the *red buoy* on *Inner Heron Island Ledge*, which leave to the eastward three hundred and fifty yards, and proceed as directed on pages 472 and 473. On the N E. by N. ½ N. course there will be not less than six fathoms water.

PASSAGE BETWEEN LINEKIN NECK AND FISHERMAN ISLAND.

This channel is only used by those familiar with these waters. It is over half a mile wide, but is obstructed by a bad sunken ledge exactly in the middle of the passage. It is, however, very useful as a short cut to those who are familiar with the positions of the in-shore ledges, and is by them constantly used. Those using it come well inside **Seguin**, and pass between the **Sisters** and **Black Rocks**, just as if bound through the *Fisherman Island Passage.* But when past the **Cuckolds** haul up for **Linekin Neck**, and pass to the northward and westward of **Fisherman Island** into the river.

DANGERS.

The **Cuckolds** have been already described above. After passing them there are no obstructions until well into the passage, when there will be seen a *red spar-buoy* to the northeastward. This is on

GANGWAY LEDGE,

which lies nearly in the middle of the passage between **Linekin Neck** and **Fisherman Island.** It has seven feet at mean low water and about five at low spring tides, and is therefore very dangerous to vessels of all classes. It is nearly six hundred yards **SOUTH from**

the southwestern end of **Linekin Neck** and about six hundred and fifty yards to the northward of **Ram Island.** (This latter is the small island lying close to the northern end of **Fisherman Island**, on its western side. See page 461.)

There are from three to five fathoms on both sides of this ledge, and it was formerly marked by a *buoy with horizontal black and red stripes.* As, however, the best and widest passage is on its southern side, between it and **Ram Island**, and as the northern channel is further obstructed by a dry shoal, called **Card Rock,** and by several detached rocks with fifteen and sixteen feet on them, *the buoy has been changed to a red one,* which pass to the southward of.

CARD ROCK.

When the *red buoy* on *Gangway Ledge* is made, there will also be seen *another red buoy* to the northward of it, and nearer to the southwest point of **Linekin Neck, on Card Rock,** a bare rock, surrounded by shoal water, and with a bad ledge extending southward from it two hundred and fifty yards with eleven feet water. On the southern end of this ledge, in five fathoms water, is placed the *red spar-buoy* marked No. 6. The northern channel passes between this buoy and that on *Gangway Ledge*, but to avoid the detached rocks northward and westward of the latter, vessels must keep closer to the buoy on **Card Rock.**

Card Rock is only about three hundred yards WEST from the southwestern end of **Linekin Neck.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING DAMARISCOTTA RIVER.

V. *Coming from the westward, between* **Linekin Neck** *and* **Fisherman Island.**—When abreast of the **Black Rocks,** bring the northern end of **Fisherman Island** to bear **E. by N. ½ N.,** with the **Cuckolds** in range with it, and in fourteen fathoms water, hard bottom; steer **E. ¾ N.,** as for *Fisherman Island Passage.* But on this course, when just past the **Cuckolds,** with **Burnt Island Light** bearing **N. by E. ½ E.** and the southern end of **Damiscove (Damiscove Point) S E. by S. SOUTHERLY,** with about twenty-five fathoms water, hard bottom, steer **N E. ½ E.** for **Linekin Neck,** carrying not less than twenty fathoms. On this course, when the middle of **Squirrel Island** bears **N. ½ E.,** and **Wood End of Damiscove Island S E. ¾ S.,** steer **N E. by E. ½ E.** for the southern end of **Inner Heron Island.** This course leads three hundred and fifty yards to the southward of the buoy on *Gangway Ledge*, and carries not less than five fathoms water. Continue it until within two or three hundred yards of the buoy on *Inner Heron Island Ledge*, and in thirteen fathoms, when steer **N. by E. ¼ E.,** and follow the directions given for the river, on pages 472 and 473.

To pass to the northward of the *Gangway* keep the northern side of the passage; leave **Card Rock** *Buoy* one hundred yards to the northward, and steer **E. ¼ S.** for the southern point of **Green Island,** carrying not less than three fathoms water. When about four hundred yards from the island alter the course to the southward, steering about **S E. by E. ¾ E.,** so as to give the point a berth of about one hundred and fifty yards. When past this point, bring the southern point of *Inner Heron Island* to bear **N E. by E. ½ E.,** steer for it, carrying not less than five fathoms water, and proceed as above directed.

TIDES.

The following data, computed for **Damariscotta,** will be of service:

Corrected Establishment, or Average Time of High Water after Moon's meridian passage	$11^h\ 8^m$
Mean Rise and Fall of Tides, or Rise of Mean High Water above the plane of reference	8.3 ft.
Mean Duration of Rise	$6^h\ 14^m$
Mean Duration of Fall	$6^h\ 11^m$

CURRENTS.

General information as to the set and velocity of the tidal-current only can be given. Its general direction is, of course, up and down the channel, as in other streams, with an augmented velocity for ebb-current owing to the natural fall of the land. But the close vicinity of the **Falls** to the **Newcastle Bridge** works a considerable change in the duration of ebb and flood currents. The water, confined to a narrow channel, which is further obstructed by rocks, pours with great velocity over the falls and through the bridge, and this velocity continues to be felt for some distance down the river, requiring a strong current of flood-tide to overcome it. Besides, the flood-tide must overcome, by the rise of the water, the elevation of the falls above the natural bed of the river, and until it has so done the current will continue to flow down river. Thus, the current of ebb commences at the turn of the tide and continues until nearly one-third flood; while the current of flood begins about one-third flood and runs up until high water. This peculiarity of the tidal-current is felt for several miles below the bridge—in fact, almost as far down as *Clarke Cove*. Near the mouth of the river, however, the rise and flow usually begin and end at the same time, being affected only by the winds and the natural descent of the shores from **Newcastle** to the mouth of the river.

The unusual duration of the ebb current in the upper part of the river is a point of some importance to vessels bound up. The whole distance from the entrance to **Newcastle** is only about fourteen miles, and a vessel taking the first of the flood at the entrance will carry it up with her, unless she has a fresh breeze aft, when she would be apt to meet the ebb above *Clarke Cove*. But under ordinary circumstances she would be sure to find no retarding current all the way to the town. This peculiarity also admits of vessels of larger draught waiting for half-tide before weighing to proceed up the river, so as to get the strength of the flood-current in passing through the narrow channels above the **Ledges**, where a favorable current is of great importance.

It may not be out of place here to remark that most of the wharves, both in **Newcastle** and **Damariscotta**, being dry at low water, piers have been built on the edge of the channel, where heavy-draught vessels may lie at low water and discharge cargo. Two of these (already mentioned on page 473) are constructed opposite *Weir Cove*, and on either side of the deep hole, (see page 473,) which forms here a convenient anchorage. Alongside of the eastern pier ten feet at low water may be carried, but the shoals have now extended out to its southern end, where there is only six feet. Vessels may still, however, use the upper end of the pier. The western pier is placed nearly in the middle of the mouth of the cove, and has twelve feet at low water along its whole length.

A third pier is built on the western side of the channel, about four hundred yards below these and a little over two hundred below **Jack Point**. It has also twelve feet at low water along its whole length.

LINEKIN BAY.

Next to the westward of the *Damariscotta River* is a commodious harbor with good water throughout its length and breadth; but except as a harbor of refuge is of no commercial importance, and is seldom used even as an anchorage, as vessels can easily make *Town's End Harbor* or the *Damariscotta*.

The entrance to *Linekin Bay* is between **Linekin Neck** on the east and a round, high, thickly-wooded peninsula on the west, called **Spruce Point.** A small island, about six hundred yards long and very thinly wooded, lies on the eastern side of the entrance, close to **Linekin Neck.** It is called **Negro Island.**

This bay is two and a half miles long, and runs into the land in a N N E. direction. Its width is about one mile, but the entrance is only about eleven hundred yards wide

(a little over half a mile) from shore to shore, and the available channel about five hundred, the latter being much narrowed by the dangerous ledges off **Spruce Point.** Five and six fathoms can be taken up to the head of the bay.

DESCRIPTION OF SHORES OF LINEKIN BAY, ISLANDS IN THE BAY AND NEAR THE ENTRANCE TO IT.

A vessel coming from the eastward and bound into *Linekin Bay* will usually pass through the *Fisherman Island Passage*, and will open out from behind **Fisherman Island** first a moderately high island bearing N W., wooded with a stunted growth of spruce trees, its southern end appearing higher than the rest of the island, and assuming a round bluff-like form. This is

SQUIRREL ISLAND,

lying in the middle of *Booth Bay*, and therefore to the westward of the entrance to *Linekin Bay.* It is nearly three-quarters of a mile long by eight hundred yards in width, and its shores are tolerably bold-to. The upper end is low, has a very gentle slope toward the northern point, and is mainly cleared and settled. On its western shore enters a deep cove with from three to seven fathoms water, called *Squirrel Island Cove.*

This island is a resort for excursion parties during the summer, and has a number of houses built on its summit. These are occupied only during the summer.

SPRUCE POINT

will open next to the northward, bearing about NORTH, and easily recognizable by its round hilly sides, and by a single bare summit surrounded by trees a little to the northward of the southern end of the point. This summit is called **Big Hill,** and is one hundred and forty feet high. It shows against the trees behind it.

Spruce Point is thickly wooded with spruce and pine. The highest crest is nearly two hundred feet above high-water mark, and, unlike **Big Hill**, is clothed with a thick growth of trees. The eastern shores are bold and the fall of the land somewhat steep.

Nearly in range with **Big Hill** will appear an islet lying close in with the southwestern end of **Linekin Neck.** This is

NEGRO ISLAND.

It lies N E. and S W., about three hundred and fifty yards from the western shore of the neck. It is forty feet high, and has a very few spruce trees on it.

Passing between **Damiscove** and **Fisherman Island,** and running up toward **Spruce Point,** the southwestern face of **Linekin Neck** will appear as low cleared land, with a few houses on it, and backed by wooded slopes. Between this end of the neck and **Negro Island** is formed a cove with bold shores and good anchorage, called *Card Cove.* It has from six to nine fathoms water.

Passing between **Negro Island** and **Spruce Point,** bound into the bay, there will be seen ahead, bearing about N E. by N., a small bare islet lying nearly in the middle of the bay. It is called

CABBAGE ISLAND;

is about a quarter of a mile long and about one hundred yards wide, and lies **N. by E.** and **S. by W.** It is exactly one mile above **Negro Island.**

The eastern shores of *Linekin Bay* are formed by the western slopes of **Linekin Neck.** They are mostly cleared and settled, and slope regularly back from the water's edge to the crests of the hills, which vary from sixty to one hundred feet high. Behind these cleared and settled lands wooded hills appear, rising in some places two hundred feet above high-water mark.

The northern shore of *Linekin Bay* is formed by high land partly wooded and partly cleared, and varying from one hundred to one hundred and sixty feet in height. There are a few houses near the shore.

Two small islands lie near the head of the bay. The northern one is called **Little Island,** and is nothing but a bare rock, about one hundred yards south of the north shore, and surrounded by ledges bare at low water. The southern one is called **Fish-Hawk Island,** and lies two hundred and fifty yards to the southward of **Little Island.** It is about eighty yards in diameter, and has a single tree on its summit. A ledge, bare at low water, obstructs the approach to it on the southern side, but its eastern and western shores are bold-to. There are not less than four fathoms water between it and the western shore of the bay.

On the western side of the bay there is a cove with from three to four and a half fathoms water, which is formed by the junction of **Spruce Point** with the main land to the northward, and is called

LEWIS COVE.

It receives the waters of a small stream called *Meadow Brook.* At the head of the cove rises a bare hill one hundred and sixty feet high, called **Mount Pisgah. Cabbage Island** lies off the mouth of this cove.

North of *Lewis Cove* the western shores of *Linekin Bay* are thickly wooded, and rise gradually to a height of one hundred feet. The woods are pine and hemlock.

DANGERS.

IN APPROACHING AND ENTERING LINEKIN BAY.

I. *Coming from the eastward.*—Coming from the eastward, through *Fisherman Island Passage,* the first danger met with is

THE HYPOCRITE,

already described, (page 474.) It lies between the **White Islands** and **Fisherman Island,** and is for the most of its length bare at low water. Its southern end is marked by a *black spar-buoy,* not numbered.

Passing the *Hypocrite,*

FISHERMAN ISLAND POINT

is reached. A ledge with fourteen feet at low water makes out from the southern point of **Fisherman Island** to a distance of three hundred and fifty yards. It has also been before described, (see page 476.)

Passing this ledge the course leads toward **Spruce Point;** and to the northward and eastward, about midway between **Fisherman Island** and **Linekin Neck,** there will be seen a *red spar-buoy,* on

GANGWAY LEDGE,

which lies nearly in the middle of the passage leading east and west between **Linekin Neck** and **Fisherman Island.** It is about six hundred and fifty yards to the northward of **Ram Island.** Seven feet at mean low water and five at low spring tides are found on this rock. (See page 476.)

A fifteen-feet shoal lies three hundred and fifty yards W. by N. from the buoy.

CARD ROCK.

A quarter of a mile N W. from the buoy on the **Gangway** will be seen another *red spar-buoy,* known as **Card Ledge** *Buoy.* It is on the southern point of the ledge surrounding **Card Rock.** This ledge has eleven feet at mean low water and only nine at low

springs, and extends two hundred and fifty yards to the southward of the rock and a quarter of a mile from the southwestern end of **Linekin Neck**. The buoy is in good water.

SPRUCE POINT LEDGES.

After passing **Card Rock** and heading up for **Negro Island**, there will be seen, bearing about N. by W., a heavy breaker in range with **Spruce Point**. This is on *Spruce Point Ledges*, which lie six hundred yards SOUTH from **Spruce Point**, and are bare at low water. With the shoal water surrounding them they cover a space about four hundred yards long in a NORTH and SOUTH direction, extending to within two hundred yards of **Spruce Point**. Six fathoms at low water may be taken between the ledges and the point through a channel about one hundred yards wide. *These ledges are not buoyed*, but in view of their importance as obstructing both *Linekin Bay* and *Town's End Harbor*, a buoy has been recommended to be placed off their southern end.

CABBAGE ISLAND LEDGES.

From the southern end of **Cabbage Island** the shoal water extends to the southward about three hundred yards, and for most of this distance the ledges are bare at low water. Vessels in standing past the south point of this island, either to the eastward or westward, should leave it at least four hundred yards to the northward except at low water, when they may approach within two hundred and twenty-five yards of the dry ledge. Both the eastern and western sides of **Cabbage Island** may be approached within one hundred and twenty-five yards with four fathoms water.

If passing to the eastward of **Cabbage Island**, a bad ledge will be met with in mid-channel, called

HOLBROOK LEDGE,

or sometimes *Linekin Ledge*. The former is the generally adopted name. It is dry at low water, and two hundred and fifty yards long between the lines of three fathoms. It is between five and six hundred yards distant from the shores of the **Neck** and the island, and *is not buoyed*.

SEAL ROCKS

lie six hundred yards NORTH from *Holbrook Ledge* and a quarter of a mile N E. from the northern end of **Cabbage Island**. They are about four hundred yards off the western shore of the bay, on the northern side of the entrance to *Lewis Cove*. Four feet at mean low water is found on these rocks; but there is a channel one hundred and fifty yards wide between them and the western shore. Five fathoms may be taken through this channel.

FISH-HAWK ISLAND SHOALS.

Fish-Hawk Island is surrounded by ledges. It should not be approached from the southward within less than three hundred yards. Vessels passing between it and the western shore give it a berth of a hundred yards. Those passing to the eastward of the island give it a berth of one hundred and fifty yards. Beyond **Fish-Hawk Island** it is not safe to go unless familiar with the bay, for the northern shore of the bay is shoal except in the northeastern corner, where there is a cove making into the northward and eastward which has three and a half fathoms water. As a general rule, however, do not go beyond **Fish-Hawk Island**, but anchor abreast of it, in from three to five fathoms, sticky bottom.

Both the eastern and western shores of *Linekin Bay* are bold, and may be safely approached along their whole length, except where bare rocks lie off the shore and give warning of the existence of shoal water.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LINEKIN BAY.

I. *Coming from the eastward, through Fisherman Island Passage.*—Through this passage the course is W. by N. ¼ N., which carries safely through between the **White Islands** and **Outer Heron Island**, well to the southward of **Hypocrite Ledge**, and between **Damiscove** and **Fisherman Island**, in not less than five fathoms water. On this course continue until the southwestern point of **Fisherman Island** bears N E. by N. ½ N. and the middle of **Squirrel Island** N W. by N. ¾ N., with six fathoms, soft bottom. When fairly through the passage, and the southern extremity of **Spruce Point** bears NORTH, with **Spruce Point Ledges** in range with it, steer NORTH for **Spruce Point**, carrying not less than four fathoms water, and passing nearly half a mile to the westward of *Gangway Ledge*, a quarter of a mile to the westward of **Card Rock**, and four hundred yards to the westward of the southwestern point of **Negro Island**. When abreast of the southwest end of **Negro Island**, in about twelve fathoms water, steer N E. ¾ N., passing to the eastward of *Spruce Point Ledges* three hundred yards, to the eastward of **Cabbage Island** two hundred and fifty yards, to the westward of *Holbrook Ledge* nearly two hundred yards, and to the eastward of *Seal Rocks* two hundred and twenty-five yards. This will lead safely, with not less than five fathoms water, to convenient anchorage on the eastern side of the bay, near its head.

Holbrook Ledge may be safely passed on either hand by giving it a berth of one hundred and seventy-five yards. The deepest water (from six to eleven fathoms) is found to the eastward of it.

Wishing to pass to the westward of **Cabbage Island**, when abreast of the southwest end of **Negro Island**, as before, steer N E. by N. ¾ N. instead of N E. ¾ N., and continue that course, with not less than five fathoms water, until fairly past the northern point of **Cabbage Island**, when an EAST course will lead into the bay clear of *Seal Rocks* and in not less than six fathoms water. But if bound into *Lewis Cove*, steer N. by W. ½ W. for **Mount Pisgah** as soon as abreast of the southern point of **Cabbage Island**. This course for **Mount Pisgah** leads well past the northern point of the entrance to the cove with not less than five fathoms, after which keep the eastern shore of the cove close aboard to be in good water. Seventeen feet may be carried well up into this cove by following these directions; but large flats, mostly dry at low water, make out from the western shore, to avoid which the eastern shore must be kept aboard.

DANGERS
IN APPROACHING LINEKIN BAY FROM SEAWARD.

II. *Coming from seaward*, vessels may pass on either the eastern or western side of **Damiscove** to enter *Linekin Bay*. If passing to the eastward, no dangers are met with until up with **Damiscove Point**, when

PUMPKIN ISLAND WESTERN LEDGES

will be seen bearing about EAST. These consist of two small bare rocks, surrounded by extensive ledges, bare at low water. The two rocks lie N E. by E. and S W. by W. from each other, six hundred and fifty yards apart. The southwestern rock is half a mile N W. ½ N. from the southern end of **Pumpkin Island**. From it the shoal water extends NORTH two hundred and seventy-five yards and SOUTH nearly four hundred yards. The *Northeastern Rock* lies over eight hundred yards N W. by N. ½ N. from the northern end of **Pumpkin Island**. From it the shoal water extends N N E. two hundred yards and W. by S. four hundred yards. *Neither of these ledges is buoyed.* (See page 475.)

After passing *Pumpkin Island Western Ledges*, the channel leads between **Outer Heron Island** and **Damiscove**, and then between the northern end of **Damiscove** and the southern end of **Fisherman Island**, thus joining the *Fisherman Island Passage.*

If, however, it is considered most convenient to pass to the westward of **Damiscove**, other dangers are met with. The first of these is

THE BANTAM,

or *Bantam Rock* as it is sometimes called. (See page 475.) It lies one mile and a quarter **S W.** by **S. ½ S.** from **Damiscove Point**; is bare at low water; extends **E N E.** and **W S W.**, and is three hundred and seventy-five yards long. Off the southwestern end is placed an *iron nun-buoy* of the second class, painted red, and marked No. 2. It is in deep water, about one hundred yards from the rock. It has been recommended that this buoy be superseded by a first-class *nun-buoy* of the same color.

THE MOTIONS

are a group of ledges, mostly bare at low water, which extend off **S S W.** from the southwestern point of **Damiscove** to a distance of six hundred yards. They are very dangerous to vessels passing between the *Bantam* and **Damiscove**, especially on the flood-tide, which sets very strongly upon them. They are not buoyed, but a buoy has been recommended.

THE CUCKOLDS.

After passing the *Motions*, the next danger met with by vessels using this channel lies on the western side of the entrance to *Booth Bay*, three hundred and fifty yards **S S E.** from **Cape Island.** It is formed by two bare rocky islets, about one hundred and one hundred and fifty yards in diameter, lying three-eighths of a mile (about eight hundred yards) **SOUTH** from **Cape Newagen.** On their southern sides they are dangerous to approach closely; but the eastern side of the easternmost island is quite bold-to. (See page 476.)

A wooden tripod, fifty-seven feet high, has been erected on the southern end of the eastern rock, twelve feet above high-water mark. The upper half is covered with boards and painted black. From it

	Miles distant.
Burnt Island Light-House bears N NE.	$2\frac{7}{8}$
Damiscove Island, (wood end,) E. by S.	$1\frac{3}{4}$
Seguin Light-House, S W. by W. ½ W	$6\frac{1}{2}$

These rocks are much dreaded. There is a passage to the northward, between them and **Cape Island,** but it is unsafe for strangers.

After passing the **Cuckolds,** the channel leads between **Squirrel** and **Fisherman Islands** into the bay.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LINEKIN BAY.

II. *Coming from the southward.*—1. *To pass to the eastward of* **Damiscove Island**: When nearly up with **Damiscove Point,** bring the middle of **Fisherman Island** to bear **N. by E. ½ E.** and steer for it, passing between **Outer Heron Island** and **Damiscove.** On this course carry not less than fifteen fathoms of water, and when the middle of **Squirrel Island** bears **N W. by N. ½ N.**, in about twenty fathoms, steer that course until **Spruce Point** bears **NORTH** and the southwestern point of **Fisherman Island N E. by N. ½ N.**, with six fathoms of water, soft bottom. Then steer **NORTH** for **Spruce Point,** carrying not less than four fathoms of water, and proceed as directed for entering this bay, (page 482.)

III. *Coming from the westward, to pass to the westward of* **Damiscove** *and enter Linekin Bay.*—With **Seguin Light** bearing **W. ½ S.** steer **E. ½ N.**, carrying not less than eighteen fath-

oms water, until **Burnt Island Light** (on **Burnt Island**, in *Booth Bay*) bears N. by E. ½ E., with thirty-five fathoms water; then steer N E. by N. ¾ N., which course will carry clear of everything up into the channel to the westward of **Cabbage Island**, with not less than five fathoms water. But to pass to the eastward of that island, when abreast of the southwestern point of **Negro Island** give it a berth of about four hundred yards and steer N E. ¾ N., carrying not less than five fathoms, and proceed as directed for this channel, (on page 482.) These courses will also serve for vessels coming from the westward outside of **Seguin**. They pass to the westward of *Bantam Rock* nearly three-quarters of a mile and to the westward of the *Motions* about five-eighths of a mile.

BOOTH BAY

is an arm of the sea, embraced between **Fisherman Island, Linekin Neck, and Spruce Point** on the east, and **Southport Island** on the west. It lies in a NORTH and SOUTH direction, and is about four miles long. *Linekin Bay* opens out of its eastern side, between **Linekin Neck** and **Spruce Point**, and is separated by the latter from the cove at the head of *Booth Bay*, called *BOOTH BAY HARBOR*, or more commonly *TOWN'S END HARBOR*, from the name of the village built on its shores.

The entrance to *Booth Bay* is between the southern point of **Fisherman Island** and the southern point of **Southport Island**, called

CAPE NEWAGEN.

It is of moderate height and bare of trees, but covered with houses on its southeastern face, forming the village of **Cape Harbor**. Viewed from the southward, this cape will be seen over a low sparsely-wooded islet, called **Cape Island,** and the two bare rocks known as the **Cuckolds.** Behind the houses on the cape the land will appear as a high bare ledge, thickly-wooded hills forming the background.

SOUTHPORT ISLAND

separates *Booth Bay* from the *Sheepscot River*. It lies NORTH and SOUTH; is four miles long and of irregular shape. Two miles to the northward of **Cape Newagen** it attains its greatest width of a mile and three-quarters, and thence diminishes toward the south, being only three-eighths of a mile wide at the cape.

Southport is thickly wooded, and very thinly settled on its eastern shore, which presents, alternately, bare and wooded surfaces, high bare ledges, and low gently-sloping lands, dotted here and there with houses. The middle of the island is thickly wooded and uninhabited.

This island is separated from the peninsula of *Booth Bay*, to the northward of it, by a narrow, crooked, but deep passage, called *TOWN'S END GUT*, which leads from the *Sheepscot* into *Booth Bay* between precipitous bluffs, and is at this point not a hundred yards wide.

To the northward and eastward of the entrance to *Town's End Gut* is a high bluff head, called

McKOWN POINT.

It is bare of trees, under cultivation, and eighty feet high. It forms the western side of the entrance to *Booth Bay* or *Town's End Harbor*, the eastern shores being formed by the northwestern side of **Spruce Point.** The entrance is here a little over eight hundred yards wide, but after passing **McKown Point** widens to a mile in width.

On the eastern side of *Town's End Harbor* a cove makes in to the northeast, with good water, and on its shores is built the village of **Town's End.** This is the *EASTERN HARBOR*, and is the principal anchorage. All of the harbor to the west-

Approaches to Booth Bay, Burnt I. Light bearing N.W. by N. distant 2 Miles.

ward of this cove is called *WESTERN HARBOR.* It is wider and more commodious, but not so well sheltered. The shores are bold, and good holding-ground may be found anywhere between the eastern and western sides in from three to five fathoms at low water.

DESCRIPTION OF THE SHORES OF BOOTH BAY AND TOWN'S END HARBOR.

To a vessel coming from the eastward, outside of all the islands, **Damiscove** would first appear. It will look like two islands lying NORTH and SOUTH from each other, close together, the southern high and covered with grass, its surface descending steeply toward the south but very gradually toward the north. The northern island will appear high and well-wooded. The bare bluff point at the southern end of **Damiscove** is called **Damiscove Point;** the wooded end on the north side of the island is **Wood End.** (See page 462.)

Passing the southern end of **Damiscove,** *DAMISCOVE HARBOR* will open. It is a long narrow cove making in on the south side of the island, with a small settlement at its head. This harbor has good water in it, and is a great resort for in-shore fishermen in southerly gales; for, although open to the southward, it is quite smooth in heavy gales from that direction.

Passing **Damiscove, Cape Newagen** will be seen bearing NORTH, and easily recognized by the houses upon it, and by its being partly hidden by a low thinly-wooded islet and two bare rocks a little to the eastward of the islet. The rocks are the **Cuckolds,** (see page 483,) and the islet is

CAPE ISLAND,

which lies due SOUTH from **Cape Newagen** about one hundred and seventy-five yards. Between it and the cape is a narrow passage forming a roadstead, called *CAPE HARBOR.* This harbor is shoal and not well sheltered, but has good holding-ground. Two or three old frame houses will appear on the north end of **Cape Island.** They are now principally used as warehouses for fish; they are not visible from the southward.

Next to the eastward, but well in the bay, will be seen a round islet, bare of trees, and with a white light-tower on its southeastern end. This is **Burnt Island,** and the light-house is **Burnt Island Light-House,** the guide to *Booth Bay* and *Town's End Harbor.*

A wooded island, high, and somewhat steep, will appear just clear of **Burnt Island Light,** to the eastward, and in range with **Spruce Point.** This is **Squirrel Island,** lying in the middle of the bay, between **Southport** and **Linekin Neck.**

Next to the eastward of **Squirrel Island** will appear **Negro Island,** and close to it, on its eastern side, **Linekin Neck.**

DESCRIPTION OF THE DIFFERENT ISLANDS IN BOOTH BAY.

A vessel coming into the bay from the southward will pass between **Damiscove** and the **Cuckolds,** and, heading up for **Burnt Island Light,** leave **Squirrel Island** to the eastward, passing between it and **Southport.**

SQUIRREL ISLAND

is situated in the middle of the bay, midway between **Southport** and **Linekin Neck.** It is nearly three-quarters of a mile long and about eight hundred yards wide; its southern end about eighty feet high and tolerably steep, covered with a growth of stunted spruce nearly to the water's edge, while the northern half is quite low, nearly bare of trees, and under cultivation. A number of houses are built on this part of the island. Just to the northward of the southwestern point a cove makes in on the western side, called

Squirrel Island Cove. It has from three to seven fathoms water in it, and is entirely unobstructed.

When abreast of **Squirrel Island**, a low wooded island will appear ahead, and close to the shore of **Southport**. This is

PIG ISLAND,

or **Pig Cove Island** as it is sometimes called. It is of a very irregular shape, lies NORTH and SOUTH, and is half a mile long, low and well wooded. A cove, semicircular in shape, and dry at low water, makes in on its eastern side, nearly dividing the island. **Pig Cove Island** is separated from **Southport** by a long and narrow passage, called *Pig Cove*, into which four and a half fathoms at low water may be carried for a quarter of a mile from its southern entrance. But above this a bar extends from **Southport** to **Pig Island** with only two feet at mean low water. At low spring tides this bar is bare.

Abreast of **Pig Island**, about four hundred yards to the eastward, is

BURNT ISLAND,

a round bare islet, about forty feet high and nearly three hundred yards in diameter. It is three-quarters of a mile N N W. from **Squirrel Island** and the same distance WEST from the southern end of **Spruce Point**. There is a good channel on both sides of it, but the main channel is to the eastward and has eleven fathoms of water. Its shores are very bold-to.

On the eastern side of **Burnt Island**, near its southern end, is built

BURNT ISLAND LIGHT-HOUSE,

which is the guide to this bay and harbor. It is a white tower, twenty-four feet high, and shows a fixed white light of the fourth order of Fresnel from a height of sixty-one feet above the sea. This light is visible thirteen miles on a clear night. Adjoining the tower, to the westward, and connected with it by a covered way, is the light-keeper's dwelling, which is painted brown. This and a small house near the northern end of this island are the only buildings.

The geographical position of **Burnt Island Light-House** is

Latitude - - - - - - - -	43° 49′ 29″ N.
Longitude - - - - - - - -	69° 38′ 25″ W.

Next to the northward of **Burnt Island** is a small low island, the southern face of which is cleared, but the northern and western sides are wooded and about forty feet high. This is

MOUSE ISLAND,

or **Johnson Island** as it is sometimes called, from the name of the owner. On the southern face is a handsome cottage, standing in the middle of ornamental grounds, and on the northern end is a warehouse and small dwelling-house adjoining a strong pier which is used by the inland steamers as a landing-place. These are all the buildings on the island. **Mouse Island** is four hundred yards to the northward of **Burnt Island** and about the same distance from the shore of **Southport**.

There is excellent water on both sides of it, and capital anchorage under its northern shores, between it and **McKown Point**.

TUMBLER ISLAND.

Two hundred and seventy-five yards off the western shore of **Spruce Point**, and eight hundred yards E. by N. ½ N. from the northern end of **Mouse Island**, is a small bare island surrounded by shoals, called **Tumbler Island**. There is a narrow passage between it and **Spruce Point**, but it is shoal and unsafe for strangers.

The village of **Town's End** is situated in the northeastern part of *Town's End Harbor*, being built on both sides of the cove called *Eastern Harbor*. The western shore of this cove is a high bluff, eighty feet above high-water mark, and occupied by several handsome dwellings. The point to the westward of the bluff is low and fringed with trees. It is called **Mill Point**, and forms the eastern side of a large irregularly-shaped cove, called *Mill Creek*.

Mill Creek is shoal; only nine feet can be taken into it past the point. Its western point is a low and flat piece of land, called **Railway Point**, upon which is a steam railway and apparatus for taking vessels up and repairing them. This is the best railway east of **Portland**, being much more easy of access than those at **Bath**, and being under the management of skillful and experienced workmen. Many vessels are yearly repaired here.

West of **Railway Point** is another low point fringed with trees, and forming the eastern point of the entrance to *Campbell Creek*, which has over three fathoms at low water in its mouth; but just above the entrance is crossed by a bridge over which passes the "shore-road" from **Southport** to **Town's End**. All of these shores are thickly settled, being included in the township of **Booth Bay**.

Behind **McKown Point**, to the northward, the western harbor forms a large and deep cove, much narrowed and obstructed, however, by a line of bare ledges making off from the eastern side of the entrance to *Campbell Creek* to a distance of three hundred yards. The best water is close along the shore of **McKown Point**.

DANGERS
IN APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

I. *Coming from the eastward.*—The dangers in the approach to *Booth Bay* from the eastward, through *Fisherman Island Channel*, have already been described, on page 480. They are, first,

HYPOCRITE LEDGE,

lying between the **White Islands** and **Fisherman Island**, and is for the most part bare at low water. Its southern end is marked by a *black spar-buoy*, not numbered. Secondly,

FISHERMAN ISLAND POINT,

a ledge, bare at low water, making off from the southwestern end of **Fisherman Island**. From it extends to the southward a shoal with fourteen feet at mean low water and twelve at low springs. The southern point of this ledge is three hundred and fifty yards south of the island. *It is not buoyed.*

GANGWAY LEDGE

is the next obstruction met with. It lies in the middle of the passage which leads **EAST** and **WEST**, between **Linekin Neck** and **Fisherman Island**, and is marked by a *red spar-buoy*. Seven feet at mean low water and five at low spring tides are found on this rock.

Three hundred and fifty yards **W.** by **N.** from *Gangway Buoy* is a shoal with fifteen feet at mean low water.

CARD ROCK

lies a quarter of a mile **NW.** from the *Gangway Buoy*, and has eleven feet on the ledge lying to the southward of it. This ledge is marked by a *red spar-buoy* in good water.

SPRUCE POINT LEDGES.

These dangerous ledges lie six hundred yards SOUTH from **Spruce Point** and are bare at low water. With the shoal water surrounding them they cover a space about four hundred yards long in a NORTH and SOUTH direction, extending to within two hundred yards of **Spruce Point.** Six fathoms at low water may be taken between the ledge and the point through a channel about one hundred yards wide. *They are not buoyed*, but a buoy has been recommended to be placed off their southern point.

TWELVE-FEET ROCK.

This rock lies five hundred yards (about a quarter of a mile) W N W. from the southern end of **Spruce Point.** There is good water on all sides of it, *but it is not buoyed.* Ten feet will be found on this rock at low spring tides, and a buoy will be recommended upon it. This rock may be avoided by keeping nearest to **Burnt Island.**

After passing **Twelve-Feet Rock** the channel is clear and the shores bold-to until we come abreast of **Tumbler Island**, which should receive a berth of one hundred and fifty yards to the eastward, and, after passing it, if bound into *Eastern Harbor*, the eastern shore should receive a berth of two hundred and fifty yards. The small bare islet which lies SOUTH from the bare bluff point on the western side of *Eastern Harbor* should be left one hundred and fifty yards to the northward and westward in passing into the harbor.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

I. *Coming from the eastward, through Fisherman Island Passage.*—The course through this passage is W. by N. ¼ N., which leads well to the southward of the **Hypocrite** and **Fisherman Island Point,** in not less than five fathoms of water. On this course continue until the southwestern point of **Fisherman Island** bears N E. by N. ½ N. and the middle of **Squirrel Island** N W. by N. ¾ N., with six fathoms water, soft bottom. Then fairly through the passage, the southern extremity of **Spruce Point** bears NORTH, and **Burnt Island Light** over the northern end of **Squirrel Island** bears N. by W. ⅜ W. Now steer N. by W., exactly for the middle of **McKown Point,** carrying not less than four fathoms, and passing one-eighth of a mile to the eastward of the northeastern point of **Squirrel Island,** nearly half a mile to the westward of *Spruce Point Ledges*, and four hundred yards to the westward of **Twelve-Feet Rock.** Continue this course past **Johnson** or **Mouse Island** until a quarter of a mile from **McKown Point** and just past **Tumbler Island,** with seven and a half fathoms water, when a N E. ¾ E. course leads, with not less than five fathoms, into *Eastern Harbor* and up abreast of the town. Or a N N E. course will lead into *Western Harbor*, close along the eastern shore of **McKown Point.** Round the point on its northern side, carrying not less than four and a half fathoms, giving the point a berth of one hundred and twenty-five yards to the southward, and anchor in the cove under the north shore, between **Railway Point** and **McKown Point.**

II. *To pass between Linekin Neck and Fisherman Island and enter Booth Bay.*—A course W. by N. ¼ N., for the northern side of the wooded hill on the southern end of **Squirrel Island,** leads safely through this passage with not less than four fathoms, passing one-eighth of a mile to the southward of the buoy on *Gangway Ledge* and six hundred yards to the southward of the buoy on **Card Ledge.** On this course, when **Spruce Point** bears NORTH and **Burnt Island Light** N W. by N., (seen just clear of the northern point of **Squirrel Island,**) and in four fathoms, steer N. by W. ¾ W. for the western slope of the bluff on **McKown Point,** carrying not less than eight fathoms of water, and when

within a quarter of a mile of the point, and just past **Tumbler Island**, steer N E. ¾ E. into *Eastern Harbor*, with not less than five fathoms; or N N E. past **McKown Point**, and thence into *Western Harbor*, carrying not less than four and a half fathoms water.

DANGERS
IN APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

II. *Coming from the eastward, between* **Damiscove Point** *and Bantam Rock.*

PUMPKIN ISLAND, EASTERN LEDGE.

This ledge has sixteen feet at mean low water, and is the first danger met with in coming from the eastward through this passage. It is eight hundred and fifty yards S E. by E. from **Pumpkin Island** and a mile and a half SOUTH from **Outer Heron Island.** *It is not buoyed*, and only shows in heavy weather.

PUMPKIN ISLAND WESTERN LEDGES

are next met with, also on the northern side of the channel. They are two bare rocks lying N E. and S W. from each other. The southwestern rock only is dangerous to this passage. It lies half a mile N W. ¾ N. from the southern point of **Pumpkin Island**, and the shoal water extends to the southward of it nearly four hundred yards. *This ledge is not buoyed*, and to avoid it vessels must give the bare rock a berth of at least a quarter of a mile to the northward.

THE MOTIONS.

These are a group of ledges, mostly bare at low water, which extend in a S S W. direction from the southwestern point of **Damiscove** nearly six hundred yards. They are very dangerous to vessels using this passage, especially on the flood-tide, which sets very strongly upon them. *They are not buoyed*, but a buoy has been recommended. (See page 483.)

THE BANTAM.

This very dangerous rock lies on the southern side of this passage, and is quite as dangerous to vessels on the ebb-tide as the *Motions* are on the flood. It is bare at extreme low tides, and is marked by an *iron nun-buoy* of the second class, painted red, and marked No. 2. It is placed in good water about one hundred yards S W. from the rock.

Bantam Rock lies one mile and a quarter S W. by S. ¾ S. from **Damiscove Point.** (See page 475.)

THE CUCKOLDS

are the two rocky islets which lie on the western side of *Booth Bay Entrance*, about three-eighths of a mile SOUTH from **Cape Newagen.** They are dangerous of approach from the southward on account of the long reefs making off from their southern sides, but the eastern side of the eastern rock is quite bold. The flood current sets right on to these rocks.

A wooden tripod, fifty-seven feet high, has been erected on the southern end of the eastern rock twelve feet above high-water mark. The upper half is covered with boards and painted black. From it

	Miles distant.
Burnt Island Light-House bears N N E.	$2\frac{7}{8}$
Damiscove Island, (Wood End,) E. by S.	$1\frac{3}{4}$
Seguin Light-House, S W. by W. ¾ W.	$6\frac{1}{2}$

There is a passage between the **Cuckolds**, but it is not safe, nor is it of any importance. It has ten feet at low water.

PIG COVE LEDGE.

This ledge extends in a SOUTH direction from the southern end of **Pig Island** for three hundred and fifty yards. At this distance there is a small rock, bare at half tide. This rock serves as a beacon to mark the end of the ledge.

EASTERN LEDGE,

or *Pig Island Eastern Ledge*, is a very dangerous one, four hundred yards long, which makes off in a southerly direction from the northern point of the cove on the eastern side of **Pig Island.** Its southern end is one hundred and fifty yards off the eastern shore of **Pig Island,** *and is not buoyed.* Part of this ledge is dry at low water.

To avoid it, vessels using this passage hug the **Burnt Island** shore.

SQUIRREL ISLAND LEDGE

lies on the eastern side of this channel. It extends W N W. from the northern point of **Squirrel Island** to a distance of nearly six hundred yards. Ten feet at mean low water and eight at low springs may be found on this ledge. *It is not buoyed.*

The southwestern point of **Mouse Island** has a long ledge making off to the southward, which is dry at low water. But the western shore of the island is quite bold, and may be safely approached.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

II. *Coming from the eastward, between* **Damiscove Point** *and Bantam Rock.*—Vessels which have come through the *Muscle Ridges*, intending to use this passage, alter the S W. by W. course as soon as they are fairly between **Allen Island** and **Monhegan**, and steer W. by S. ½ S. until **Pemaquid Light** bears N. by W. ½ W., when W. ½ N. will lead safely through between the *Motions* and the *Bantam*, in not less than ten fathoms of water. But from outside of **Monhegan**, about two miles to the southward of it, a straight course W. by N. ½ N. will also lead safely through. On the ebb-tide this course must be altered to the northward to avoid the *Bantam*, as when made good it leads within six hundred and fifty yards of the rock. This course carries through in not less than ten fathoms.

On either of these courses continue until opening **Burnt Island Light** to the westward of the southwestern point of **Squirrel Island**, on a bearing of N. ½ E. Then steer N. ½ E. for the southern end of **Pig Island**, carrying not less than eighteen fathoms water, and passing a quarter of a mile to the westward of the *Motions* and nearly three-quarters of a mile to the eastward of the **Cuckolds**. When abreast of the southern end of **Squirrel Island**, in about eighteen fathoms, steer N. by E., if bound up to the westward of **Burnt Island**, keeping the eastern side of the channel aboard to avoid *Pig Island Eastern Ledge*, and carrying not less than ten fathoms; and when **Burnt Island Light** bears E. by N., or is a little forward of the beam, steer N. ½ W. past **Mouse Island**, with not less than seven fathoms water. When about midway between the entrance to *Town's End Gut* and the dock on the northern side of **Mouse Island**, and in seven fathoms water, a N E. by E. ½ E. course will lead safely into *Eastern Harbor*, where anchor off the town. Or, keep the southern and eastern shores of **McKown Point** close aboard, and round that point into *Western Harbor.*

If wishing to anchor in *Pig Cove*, when between the *Motions* and the *Bantam* and **Burnt Island Light** bears N. ½ E., just open to the westward of **Squirrel Island**, steer **NORTH,**

which course will carry straight into the cove with not less than ten fathoms water. *Pig Cove Ledge* always shows itself, and is, therefore, easily avoided.

But if wishing to pass to the eastward of **Burnt Island,** when abreast of the southern end of **Squirrel Island** steer N N E. for the western point of **Tumbler Island,** and continue this course, with not less than four fathoms water, until abreast of **Burnt Island Light,** when steer for the eastern end of **McKown Point,** carrying not less than eight fathoms; and if bound into *Western Harbor,* pass close to the point and round its northeast end into the harbor, with not less than twenty-seven feet. But if bound into *Eastern Harbor,* when abreast of **Tumbler Island** steer N E. ¾ E., which will lead clear of everything up to the anchorage, and in not less than five fathoms.

Or, anchor anywhere between **Johnson** or **Mouse Island** and **McKown Point,** in from six to eight fathoms, soft bottom. This is a great anchorage for fishermen.

III. *Coming from the southward, or from seaward, to enter Booth Bay.*—Bring **Burnt Island Light** to bear N. by E. and steer for it. This course carries not less than twelve fathoms past **Squirrel Island,** passes nearly three-quarters of a mile to the westward of the *Bantam,* about five-eighths of a mile to the westward of the *Motions,* and nearly half a mile to the eastward of the **Cuckolds.** Continue it, with not less than four fathoms, until within three hundred yards of **Burnt Island,** when, in about five fathoms water, and if bound to the eastward of that island, round its southeastern end, keeping in about ten fathoms two or three hundred yards from shore—if it be night-time—and when abreast of the light, bearing WEST, steer for the eastern end of **McKown Point,** and follow the directions given above. On the last course there is not less than seven fathoms of water.

But, if bound to the westward of **Burnt Island,** when within eight or nine hundred yards of the light, in about thirteen fathoms, steer N. ½ W., keeping the western sides of **Burnt** and **Mouse Islands** close aboard to avoid *Eastern Ledge;* this course will carry not less than six fathoms. When past **Mouse Island,** and midway between it and the entrance to *Town's End Gut,* in six and a half fathoms, steer N E. by E. ½ E. into *Eastern Harbor,* carrying not less than five fathoms water; or follow the shore of **McKown Point** into *Western Harbor;* or anchor under the northern shore of **Mouse Island.**

DANGERS
IN APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

IV. *Coming from the westward, outside of* **Seguin.**—Vessels of heavy draught, coming from the westward and intending to pass to the southward of **Seguin Island,** must beware of

MILE LEDGE,

with eighteen feet at mean low water and sixteen at low spring tides, which lies nearly three-quarters of a mile S. ½ W. from the southern point of **Seguin Island** and nearly a mile from **Seguin Light.** In the day-time it is perfectly safe to go inside of this rock, and from sixteen to eighteen fathoms may be carried about midway between it and the island.

TOM ROCK,

sometimes called the *Sunken Sister,* lies in *Sheepscot Bay,* two miles and a half N E. by E. ½ E. from the southern point of **Seguin** and N E. by E. ½ E. from **Seguin Light.** From **Cape Newagen** it bears S W. ½ W., distant a little over four miles. It has eight or nine feet at mean low water, and is marked by a *red spar-buoy* (No. 2) placed in deep water well to the southward and westward of the ledge. Pass to the southward of it

going into the *Sheepscot and Booth Bays*, but to the northward by vessels using the inside channel.

This buoy sometimes goes adrift, and vessels must be guided by the bearings to avoid the ledge.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BOOTH BAY AND TOWN'S END HARBOR.

IV. *Coming from the westward, outside of* **Seguin Island.**—Bring **Seguin Light** to bear **NORTH**, one mile and one-eighth distant, in nine and a half fathoms of water, and steer **N E. by E. ¼ E.** for the southern end of **Fisherman Island.** This course takes not less than nineteen fathoms of water, and passes three-quarters of a mile to the southward of *Tom Rock.* Continue it until past the mouth of the *Sheepscot* and **Burnt Island Light** bears **N. by E.**, in twenty-seven fathoms water, then steer for the light, and follow the directions previously given, (page 490.)

There is another channel, by which the *Sheepscot River* and *Booth Bay* may be approached from the westward. It passes to the northward of **Seguin** and along the northwestern shores of *Sheepscot Bay.* It is, however, too dangerous for strangers to attempt, being full of ledges, shoals, and rocks, *only a few of which are buoyed*, and being moreover subject to the influence of the dangerous tidal-currents in the vicinity of the *Kennebec Entrance.* It will be treated under the head of the *Sheepscot River.*

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Burnt Island Lt.	43° 49′ 29″	69° 38′ 25″	4^h 38^m 33.7^s	Fixed.	61 ft.	13

TIDES.

Corrected Establishment	10^h 25^m
Mean Rise and Fall of Tides	8.9 ft.
Mean Duration of Rise	6^h 12^m
Mean Duration of Fall	6^h 13^m

CURRENTS.

Little need be said in regard to the currents in *Booth Bay* and the approaches to it, except to repeat the caution to mariners coming from the eastward through the passage between **Damiscove Point** and the *Bantam*, namely, on the flood-tide to beware of the *Motions*, on which the current of flood sets strongly, and on the ebb to take like care to avoid the *Bantam*, on which the ebb sets with considerable force. The current of flood also sets strongly on the **Cuckolds**, and, therefore, strangers at night, if it be flood-tide, should never haul up to enter the harbor until **Burnt Island Light** bears **N. by E.**

The flood-current sets on to *Mile Ledge* and *Tom Rock*, but its strength is not great, and the courses laid down give them a sufficient berth except in heavy southerly weather. The distance from the rocks can easily be estimated by the bearings given, on page 491.

SHEEPSCOT RIVER.

This river empties into *Sheepscot Bay*, and is the first opening into the land met with to the westward of *Booth Bay.* It is very deep, nine fathoms being the shoalest

water in the channel from the mouth of the river to the town of **Wiscasset,** nearly fourteen miles above.

The entrance to this river is between **Cape Newagen** on the east and the southeastern point of **Georgetown Island** on the west. This point is very easily recognized, as it is a prominent round hillock, about fifty feet high, the summit of which is composed of marble, which gives it a very bald white appearance. It is called **Griffith Head.**

Between **Griffith Head** and **Cape Newagen** the river is two and a half miles wide; but it becomes much narrower up toward **Wiscasset.**

DESCRIPTION OF THE SHORES OF SHEEPSCOT RIVER.

SOUTHPORT ISLAND.

This island lies between the *Sheepscot* and *Booth Bays.* It is four miles long and of variable width, its greatest extent east and west being a mile and a half, and its narrowest part, at **Cape Newagen,** only three-eighths of a mile. It lies **NORTH** and **SOUTH,** and its western side forms the eastern shores of the lower part of the *Sheepscot.* This side of the island presents a shore of varied heights from the low land at **Cape Newagen,** where it is forty feet high, to the high bluff at *Christmas Cove,* (a mile and a half above the cape,) where it is over one hundred feet. The land is generally thickly wooded and the shore-line very irregular. Several islands lie along the shore.

CAPE ISLAND

lies off the southern end of **Cape Newagen,** separated from it by a narrow strait, known as *Cape Harbor.* The island is low and rocky, with a few fir trees upon it, and one or two houses. Viewed from the southward, the houses in the cape settlement are distinctly to be seen over this island. It is surrounded by shoal water and dangerous rocks.

HUNTING ISLAND

also lies off the southern end of **Southport Island,** about two hundred and fifty yards west of **Cape Island.** It forms the southern side of the entrance to *Cape Harbor;* is low and thinly wooded. Its western and southwestern shores should receive a good berth, as there are long ledges and bad shoals extending from the island toward the west and southwest.

LOWER MARK ISLAND.

To the northwestward of **Hunting Island,** a little more than three-quarters of a mile distant, lies a small wooded island, called **Lower Mark Island.** It is three-eighths of a mile from the **Southport** shore.

Mark Island is about two hundred yards in diameter. It is wooded with spruce and fir—mainly the latter. In the centre of the islet rises a spruce tree from which all of the branches have been stripped except at the very top, where a tuft has been left, giving to the tree, as it rises above all of the others, the appearance of a tall pole with a black ball on top of it. Inside of this island the ground is broken and dangerous. Strangers should always pass to the westward of it.

CHRISTMAS COVE.

One mile and a half above **Cape Newagen** a long narrow cove makes in to the northward for about half a mile. It is called *Christmas Cove,* and is easily recognized by the high, thinly-wooded hill on the western side of the entrance to it. This hill is the highest land on the western shore of **Southport.** The middle of the island rises to a much greater height, and shows bare ridges and here and there thin woods of pine and hemlock. *Christmas Cove* is shoal, and much of it is dry at low water. It offers no advantages as a harbor.

HENDRICK HARBOR.

Seven-eighths of a mile to the northward of *Christmas Cove* is *Hendrick Harbor.* The entrance to it is between a low bare island, called **David Island,** with one or two houses on it, on the north, and a larger partially-wooded island, called **Joe Island,** on the south.

Hendrick Harbor is contained between the western shores of **Southport** on the east and **David** and **Joe Islands** on the west. The northern end of the harbor is a shallow cove running up into the island of **Southport.** The southern end is formed by a narrow passage between **Joe Island** and the western shore of **Southport,** and is dry at low water. The entrance is extremely narrow, and has nine feet in it. The harbor is completely land-locked, so that vessels may lie securely at all times. The anchorage is, however, very narrow, and vessels usually moor by a line to one of the wharves.

There is quite a settlement at *Hendrick Harbor*, and a number of fishermen fit out there. But strangers cannot enter without a good local pilot.

Just to the northward of *Hendrick Harbor* is

HENDRICK HEAD,

easily recognized by the light-house on it. It is a little over two miles and a half above **Cape Newagen** and a mile and a quarter above *Christmas Cove*, and is low, bare, and rocky. On its southern extremity is built

HENDRICK HEAD LIGHT-HOUSE,

the guide for entering the *Sheepscot River.* It is a one-storied building, whitewashed, and the lantern containing the light is on its western end. This **Light-house** shows a revolving white light of the fourth order from a height of forty feet above the level of the river, and visible twelve nautical miles. Its geographical position is

Latitude - - - - - - - -	43° 49′ 20″ N.
Longitude - - - - - - - -	69° 41′ 24″ W.

Hendrick Head is very bold. Vessels may go close to it. There is a cove to the eastward of it which is full of rocks and nearly dry at low water.

One mile to the northward of **Hendrick Head** is a low but prominent point, called

DOGFISH HEAD,

easily recognizable by a large porgy-oil factory built upon it. The land between it and **Hendrick Head** is all low and thickly wooded with pine and spruce. **Dogfish Head** forms the southern point of the entrance to *EBENICOOK HARBOR.* It is quite bold-to.

The western shores of the *Sheepscot*, from its mouth to a distance of four miles to the northward, are formed by the eastern side of

GEORGETOWN ISLAND,

seven and a half miles long and of a very irregular shape. It lies between the *Sheepscot* and the *Kennebec*, and is tolerably well settled. On its southern side it is indented by two shallow coves called *Sagadahoc Bay* and *Heal Eddy;* on the northern side it is nearly separated into two parts by a long narrow cove, called *Robin Hood Cove,* which, beginning at the north end of the island, runs to within less than a mile of the southern end.

GRIFFITH HEAD

is the southeastern point of **Georgetown Island.** It is a bare round hillock about fifty feet high, and composed, to a great extent, of limestone. The summit is of marble,

and being worn by the weather presents a very bald and white appearance—the more remarkable as the land in the vicinity is quite low and sandy. To the eastward, separated from it by a very narrow channel, dry at low water, lies the **Outer Head,** a detached rock about one hundred and fifty yards in diameter, and perfectly bare. It is two hundred yards from shore.

One mile and three-eighths to the northward of **Griffith Head** is the entrance to a long narrow cove, with from four to seven fathoms of water, called

HERMAN HARBOR.

It is three-quarters of a mile long, but its entrance is very much contracted by a small islet and reef of rocks making out from its eastern side. The entrance being narrow has, however, four fathoms at low water, and there is capital anchorage within it. There is quite a settlement at this place.

Between *Herman Harbor* and **Griffith Head** the shores are bold-to, rocky, and wooded.

Five-eighths of a mile to the northward of *Herman Harbor* is the southernmost of a group of islets, called

THE FIVE ISLANDS.

These are all small, and five in number. The southernmost is about two hundred yards from the **Georgetown** shore, and has a few spruce trees on it. The two central islands of the group are about one hundred and seventy-five yards to the northward of the southernmost, are larger and more thickly wooded. The two northernmost lie close together, about four hundred yards to the northward of the middle islands. They are both low and very small, and lie closer to the shore than any of the others.

There are various passages among these islets, but only one that is available, except for very light-draught vessels. This passage leads between the northernmost island and the central islands. The channel leads close along the northern shore of the **Central Islands,** and has eight fathoms of water. Having passed in by this entrance, a small but comfortable harbor is reached, contained between the islands and the **Georgetown** shore, where anchor securely in from three to five fathoms at low water. This harbor is called *FIVE ISLAND HARBOR.* The entrance is a very little above but nearly opposite to **Hendrick Head Light-House,** on the eastern shore of the river.

LITTLE SHEEPSCOT RIVER.

Just above the **Five Islands** opens the *Little Sheepscot,* a narrow passage, running in a northerly direction between the northeastern end of **Georgetown Island** and a moderately high, well-wooded island, called **McMahan Island.** The *Little Sheepscot* is only about two hundred and fifty yards wide at its mouth, and rapidly narrows to only about seventy-five yards; but it spreads out into a cove just above the *Narrows* and attains a width of nearly a quarter of a mile. At its northern extremity it joins the *SASANOA RIVER,* which connects the *Kennebec* and *Sheepscot.*

The length of the *Little Sheepscot* from its mouth to **Soldier Point,** where it joins the *Sasanoa,* is nearly a mile. Five fathoms may be carried through it at low water, but the velocity of the current is great and the channel narrow, though straight, and it is by no means suitable for strangers.

SOLDIER POINT

is the northeastern point of **Georgetown Island.** It forms the western side of the entrance of the *Little Sheepscot* into the *Sasanoa,* and is low, very thinly wooded, and occupied by one house and small barn.

McMAHAN ISLAND

lies on the western side of the *Sheepscot*, along the northeastern shore of **Georgetown**, and forms the eastern shore of the *Little Sheepscot*. It extends N. by E. and S. by W., is nearly a mile in length and triangular in shape, its widest part being at its northern end.

This island is moderately high, (about eighty feet in its highest part,) and is well wooded. Its northeastern end is a low bare point, backed by spruce and pine woods, and called **North East Point.** This point forms the southern side of the entrance to *Sasanoa*, which here makes in to the westward through a narrow and deep passage called *GOOSE ROCK PASSAGE.*

MIDDLE MARK ISLAND.

A little over half a mile to the eastward of the middle of **McMahan Island** lies a small, bare, round island, called **Middle Mark Island.** It is surrounded by shoals, but there is a channel with nine fathoms of water between it and **McMahan Island** by keeping the shore of the latter close aboard.

A quarter of a mile N. by E. from **North East Point** is a small, low, wooded island, called

WHITTUM ISLAND.

It lies N E. by N. and S W. by S., in the middle of the entrance to *Goose Rock Passage.* It is about two hundred and fifty yards long and quite narrow. There is good water into the *Sasanoa* on both sides of it, but the true channel is between the southern end of this island and **North East Point.**

The northern shore of *Goose Rock Passage* is formed by the southern end of **Westport Island,** a large island, which forms the western side of the *Sheepscot River* from the mouth of the *Sasanoa* to the town of **Wiscasset,**

On the eastern shore of the *Sheepscot* a group of islands extends to the northward from **Dogfish Head,** lying along the northwestern face of **Southport** and the western shore of *Booth Bay Peninsula.* First to the northward of the **Head** lies a group of three, called the

GREEN ISLANDS.

They are about one hundred yards to the northward of **Dogfish Head,** and form the northern side of the entrance to a wide and deep cove or basin, called *Ebenicook Harbor.* The middle island of the group is the largest. It is thinly wooded on its western side, but elsewhere bare of trees. It rises gradually to a height of eighty feet above high-water mark. The other two islands are low, wooded, and much smaller than the central one. There is no passage between them except at high water.

EBENICOOK HARBOR,

as before mentioned, is a wide cove or basin, embraced between the **NORTH** and **N W.** points of **Southport Island.** The principal entrance to it from the westward and southwestward is between the **Green Islands** on the north and **Dogfish Head** on the south. Through this passage twelve fathoms may be carried. It may also be entered by a passage between the **Green Islands** and the island north of them, called **Boston Island;** but the former is the usual and best channel.

From the eastward and southeastward the harbor may be entered through *Town's End Gut;* but here a drawbridge has to be passed, and the channel is narrower, more crooked, and has a very strong tideway.

On the west and northwest this harbor is protected by the line of islands which lie along the western shore of **Southport** and **Booth Bay Peninsula.** Thus it is completely

land-locked, and being easy of access, with plenty of water and good holding-ground, it forms the most desirable harbor on the *Sheepscot River*. A small settlement occupies the southern and eastern shores, and the western side is occupied by mills, warehouses, and the dwellings of those employed in the mills.

There are few obstructions in this harbor, and it is entirely free from ice in the winter.

BOSTON ISLAND,

between five and six hundred yards to the northward of the **Green Islands**, is bare of trees except near its crest, where there is a small grove of pine. Its western shores are steep, but on its south side the land rises very gradually to the summit, sixty feet high.

Boston Island lies N E. by N. and S W. by S., and is six hundred and fifty yards long. Between it and the **Green Islands** there is a passage with three and a half fathoms into *Ebenicook Harbor*, narrowed, however, and obstructed by a large ledge, dry at half-ebb, which surrounds a little bare islet about midway between **Boston Island** and the **Green Islands.**

Boston Island lies exactly opposite to **North East Point.**

To the northward of **Boston Island** lies a group composed of three islands, the central one being much the largest. This middle island is called

SWEET'S ISLAND,

and sometimes **Thirty-Acre Island.** Its southern point is only three hundred yards to the northward of **Boston Island**; is low and partially wooded. The island rises gradually to a height of eighty feet above high-water mark, the middle and southern portions tolerably well wooded with the usual growth of pine and spruce, and the northern and western shores low, cleared, and cultivated. On the north shore there are several houses.

Sweet's Island is nearly twelve hundred yards long, (a little over half a mile,) and its greatest width is three-eighths of a mile, or over seven hundred yards. The small low islet with a few trees on it, which lies two hundred and fifty yards S W. from the centre of **Sweet's**, is called **Powderhorn Island.** It is about two hundred yards long, and is surrounded by shoals.

The third island of the group is in reality two islands, joined only at low water. The common name applied to them is

THE SPECTACLES,

or **Spectacle Island.** They lie about two hundred and seventy-five yards S E. from the southeastern face of **Sweet's Island**; are of an oval shape and of equal length, being each about two hundred and seventy-five yards long. They are both low and entirely bare. Between them and the southeastern face of **Sweet's Island** there is a channel with six fathoms leading to the northward.

Between three and four hundred yards east of the **Spectacles**, and between them and the western shore of *Booth Bay Peninsula*, lies an island called

INDIANTOWN ISLAND.

It lies in a **NORTH** and **SOUTH** direction, and is five-eighths of a mile long, but quite narrow. Its northern and southern ends are formed by wooded hillocks eighty feet high, separated by a valley running **EAST** and **WEST** about the middle of the island. Thus, viewed from the westward the island presents a saddle-like appearance. In the

centre of the valley two or three houses may be seen. The channel to *Town's End Gut* from the northward passes between this island and the **Spectacles**, and then between the southwestern point of *Booth Bay Peninsula* on the north and the northern point of **Southport** on the south.

The entrance to *Town's End Gut* is about three hundred and seventy-five yards wide, but rapidly diminishes in width until, at the bridge, which is only about eight hundred yards from the entrance, it is only one hundred and fifty yards wide. Beyond the bridge it spreads out into a broad basin, from the northwestern side of which a long, narrow, and shallow cove makes in to the northwestward, called *Hodgdon Cove.* To the southward of *Hodgdon Cove* the *Gut* again narrows to a width of one hundred and thirty yards, running between partly-wooded and partly-cleared lands on the east and a wooded, bluff point, one hundred feet high, on the west. Passing this bluff it sends off an arm to the westward, called *Thompson Cove,* with shores cleared and settled, and then, once more contracting to a width of one hundred yards, enters *Booth Bay.*

Town's End Gut is one mile and a quarter long, and the least water in it is three and a half fathoms at low water. A strong tidal-current runs through the passage, and strangers must not attempt it.

RAM ISLAND,

a little over three hundred yards N W. of **Sweet's Island**, is a low, grassy islet, lying N. by E. and S. by W., and two hundred and twenty-eight yards long. Two hundred yards to the eastward of it is another small island, not named, and between this and **Sawyer Island**, to the eastward, is a channel with sixteen feet at mean low water leading from the northward into *Town's End Gut.*

SAWYER ISLAND

is of very irregular shape, about eleven or twelve hundred yards long, and has an average width of about five-eighths of a mile. Its northern and southern shores are much indented by coves, (three on the southern and two on the northern side,) but most of them are dry at low water. The island is of moderate height, mainly cleared and settled. The passage between the southeastern point of **Sawyer Island** and the northern end of **Indiantown Island** is only fifty yards wide at high water, and the two islands are connected at low water. A bridge or causeway, fifty yards long, connects the southeastern point of **Sawyer Island** with the main land, and another bridge, about forty yards long, joins its northeastern end to another island, called

HODGDON ISLAND,

which lies NORTH and SOUTH, and is half a mile long. Its southern half is low and wooded with a variety of trees, the northern half higher, cleared, and settled. It lies in the middle of the mouth of a narrow passage between the peninsula of *Booth Bay* and a large, high, well-wooded island, called **Barter Island.**

Opposite to **Ram Island**, on the western shore of the *Sheepscot*, is a wide but shallow cove, called

JEWETT COVE.

It is on the eastern shore of **Westport Island**, three-quarters of a mile above **North East Point** and five miles above the mouth of the river. Its shores are high, cleared, and under cultivation, with a number of dwellings, wharves, and fish-houses on its banks. It affords good anchorage for vessels drawing not over ten feet, but is somewhat exposed to the swell in southerly winds.

Just to the northward of *Jewett Cove* is a long, narrow, and shoal cove running to the northward, called

LONG COVE.

It enters between the northeast point of entrance to *Jewett Cove* on the west and a low bare point, called **Kehail Point,** on the east, and is nearly dry at low water.

Long Cove is exactly opposite to **Sawyer Island.**

Four hundred yards to the eastward of **Kehail Point** lies **Upper Mark Island,** the most northerly of the three **Mark Islands** in the river. It is a small bare island, of moderate height, lies nearly NORTH and SOUTH, and is about one hundred and fifty yards long. It is bold-to on its southern and eastern faces, but a long ledge extends to the northward from its north end, and on the western side the approaches are quite shoal. There is, however, a passage with nearly four fathoms between it and **Kehail Point.**

After passing **Kehail Point** and **Upper Mark Island,** the river runs between **Westport Island** on the west and a large partially-cleared island, called

BARTER ISLAND,

on the east. This island lies off the western shore of *Booth Bay,* from which it is separated by the narrow but deep channel called *Back River,* which leads into *Town's End Gut.* . On the south it is separated by a narrow passage from **Sawyer** and **Hodgdon Islands,** on the north, by *Cross River* from the main land. It is three miles and a quarter long, and at its widest part, near the southern end, is nearly a mile wide. On the river side it presents a gradually-sloping surface, descending from its crest to the water, partly cleared and cultivated, and with scattered houses near the shore.

On the western side of the river the shores are high, bluff, and bold-to from **Kehail Point** to the *Narrows,* seven miles above. The first indentation after passing **Kehail Point** is

TARBOX COVE,

a small, narrow, and shallow cove on the eastern side of **Kehail Point,** and only used by the "longshore fishermen" belonging to the river. It is otherwise of no importance.

GREENLEAF COVE.

From *Tarbox Cove* the shores of **Westport** extend in a N N E. direction nearly two miles to a large cove of irregular shape, often used as an anchorage by wind-bound vessels. Between its northern and southern points of entrance it is nearly a mile wide, but sends up a long arm to the northward called *Fowle Cove,* and another smaller arm to the southward, called *McCarty Cove;* while the middle and main part of the curve is known as *Greenleaf Cove.* A small bare rock, called **Greenleaf Ledge,** lies off the entrance near the north point. The shores are steep and high, and wooded with spruce and fir.

FOWLE POINT,

the northern point of the entrance to this cove, is immediately opposite to the northern point of **Barter Island;** is high, bluff, and precipitous; wooded except on its crest, which is cleared, cultivated, and settled. Here the river, which has had an average width of half a mile from *Tarbox Cove* up to this point, suddenly narrows to a width of less than a quarter of a mile, running between high steep banks to the *Narrows.*

CROSS RIVER.

Directly opposite to **Fowle Point** is the mouth of *Cross River.* This stream takes its rise on the peninsula of *Booth Bay,* runs NORTH for two miles, then turns and runs directly WEST for half a mile between high and precipitous banks, and in a deep and

very narrow channel, with from three to five fathoms, through which the tide pours with great velocity. This channel is called the *OVEN'S MOUTH.* From the *Oven's Mouth* this river has a general course about W S W. for a little over a mile to its mouth. It connects with *Back River* by a wide passage, through which nine feet may be taken, between the western end of the *Oven's Mouth* and the eastern shores of **Barter Island.** *Cross River* at its mouth is not quite a quarter of a mile wide, but six fathoms at low water can be carried through a perfectly clear channel to the *Oven's Mouth*, and sixteen feet over the bar at the eastern end of the latter.

On the northern side of the entrance to *Cross River* is the main land, the southern point of which, forming the northern point of *Cross River* entrance, is called

QUARRY POINT.

It is low and gently sloping, mostly cleared and cultivated, but with a few trees on its southern extremity. The channel of the *Sheepscot* leads directly between it and **Fowle Point,** with twelve fathoms of water.

Both shores of the river from this point to the *Narrows* are bold-to and precipitous, but the eastern shore is specially noticeable from its being formed by a series of thickly-wooded bluffs, separated from each other by cleared and cultivated valleys, dotted with houses here and there.

On the western shore, just above **Fowle Point,** is a small cove called *Rum Cove.* It is of no importance. On its north side is a high, bold, and precipitous ridge of rock, called **Doggett's Castle,** but corrupted by the settlers into the **Dog's Castle.** The shores are here so bold-to that eight fathoms are found a few yards from the rock.

Nearly a mile above the **Castle** is *Colby Cove,* a small cove with precipitous banks, which affords good anchorage. Opposite to its mouth is the **spindle** on *Merrill Ledge.*

One mile above *Colby Cove* is **Hilton Point,** a narrow, rocky point of moderate height, and bare of trees. Three-quarters of a mile above it is

CLOUGH POINT,

the northern point of **Westport Island** and the southern point of the *Narrows.* It has a bare gently-sloping surface on its northern face, but its eastern side is precipitous, and the western shores thinly wooded with spruce. N E. from it, at a distance of four hundred yards, is the southern end of **Davis Island.** The river here turns abruptly at right angles to its former course, forming the *NARROWS,* through which pass to the westward, between **Davis Island** and **Clough Point,** into *Wiscasset Bay.*

DAVIS ISLAND,

which forms the eastern shore of *Wiscasset Bay,* lies E N E. and W S W., and is about three-quarters of a mile long. It is thinly wooded except a portion of its southern shores, which are cleared. It is of moderate height except on its southeastern face, where is a conical hill rising abruptly from the low land around it. At the base of this hill a bridge connects the island with the main land. The cove formed by this bridge and the southeastern shore of **Davis Island** with the eastern shore of the *Sheepscot* is called *THE EDDY.*

The prominent feature of the entrance to *Wiscasset Bay* is the old block house on **Davis Island.** It is an ancient building, octagonal in form, and loop-holed for musketry, and stands near the southern point of the island. The town of **Wiscasset** is connected with **Davis Island** by a bridge with a draw, which forms the northern side of the harbor.

WISCASSET BAY

or *WISCASSET HARBOR* is of irregular shape, but wide and deep. It forms a most excellent harbor, with good anchorage, and is very little obstructed. The town of *Wiscasset* is built upon its western shores, has about two thousand inhabitants, and its natural advantages as a commercial port can scarcely be surpassed. But it is completely overshadowed by the neighboring town of **Bath**, situated on the *Kennebec*, which commands all the immense lumber trade of the country drained by that river.

On the western shore of the bay of **Wiscasset** lie two shallow coves, the northernmost of which, about half a mile below the town, is called *Pottle Cove.* The other, called *Hilton Cove,* makes in to the southward behind a grassy and prominent point, called

BIRCH POINT,

which forms, with **Clough Point**, the entrance to a deep river separating **Westport Island** from the main land to the westward, and called *BACK RIVER.* It connects the *Sheepscot* with the *Sasanoa* at *Hockomock Bay*, but is of little use to strangers on account of the narrow limits to which the channel is confined and the shoals and ledges which obstruct it. Its general course is about S W. by S., and its length from **Clough Point** to **Westport Bridge**, where it joins the *Sasanoa*, is exactly six miles. Three miles to the southward of **Clough Point** the river widens to a breadth of over a mile, forming a shallow bay, called *MONTSEAG BAY.* This bay extends from **Young's Point,** three miles below **Clough**, to **Westport Bridge.** The channel is here very narrow and crooked.

A draw admits vessels from *Montseag Bay* into *Hockomock Bay* through **Westport Bridge.**

DANGERS
IN APPROACHING AND ENTERING SHEEPSCOT RIVER.

I. *Coming from the eastward.*

BANTAM ROCK.

Vessels coming from the eastward, bound into the *Sheepscot*, may go on either side of the *Bantam.* (See page 475.)

This dangerous rock lies one mile and a quarter S W. by S. ½ S. from **Damiscove Point,** and is bare at extreme low tides. It is marked by an *iron nun-buoy* (No. 2) of the second class, painted red, and placed in good water about one hundred yards S W. from the rock.

THE MOTIONS.

If passing to the northward of the *Bantam*, there will be seen, bearing about N. by E., a heavy breaker on a group of rocks just to the southward of **Damiscove Island.** These are the *Motions*, and are dangerous on the flood-tide, which sets right on to them. They are mostly bare at low water, extend in a S S W. direction nearly six hundred yards from the southwestern point of **Damiscove**, and *are not buoyed*, but a buoy has been recommended.

TOM ROCK.

If passing to the westward of the *Bantam*, *Tom Rock* will be to the westward going in, but so far distant that it cannot be said to obstruct the passage to vessels coming from the eastward. It bears W. by N. ½ N. from the *Bantam*, distant exactly four miles, and is the southernmost of a group of rocks called the **Sisters**, being sometimes called the *Sunken Sister* to distinguish it from the others, which are bare. It bears S W. ½ W. from **Cape Newagen**, distant nearly four miles, and has nine feet at mean low water; is marked by a *red spar-buoy* (No. 2) placed in deep water well to the southward and westward of the ledge, and is to be left to the westward bound into the *Sheepscot.*

This buoy sometimes goes adrift, and vessels must be guided by the bearings to avoid the ledge.

Passing to the northward of *Tom Rock*, the next obstruction is called

THE SISTERS.

They are on the western side of the entrance, and a little over half a mile **NORTH** from *Tom Rock Buoy*. Two of them are always bare. The southernmost one is bare at half-tide, and shoal water extends two hundred yards every way from the bare rocks, and a wide channel exists between them and the western shores of *Sheepscot Bay*.

Passing the **Sisters**, the next danger is

BLACK ROCKS.

also on the western side of the main channel. They are three rocky islets, surrounded by shoal water, which lie **N.** by **E.** ½ **E.** from the **Sisters**, about a mile distant, (bearing taken from easternmost **Sister** to easternmost **Black Rock**.) The easternmost of this group bears **S.** ½ **W.** from **Griffith Head**, distant one mile and one-eighth.

The next obstruction is only dangerous in thick weather, or if coming from the eastward between **Damiscove** and the *Bantam*. It is on the eastern side of the channel, and is known and dreaded as

THE CUCKOLDS,

two bare rocky islets, (see page 483,) lying about three-eighths of a mile **SOUTH** from **Cape Newagen**. They are dangerous of approach on their southern side on account of the reefs in that direction; and the shoals also extend half a mile to the westward of the western rock. The current of flood sets right on to these rocks.

A wooden tripod, fifty-seven feet high, has been erected on the southern end of the eastern rock twelve feet above high-water mark. The upper half is covered with boards and painted black. From it

	Miles distant.
Burnt Island Light-House bears **N N E.**	$2\frac{7}{8}$
Damiscove Island, (Wood End,) E. by **S.**	$1\frac{3}{4}$
Seguin Light-House, S W. by **W.** ½ **W.**	$6\frac{1}{2}$

When past the **Cuckolds**, the next obstruction will be seen to the westward. It is called

GRIFFITH HEAD LEDGE,

and has seven feet at mean low water and scarcely five at low spring tides. Being bold-to and surrounded by very deep water, it almost always breaks. This ledge bears **E.** ½ **S.** from the **Outer Head**, distant about eight hundred yards; **N E.** by **N.** from the **Black Rocks**, distant a mile and a quarter; is marked by a *spar-buoy* painted in black and red horizontal stripes, placed about sixty yards to the southward of the shoal.

There is a good channel between the **Outer Head** and *Griffith Head Ledge*.

When past the **Head, Lower Mark Island** will be seen bearing about **EAST**. It is very bold-to on its western face, and may be approached closely with eight fathoms. But about half a mile to the northward of it, and on the eastern side of the channel, lie a group of very dangerous ledges, called the

CAT LEDGES.

Some of these rocks are always bare, but many are bare only at low water. They lie to the westward of the entrance to *Christmas Cove* and on the western side of the southern entrance to *Hendrick Harbor*, and are quite bold-to on their western side. The group covers a space half a mile in length, and extends in a **N W.** and **S E.** direction.

Four fathoms may be taken between their northern end and the south point of **Joe Island**, and thence between them and the west shore of **Southport** a deep passage exists; but none dare use it but the fishermen who live in that vicinity and are familiar with all the dangers. It is narrow and crooked.

In southerly winds, even if very moderate, the sea breaks upon the **Cat Ledges** in a very frightful manner. The roar of the breakers can be distinctly heard at *Jewett Cove*, several miles to the northward.

Off the southern end of **Joe Island** are ledges bare at low water, which ought properly to be included in the **Cat Ledge Group**. It is best for vessels in beating not to go inside of the range of **Hendrick Head Light-House** and the large bare rock forming the northernmost of the **Cat Ledges**.

When abreast of the **Cat Ledges**, the entrance to *Herman Harbor* will bear about **W. by N.** The eastern point of the entrance is very shoal, and the shore should here receive a berth of two hundred and fifty yards.

The next dangers met with in going up the river are exactly opposite to each other, on either side of the channel. The one on the eastern shore is called *Cedar-Bush Ledge;* that on the western side is the *Old Sow.*

CEDAR-BUSH LEDGE

lies **W. by S.** from the southern point of **Cedar-Bush Island**, at a distance of two hundred yards. It has ten feet at mean low water, is one-quarter of a mile SOUTH from **Hendrick Head Light**, and on the southern side of the entrance to the harbor.

THE OLD SOW

is out at low spring tides, and has two feet at mean low water. It is about two hundred and fifty yards **S S W.** from the outer of the **Five Islands**, and is only dangerous to vessels which, in beating in, may stand too close to the shores of the islands.

A long ledge, bare at low water, extends to the southward from the northernmost of the **Five Islands**, two hundred and fifty yards. It obstructs the entrance to *Five Island Harbor.*

Passing **Hendrick Head** be careful, when about half a mile to the northward of the light, not to go too near the shore of **Southport** if drawing over fourteen feet, for there is a ledge with sixteen feet at mean low water about two hundred yards from shore.

BULL LEDGE,

or *Bull Rock* as it is mostly called, is the next danger met with. It lies nearly in mid-river, is bare at low water, and is marked by a *spar-buoy* painted in black and red horizontal stripes, placed on the southern point of the ledge. From this ledge **Hendrick Head Light** bears **S. by E. ½ E.**, seven-eighths of a mile; **Dogfish Head** bears E. ½ S., five-eighths of a mile; **Middle Mark Island** bears **N N E.**, five-eighths of a mile.

Passing *Bull Ledge*, there will be seen ahead a small, bare, round island, lying nearly in the middle of the river, but a little closer to the western than the eastern shore. This is **Middle Mark Island**, (see page 496.) It is surrounded by shoals, and should receive a berth to the northward of three hundred and fifty yards, to the southward of two hundred and fifty yards, and to the westward of one hundred and fifty yards. But pass to the westward of it, and go between it and **McMahan Island**. In that case look out for

MARK ISLAND LEDGE,

which has only seven feet at mean low water; is two hundred and fifty yards **S W.** from

Middle Mark Island; lies NORTH and SOUTH, and is over three hundred yards long. Five fathoms may be taken between the island and the ledge, and ten fathoms between the ledge and **McMahan Island**. In using this latter passage keep close to **McMahan Island** to avoid the ledge. *It is not buoyed.*

When past **Middle Mark Island**, there will be seen a breaker bearing about EAST. This is on

HARDING LEDGE,

a very dangerous rock, obstructing both the *Sheepscot Channel* and the entrance to *Town's End Gut.* It lies half a mile S. by W. from **Powderhorn Island** and nearly half a mile E. ½ N. from **Middle Mark Island**, and is four hundred yards to the westward of **Boston Island.** It lies nearly NORTH and SOUTH, and has eight feet at mean low water, *and is not buoyed*, but a buoy has been recommended.

A narrow passage, with six fathoms, separates the northern end of *Harding Ledge* from

POWDERHORN SOUTH LEDGES,

which extend off to the southward from the south point of **Powderhorn Island** a little more than a quarter of a mile—in many places bare at low water. They have ten feet at their southern extremity, and six feet is found on them four hundred yards from the point of the island. *They are not buoyed.*

THE EIGHT-FEET LEDGE.

After passing between *Harding Ledge* and **Middle Mark Island**, the next obstruction met with is a very dangerous ledge on the western hand, known to the inhabitants of the neighboring shores as *Eight-Feet Ledge.* It lies EAST from **North East Point** of **McMahan Island**, and exactly between it and **Powderhorn.** Ten feet at mean low water and eight feet at low spring tides are found on it, and it is dangerous even to those acquainted with the river. It lies in a line drawn from **Middle Mark Island** to the **spindle** on *Clou Ledge*, seven hundred yards to the northward of the island and about four hundred to the southward of the **spindle.**

Vessels passing up the river between *Clou Ledge* and the western shore can avoid this ledge in the day-time by not going so far to the eastward as to bring **Clou Spindle** to bear N. ½ E. Those passing up the main channel should keep **Kehail Point** open to the eastward of the **spindle** on *Clou Ledge.* The range of the **spindle** with **Kehail Point** leads exactly over the ledge.

This ledge is not buoyed, but a buoy has been recommended.

CLOU LEDGE.

After passing *Eight-Feet Ledge*, the **spindle** on this ledge will be seen bearing about N W. The ledge is bare at three-quarters ebb; lies between **Whittum Island** and **Powderhorn Island**, almost exactly in mid-river, and may be passed on either hand. The main channel, however, leads to the eastward of it.

This ledge, the eight-feet spot to the southward, and the four-feet spot to the northward of it, seem to form part of a long rocky spur making off from **Middle Mark Island** toward **Upper Mark Island**; for there are found, when passing up river, at short distances along the whole line, (one and a half miles long,) ledges or spots with shoal water, forming pinnacles or knobs on the back of this spur.

POWDERHORN LEDGE,

or *Powderhorn North Ledge* as it should properly be called, is the next obstruction met with. It lies on the eastern shore of the river, one hundred yards NORTH from

Powderhorn Island, and has four feet at mean low water. *It is not buoyed*, but a buoy has been recommended. A channel with five fathoms at low water exists between this ledge and **Powderhorn Island.** It can safely be entered by keeping the **NORTH** point of the island close aboard.

FOUR-FEET SPOT

is on the western hand of vessels bound up the main channel. It has no distinctive name, being known simply as the "*Four-Feet Spot.*" Its bearings and distances are as follows:

Clou Spindle bears S. ½ W., distant one-quarter of a mile; **North End of Powderhorn Island** bears S E. ¾ E., three-eighths of a mile distant. The ledge is distant from the shore of *Jewett Cove* about half a mile. *It is not buoyed*, but a buoy or spindle has been recommended.

This is a very dangerous ledge, formed by one of the knobs on the back of the ridge from **Middle** to **Upper Mark Island.**

LONG LEDGE.

Vessels using the western channel, which leads along the eastern shore of **McMahon Island,** and between **Whittum Island** and *Clou Ledge*, will meet, after passing the latter and the *Four-Feet Ledge*, a bad ledge of rocks off the **SOUTH** point of the entrance to *Jewett Cove.* This is *Long Ledge.* It is about two hundred yards from the shore; is bare in places at low spring tides; extends N. by E. and S. by W. for a quarter of a mile, and there are several detached rocks which lie to the northward and eastward of it, between it and **Upper Mark Island**; and one with sixteen feet midway between it and **Whittum Island.** The rocks between *Long Ledge* and **Upper Mark Island** have seventeen and eighteen feet at low water, and are not specially dangerous.

But the whole of the ground between **Whittum Island** and **Westport** is very much broken—full of ledges and sunken rocks, which, owing to the strong current of *Goose Rock Passage*, make this a dangerous vicinity. So strong is the current of the *Sasanoa*, especially on ebb-tide, that it is dangerous for strangers to use the western channel of the *Sheepscot.* It is always better, if it be possible, to keep to the eastward of *Clou Ledge.*

Long Ledge is not buoyed, but is plainly marked at low water by the kelp. Vessels beating in or out should not stand farther to the westward in this vicinity than the range of **Clou Spindle** with **Kehail Point,** which will be on the bearing of the spindle S. ½ W., and the **Point** N. ½ E.

RAM ISLAND LEDGES.

Vessels using the main channel after passing the *Four-Feet Spot* meet with no obstruction until past **Ram Island,** (page 498.) The island itself may be passed close-to with five fathoms of water, as its western shore is quite bold-to; but about three hundred and fifty yards to the northward lie two ledges, bare at low water, called *Ram Island Ledges*, surrounded by shoal water and broken ground. It is not safe for vessels of heavy draught to go to the eastward of the range of the western end of **Barter Island,** bearing N. by E. ½ E. There is, however, a channel leading into *Back River*, which passes between the southern point of **Barter** and the northwestern end of **Sawyer Island.** The entrance leads close under **Barter Island** until past the shoals north of *Ram Island Ledges*, after which both sides are bold-to.

The shoal ground extends to the northward of **Upper Mark Island** more than a quarter of a mile, and only one-eighth of a mile to the northward of **Mark Island Shoal** lies a large bare ledge, known as

HODGDON LEDGE,

or *Tarbox Ledge* as it is sometimes called. It lies seven hundred yards **N. by E.** from **Upper Mark Island**, and is two hundred yards from shore, and east of the entrance to *Tarbox Cove.* This ledge is marked by a *black spar-buoy*, No. 3, placed off the south point of the ledge in two fathoms at low spring tides. It is to be left to the westward.

STOVER LEDGE.

After passing this rock there is nothing in mid-river, but there is a bare ledge, called *Stover Ledge,* about two hundred yards west of the **Barter Island** shore, a little above *Hodgdon Ledge.* This is only dangerous to vessels beating in or out, and these must be careful to give this part of the island a good berth.

Stover Ledge is marked by a *red spar-buoy*, No. 2, placed in two fathoms of water off the southern end of the shoal.

GREENLEAF LEDGES,

are the next obstructions met with. They are two and three-eighths miles above *Hodgdon Ledge*, and between the latter and these ledges the river is entirely unobstructed.

The principal ledge is a bare rocky islet, surrounded by shoal water, lying two and a half miles to the northward of *Hodgdon Ledge*, one-quarter of a mile **S W.** from **Fowle Point**, and a little over a quarter of a mile from the shore of *Greenleaf Cove.* Inside of this ledge lies another at a distance of a hundred and twenty-five yards, with four feet at mean low water and awash at low spring tides. A *black spar-buoy*, marked No. 5, is placed in fifteen feet of water on the southeastern point of *Greenleaf Ledges.*

Vessels beating up or down river should not approach the shore of **Westport Island**, between **McCarty Point** and **Fowle Point**, nearer than on a line drawn between the former and the dry part of *Greenleaf Ledges.*

From *Greenleaf Ledges* the river is clear of all obstructions until up with

MERRILL LEDGE,

two miles and a half above **Fowle Point.** This ledge lies on the eastern side of the river, about two hundred yards from shore, and just to the northward of the mouth of *Merrill Cove.* It is bare at low water, lies **N E.** and **S W.**, is six hundred yards long between the lines of three fathoms, and is marked by a **spindle** placed on the highest part of the ledge, near the southern end.

Abreast of *Merrill Ledge*, on the western shore of the river, is *Colby Cove*, (page 500,) an excellent anchorage for wind-bound vessels.

After passing *Merrill Ledge*, the channel is entirely unobstructed as far up as **Hilton Point,** from which a ledge extends **N E.** for four hundred yards, with only eight feet at mean low water. *It is not buoyed*, but is easily avoided by keeping in mid-river or over toward the eastern shore; or if beating to windward, by not going inside of **Hilton Point,** bearing **S W.** until a third of a mile to the northward of it.

Clough Point should receive a berth of one hundred yards to the westward and southward in passing or rounding it, bound up.

After passing the *Narrows*, the first danger met with is to the southward, and consists of two ledges or rocks, called

SEAL ROCKS,

lying in *Wiscasset Bay*, between **Clough** and **Birch Points**, and in the middle of the channel leading into *Back River.* The more northerly of the two is bare, and is five hundred yards **W N W.** from **Clough Point** and exactly the same distance from **Birch Point.** The

inner and more southerly rock is two hundred and fifty yards S E. from the outer one, and only one hundred and fifty yards from the shore. Three fathoms at low water are found between the two rocks. The outer one is marked by a *black spar-buoy*, marked No. 7, placed in good water off the northeastern point of the ledge.

Seal Rocks are only dangerous on account of the set of the current of ebb, which has a tendency to carry vessels toward *Back River*, and consequently upon these ledges. Vessels passing through the *Narrows* should, if possible, keep the **Davis Island** shore aboard.

THE MIDDLE GROUND.

After passing the *Narrows* and leaving *Seal Rocks Buoy* to the southward, steer up for the southernmost wharves in **Wiscasset**, to avoid a shoal with ten feet at mean low water, which lies nearly in the middle of the bay, about a quarter of a mile from the shore of **Davis Island.** This shoal begins at **Wiscasset Bridge** and extends S W. for three-eighths of a mile. *There is no buoy on it.* It is called the *Middle Ground.*

In avoiding the *Middle Ground* be careful not to get too close to the large piers on which the saw-mills are built, as there is a dangerous sunken ledge, called

BIRCH POINT LEDGE,

about one hundred and fifty yards to the southward and westward of them. This rock has only seven feet at mean low water and five at low spring tides, lies three hundred and fifty yards N E. ½ N. from **Birch Point**, and about a quarter of a mile to the westward of the southern end of the *Middle Ground.* It has caused several disasters.

SAILING DIRECTIONS
FOR ENTERING THE SHEEPSCOT RIVER.

I. *Coming from the eastward, and proceeding up the river as far as* **Wiscasset.**—If coming inside the *Bantam*, between it and **Damiscove**, bring **Griffith Head** to bear N W. carrying not less than twelve fathoms, and steer for it until **Hendrick Head Light-House** bears N. by E. ½ E., with thirty-two fathoms, soft bottom, when steer N. by E. ½ E., which course continue, with not less than twelve fathoms, until up with the buoy on *Hodgdon Ledge.* Leave this to the westward, and keep the middle of the river, with not less than eleven fathoms, until up with the mouth of *Cross River*, when it may be necessary to keep one shore or the other aboard to avoid the current of that river, according as the tide is flood or ebb. Both shores are very bold-to. After passing **Quarry Point**, however, the way is clear, and the depth not less than eleven fathoms until up to the **spindle** on *Merrill Ledge*, which leave to the eastward and keep the western shore aboard until well past the ledge; then keep the middle until up with the *Narrows*, carrying not less than nine fathoms up to **Clough Point.**

In passing the *Narrows* with an ebb-tide and a strong breeze, keep the shore of **Davis Island** aboard to avoid **Seal Rocks**; but if the tide be flood, keep the middle of the passage. Ten fathoms may be carried through into *Wiscasset Bay.*

As soon as through the *Narrows*, steer for the large **Saw-mill** at the southern end of the *Boom* until within three hundred yards of it and in about eight fathoms of water, when the *Middle Ground* is safely past, and haul up the draw in **Wiscasset Bridge**, and anchor off the town at discretion, in from four to six fathoms, soft bottom.

But if of light-draught, cross the *Middle Ground*, as there is nowhere less than ten feet upon it at mean low water.

If intending to pass to the southward of the *Bantam*, bring **Pond Island Light-House** to bear N W. by W. and steer for it, carrying not less than thirty fathoms, until **Hendrick Head Light-House** bears N. by E. ½ E., in about thirty fathoms. Then steer N. by E. ½ E., carrying not less than twelve fathoms, and proceed as directed above.

These courses made good will pass eight hundred yards to the westward of *Cat Ledges;* a quarter of a mile to the westward of *Cedar-Bush Ledge;* a quarter of a mile to

the eastward of *Bull Ledge;* two hundred yards to the eastward of **Middle Mark Island**; a quarter of a mile to the westward of *Harding Ledge;* six hundred yards to the westward of *Powderhorn South Ledge;* one-eighth of a mile to the westward of *Powderhorn North Ledge;* two hundred yards to the eastward of *Eight-Feet Ledge;* a quarter of a mile to the eastward of *Clou Ledge;* four hundred yards to the eastward of *Four-Feet Spot;* two hundred yards to the eastward of **Upper Mark Island**; and one hundred and fifty yards to the eastward of *Hodgdon Ledge.*

DANGERS
IN APPROACHING AND ENTERING THE SHEEPSCOT RIVER.

II. *Coming from the westward.*—In this case strangers must make **Seguin Island** (off the entrance to the *Kennebec*) and pass outside of it. The first danger encountered in this passage is

MILE LEDGE,

situated nearly one mile S. ½ W. from **Seguin Light-House** and three-quarters of a mile from the southern point of the island. It may be avoided by going close under the southern point of **Seguin**, or by keeping a mile and a half to the southward of the island. It is marked by an *iron can-buoy* of the second class, painted with red and black horizontal stripes, and placed in seven fathoms of water about one hundred yards south of the ledge. Eighteen feet at mean low water will be found on this ledge, and in heavy southerly or easterly weather it breaks with great violence.

Passing to the eastward of **Seguin**, the next danger is *Tom Rock*, which pass to the eastward of.

TOM ROCK,

already described, (page 501,) is the southernmost of a group of rocks called the **Sisters**, and is itself sometimes known as the *Sunken Sister.* It has nine feet at mean low water, and is marked by a *red spar-buoy*, No. 2, placed in deep water on the southwestern side of the rock. This buoy is intended as a guide to the passage inside of **Seguin**, and is therefore painted red, as it must be left to the eastward by vessels using that passage, or bound into the *Kennebec;* but those bound into the *Sheepscot*, and passing to the southward of **Seguin**, must leave it well to the northward and westward.

This rock bears N E. by E. ½ E. from **Seguin Light-House**, from which it is distant two miles and three-eighths. From **Griffith Head** it bears S. ½ W., distant three miles. From **Cape Newagen** it bears S W. ½ W., distant nearly four miles. To the northward of it lie

THE SISTERS,

also on the western side of the entrance, and a little over half a mile to the northward of *Tom Rock Buoy.* Two of them are bare rocky islets; the southernmost is only bare at half-tide. Shoal water extends two hundred yards in every direction from the bare rocks.

The **Sisters** *are not buoyed*, as they always show themselves. They lie between the main entrance and the *Inner* or *Black Rock Channel.*

Next to the northward of the **Sisters**, at a distance of seven-eighths of a mile, will be seen a group of three bare rocky islets, also on the western side of the channel. These are

THE BLACK ROCKS.

From the **Sisters** they bear N. by E. ½ E., (bearing taken from easternmost **Sister** to easternmost **Black Rock**.) The rocks are not in any way connected, deep channels existing between and among them; but each rock is surrounded to some distance by shoal water and broken ground.

From the easternmost of the **Black Rocks, Griffith Head** bears **N. ½ E.**, distant one mile and one-eighth.

The position of these rocks and the **Sisters** can be determined by the mariner at night or in thick weather almost as well as in clear weather or daylight, as the roar of the breakers upon each group on approaching it serves to indicate its position with considerable accuracy. To pass them safely under such circumstances, it is, however, necessary to get hold of **Seguin** and take your departure from it.

After passing the **Black Rocks** no dangers are met with until entering the river. The obstructions in the river have already been described, (pages 501 to 507.)

SAILING DIRECTIONS
FOR ENTERING THE SHEEPSCOT RIVER.

II. *Coming from the westward, outside of* **Seguin Island.**—From a position one mile and a quarter SOUTH from **Cape Small Point**, and in sixteen fathoms, the course to clear *Mile Ledge* is **E. ½ S.** This will lead half a mile to the southward of the ledge if the course is made good, and will carry not less than thirteen fathoms. On this course, when **Seguin Light-House** bears **N. ½ W.**, with **Pond Island Light** shut in behind the east spur of the island, steer **N E.** for **Cape Newagen.** This course leaves *Tom Rock* half a mile to the northward and westward and carries not less than twenty fathoms. If the tide be flood, steer **N E.** by **E.** to allow for the set of the current, which during flood-tide sets on to *Tom Rock.*

When, on the course for **Cape Newagen, Hendrick Head Light-House** bears **N. by E. ½ E.**, with thirty-two fathoms, soft bottom, steer **N. by E. ½ E.**, which will lead up the middle of the channel with not less than twelve fathoms, and when up with *Hodgdon Ledge* follow the directions previously given, (pages 507 and 508.)

DANGERS
IN APPROACHING AND ENTERING THE SHEEPSCOT RIVER.

III. *Coming from the westward, inside of Seguin Island.*—This passage is not safe for strangers on account both of the numerous ledges and sunken rocks which obstruct it and the force of the tidal-current of the *Kennebec*, which sets directly across the course of a vessel passing through the channel. But as circumstances may compel strangers to seek an entrance by this passage, the dangers will be carefully described, and the means of avoiding them.

The most of the ledges and rocks which obstruct this passage are common to it and the *Kennebec* entrance, as vessels must pass the mouth of the latter to enter the *Sheepscot River.* The first obstruction met with is

JACK-KNIFE LEDGE,

a very dangerous ledge, which has been the cause of many disasters; lies on the north side of the channel, and has eight feet at mean low water and about six feet at low spring tides. It bears **N W. by N.** from **Seguin Island Light-House**, one mile and a quarter distant; from **Pond Island Light-House S W. by S.**, nearly one mile and a quarter; and from **Cape Small Point E. by N. ½ N.**, two miles and three-quarters distant; and it is three-quarters of a mile from the nearest shore, which is that of the **Fox Islands.**

It is marked by an *iron nun-buoy* of the second class, (No. 3,) with the letters "J. K." painted in white upon it. In winter this is replaced by a *black spar-buoy,* lettered in the same way. This buoy is placed in three fathoms south of the ledge; but it frequently goes adrift, owing to the heavy sea and insecure holding-ground, and vessels must carefully watch the bearings to avoid being set on the ledge. There is a channel

to the northward of *Jack-Knife* with five fathoms of water, but no stranger should attempt it.

On the southern side of the entrance will be seen a bare rocky islet, called

ELLINGWOOD ROCK,

which lies N. ¾ E. from the northern end of **Seguin Island** at a distance of four hundred yards. It is nearly a mile S E. by E. ¼ E. from *Jack-Knife Ledge*, the channel passing directly between them. It lies N E. and S W., and on its southeastern face is shoal; but the northwestern face, which is toward this channel, is quite bold, and may be approached quite closely with not less than four fathoms of water.

There is a channel with seven fathoms between it and **Seguin**, which may be safely passed through by keeping midway between the rock and the north point of the island.

SEGUIN LEDGES

are a group of bare rocks lying on the eastern side of the channel, and surrounded by a shoal and rocky bottom. They bear E. by S. from *Jack-Knife Ledge*, one mile distant, and N E. by N. from **Seguin Island**, about one thousand yards; extend N. by E. and S. by W., and are about three hundred yards long. Vessels should give the bare rocks a berth of about three hundred yards.

POND ISLAND BAR

is the first shoal on the western side of the channel after passing *Jack-Knife Ledge*. It is a very extensive shoal, making off from the **Fox Islands** about E. by S. for three-quarters of a mile. At a distance of five-eighths of a mile from these islands it has six feet of water, and it is not safe for strangers to go inside of the buoy, which is a nun of the second class, (No. 5,) painted black, and placed on the southeastern point of the reef.

Abreast of it, bearing E. by S., and nearly three-quarters of a mile distant, is a ledge with eight feet at low water, known as

WHITE LEDGE.

It is not in the way except for vessels beating in or out of the *Kennebec;* is eight hundred yards N E. by N. from **Seguin Ledges**, and is marked by a *spar-buoy*, (No. 1,) painted black, with the letters "W. L." marked upon it in white.

The buoy is placed about fifty feet EAST from the eastern point of the ledge.

WHALE BACK

is a bare rock, about one hundred and fifty yards long and seventy-five wide, lying on the western side of the channel, and surrounded by shoal water. It is two hundred yards S S W. from **Salter Island**, between which and the rock there is not less than eleven feet of water; but the bottom is much broken, and strangers should not attempt this passage. On its southeastern side it is tolerably bold-to, so that it may be approached within one hundred yards with not less than three fathoms of water.

THE SISTERS

are the next obstructions in this channel, and are on the eastern side of it. They have been already described as three bare rocky islets, (see page 502,) and are easily avoided, as they are always visible. They lie E. by S. from **Whale Back**, one mile and a half distant, which is here the width of the channel. Next to the northward of the **Sisters**, and also on the eastern side of the channel, lie

THE BLACK ROCKS.

They are three bare rocky islets, lying N. by E. ¼ E. from the **Sisters**, seven-eighths of a

mile distant, (see page 502,) and bear S. ½ W. from **Griffith Head**, a little more than a mile distant. They are bold-to.

When up with the southernmost of these rocks there will be seen, bearing about N. by E., a *black spar-buoy*, on

SLOOP LEDGE,

which lies nearly seven hundred yards N W. by N. from the largest of the **Black Rocks**, and has six feet at low water. The buoy is placed SOUTH from it, and bears S W. by S. ½ S. from **Griffith Head**, distant one mile. Pass to the eastward of it going in.

LITTLE RIVER LEDGES,

Between *Sloop Ledge* and the shore are a series of bad rocks, one of which is awash at low water. They are called *Little River Ledges*, as they lie off the mouth of that river. The whole ground inside of *Sloop Ledge* is full of rocks, and vessels must be careful not to go to the westward of that buoy.

After passing between the **Black Rocks** and *Sloop Ledge* the channel is clear to the mouth of the *Sheepscot.* Here, when abreast of **Griffith Head**, there will be seen, bearing about N N E., a *spar-buoy* painted in black and red horizontal stripes, on

GRIFFITH HEAD LEDGE,

which has seven feet at mean low water (see page 502) and scarcely five feet at low spring tides. It bears N E. by N. from the **Black Rocks**, one mile and a quarter distant; and E. ¼ S. from the **Outer Head**, eight hundred yards, and must be left to the westward.

SAILING DIRECTIONS
FOR ENTERING THE SHEEPSCOT RIVER.

III. *Coming from the westward, inside of* **Seguin Island.**—Give **Fuller Rock** a berth of about seven-eighths of a mile to the northward and westward, and when it is in range with **Cape Small Point** and in sixteen fathoms water steer N E. by E. ¼ E. for the southernmost of the **Black Rocks.** This course leads, with not less than four fathoms, past **Seguin**; between *Jack-Knife Ledge* and **Ellingwood Rock**; past *Seguin Ledges;* and between *Pond Island Bar* and *White Ledge.* Continue it until past the entrance to the *Kennebec*, taking care that the tide, if flood, does not set on to *Pond Island Bar*, or, if ebb, on to *White Ledge.* On this course, when **Pond Island Light** is exactly on with the southern point of the **Whale Back**, and in ten fathoms of water, steer N E., which leads safely past the **Black Rocks** and *Sloop Ledge* with not less than eight fathoms of water, and passes about two hundred yards to the eastward of *Griffith Head Ledge.* On this course continue until **Hendrick Head Light** bears N. by E. ¼ E., with twenty-two fathoms of water, when steer N. by E. ¼ E., and proceed as directed on pages 507 and 508.

HARBORS OF REFUGE IN THE SHEEPSCOT RIVER.

The different harbors of refuge along the shores of this river have been already described; but some further mention may be of use to strangers in case of necessity. And first,

DAMISCOVE HARBOR.

This small but comfortable anchorage is formed by the south end of **Damiscove Island** splitting into two points and thus forming a long and narrow cove, which extends inland about eight hundred yards. Contrary to what would be supposed from its position, the harbor is not available in northerly winds, as a heavy swell sets into it,

making the anchorage uncomfortable. In southerly winds it is smooth and comfortable, the southeast swell being broken off by the *Motions* and the other ledges outside of it.

To enter Damiscove Harbor from the southward and eastward: Bring the southeast point of the island (which is high and bare of trees) to bear N N E., one mile distant, when the harbor will be completely open, and there will be thirteen fathoms. Then steer N. by E. ½ E., which course will lead, with not less than nine fathoms, up to the entrance, and will leave the *Motions* well to the westward. Now keep the middle of the harbor, and anchor at pleasure, in from two to three fathoms, soft bottom.

Or coming from the eastward close in, hug the southeast point of **Damiscove**, passing within two hundred and fifty yards of it, and when the harbor is fully open steer up the middle of it, and anchor as before. Near the head of the harbor a chain crosses from shore to shore, to which the fishermen are accustomed to make fast.

CAPE HARBOR

is formed by **Cape Newagen** on the north and **Cape** and **Hunting Islands** on the south. Its eastern side is shut off from the easterly swell by a bare rocky islet, called the **Ark.** It is neither very comfortable nor roomy, being open to the southeast swell except at low water. Thirteen feet can be carried into it, with good holding-ground.

To enter this harbor from Sheepscot River: Keep the south point of **Southport Island** close aboard, rounding it at a distance of a few yards with three fathoms, and steer E. ¾ S. for the **Ark**, at the eastern end of the harbor, carrying not less than thirteen feet. Anchor off the north end of **Cape Island**, about in the middle of the basin. If the tide be ebbing, hug **Southport** closely, to avoid the rocks off **Hunting Island.**

There is quite a settlement at this place, and considerable fishing interest.

CHRISTMAS COVE.

This is a cove of very little importance, (see 493,) lying one and a quarter miles north of *Cape Harbor.* The chart is the best guide to it. No directions can be given for it except to keep the eastern shore aboard.

HENDRICK HARBOR

is a most excellent harbor for vessels of light draught, and is (see page 494) contained between **Southport Island** on the NORTH and EAST and **David Island** and **Joe Island** on the WEST. When once inside it is a complete land-lock, but there is but little water at low tides. Vessels usually moor by a line to one of the wharves in the settlement. The entrance is extremely narrow and crooked, and strangers should not attempt to enter unless in case of necessity.

To enter *Hendrick Harbor*, keep as nearly as possible in the middle of the passage between **David** and **Joe Islands**, only taking care to leave an **iron spindle**, which stands exactly in the entrance, close-to to the northwestward. This spindle is on a bad rock, bare at low water, which lies almost exactly in the centre of the passage. Keep in the middle after passing this until near the extreme southeastern point of **David Island**, when sheer off suddenly to the southward, to avoid a dangerous sunken ledge off that point. When the harbor is fairly open, steer up for the settlement and anchor off the wharves, in eight feet at mean low water. Nine feet may be taken between **David** and **Joe Islands** at mean low water.

HERMAN HARBOR

lies on the eastern shore of **Georgetown Island**, one mile and three-eighths to the northward of **Griffith Head.** (See page 495.) It has good water, and is tolerably easy of entrance. The following are the best directions that can be given for entering it:

Keep about one hundred and fifty yards from the western shore and in about four and a half fathoms of water, to avoid a ledge bare at low water, lying near that shore; then pass between that ledge and another, also bare at low water, on the northeast shore, making off from the small island which forms the eastern point of entrance to the harbor, with not less than four fathoms of water. After passing these, steer about N. ¼ E., or nearly up the middle of the passage, and anchor in from four to seven fathoms under either shore. The bottom is excellent, being mostly stiff mud, very sticky.

At low water any one can enter this harbor, as the two ledges always show themselves then, and it is only necessary to keep midway between them until past the entrance, when steer up the middle of the harbor, as directed above.

FIVE ISLAND HARBOR.

There are several entrances to this harbor, but the best is to the northward of the largest island, the most easterly of the five, (page 495.) This entrance is wide and tolerably safe; leads between the northernmost island and the easternmost, and is obstructed only by a ledge (dry at low water) which extends off from the southern end of the former.

To enter Five Island Harbor, keep the southern shore close aboard. It is quite bold-to, and perfectly safe to approach except with a strong ebb-tide, when, if approaching too closely, there is danger of being set upon the point of the island. When the harbor fairly opens by the north point of the easternmost island haul short around that point and anchor off the settlement, in from three to five fathoms, soft bottom. Eight fathoms can be carried in past the large island.

This is a good harbor of refuge, and is comparatively safe in all weathers.

LITTLE SHEEPSCOT RIVER.

No sailing directions can be given for this narrow passage. It separates **McMahan** and **Georgetown Islands**, and unites the *Sheepscot* with the *Sasanoa.* Vessels can only pass through it with a fair tide unless they have a strong fair breeze. It is usual to keep the middle of the river until it widens out, which it does about half a mile above its mouth, and then haul over to the eastern shore, to avoid a dangerous sunken rock lying in the middle of the passage. After passing this the channel is unobstructed to the entrance into *Goose Rock Passage*, but the strength of the current is such as to make it dangerous for vessels to attempt to enter the *Sasanoa* by this passage. By following the above directions not less than five fathoms will be taken through into *Goose Rock Passage.*

EBENICOOK HARBOR

is on the eastern side of the river, and is formed by a deep indentation on the northern shore of **Southport Island**, and by the group of islands which lie to the northward of **Dogfish Head.** The entrance is between **Dogfish Head** and the **Green Islands**, and is one mile north of **Hendrick Head.** It is safe, easy of access, commodious, and free from ice in the winter. The entrance is unobstructed, and any stranger may enter it by rounding **Dogfish Head**, keeping about fifty yards from it in about six fathoms of water, and anchoring anywhere under the western shore of the harbor in from three to six fathoms. But if bound into *Town's End Gut*, when fairly past the head steer up for the north point of **Southport**, carrying not less than three and a half fathoms, and keep the **Green Island** shore aboard for a few hundred yards, to avoid a long line of ledges which extends from *Maddox Cove* (in the southwestern part of the harbor) into the very centre of the passage. This line of rocks is dry in many places at low water, but the

northernmost rock has fifteen feet at mean low tides. By these rocks *Ebenicook Harbor* is divided into two parts. There is equally good anchorage to the eastward and westward of them.

To pass into Town's End Gut: After clearing the long ledge just mentioned, keep the middle of the passage between the **Green Islands** and **Southport**, or steer for the bluff on the southwestern end of **Indiantown Island**, with not less than three fathoms. When up with the northern end of **Southport** gradually round the point, keeping about one hundred and fifty yards from it, in about five fathoms. By this means enter *Town's End Gut* with eighteen feet at low water, and avoid the long ledges, dry at low water, lying SOUTH of **Indiantown Island**, which narrows the channel to a width of about two hundred yards. When safely round the north point of **Southport**, the draw-bridge will be seen ahead to the southward and eastward. Keep the middle of the passage until close to the draw, when run for it and pass through, carrying not less than five fathoms.

After passing the draw-bridge there is but one danger, a rock with seven feet at low water, which lies nearly in the middle of the *Gut*, off the mouth of *Thompson Cove*. To avoid it, keep the high bluff head on the north side of *Thompson Cove* close aboard until the cove is open, and then gradually edge over to the other shore. After clearing this rock keep the middle of the channel, and take not less than four fathoms into *Booth Bay*.

The tidal-current, aided by the natural fall of the bed of the stream, flows through these passages on the ebb with great velocity. Nor is it safe for strangers to pass here even on the flood. None unacquainted with the set of the currents should attempt to pass without a pilot.

There are many other passages into *Town's End Gut:* One exists between **Boston Island** and the **Green Islands**, through which three and a half fathoms may be carried; one between the **Spectacles** and **Boston Island**, with ten feet; a good channel with not less than three fathoms between **Ram Island** and **Sweet's Island**; and finally a passage, called *BACK RIVER*, runs from *Cross River* behind **Barter**, **Hodgdon**, **Sawyer**, and **Indiantown Islands**. It is only available at high water, however.

The channel leading from the *Sheepscot*, between **Ram Island** and **Sweet's Island**, is the one used by vessels bound to *Booth Bay* from **Wiscasset**. Seventeen feet at low water can be carried through it. Those using it steer E. by N. ½ N., between the two islands, keeping as nearly as possible in the middle of the passage, with about five fathoms of water, until abreast of the northeastern point of **Sweet's Island**, when the northeastern end of the **Spectacles** will be in range with the northern end of **Southport Island**. Then steer for the bluff on the southwestern end of **Indiantown Island** until abreast of the northern point of the **Spectacles**. Go close to the bluff on the **Indiantown** shore, as it is bold-to. Now steer for the northern end of **Southport**, carrying not less than three fathoms, until about three hundred yards from it, when head up for the draw in **Town's End Bridge**. Avoid a bad ledge, bare at low water, lying off the north shore of **Sweet's Island**, by keeping the north side of the channel. Also avoid the shoals between **Indiantown** and the northern point of **Southport** by keeping about one hundred and fifty yards from the latter point in passing it. Both of these ledges are, however, bare at low water.

JEWETT COVE.

This is an excellent anchorage, lying on the western side of the river, just above the mouth of *Goose Rock Passage*. It is an indentation in the shore of **Westport Island**, and though exposed to the southeast swell affords good shelter and excellent holding-ground.

There is a settlement here, a good country store and other facilities. (See page 498.)

VARIATION OF THE COMPASS.

The magnetic variation for *Sheepscot Entrance* is, for 1875, 13° 45′ W., with an annual increase of 2½′.

For *Long Cove*, *McCarty Cove*, and the other small anchorages along the *Sheepscot River*, the chart will be found to be the best guide.

LIGHT-HOUSES.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s			Feet.	
Hendrick Head Lt.	43 49 20	69 41 24	4 38 45.6	Revolv.	30s	40	11
Seguin Light.....	43 42 25	69 45 31	4 39 02.1	Fixed.	.....	180	20

TIDES.

	Bath.	Wiscasset.
Corrected Establishment, or average time of High Water after Moon's meridian passage	$12^h\ 13^m$	$11^h\ 12^m$
Mean Rise and Fall of Tides, or Rise of Mean High Water above the plane of reference, (mean low water)	6.1 Ft.	9.4 Ft.
Rise of High Water, Spring Tides, above the plane of reference	6.5 "	9.9 "
Fall of Low Water, Spring Tides, below do.	0.4 "	0.8 "
Rise of High Water, Neap Tides, above do.	5.5 "	8.9 "
Height of Low Water, Neap Tides, above do.	0.4 "	0.8 "
Rise of Highest Tide observed above do.	7.9 "	10.6 "
Fall of Lowest Tide observed below do.	0.9 "	1.3 "
Mean Duration of Rise	$5^h\ 54^m$	$6^h\ 30^m$
Mean Duration of Fall	$6^h\ 29^m$	$5^h\ 54^m$

CURRENTS.

The current of flood affects the course of vessels coming from the eastward, having a tendency to set those passing north of the *Bantam* on to the *Motions*, and those passing south of the *Bantam* on to that rock. It sets with considerable force on to the **Cuckolds**, making those rocks very dangerous in thick weather. In the river channel the current of both tides sets directly up or down the river. But vessels in beating must be careful in passing *Bull Ledge* and all the rocks above it, as they lie in the centre of the channel and the current sets directly over them.

Particularly should vessels, passing the entrance to *Goose Rock Passage*, be careful that the flood does not set them on to *Eight-Feet Ledge* or *Clou Ledge;* and if passing between these ledges and the western shore, that the ebb does not have the same effect. For here the current of the *Sasanoa* sets with great force directly across the channel of the *Sheepscot*, and a vessel with a light breeze is apt to run ashore on one or other of these obstructions. Vessels passing to the westward of *Clou Ledge* sometimes have to use their boats to keep them off the rocks.

There is a strong set of current in and out of *Cross River*, but vessels easily avoid the set of the flood by keeping the **Westport** shore aboard.

In passing the *Narrows* with an ebb-tide hug the **Davis Island** shore, to avoid being set on to **Clough Point.** With the flood keep the middle.

The velocity of the current in the narrower parts of the *Sheepscot River* is very great, being as high as four and even five miles an hour. From **Fowle Point** to the *Narrows* vessels cannot make headway against an ebb-tide unless they have a strong breeze aft.

COAST OF SHEEPSCOT BAY,
FROM THE SHEEPSCOT TO THE KENNEBEC RIVER.

From **Griffith Head** to the westward the shore-line takes a direction about S W. ½ W. to the southern end of **Georgetown Island**, called **Indian Point**. From **Griffith Head** to the mouth of *Little River* it is quite low, presenting to the view a long sand-beach interspersed with hillocks of sand, and backed by hills mostly wooded with spruce, fir, and hemlock.

Little River is bare at low water, and not navigable even for flat-boats, except at high tide. It is of no importance. A group of very bad ledges lies off its mouth. (See page 511.)

From *Little River* the shores are high, rocky, and bold to **Indian Point**, which latter, however, is low and very shoal. A few stunted firs grow here and there on the point. South of **Indian Point**, separated from it by a passage three hundred yards in width, is a rocky sparsely-wooded island, called

SALTER ISLAND.

It lies nearly N E. and S W., and is about half a mile long and about three hundred yards wide, its southern end rocky and bare of trees except one lone spruce tree, which stands on the point and is a capital landmark.

The passage between **Indian Point** and **Salter Island** has seventeen feet at mean low water, but is very narrow and crooked.

To the westward of **Indian Point** is a deep indentation in the shore of **Georgetown Island**, forming a large cove, known as

SAGADAHOC BAY.

It is a little more than a mile long, with an average width of six hundred yards. At low water it is bare throughout four-fifths of its length, and being open to the sea is of no use as a harbor. The holding-ground is also poor.

STAGE ISLAND.

Three-eighths of a mile to the westward of **Salter Island** lies a rocky and thinly-wooded island, of very irregular shape, known as **Stage Island.** It lies **NORTH** and **SOUTH**, and is three-eighths of a mile long, and is separated from the south shore of **Georgetown** by a narrow passage only about forty yards in width, and with about one foot at low water. This is a good boat-passage, by means of which boats may avoid the strong current of the *Kennebec.*

The space between **Stage Island** and **Salter Island** is called

STAGE ISLAND BAY;

has good holding-ground, and is a common anchorage for vessels when waiting to enter the *Kennebec.* The depth is from two to five fathoms, soft bottom.

West of **Stage Island** is the entrance to the

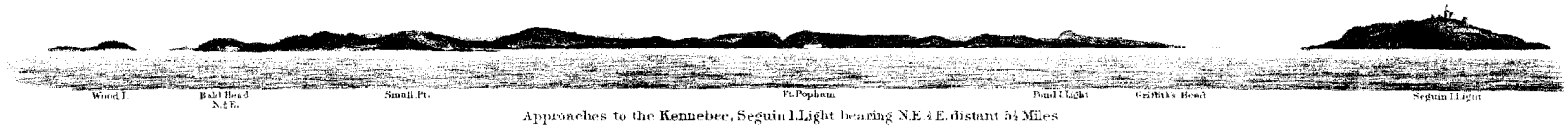
KENNEBEC RIVER,

twenty-one miles E. by N. from **Cape Elizabeth**; sixty-five miles N E. ¼ N. from **Cape Ann**; and nineteen miles **WEST** from **Monhegan Island.**

The true mouth of the river is contained between the southern end of **Stage Island** and a low sandy point a little over half a mile to the westward of it, called **Hunniwell Point.** But the approaches are so obstructed by islands and bare rocks that, for purposes of navigation, the entrance to the *Kennebec* is supposed to begin at

Approaches to the Kennebec from the Sd. and Ed. Pond I. Light bearing N.W. ¼ W. distant 5 Miles.

Approaches to the Kennebec, Seguin I. Light bearing N. by E. ¼ E. distant 3 Miles



Approaches to the Kennebec, Seguin I. Light bearing N.E. ¼ E. distant 5¼ Miles

Approaches to the Kennebec and Sheepscot, Damiscove I. bearing North distant 1 Mile, Seguin I. Light West distant 6¾ Miles

SEGUIN ISLAND,

and from this island the above bearings and distances are taken. **Seguin Island** lies one mile and three-quarters S. by W. ½ W. from **Salter Island**; four miles and three quarters S W. by S. from **Griffith Head**; six miles S W. by W. from **Cape Newagen**; six miles and a half W. ¾ S. from **Damiscove Point**; and E. ¾ S. three miles and a quarter from **Cape Small Point**, the extreme eastern point of *Casco Bay*.

Seguin is a very prominent, high, rocky island, with precipitous shores. It lies **NORTH** and **SOUTH**, is eleven hundred yards long and two hundred and fifty wide, except near its southern end, where a bare rocky spur, of less elevation than the rest of the island, makes off to the eastward, increasing the width of the island to half a mile. The junction of this spur with the main island forms a small cove on its northern side, which offers a shelter in southwesterly winds and a convenient landing-place. It is mostly bare of trees except a small grove of spruce and fir on its northeastern face.

SEGUIN LIGHT-HOUSE.

On the highest part of this island, and nearest to its southern end, is built a **granite light-house**, which shows a fixed white light of the first order of Fresnel from a height of one hundred and eighty feet above sea-level. The keeper's house is of brick and connected with the tower by a low-walled passage, roofed and used as a work-room. **Seguin Light** is visible twenty nautical miles at sea from the deck of any vessel large enough to raise the eye of the observer fifteen feet above sea-level. Its position is

Latitude - - - - - - - -	43° 42′ 25″ N.
Longitude - - - - - - - -	69° 45′ 31″ W.

FOG-SIGNAL.

A ten-inch steam fog-whistle, giving blasts of eight seconds' duration at intervals of fifty-two seconds, is placed on this island near the light-house.

DESCRIPTION
OF THE APPROACHES TO THE KENNEBEC, THE ISLANDS IN AND AROUND THE ENTRANCE, AND SHORES OF THE RIVER AS THEY WILL APPEAR TO A VESSEL BOUND IN.

Passing **Seguin**, bound into the *Kennebec* from the westward, there will be seen a little to the northward the rocky shores of **Salter Island**, and on a nearer approach the lone tree on the southern point will be seen. In range with **Salter Island** will be seen a bare rocky islet off its southern shore. This is the **Whale Back**, and forms one of the obstructions in the *Kennebec Entrance;* bearing nearly **NORTH** will be seen **Stage Island**, and **Stage Island Bay** will be directly ahead. On the west will be seen a bare rocky island, surmounted by a building of a peculiar brown color, attached to which is a white light-tower. This is

POND ISLAND,

lying on the western side of the entrance, one and five-eighths miles **NORTH** from **Seguin Island** and five-eighths of a mile W. ¾ S. from the southwestern end of **Salter Island**. It is destitute of trees and almost of grass; is a quarter of a mile long, and about three hundred yards broad, and lies **NORTH** and **SOUTH**.

POND ISLAND LIGHT-HOUSE.

Near the centre of **Pond Island** is built the light-house. It is *a white tower*, eighteen feet high, showing a fixed white light of the fifth order of Fresnel from a height of

fifty-four feet above sea-level. Near the tower is a *fog-bell*, struck by machinery. The light-house is connected with the keeper's dwelling by a brick work-room.

The geographical position of **Pond Island Light** is

Latitude - - - - - - - - - - 43° 44′ 23″ N.
Longitude - - - - - - - - - 69° 46′ 14″ W.

Next to the westward of **Pond Island** will appear a small island of about the same size, covered with a growth of stunted fir trees. This is

WOOD ISLAND,

a quarter of a mile west from **Pond Island** and the same distance SOUTH from the southern point of **Hunniwell Beach.** It is connected with the latter at low water by a bare sand-spit; but a narrow channel, with seventeen feet at low water, separates it from **Pond Island.**

Over the low beach behind **Wood Island**, and to the westward, will appear, first, a square of granite fort with outbuildings, stone-sheds, and derricks surrounding it. This is **Fort Popham**—a fortification as yet in an unfinished state—occupying the whole of the north end of **Hunniwell Point.** To the westward of it will appear two high round hills, the valley between them occupied by a large square house, near which is a flagstaff. The eastern and highest hill is **Sabine Head**; the other **Hunniwell Hill**; and the house belongs to Mr. Irving. The house will not show until past **Ellingwood Rock**—the small bare rock lying a quarter of a mile to the northward of **Seguin.**

On approaching the mouth of the river two bare rocky islets will open, lying close together in the middle of the river, the westernmost one nearly in range with a high bluff on the eastern shore. These are the **Sugar Loaves,** and the bluff in range with the north **Sugar Loaf** is called **Gilbert Head,** and is the southern end of **Long Island.** The head is directly opposite to **Fort Popham.**

Still proceeding to the northward, a high hill opens on the western shore of the river. This is **Cox Head,** the highest land near the entrance. It is bare of trees, and shows the remains of an old earthwork on its summit.

The course of the river now leads past **Pond Island**, leaving it to the westward, between the **Sugar Loaves** and **Hunniwell Beach**, and toward **Fort Popham.** Passing the **Sugar Loaves,** look up to the northward and eastward into a cove or bay opening into the land just to the westward of **Stage Island.** This is

HEAL EDDY,

a shallow cove, which makes into the south shore of **Georgetown Island** just to the westward of *Sagadahoc Bay.* Like the latter, it is for the most part bare at low water, but is often used as an anchorage by vessels waiting for wind or tide.

Next to the westward of *Heal Eddy* will be seen a narrow passage separating **Long Island** from the southwestern end of **Georgetown.** This is

LONG ISLAND NARROWS,

running between **Long Island** and **Georgetown Island** for half the length of the former, after which it expands into a wide bay, called

TODD BAY,

almost wholly dry at low water. *Todd Bay* is partly separated from *Kennebec River* by **Long Island** and a narrow wooded island to the northward of it, called **Marr Island.**

When abreast of the **North Sugar Loaf** the buildings on **Hunniwell Point** will show

plainly. Next to the fort, in prominence, is the **Ocean House**, a large wooden building surmounted by a railed observatory and a flag-staff. The house is gradually falling to decay. It stands on the shore just to the southward of the fort.

Passing **Fort Popham**, a wide bay will open to the westward, extending to the southward and westward, between **Cox Head** on the north and **Hunniwell Point** on the south. It is called

ATKINS BAY,

and is nearly all bare at low water. It is one mile and a quarter in length, and its width at its entrance is five-eighths of a mile. The southern end of the bay is only a little over a quarter of a mile from the outer beach. The flats in this bay are covered with fish-weirs, which extend out almost to the edge of the channel. Considerable trade is done here in shad and salmon. The course of the river now leads between **Gilbert Head** on the right and **Cox Head** on the left.

GILBERT HEAD

is, as before stated, the southern end of **Long Island**. (See page 518.) It is a high rocky bluff with a few trees on it. This is one of the narrowest places on the river, it being here only about three hundred yards wide, with a very strong tidal-current.

LONG ISLAND

lies along the western shore of **Georgetown Island**. It is a little over a mile long, but in no place wider than three hundred and fifty yards, its surface hilly and undulating, partly wooded, partly cleared, and with a few houses on it. The northern point is low and narrow, and has a few stunted fir and spruce upon it.

COX HEAD

is the eastern extremity of a very irregular-shaped peninsula on the western shore of the river, making out from the main land to a distance of nearly half a mile. The southern shore of this peninsula makes the northern boundary of *Atkins Bay*, while its northern face by its peculiar shape forms a small, nearly circular cove, bare at low water, called *Wyman Bay*. It is also occupied by fish-weirs.

The eastern face of **Cox Head** is very bold-to, and may be approached closely with four fathoms of water.

DIX ISLAND.

This small rock island lies just clear of the north point of **Cox Head**, with which at low water it is connected. Its southern end is quite low, bare of trees, and has a few houses upon it. The northern end is higher. This island lies three hundred and fifty yards from shore, and exactly on the end of the flats. It forms, with **Cox Head**, the eastern shore of *Wyman Bay*.

Passing **Dix Island**, come to

MARR ISLAND,

which lies one-eighth of a mile to the northward of the north point of **Long Island**, on the eastern side of the channel. It is very narrow, but three-quarters of a mile long. Spruce and fir in a sparse and stunted growth are the only trees upon it. The northern end is low and nearly bare. Between **Marr Island** and **Long Island** is the entrance to *Todd Bay*, contained between those two islands and the shore of **Georgetown**.

PERKINS ISLAND.

One mile above **Cox Head**, and nearly in the middle of the river, lies a small rocky island, wooded mainly with fir. This is **Perkins Island**. It may be passed on either

hand, as there is a deep channel with seven fathoms water to the eastward of it, between it and **Marr Island**; but the main channel is on its western side. When nearly up with **Perkins Island** a large cove or bay will open to the westward, at the head of which will be seen a village with several saw-mills. This village is called

PARKER HEAD VILLAGE,

from the name of the high bluff head on the north side of the cove, which is called **Parker Head.** Some lumber trade goes on at this village, there being a large pond and dam, and a channel with ten feet up to the anchorage. The channel now leads between **Perkins Island** and **Parker Head,** and a long cove or bay will open on the eastern side of the river one mile above **Perkins Island.** The shores on both sides are bluff and wooded, but not very bold—flats making off on either hand. Two precipitous heads mark the entrance to this bay, and in the centre will be seen two small low islands.

This passage is the mouth of *BACK RIVER*, which separates **Georgetown** and **Arrowsic Islands.** It begins in *Hockomock Bay*, in the *Sasanoa River*, and takes a general course of S S W. for five miles to its junction with the *Kennebec*. At its junction with the *Sasanoa* it is dry at low water, but eight feet at mean low water may be taken from the *Kennebec* up the river for three miles and a half. The channel is narrow and crooked, and obstructed by flats and ledges.

The high head on the north side of the entrance to *Back River* is called **Bald Head.** It is a very prominent headland, forming the southern end of

ARROWSIC ISLAND,

which lies between *Back* and *Sasanoa Rivers* on the east and the *Kennebec* on the west. Its shore forms the east bank of the last-named river from **Bald Head** to **Bath.** It is six miles long and of a very irregular shape, is well settled and cultivated.

The channel of the *Kennebec* leads past **Bald Head,** and between the south shore of **Arrowsic** and the **Phipsburg** land. Here the river narrows to a width of only one-quarter of a mile, and three-quarters of a mile to the westward of **Bald Head** it passes between a low partially cleared point called **Weasel Point,** on the west, and a bare rocky hill on the east, called **Squirrel Point,** the southwestern point of **Arrowsic.**

Opposite to **Squirrel Point** will be seen another village, surrounded by cleared and cultivated lands. This is

PHIPSBURG CENTRE.

It is of little importance, except from its vicinity to the saw-mills in *Drummore Bay*, just above it. It is a little over two miles above **Parker Head Village** and about four below the city of **Bath.** About a mile and a quarter above it, and on the same side of the river, are situated a number of saw-mills worked by water-power, and called **Drummore Mills.** The shore makes a broad sweep to the westward just above **Phipsburg,** and forms a shallow cove, called

DRUMMORE BAY,

at the head of which stand the mills. The eastern shore of this bay is formed by a rocky island, partially wooded, and with partly-cleared gently-sloping shores at its southern end. On its western face are meadow and marsh lands. The bay is nearly all dry at low water, but at high water there are three entrances to it. The main channel is close along the **Phipsburg** shore, passing to the westward of a small, low, bare island surrounded by ledges, called **Goat Island.** There is also a passage north of **Goat Island** with ten feet across the ledges, and a third between the main shore and the northern end of the large island forming the eastern side of the bay, which is called

LEE ISLAND.

It is three-quarters of a mile long, and lies nearly N N E. and S S W. At its southern end the shores are partly cleared and slope gradually to the water, while the eastern face is precipitous and bold. The slopes are wooded with a stunted growth of fir and a few spruce trees. Near the north end of **Lee Island**, exactly in mid-river, lies a low, grassy islet, known as

RAM ISLAND.

There is a good channel on each side of it, either of which may be used, according as the tide serves. That to the eastward has ten fathoms of water, that to the westward has six fathoms and a quarter. Several small bare rocks lie a quarter of a mile to the southward of it. They are called **Pettis Rocks.** There is a good channel on each side of these rocks; but the one mainly used is between them and **Lee Island**, with nine fathoms of water.

Passing **Ram Island**, the course of the stream continues about N. by E., with a width of three-eighths of a mile, past the northern entrance to *Drummore Bay* on the west; past a low marshy point three-eighths of a mile above **Ram Island**, called **Indian Point,** also on the west shore; and there will be seen ahead a bold, rocky, precipitous bluff, apparently in the middle of the river. This point is

BLUFF HEAD.

It is one mile above **Ram Island** and two miles below **Bath.** What appears to be the widest branch of the river, that on the right of the bluff, is really a shallow cove, called *Fisher Eddy*, used by vessels when obliged to anchor on account of unfavorable tides. At **Bluff Head** the river is only about two hundred and fifty yards wide, with a depth in the channel of between fourteen and seventeen fathoms. The velocity of the tidal-current, especially on the ebb, is therefore very great, and *Fisher Eddy* offers the only convenient place for anchorage. There is somewhat of a settlement at this cove, on its southern shore.

From **Bluff Head** the river, with a width of from two hundred and fifty to three hundred and seventy-five yards, continues in a northerly direction for one mile. And here opens another good anchorage, *on the western shore*, called *Morse Cove*, with good holding-ground, clear of the current, in four fathoms at low water.

A little over a quarter of a mile above *Morse Cove* the river suddenly turns to the westward, running nearly at right angles to its main course, with a width of from three hundred to three hundred and fifty yards and a very powerful and dangerous current.

This abrupt turn is called

FIDDLER REACH,

and is one of the most dangerous places in the river. The reach is about half a mile long, with dangerous cross-currents and eddies until past the gently-sloping point of cleared land on the north side of the reach and the river is opened in its course to the northward beyond it. This point is called **Doubling Point.** When abreast of it a wide cove will open to the westward, at the head of which will appear a number of saw-mills and a surrounding settlement. This is *Winnegance Creek*, and the settlement is known as **Winnegance.** A considerable lumber trade goes on here. To the northward of the mills, and directly ahead when passing **Doubling Point**, will be seen a low point surrounded by marsh land. This is **Hospital Point.** Here the river turns again as abruptly as before, and the channel, passing between **Doubling Point** on the east and

Hospital Point on the west, takes a due N. by E. course past the city of **Bath,** which occupies the whole of the western shore from **Hospital Point** to **Telegraph Point,** four miles above.

At **Bath** the average width of the river is about three-eighths of a mile. There is good anchorage anywhere off the wharves; *the ledges are all buoyed*, and the holding-ground is very good.

The *SASANOA RIVER* joins the *Kennebec* abreast of the centre of the city, coming in between **Preble Point,** the north point of **Arrowsic**, and **Towesic Point,** the southern end of **Woolwich.** A steam ferry-boat plies between **Bath** and **Woolwich**, and a line of steamers, built specially for the service, affords daily communication between **Bath**, the *Sheepscot*, and *Booth Bay*.

TELEGRAPH POINT,

the northern extremity of the city of **Bath**, is a high, bluff, and precipitous point nearly opposite to the village of **Woolwich.** Here the river has a width of about two hundred and fifty yards, with a deep channel and strong current, and passing **Telegraph Point** rapidly widens again, forming a sort of basin three-quarters of a mile wide, but full of islands, which contract the channels and make them difficult of navigation.

Telegraph Point receives its name from the fact that the telegraph wire here crosses the river, being stretched between two poles, one on the **Woolwich** side and one on the summit of this point, thus elevating it sufficiently for vessels to pass under it.

After passing **Telegraph Point** keep the eastern shore aboard, or turn to the westward among the islands. The latter is the main channel, and is called *WEST BRANCH*. The eastern passage is called *EAST BRANCH*, and is narrow and crooked at its northern end. In the middle of the river, on passing **Telegraph Point**, there will be seen a large island, partly cleared and settled, but wooded here and there with oak, birch, maple, and pine. The land is of moderate height, and slopes gradually toward the water. This is

LINES ISLAND,

and divides the channel of the river into its *East* and *West Branches*. It lies N. by E. and S. by W., and is three-quarters of a mile long. Off its southeast point, about a hundred yards distant, is a small low island, called **Thorne Island.** Here begins the *East Branch*, running between **Thorne Island** on the east and **Woolwich** on the west, with a width at the entrance of about two hundred yards. Passing **Thorne Island**, it continues between **Woolwich** shore and **Lines Island** for half a mile to the north end of **Lines**, where it rejoins the main river by a narrow and much obstructed channel, called *BURNT JACKET CHANNEL*.

If intending to pass up by the *Western Branch* of the channel, round **Telegraph Point** close-to and steer to the westward, when first pass to the northward of a low island, called **Wood Island,** going between it and **Thorne Island.** This islet is wooded with birch, spruce, oak, and maple. Only a hundred and fifty yards to the westward of it lies another islet, low and grassy, which also leave to the southward. This is **Crawford Island.** Two hundred yards to the northwestward of **Crawford** is another low bare islet, called **Ram Island,** the last of the group. The channel passes between **Ram Island** and the southwestern point of **Lines Island**, and then turns to the northward, running between **Lines Island** and the main land, until it joins the main river.

THE CHOPS.

Five-eighths of a mile north of **Lines Island** the river takes a turn to the northwestward and passes between two prominent points which here contract the channel to a

width of only about two hundred and seventy-five yards. This passage is called *THE CHOPS;* and here a very strong tidal-current rushes through, especially on the ebb-tide. The shore on the northeastern side of the *Chops* is moderately high, cleared, and settled. The point on the southwestern side is called **Chops Point,** and is wooded with pine, spruce, and a variety of hard-wood trees.

Passing the *Chops*, the channel turns to the northeastward; but here the shores fall away to the southward and westward and form a very large though shallow bay, communicating with the *ANDROSCOGGIN RIVER*, called

MERRYMEETING BAY.

It is full of shoals, and is entirely unfit for strangers. Into its north side flows a very shallow stream, called *ABAGADUSSET RIVER*, into which only two feet can be carried through a narrow and crooked channel. Into its northwestern corner flows the *CATHANSE* or *CATHANCE RIVER*, which leads to **Bowdoinham,** about a mile and a half above its mouth; and at its southern end the *Androscoggin River* discharges itself through narrow and shallow channels with not more than a foot of water at low tides. The bar at the entrance to *Cathanse River* has only one foot at mean low water and is bare at low spring tides. The

ANDROSCOGGIN RIVER

has a general course about S W. for nearly four miles, between gently-sloping banks of moderate height, diversified with cleared lands and groves of trees. Then it takes an abrupt turn nearly at right angles, running nearly N W. about a mile and a half to the town of **Brunswick.** The channel of the river is much obstructed and greatly diminished in width by several islands, which occupy the largest part of the river-bed and render the channel extremely narrow and crooked.

Two bridges cross the stream—one called **Bay Bridge**, about two miles above its mouth, where **Mustin Island** lies in the middle of the river; and one at **Brunswick**, which carries the Androscoggin railway.

No stranger can enter this river or *Merrymeeting Bay* without a pilot.

Above the *Chops* the *Kennebec* takes a N E. by N. course past the mouth of *Merrymeeting Bay* to **Abagadusset Point,** which is low, with a somewhat steep face, and for the most part cleared and cultivated. This point is the southeastern extremity of a large and fertile peninsula on the north side of *Merrymeeting Bay* and the east side of the *Kennebec River*. *Abagadusset River* separates it from the main land to the westward. The river is here not quite three-eighths of a mile wide, but there is a good channel with from three to five fathoms at low water. Above **Abagadusset Point** the river is somewhat wider, and has a general course about N N E. for a mile and a half, to

SWAN ISLAND,

which occupies the middle of the stream for a distance of three miles, dividing it into two narrow channels. The island is three miles long, with an average width of half a mile; lies N E. by N. and S W. by S., and shows at its south end a somewhat steep face about twenty feet high, behind which the land rises to a hundred and forty feet. This southern end shows cleared fields backed by thick woods; the western shore of the island is also mostly wooded, but the east side is in most places cleared and cultivated. The main channel of the river runs to the eastward of the island, and not less than ten feet at low water may be taken above **Richmond.** Seven feet is the best that can be carried up to **Richmond** through the western channel.

WESTERN BRANCH,

which leads to **Richmond**, is very narrow, having an average width of an eighth of a

mile, while at the village it is only about one hundred and twenty yards wide. It enters between **Swan Island Point** (the southern extremity of **Swan Island**) on the north and **Maxwell Point**, a steep bluff point of the main land, on the south. **Maxwell Point** is about one mile above **Abagadusset Point**.

From its entrance, *Western Branch* has a general course NE. by N. for about three miles and a quarter to the village of **Richmond**, built on its west bank. The west banks are undulating, but in general show steep faces about twenty feet high, behind which cleared and cultivated lands rise gradually to heights varying from forty to one hundred and twenty feet. The northwestern end of **Swan Island** shows a steep bluff eighty feet high, and cleared opposite to the village. Only seven feet at mean low water can be carried up to **Richmond** through this channel, as there are bars with from seven to nine feet on them at intervals along its course. The shoalest bar is about half a mile below the village and a little above *Hatch Rocks*. It has seven feet on it.

EASTERN BRANCH

runs between **Swan Island Point** and **Hathorne Point** on the east bank of the *Kennebec*. Its general course is about NE. by N. for a little over two miles to the *NARROWS*, which are formed by **Little Swan Island**, lying along the eastern shore of **Swan Island** a little over a mile below its northern end. This island is wooded except on its summit, which is forty feet high, cleared, cultivated, and has a group of houses on it. Through the narrow channel between the two islands six feet can be carried, and not less than three fathoms through the *Narrows*.

At the *Narrows* the channel turns abruptly to the westward, running nearly NW. for about a quarter of a mile through a narrow and intricate channel obstructed by bare rocks and sunken ledges. Through this channel the least water is three fathoms. At its western end it turns abruptly about NE. by N. for three-quarters of a mile, and unites with the *Western Branch* at the north end of **Swan Island**.

From **Swan Island** the river continues to the northward, with courses varying from NNW. to NE. for nine miles, to **Gardiner**, which is also situated on the west bank. Its width varies; but, except near the ice-houses, its average breadth may be taken as four hundred yards. Just above and below the ice-houses it widens out to three-eighths of a mile; at **Gardiner** it is only two hundred yards wide. Eight feet may be carried up to **Gardiner**—the channel being obstructed by a bar just below **Naumkeag Island**, and about five miles above **Swan Island**. This bar, over which eight feet can be taken, having been passed, there is not less than two fathoms to **Gardiner**.

EASTERN RIVER

is the name of a branch which makes in to the northeastward from the *Kennebec River* a little above **Hathorn Point**, on the *Eastern Branch*. It flows through a narrow and crooked channel in a northeasterly direction, with a width of about one hundred and fifty yards; and six feet can be carried up it to the second bridge, four miles above its mouth.

The shores of the *Kennebec* above **Swan Island** are almost all cleared and under cultivation, small groves extending like spurs at intervals between the cleared fields. The land varies in height from twenty to one hundred and forty feet, and in general has a very gradual rise. The village of **Hallowell** is on the west bank, about five miles above **Gardiner**; and **Augusta** is also situated on the west bank of the river, about seven miles above **Gardiner**, and about twenty-seven miles above **Bath**. There is an immense lumber trade on this river, in which all of the towns on its banks are greatly interested.

DANGERS
IN APPROACHING AND ENTERING THE KENNEBEC RIVER.

I. *Coming from the eastward.*—The first danger met with, in approaching the *Kennebec*, is

THE BANTAM,

which is bare at low water. It lies S W. by S. ½ S. from **Damiscove Point**, one and a half miles distant, and is marked by an *iron nun-buoy* of the second class, painted red, and marked No. 2. The buoy is in good water about one hundred yards S W. from the rock. (See page 475.)

TOM ROCK

lies W. by N. ½ N. from the *Bantam*, four miles distant; a very dangerous sunken ledge, (see page 491.) It is directly in the way of vessels bound into the *Kennebec* from the eastward, and has only nine feet at low water. *A red spar-buoy*, marked No. 2, is placed in deep water on the southwestern side of the ledge. This rock bears N E. by E. ½ E. from **Seguin Light-House**, distant two miles and three-eighths; from **Griffith Head** S. ½ W., distant three miles; and from **Cape Newagen** S W. ½ W., nearly four miles distant.

After passing *Tom Rock*, the next obstruction met with lies on the western side of the channel, and is called

WHITE LEDGE.

It has eight feet at low water; lies N E. by N. from the northern end of **Seguin Island**, and one mile distant; and W. ½ N. from *Tom Rock*, one mile and a half distant. *A black spar-buoy*, (No. 1,) with the letters W. L. painted in white upon it, is placed about fifty feet east of the eastern point of the ledge.

Passing *White Ledge*, the course leads clear of all obstructions until nearly up with **Pond Island**, when avoid the

WHALE BACK,

on the northeastern side of the channel, two hundred and eighty yards S S W. from **Salter Island**. **Whale Back** is an islet two hundred yards long and one hundred broad, and in thick weather is very dangerous. There is a passage between it and **Salter Island**, but it is narrow, crooked, and unsafe. The rock may be approached quite closely in clear weather, on the *Kennebec* side, with not less than four fathoms of water.

FOUR-FATHOM ROCK,

dangerous only in heavy weather, is the next obstruction. It lies almost exactly in mid-channel, between the north point of **Pond Island** and **Whale Back**. From **Stage Island** it bears nearly SOUTH, one quarter of a mile distant, and from **Pond Island Light-House** E. ½ N., one quarter of a mile. Four fathoms at mean low water are found on this ledge. ***It is not buoyed.***

THE SUGAR LOAVES.

After passing **Pond Island** there will be seen ahead, and nearly in mid-river, two bare rocky islets surrounded by shoals. These are the **Sugar Loaves**. The southern one, called **South Sugar Loaf**, is in mid-channel, a quarter of a mile east of **Hunniwell Beach**, and about the same distance west of **Stage Island**. It is surrounded by shoal water; the flood sets strongly on it, and it should be carefully avoided.

Three hundred and fifty yards N W. from it is the **North Sugar Loaf**, another small bare rock, about one hundred and fifty yards in diameter and nearly round. Ebb-tide sets upon it, and it is surrounded by shoal water. There is a deep passage, however, with four and a half fathoms, between the two rocks. **North Sugar Loaf** should

receive a berth to the eastward, from vessels passing to the westward of it, of at least one hundred yards. Those passing to the eastward of it should not approach it nearer than seventy-five yards. **South Sugar Loaf** should receive a berth to the eastward of seventy-five yards, and those passing on the eastern side of it should give it a berth of one hundred and fifty yards; for between seventy five and eighty yards to the eastward of the north end of the rock is a dangerous ledge, known as

BLACK-JACK ROCK,

or simply *Jack's Rock.* It is bare at low water, and was formerly marked by an iron spindle with a cage on top. This spindle has been carried away (1869) and had not been replaced in 1872. The rock is only dangerous to vessels passing to the eastward of the **Sugar Loaves.**

FIFTEEN-FEET SPOT

is also in the way of vessels passing on the eastern side of the **Sugar Loaves.** It bears N. by E. ½ E. from the **South Sugar Loaf,** and is distant from it one hundred and fifty yards. After passing the **Sugar Loaves** give **Hunniwell Beach** a berth of one hundred and fifty yards, and there are no more dangers until past **Fort Popham.**

The flats of Atkins Bay, which make out almost to the line of **Cox Head** and **Hunniwell Point,** nearly always show themselves by discolored water. They are easily avoided, however, by not going inside the line of **Cox Head** and the **Fort.**

SHAG ROCK.

After passing **Gilbert Head,** and when nearly up with **Cox Head,** a bare rock surrounded by shoal water is reached, lying about one hundred and fifty yards off the **Long Island** shore, and called **Shag Rock.** *It is not buoyed,* but a buoy or spindle has been recommended to be placed upon it.

After passing **Shag Rock** the channel is clear approaching **Perkins Island.** The edges of the channel are plainly marked at low water by the flats between **Parker Head** and **Cox Head** on the west and between **Marr Island** and **Long Island** on the east. These flats are almost always distinguishable from the deep water by the color of the water upon them. To avoid them when they do not show themselves vessels must not, when standing to the eastward, go inside of the range of **Bald Head** and **Perkins Island,** and when standing to the westward, must go about when in line between **Dix Island** and **Parker Head.** But when up with **Dix Island,** a *spar-buoy* will be seen about half a mile ahead. This buoy marks

PERKINS ISLAND SOUTH LEDGE,

or *Perkins Island Ledge* as it is sometimes called.

This ledge is a quarter of a mile S S W. from **Perkins Island;** nearly four hundred yards **WEST** from the middle of **Marr Island;** and one mile **NORTH** from *Shag Rock.* It is a detached rock, with eleven feet at mean low water and nine feet at low spring tides, with five fathoms of water on all sides of it. *A spar-buoy, painted in black and red* horizontal stripes, is placed on the southern point of the rock. It is customary in going up river to leave this buoy to the eastward.

PERKINS ISLAND NORTH LEDGE.

Three-eighths of a mile to the northward of the *South Ledge,* and exactly opposite to the middle of **Perkins Island,** is another ledge exactly in the middle of the river. This is *Perkins Island North Ledge,* and has seven feet at mean low water. It is marked by a *black spar-buoy* (No. 1) placed on the southeastern side of the rock. The best channel

is between this buoy and **Perkins Island**, although, as the rock is detached and has six fathoms of water on all sides of it, vessels sometimes go between it and **Parker Head**. This ledge is sometimes known as *Parker Ledge.*

PARKER FLATS

extend off from the west bank of the river, between **Parker Head** and **Weasel Point**. Vessels of over ten feet draught should not approach the west shore between these two points nearer than three hundred and seventy-five yards until, coming near **Weasel Point, a spindle with cylinder on top** is seen placed about one hundred yards off the shore and about four hundred yards below **Weasel Point**; go close to this spindle, and above it the shore may be safely approached within one hundred yards until up with **Weasel Point.** This spindle is on

SEAL ROCKS,

two rocks almost always bare, lying about one hundred yards from the west shore, one mile and a quarter above **Parker Head** and a quarter of a mile below **Weasel Point. Bald Head** is almost exactly opposite. **An iron spindle with copper cylinder on top, painted black,** is placed on the outermost of the two rocks.

On the eastern shore, after passing **Perkins Island**, vessels must not go inside of the line from the north point of **Marr Island** to the south point of **Bald Head**; and when up with the **Head**, they must not go inside of the line from it to **Squirrel Point.** Thus the flats which make off from **Georgetown Island**, the mouth of *Back River*, and the southern shore of **Arrowsic Island**, will be avoided. **Squirrel Point** is, however, tolerably bold.

Above **Weasel Point**, give the west shore a berth of one hundred and fifty yards until near **Goat Island.** Here take care to avoid a bad rock, called

GOAT ISLAND ROCK,

which lies one hundred and fifty yards to the southward of **Goat Island**, is bare at low water, and forms the southern extremity of the line of ledges and shoals which make off from the south end of **Lee Island** to a distance of three-eighths of a mile. *Goat Island Rock is not buoyed.*

LEE ISLAND ROCK.

When up with **Goat Island, a spindle** will be seen near the shore of **Lee Island.** This is on *Lee Island Rock*, awash at mean low water, lying between eighty and ninety yards from the shore, near the south end of the island. There are five fathoms of water close up to the **spindle, which is iron, painted red, with a black ball on top. Lee Island Rock** is not connected with the shore, as there is good water between it and the island. The passage, however, is too narrow to be of use.

PETTIS ROCKS.

Between **Lee Island** and the eastern shore of the river, and as far up as **Green Point,** we find the middle of the river occupied by a line of marshy and rocky islets. The northernmost and largest of these islets is called **Ram Island,** (see page 521,) and the others are known as **Pettis Rocks.** They lie N N E. and S S W. **Pettis Rocks** extend a quarter of a mile in that direction, leaving a narrow channel between their northern end and **Ram Island.** This island is also surrounded by shoal water, and **NORTH** from its north point, one hundred and twenty-five yards distant, lies a rock called

RAM ISLAND ROCK,

which is bare at one-quarter ebb. It is marked by a spindle, painted red, with two red balls on top. It may be left on either hand, but it is customary to leave it to the eastward.

After passing *Ram Island Rock* the channel is clear, and it is only necessary, between **Green Point** and **Bluff Head**, to give the **Arrowsic** shore a good berth, say of two hundred yards. But the shoal is gradual, and the lead will inform when it is time to go about. Above **Bluff Head** there are no obstructions, and the shores are bold until past *Morse Cove*, when beware of

LITHGOW ROCK,

which has eight feet at mean low water. It lies nearly in the middle of the river, just above the northern point of *Morse Cove*, and is marked by a *black spar-buoy* (No. 3) placed on its southern point. It may be passed on either hand, but it is usual to pass to the eastward of it.

After passing through *Fiddler Reach*, give **Doubling Point** a berth of one hundred and fifty yards to avoid a long spit which makes out from it. There is then nothing in the way until up to

LINCOLN LEDGE,

lying nearly in mid-river, off the lower end of the city of **Bath**. It has four feet at mean low water, and is marked by a *black spar-buoy* (No. 5) placed on its eastern side. There are five fathoms inside of it, between the rock and the line of wharves.

TRUFANT LEDGES.

Six hundred and fifty yards above *Lincoln Ledge*, and close in with the shore, a group of ledges, some always bare, and some bare at low water, lie off the south end of **Trufant Wharf**. These are **Trufant Ledges**. They are marked by a *black spar-buoy* (No. 7) placed in two fathoms on the eastern side.

On **Trufant Point** there is a steam saw-mill and ship-yard, which will serve to prevent a stranger from mistaking the ledges for *Lincoln Ledge*.

WINSLOW ROCKS.

Above **Trufant Ledges** the river is clear for one mile and three-quarters, when a mass of shoals, occupying two-thirds of the width of the river, is reached—some of them dry at low water, others with from six to eighteen feet on them at low tide. These are *Winslow Rocks*. The dry ledge is marked by an iron spindle with a red top in the form of a cask, which pass to the eastward of, bound up with a fair wind, and give it a berth of at least two hundred yards. The deepest channel, which has ten fathoms, here runs close along the eastern shore of the river, which is quite bold-to, and vessels need only keep this shore close aboard to avoid all of the shoals of *Winslow Rocks*.

Vessels of not over twelve feet draught may leave the spindle to the eastward, and will not have less than sixteen feet at mean low water. This is the channel commonly used, especially on the flood-tide. But heavy-draught vessels, with a fair wind, should keep the eastern shore aboard.

STETSON ROCKS.

Half a mile above the spindle on *Winslow Rocks* lie three bad rocks nearly in mid-river, called *Stetson Rocks*, and are marked by a *red spar-buoy* (not numbered) placed on the shoal in eleven feet water. The southern rock is always awash; the northern one is bare at low spring tides; the western rock has six feet at mean low water. The widest channel is to the westward of them, so the buoy is usually left to the eastward; but with a fair wind it is perfectly safe to go to the eastward, as simply keeping the **Woolwich** shore close aboard clears of all danger, in ten fathoms of water.

From *Stetson Rocks* to the *Narrows* there are no dangers; but on passing through the *Narrows* a long ledge will be encountered making off from **Lines Island** nearly to **Telegraph Point**, and having a *black spar-buoy* on the southeastern end. This is called

THORNE ISLAND LEDGE.

In some places it is nearly bare, and from **Lines Island** to the buoy it is half a mile in length. Its general direction is N W. and S E. The buoy is at the dividing line between the *East Branch* and *West Branch Channels*, and is to be left to the westward by those bound up *East Branch*, and to the eastward by those following the *West Branch.*

Strangers must not attempt the passage of the *East Branch*, however, as the *Burnt Jacket Channel* at its northern end is much obstructed, and dangerous for those unacquainted with the currents and the locality of the ledges.

In passing through the *West Branch*, there are no obstructions after passing *Thorne Island Ledge* until nearly abreast of the middle of **Lines Island.** Here lies a group of bare rocks about a quarter of a mile from the western shore. They always show themselves, and to avoid them it is only necessary to keep close to the shore of **Lines Island.** To the westward of these rocks the water is shoal and the bottom rocky and broken.

GRACE ROCK.

Three hundred yards NORTH from **Lines Island** lies a detached rock, bare at low water, called *Grace Rock.* A *red spar-buoy* (No. 4) is placed on its western edge in eleven feet at mean low water.

After passing *Grace Rock* steer gradually over to the eastern shore, so as to give the eastern side of **Chops Point** a berth of at least two hundred and fifty yards, to avoid *a shoal with ten feet at low spring tides* which makes off from the eastern side of the point in a southerly direction. When the *Chops* are fairly open this danger is passed, and steer through them, the passage being entirely unobstructed and both shores very bold-to.

The eastern shore of the river, from **Lines Island** to the northern point of *Chops Entrance*, is also somewhat obstructed. Ledges and shoals lie off the **Woolwich** shore, and it should not be approached nearer than two hundred and fifty yards.

At the **North Point** of the *Chops* it is, however, quite bold.

TROTT ROCK.

After passing through the *Chops* the channel leads to the northeastward, keeping the eastern shore aboard. Three-eighths of a mile above **North Point** of *Chops* there is a *spar-buoy*, (No. 6,) *painted red*, which marks *Trott Rock*, which has five feet at mean low water. The usual course is to leave the buoy to the eastward; but vessels may go to the eastward of the ledge by keeping the eastern shore of the river close aboard.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING THE KENNEBEC RIVER, COMING FROM THE EASTWARD, AND FOR PROCEEDING UP THE RIVER TO THE CITY OF BATH.

When off the mouth of the *Sheepscot*, in thirty-five fathoms, with **Hendrick Head Light** bearing **N.** by **E.** ½ **E.** and **Seguin Light WEST**, two and three-quarters miles distant, bring **Pond Island Light** to bear **N W.** by **W.** and steer for it, carrying not less than six fathoms of water, until the flagstaff on the **Ocean House** at **Hunniwell Point** bears **N W.** by **N.** ½ **N.** When about a quarter of a mile from **Pond Island**, in six and a half fathoms, then steer **N W.** by **N.**, carrying not less than eight fathoms, until abreast of the southern end of **South Sugar Loaf**, which leave two hundred and fifty yards to the eastward, and steer **N.** by **W.** ½ **W.** for the bare summit of **Cox Head**; and when abreast of the northern angle of **Fort Popham**, if desiring an anchorage, steer into *Atkins Bay*, rounding the

point close-to, and anchor in from three to nine fathoms, soft muddy bottom. On this last course not less than five and a half fathoms can be carried.

There is a Government mooring-buoy here, which marks the most sheltered anchorage. As a general rule, however, do not anchor inside of a line drawn from **Sabino** to **Cox Head**, as the flats make off nearly to that line. The bottom is, however, soft, and no harm will happen to vessels which may take ground upon the flats. This anchorage, except at the mooring-buoy, is uncomfortable and somewhat dangerous, owing to the whirls caused by the rapid currents in this vicinity. Vessels are not advised to anchor here, but if desiring anchorage should run up to *Parker Flats* before coming to. *But if bound up to* **Bath**, continue the course N. by W. ½ W. until just past the north end of **Hunniwell Point** and in about seven fathoms, when steer N. ½ E., which will bring, with not less than seven fathoms water, to the *black and red buoy* on *Perkins Island South Ledge*. Leave this to the eastward close-to, and steer N. by E. EASTERLY for **Bald Head**, carrying not less than six fathoms, and leaving the *black buoy* on *Perkins North Ledge* to the westward. When off the mouth of *Back River*, with **Squirrel Point** bearing N. by W. ½ W. and **Crow Islands** N E. by N., steer N N W. nearly, with not less than four fathoms, until past the latter point; when abreast of **Phipsburg Centre**, and if bound into *Drummore Bay*, continue the course N N W., leaving **Goat Island** to the eastward until that island bears N N E. But if bound to **Bath**, when past **Squirrel Point** steer N E. by N. ½ N. for **Bluff Head**, leaving **Goat Island Rock** and **Lee Island Rock** to the westward, and **Pettis Rocks** and *Ram Island Rock* to the eastward, and carrying not less than six fathoms of water. When abreast of the **spindle** on *Ram Island Rock*, haul a little over toward the eastern shore if the tide be flood, to avoid being set on to **Indian Point**. When up with **Bluff Head**, keep the middle of the river, in from fourteen to twenty fathoms water, until up with *Morse Cove*, when the eastern or western shore should be kept aboard, according to tide, to avoid *Lithgow Rock*. *Fiddler Reach* cannot be passed without a good fair tide or a very strong fair wind, but there are no obstructions in the *Reach*, and it has fourteen fathoms water. Give **Doubling Point** a good berth, (say two hundred yards,) and then keep the middle of the river, only avoiding *Lincoln* and *Trufant Ledges*, which are marked by buoys, and anchor at discretion off the town, in from five to seven fathoms, good holding-ground.

The above courses must be made good, and it will be necessary to alter them according to tide.

Above **Bath** strangers must not go without a pilot. No intelligible sailing directions can be given for either **Richmond**, **Gardiner**, or **Augusta**.

DANGERS
IN APPROACHING THE KENNEBEC RIVER.

II. *Coming from the southward and westward.*—In approaching the *Kennebec* from the southward, there is nothing in the way but

MILE LEDGE,

which is situated nearly one mile S. ½ W. from **Seguin Light-House** and three-quarters of a mile from the south point of the island. It has eighteen feet at mean low water, and is marked by an *iron can buoy* of the second class, *painted with black and red* horizontal stripes, and placed in seven fathoms of water about one hundred yards SOUTH from the ledge. In heavy southerly or easterly weather the sea breaks on this ledge with great violence. But coming from the westward, when nearing **Cape Small Point**, there will be seen ahead a ledge breaking heavily. This is

BALD HEAD LEDGE.

It lies off the bare head so called, just to the westward of **Cape Small Point**; is bare at half-

tide; is three-eighths of a mile S. by W. ½ W. from **Bald Head**, and W. ½ N. three-quarters of a mile from **Cape Small Point.** The range for clearing it is to keep **Seguin Light** open to the southward of **Fuller** or **Glover Rock**; or, if going to the northward of **Glover Rock,** and between the ledge and **Bald Head,** do not go to the southward of **Seguin Light,** seen over the southern end of **Small Point.** This is a very dangerous ledge. It always breaks, even in the calmest weather, and it lies exactly in the track of vessels bound either way past **Small Point,** as nearly all pass to the northward of **Glover Rock.** Passing *Bald Head Ledge,* the next danger is the

BILL WALLACE GROUND,

which is a shoal place with a pinnacle rock upon it, which has seventeen feet at low water. This rock is very small and has no buoy. The bearings for the shoalest water are **Seguin Light-House,** over the southern point of **Fuller** or **Glover Rock,** and *Bald Head Ledge* and **Mark Island** in range. On this range one cast of seventeen feet is obtained. Heavy-draught vessels must avoid this rock by keeping **Seguin Light** open to the southward of **Glover Rock.**

Vessels using the channel between **Cape Small Point** and **Glover Rock** must beware of

THE BUTTON-MOULDS,

two sunken ledges with ten and sixteen feet, respectively, lying in mid-channel a little to the westward of a line drawn from **Cape Small Point** to **Glover Rock.** They bear as follows:

From **Glover Rock** N W. ½ W., distant nearly one-quarter of a mile; from **Bald Head** S E. ½ E., distant three-quarters of a mile; from the summit of **Cape Small Point** S W. by S. ½ S., distant nearly a quarter of a mile. *They are not buoyed.* To avoid them keep the **Small Point** shore aboard, or do not go to the southward of **Seguin Light** bearing E. ½ S.

GLOVER ROCK

is a bare rocky islet, known by the above name to the residents of **Cape Small Point** and vicinity, but called **Fuller Rock** on the chart. It lies a little over a quarter of a mile SOUTH from **Cape Small Point,** and between the two is a good channel, with from three to ten fathoms, very much used by coasting vessels bound either to the eastward or westward.

Glover Rock is tolerably bold-to on its NORTH an EAST sides, but on the SOUTH and WEST sides it is shoal, and must not be approached too closely.

HALIBUT ROCKS.

Five-eighths of a mile E. by N. from **Glover Rock** lie three sunken ledges, dangerous only in heavy weather and to heavy-draught vessels. Twenty-two feet at lowest tides is the least water upon them. *They are not buoyed,* but are known as *Halibut Rocks.* The schooner "Yankee Girl" was capsized by the breakers on the most northerly ledge some years ago, and all hands lost.

BOLD DICK

lies close to the main shore, and is only dangerous to vessels beating up on their in-shore tack. It is a bare rock, with shoal water extending some distance to the eastward; lies a little over half a mile from the beach, between *Morse* and *Sprague Rivers,* one mile and a third N E. ½ E. from **Cape Small Point,** and half a mile W. ½ S. from the south point of **Heron Island.**

One-quarter of a mile EAST from it lies a rock awash at low water. It has no name.

HERON ISLAND

is in reality three islands, bare and rocky, which lie in a **NORTH** and **SOUTH** direction about half a mile off the mouth of *Morse River*. (See page 541.) On their eastern side they are quite bold; but **a bare rock** and a rock awash at low water lie off the south point of the southernmost islet, at a distance of seventy-five and one hundred and fifty yards, respectively. These rocks are only dangerous to vessels beating to the eastward or westward.

Passing **Heron Island**, no obstructions are met with until up with

JACK-KNIFE LEDGE.

This very dangerous rock (see page 509) has eight feet at mean low water, and is marked by *a black spar-buoy* (No. 3) with the letters J. K. L. marked upon it in white. This buoy, in summer, is replaced by *a black can-buoy*, also marked with the letters J. K. L. It is placed about twenty-five yards **SOUTH** from the ledge. *Jack-Knife Ledge* bears **N W.** by **N.** from **Seguin Light-House**, one mile and a quarter distant; from **Pond Island Light-House S W.** by **S.**, one mile and a quarter nearly; from **Cape Small Point E.** by **N.** ½ **N.**, two miles and three-quarters; and from the easternmost of the **Fox Islands S E.** by **S.** ½ **S.**, three-quarters of a mile distant.

There is a channel with five fathoms water to the northward of this ledge, between it and the **Fox Islands**, but it is not available for strangers.

The buoy on *Jack-Knife Ledge* often goes adrift, owing to the heavy sea and insecure holding-ground. Vessels should carefully watch the bearings given above to avoid being set on the ledge.

THE FOX ISLANDS

are a group of rocky islets, one of them thinly wooded, which lie off **Morse Point** at the southern extremity of **Hunniwell Beach**, and about three hundred yards from shore. At low water a bare sand-spit connects them with the beach. They are surrounded by shoal water, and it is not safe to approach them closely. The easternmost of the group is the largest, bears **W.** by **S.** ½ **S.** from **Wood Island**, with **Pond Island Light-House** in range, and is five-eighths of a mile distant from the former.

POND ISLAND BAR.

From the **Fox Islands** eastward to **Pond Island** the coast is very shoal. A very extensive bar or shoal of hard sand makes off from **Hunniwell Beach** to the southeastward for one mile, and to the eastward as far as the eastern side of **Pond Island.** This is called *Pond Island Bar.* It is a very dangerous shoal, as its exposed position causes the sea in southerly gales to break heavily upon it in three and a half fathoms. But there are many spots upon it with only four and five feet at low water, and a wide berth should be given to it even in moderate weather.

This shoal is marked by an *iron can-buoy* of the second class, *painted black*, and marked No. 5. It is not safe except in very moderate weather, and with light-draught vessels, to go between this buoy and **Pond Island.** There is a very narrow channel between **Pond Island** and **Wood Island**, with seventeen feet at low water, but it is too dangerous for strangers.

On approaching the *Kennebec* from the westward, a bare rocky islet will be seen off the north point of **Seguin.** This is

ELLINGWOOD ROCK.

It lies four hundred yards **N.** ½ **E.** from the north point of **Seguin** and one mile **S E.** by **E.** ½ **E.** from *Jack-Knife Ledge.* Its northern face is bold-to, and may be approached quite closely with safety. Half a mile **N E.** from it lies a group of bare rocks, called

SEGUIN LEDGES,

on the southeastern side of the channel, and surrounded by a shoal and rocky bottom. They are one mile E. by S. from *Jack-Knife Ledge* and one thousand yards **N E. by N.** from **Seguin Island.** Being always bare, *they are not buoyed.* Vessels should give the bare rocks a berth to the eastward of about three hundred yards.

WHITE LEDGE

lies one-third of a mile **N E.** from **Seguin Ledges** and one mile **N E. by N.** from **Seguin Island.** It has eight feet at low water, and is marked by a *black spar-buoy* (No. 1) with the letters W. L. painted in white upon it, and placed about fifty feet east of the eastern point of the ledge.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING THE KENNEBEC RIVER.

I. *Coming from the southward, or from sea.*—Bring **Seguin Light-House** to bear **N E. by N. ½ N.**, three miles distant, and steer **N N E.**, carrying not less than four fathoms of water, passing one-third of a mile to the westward of **Seguin Island,** one-quarter of a mile to the westward of **Ellingwood Rock,** five-eighths of a mile to the eastward of *Jack-Knife Ledge*, one-third of a mile to the westward of **Seguin Ledges,** three hundred and fifty yards to the eastward of the buoy on *Pond Island Bar*, half a mile to the westward of *White Ledge.* Continue this course until past *Pond Island Bar Buoy*, and **Pond Island Light** bears **N N W.** Then steer **N. ½ E.** for **Stage Island,** having **Seguin Light-House** nearly astern, and carrying from four to six fathoms. On this course continue for about three-eighths of a mile, until **Pond Island Light** bears **N W. by W.** and the flagstaff on the **Ocean House** bears **N W. by N. ½ N.** Then steer **N W. by N.** until abreast of the southern end of **South Sugar Loaf,** when proceed as directed on pages 529 and 530. But, coming from the westward, along shore, the course from **Portland Head** for **Half-way Rock** is **EAST.** This course continue until up with **Cape Small Point,** which leave one mile to the northward, and there will be fifteen fathoms. When **Glover Rock** and the **Cape** are in range, steer **N E. by E. ½ E.**, carrying not less than four fathoms, and leaving *Jack-Knife Ledge Buoy* a little over four hundred yards to the northwestward and *Pond Island Bar Buoy* four hundred yards in the same direction. When past this latter buoy, with **Pond Island Light** bearing **N. by W. ½ W.** and **Stage Island N. ½ E.**, with four and a half fathoms, steer **N. ½ E.** until **Pond Island Light** bears **N W. by W.** and the flagstaff on the **Ocean House N W. by N. ½ N.** On this course there is not less than four fathoms. Then steer **N W. by N.** until abreast of **South Sugar Loaf,** when proceed as directed on pages 529 and 530.

II. *Coming from the westward, outside, clear of everything.*—When off **Cape Elizabeth,** with the light bearing **N N W.**, three and a half miles distant, the course for **Seguin Light** is **E. by N. ½ N.** This course leads a mile and a quarter to the southward of **Small Point,** when, bringing it and **Glover Rock** in range, steer **N E. by E. ½ E.**, carrying not less than four fathoms of water, until **Pond Island Light** bears **N. by W. ½ W.**, with five fathoms water, when steer **N. ½ E.** for **Stage Island**; or, continue the course **E. by N. ½ N.** until **Pond Island Light** bears **N.** by E. and the south end of **Seguin Island E. ½ S.**, with fifteen fathoms water. Then steer **N N E.**, carrying not less than four fathoms, until **Pond Island Light** bears **N N W.**, with four and a half fathoms, when steer **N. ½ E.** for **Stage Island,** and proceed as before directed.

To pass inside of **Glover Rock** *and enter the Kennebec River:* From **Half-Way Rock** steer **E. ½ N.**, nearly for **Cape Small Point.** Give **Bald Head** a berth of five-eighths of a mile, which will leave *Bald Head Ledge* between three and four hundred yards to the north-

ward. Leave **Cape Small Point** about two hundred yards to the northward and **Glover Rock** three hundred and fifty yards to the southward. Keep the **Small Point** shore aboard to avoid the *Button-Moulds*, which lie nearly in the middle of the passage between **Small Point** and **Glover Rock.** After passing **Cape Small Point,** continue the course E. ¼ N. for the north end of **Ellingwood Rock,** in range with **Damiscove Point.** On this course there will be nothing less than nine fathoms of water. Continue it until **Pond Island Light** bears N E. ½ N. and **Seguin Light** E. by S. ¾ S., when steer N E. by E. ½ E., carrying not less than four fathoms, until **Pond Island Light** bears N. by W. ½ W., with five fathoms, when steer N. ½ E. for **Salter Island,** and proceed as before directed.

In beating up from the westward, when near **Bald Head** do not stand to the northward of **Seguin Light** in range with **Glover Rock** on an EAST bearing. This will avoid *Bald Head Ledge* and the *Bill Wallace Ground.*

When to the eastward of the range of **Glover Rock** and **Cape Small Point,** and there is a heavy sea on, do not stand to the northward of **Suguin Light,** bearing E. ¼ N., thus avoiding the *Inner Halibut Rock,* which has four fathoms on it at low water, and on which the sea breaks in heavy weather.

When near *Jack-Knife Ledge,* do not go inside of the bearing of **Pond Island Light,** N E. by N. ½ N., which will lead clear of the ledge. Remember that the flood-tide sets strongly upon it, and shape courses accordingly.

Remember, also, that the current of both flood and ebb tides set strongly upon the **Sugar Loaves,** and that the current of ebb has, at this point, a maximum velocity of at least three miles an hour.

There are always pilots to be had at **Hunniwell Point,** or at **Gilbert Head** on **Long Island.** Strangers bound up the river should always take a pilot, as the narrow limits of the channel, the consequent strong tidal-currents, and the many obstructions in the middle of the river render it somewhat difficult, especially in light winds, for inexperienced persons to keep vessels off the rocks.

With a fair tide, if caught by a calm in *Fiddler Reach,* (a not unfrequent occurrence,) tow through with a boat, simply taking care to keep off the banks on either side. With a head tide, unless the wind is strong and nearly aft, vessels must not attempt to pass the *Reach,* but must anchor in *Morse Cove.* There are no obstructions in the entrance to this cove, or in the cove itself. Stand in for the shore, and anchor at pleasure in from four to six fathoms. Near the mouth of the *Kennebec,* vessels caught by a head-tide or a calm make an anchorage in *Stage Island Bay.* (See page 516.) This bay embraces all of that sheet of water between **Salter** and **Stage Islands.** There is good holding-ground, with soft bottom, in from three to five fathoms, and no obstructions in the way except *Four-Fathom Rock.*

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Pond Island Light ..	43° 44′ 23″	69° 46′ 14″	$4^h 39^m 04.9^s$	Fixed.	54 ft.	13
Seguin Light.....	43° 42′ 25″	69° 45′ 31″	$4^h 39^m 02.1^s$	Fixed.	180 ft.	20

TIDES.

	Bath.	Hunniwell Point.
Corrected Establishment, or Average Time of High Water after Moon's meridian passage	$12^h\ 13^m$	$11^h\ 15^m$
Mean Rise and Fall of Tides, or Rise of Mean High Water above the plane of reference, (mean low water)	6.1 ft.	8.1 ft.
Mean Rise and Fall of Tides between Bath and Gardiner, 0.5 ft.		
Rise of High Water, Spring Tides, above plane of reference	6.5 ft.	8.9 ft.
Fall of Low Water, Spring Tides, below plane of reference	0.4 ft.	0.4 ft.
Rise of High Water, Neap Tides, above plane of reference	5.5 ft.	7.4 ft.
Height of Low Water, Neap Tides, above plane of reference	0.4 ft.	0.4 ft.
Rise of Highest Tide observed, above plane of reference	7.9 ft.	9.9 ft.
Fall of Lowest Tide observed, below plane of reference	0.9 ft.	2.1 ft.
Mean Duration of Rise	$5^h\ 54^m$	$6^h\ 16^m$
Mean Duration of Fall	$6^h\ 29^m$	$6^h\ 11^m$

CURRENTS.

The velocity of the current of ebb in the *Kennebec River* is considerable, especially in the narrower parts of the stream, as, for instance, near the **Sugar Loaves**, at **Hunniwell Point**, and from **Bluff Head** to **Doubling Point**. The large volume of water which must have egress, confined between narrow walls, hurries toward the sea with a velocity only increased by the natural fall of the bed of the river, and renders this stream one of the most dangerous on the whole coast for strangers to navigate. No complete observations of currents have as yet been made here, and the actual velocity and direction of the tidal-currents are not accurately known. Of the ebb the maximum velocity is about three knots, of the flood about two. The direction of the current depends on the course of the river, and near the mouth is influenced somewhat by strong winds, especially easterly gales. The effect of the currents upon the courses of vessels is sufficiently great to give point to the warning before given (page 534) to strangers, to take a pilot whenever possible to get one.

VARIATION OF THE COMPASS.

The magnetic variation at the mouth of the *Kennebec River* is, for 1875, 13° 45′ W., with an annual increase of about 2½′. At **Bath** the variation for the same year is about 13° 20′ W.

SASANOA RIVER.

This river connects the *Kennebec* and *Sheepscot Rivers*. It takes its origin in the *Kennebec River* opposite the city of **Bath**, and flows through a very eccentric, crooked, and dangerous channel, for a distance of about seven miles, into the *Sheepscot River*. In the narrowest part of the channel the tidal-current attains the extraordinary velocity of thirteen nautical miles an hour. Many ledges and rocks obstruct the passage of this river, and it is not possible for strangers to attempt it without disaster. Only a general description will be given of it, therefore, and the chart of the river on a large scale, published by the Coast Survey, will give the mariner a better idea of its dangers than any verbal description.

The *Sasanoa* begins opposite **Bath**, between **Towesic** and **Preble Points**. Here it is about two hundred and seventy yards wide, and takes a course about E N E. for a quarter of a mile, where it is crossed by a draw-bridge. Passing this, a much wider portion of the stream opens, and the course changes abruptly to S E. by S. The river is here nearly three-eighths of a mile wide, and sends off to the northward an arm nearly as

wide, forming a broad but shallow cove, called *Pleasant Cove.* Although wide at this point between the banks, the channel itself is quite narrow. It approaches the northeastern shore by a gradual curve, leaving extensive flats, mostly dry at low water, on the southwestern side. The channel hugs the northeastern shore for three-eighths of a mile, and is seventy-five yards wide, with a depth of from thirteen feet to six fathoms. It then gradually turns toward the southwest shore, and five-eighths of a mile beyond **Preble Point** it runs into a pocket. A bar with five feet at mean low water here occupies the stream from bank to bank. The shores are mostly high, and the lands cleared and cultivated. At the bar the river is a quarter of a mile wide, but it now gradually but steadily narrows until, about a mile and a quarter from **Preble Point,** it is but fifty yards across, and obstructed by two very dangerous rocks—the one on the northwestern side called the *Boiler,* and that on the southeastern shore known as *Lime Rock.* The latter is marked by a **spindle.** The *Boiler* is never out except at extremely low spring tides. Here the current, especially at half-ebb, rushes with great velocity through the narrow rocky channel, and meeting with the obstructions offered by these two rocks boils over them and breaks into cross-currents, eddies, and small whirlpools, very dangerous to boats and vessels endeavoring to pass. The roar of the *Boiler* is heard at *Heal Cove,* nearly two miles below. The velocity of the current of ebb at its height is at this point thirteen miles an hour on spring tides. This narrow reach of the *Sasanoa* is appropriately called *UPPER HELL GATE.*

From *Upper Hell Gate* the river gradually widens, with long but shallow coves on both shores, but continue sthe same general course S E. by S. for a little over three-quarters of a mile farther, or about two miles from **Preble Point,** where it is about two hundred and seventy yards wide, and passes between a bluff precipitous point on the north and a grassy gently-sloping, cleared, and cultivated point on the south, into a broad and handsome bay. The rocky precipitous bluff on the north is **Hockomock Point.** Its summit is thickly wooded with fir and spruce. The low grassy point on the south shore is **Mill Point.** There are several houses on it, and behind it, to the eastward, is a mill-dam and saw-mills, known as **Fisher Mills.**

The large bay into which the *Sasanoa* here expands is called

HOCKOMOCK BAY.

It is a mile and a quarter in width measuring N W. and S E., and the same in length N E. and S W.; is full of islands, ledges, and flats, and the channel is narrow and so difficult that even those who are best acquainted with its windings and turnings sometimes go ashore. In its extreme north corner it sends off a long arm into the land, known as *Brookings Bay,* a large portion of which is dry at low water. Into its southwestern corner empties *Back River,* which begins in the *Kennebec,* (page 520,) and with a general course N N E., between **Georgetown** and **Arrowsic Islands,** finally joins the *Sasanoa* at this point in *Hockomock Bay.*

Into the northeastern part of *Hockomock Bay* empties *MONTSEAG BAY,* which is the southern portion of that broad but shallow passage between **Westport Island** and the main land, which, beginning in *Wiscasset Bay* between **Clough** and **Birch Points,** runs about S W. by S. for six miles to its point of entrance into the *Sasanoa,* and is also called *Back River;* but to distinguish it from the other, which connects the *Kennebec* and *Sasanoa,* the former is sometimes called *NORTH BACK RIVER,* and the other *SOUTH BACK RIVER.*

A draw-bridge, called **Westport Bridge,** crosses the *North Back River* half a mile above its entrance into *Hockomock Bay.*

The eastern point of the mouth of *North Back River* is a partially-wooded low point with a prominent leaning tree upon it. This is **Hubbard Point.** The western point is high, cleared, and cultivated, and slopes gradually from its crest to the shore. Farm-houses occupy the summit of the point, which is called **Phipps Point.**

Next to the northeastward of the mouth of *South Back River* is a long but shallow cove, called *Hall Bay*, making into the **Georgetown** shore in a southerly direction for about a mile. It is of no importance, being almost entirely bare at low water.

Off the mouth of *Hall Bay* lie four islands in the southeastern portion of *Hockomock Bay.* The two southernmost are low, connected at low water, and only one hundred and fifty yards from shore. They are called the **Webber Islands.** To the northward of these islands, about three hundred and eighty yards, are two others—the western one low and covered with scrub, with one or two small birch saplings on it, and called **Berry Island.** Nearly two hundred yards to the eastward is another islet, rocky, and covered with a scrubby growth, and called **Castle Island.** Along the north shores of these two islands the channel of the river takes its course—the northern part of *Hockomock Bay* for some distance east of **Hockomock Point** being occupied by flats bare at low water. After passing **Castle Island** the river turns to the southward and eastward, passing between **Hubbard Point** (the most westerly point of **Westport Island**) and **Castle Island.** Here the passage is a quarter of a mile wide, and forms the upper entrance to another narrow and dangerous reach of the river, called

GREAT HELL GATE.

The general course of this reach is S. ½ E.; its length is about a mile and a quarter; its breadth, where widest, (which is at its south end,) a quarter of a mile, and where narrowest, one hundred and twenty yards. It begins, as above mentioned, at **Hubbard Point,** a low point, backed by woods, with a single leaning pine on its extremity; then, gradually narrowing, it passes between a group of wooded islets on the east, called **Tyler Islands,** and a low, rocky, and wooded island on the west, called **Bareneck Island.** The course is directly for a bare, white, rocky point, the northeast point of **Beal Island,** where the river contracts to a width of one hundred and twenty-five yards, takes a sharp turn to the eastward, and passes between the southern point of **Tyler Islands** on the north, and this point, called **White Point,** on the south. This is the worst part of the *Gate.* Off the south end of **Tyler Islands** lie two bad rocks, one bare at low water, the other at or about three-quarters ebb, called the *Boilers.* Between **White Point** and the *Boilers* the channel is only fifty yards wide. On the ebb the volume of water from above rushes through directly for these rocks, and striking them, takes a direct course over for **White Point.** Where it meets the eddy near **White Point** a perfect whirlpool of conflicting currents and eddies is formed, dangerous at any time to pass; but at half-ebb, on a spring tide, a wall of water from six inches to a foot in height stretches across from the *Boilers* to **White Point.** The roar of the water boiling over these rocks is, at such times, distinctly audible at *Goose Rock Passage,* two miles below. The above remarks are true also of the flood-tide, although in a less degree. The velocity of the current is not so great as that of the ebb, and the consequent danger is less.

Behind **Tyler Islands,** and between them and **Westport,** is a narrow passage, full of obstructions, but with good water at high tide, called *THE BACK DOOR,* leading from *Heal Cove* and *Saw-Mills* into *Hell Gate.*

Heal Cove is long and moderately wide, and makes into the **Westport** shore behind **Hubbard Point.** **Tyler Islands** obstruct its mouth, the main entrance being close

under **Hubbard Point**. Near its head it is dammed and a mill-pond formed, by which the mills are run. There is a great deal of lumber cut and shipped from these mills. The channel of the cove is much obstructed, and unsafe for strangers.

There is a bad rock, with only four feet upon it, one hundred yards NE. from **Bareneck Point**. *It is buoyed.*

After passing between **White Point** and **Tyler Islands**, the *Reach* turns again to the southward and runs behind **Westport** and **Beal Islands** to its entrance into *KNUBBLE BAY*. It gradually widens as it proceeds to the southward, being two hundred and fifty yards wide at **Willis Point**, one third of a mile below **Tyler Islands**, and a quarter of a mile wide at **Brooks Point**, the lowest point of the *Reach*.

A good safe anchorage, with from two to three and a half fathoms, may be found to the eastward of **Willis Point**, in *Tarbox Cove*, which makes into the land at **Westport** behind the point. The bottom is soft, the holding-ground excellent, and the anchorage is entirely free from eddies and strong currents.

At **Brooks Point** the river widens and forms a broad deep bay, nearly five-eighths of a mile wide and a mile and a quarter long, called

KNUBBLE BAY,

lying between **Westport** and **Georgetown Islands**. Its general course is N. ½ E. and S. ½ W., and it affords good anchorage throughout all parts of it. It received its name from a very peculiar projection from the shore of **Georgetown**, which extends out into the bay three-quarters of a mile below **Brooks Point**. This projection is oval in form, and is connected with the **Georgetown** shore by a narrow isthmus about one hundred yards long and fifty wide. At high water it is nearly an island. This singular point or island is called the **Knubble**, is grassy, and entirely bare of trees with the exception of a few surrounding the houses and outbuildings on its summit.

Off its eastern end lies a rocky islet, called **Little Knubble**, with a single birch tree on it. There is a dangerous rock off its eastern end.

On the north side of the **Knubble** is good anchorage, in soft bottom, in the mouth of a cove, called *Dark Cove*. On the south side is *Riggs Cove*, the best anchorage in the bay. Here is quite a settlement, called **Riggsville**—a good store, a ship blacksmith-shop, and a tank of most excellent water, with hose and pipe for filling boilers or casks.

Georgetown Island is here nearly separated into two parts by a long and narrow cove, called *Robin Hood Cove*, which runs from *Knubble Bay* to the southward, beginning at **Riggsville**, and running to within less than a mile of the head of *Sagadahoc Bay*, (see also page 494.) There is good water in this cove for some distance from its mouth, but it is little used.

Lowe Point is the eastern point of the entrance to *Robin Hood Cove* and the southern point of the entrance to *Goose Rock Passage*. Here *Knubble Bay* terminates; the river takes a very eccentric turn to the eastward, between **Newdick Point** (the southernmost point of **Westport Island**) on the north and **Lowe Point** on the south, with a width of about three hundred yards, and enters the *Sheepscot River* through

GOOSE ROCK PASSAGE.

Both **Lowe** and **Newdick Points** are low, but the former is wooded and the latter bare. At the entrance the course of the passage is about SE., but it gradually turns to the northward until it runs E. by N., between **Westport** and **McMahan Islands**, into the *Sheepscot*. It is a little over a mile long, three hundred yards wide at its western end, and gradually widens to its mouth, where it is nearly half a mile wide.

Just to the eastward of **Newdick Point** is *Newdick Cove*, full of ledges and unfit for anchorage. On the eastern side of **Lowe Point** is *Lowe Cove*, a deep indentation in the north shore of **Georgetown**, offering a fair anchorage in from three to ten fathoms, and perfectly free from obstructions. Nearly in the middle of the passage, and between the two coves, lies a bare rocky islet, surrounded by very dangerous rocks and sunken ledges, over which the tide sets strongly. This is **Goose Rock**, and gives the name to the passage.

One hundred and fifty yards S E. by S. from the south end of **Goose Rock** is a very bad sunken rock, called the *Boiler*. It is never bare except at the very lowest tides, and is a very serious obstruction to the navigation of this passage. The channel passes between it and the **Georgetown shore**, and is only one hundred and fifty yards wide, with twelve fathoms of water. The velocity of the current of ebb is here about five knots, and at half-ebb spring tides it has been known to reach a speed of seven knots. The point of **Georgetown Island** south of the *Boiler* is low and rocky, and is called **Soldier Point.** It forms the western side of the north entrance to *Little Sheepscot River*, which runs between **Georgetown** and **McMahan Islands** for one mile to its junction with the *Sheepscot River*. Its general course is about SOUTH. (See page 495.)

The ebb-tide sets very strongly into this river, and after passing *Goose Rock Boiler* if possible haul up toward the north side of the passage, to avoid being set into the river or on to the rocks north of **McMahan Island.** On the flood the current of the *Little Sheepscot* sets to the northward and that of *Goose Rock Passage* to the eastward; and the two currents meeting at **Soldier Point** cause dangerous whirls and eddies in that vicinity.

Just to the eastward of *Newdick Cove* (on the **Westport** shore) is a very comfortable and safe anchorage, called *Brooks Cove.* Capital holding-ground, in four or five fathoms, soft mud, may be found off **Brooks Fish-Houses**, safe from all winds, and free from currents or dangerous whirls. Even a stranger may enter this cove by passing between **Whittum Island** and the buoy on *North East Point Ledge;* keeping the middle of the passage, and rounding **Brooks Point** at a distance of a hundred and seventy-five yards, run up into the cove and anchor off the wharves.

From the entrance to *Little Sheepscot* the river takes a course about E. by N. for a little over half a mile, gradually widening until it empties into the *Sheepscot*, between **Blake Point**, the southeastern point of **Westport Island**, and **North East Point** of **McMahan Island.** Here it is obstructed by a small low island, wooded mainly with fir, lying nearly in the middle of its mouth. This is **Whittum Island.** (See page 496.)

From **North East Point** a long ledge, bare in places at extreme low tides, makes out for over two hundred yards in a N. by E. direction exactly for **Whittum Island.** It is called *North East Point Ledge*, and is marked by a *black spar-buoy* placed on its north point. The channel lies between this buoy and the south end of **Whittum Island**, as the passage between **Whittum** and **Westport** is too much obstructed to be at all safe. But twelve fathoms at low water may be taken between **Whittum Island** and **North East Point Buoy.**

No sailing directions for *Sasanoa River* can be given. Strangers should never attempt it, as good pilots can be found at *Five Islands Harbor*, on **Georgetown Island**; at *Jewett Cove*, on **Westport**; or at **Bath**, if entering the river at its western end. Its currents, eddies, and dangerous rocks offer such difficulties to a safe passage that even the pilots are often obliged to seek anchorage in some of the coves and wait a favorable opportunity for proceeding. A stranger may, however, with a favorable tide, go up

Goose Rock Passage as far as *Brooks Cove*, but under no circumstances farther. There anchorage and a pilot will be found. Through this river from the *Kennebec* to *Upper Hell Gate* not less than five feet can be carried. The shoalest spot is the bar five-eighths of a mile to the southeastward of **Preble Point**, on which there is five feet. After crossing the bar, there is not less than fifteen feet until past the *Gate* and entering *Hockomock Bay*. The least water in the channel through this bay is thirteen feet, which is found on the bar to the northward of **Berry** and **Castle Island**. When past this shoal, there is not less than four fathoms to the entrance to *Great Hell Gate*. Through this passage five fathoms may be taken. In *Tarbox Cove* there is anchorage in from two to three and a half fathoms, sticky bottom; thence to *Knubble Bay* not less than seven fathoms may be carried; through the *Bay* not less than seven and a half fathoms; and through *Goose Rock Passage* not less than nine fathoms.

In *Dark Cove*, anchorage may be found in from two to four fathoms, muddy bottom; in *Riggs Cove*, in from two to five fathoms, soft bottom; in *Robin Hood Cove*, in from three to twelve fathoms, muddy bottom; in *Lowe Cove*, in from three to ten fathoms, muddy bottom; and in *Brooks Cove*, in from two to five fathoms, muddy bottom.

SAILING COURSES
FOR VESSELS BOUND ALONG THE COAST FROM THE KENNEBEC TOWARD MONHEGAN AND TOWARD CAPE ANN.

The course from **Seguin** to **Monhegan** is EAST; the distance nineteen nautical miles.
The course from **Seguin** to **Portland Head** is WEST; the distance twenty miles.
The course from **Seguin** to **Cape Ann** is S W. ¼ S.; the distance seventy-four miles.

DESCRIPTION OF SHORES
BETWEEN KENNEBEC RIVER AND CAPE SMALL POINT, TO THE WESTWARD.

From the southern point of **Hunniwell Beach** to **Cape Small Point** the distance is three miles and three-quarters and the direction S W. by W. The general course of the shore is, however, W S W. First, the beach takes a wide sweep to the westward behind **Wood Island**, and then turns to the southward toward a group of bare rocky islets connected with it at low water, called the **Fox Islands.** Thus a wide but shallow cove is formed whose boundary on the east is **Wood Island**, on the west the **Fox Islands**, and on the north a low sand-beach, dotted with many small sand-hillocks, covered with a thin growth of grass, and over which the high land of **Sabino Head**, crowned with a thick growth of spruce and fir, is plainly visible.

THE FOX ISLANDS

(see page 532) are a group of rocky islets lying close to the shore, and connected with it at low water. The easternmost island is the largest, and is five-eighths of a mile W. by S. ½ S. from **Wood Island**. The southernmost islet, also bare and rocky, is one-eighth of a mile S W. from the largest one, and the space between it is occupied by two or three small bare rocks hardly deserving the name of islets. The southern point of beach off which they are situated is called **Morse Point.**

The **Fox Islands** are surrounded by shoals and ledges. Eastward of them is *Pond Island Bar*, and to the southeastward the famous *Jack-Knife Ledge*. They should not, therefore, be approached closely under any circumstances.

From **Morse Point** the beach runs WEST for half a mile to the entrance to *MORSE RIVER*, a shallow and crooked creek of no importance, impassable at low water even for a small boat. It is a quarter of a mile wide at its mouth, but rapidly contracts to

less than a hundred yards. It takes its rise in a shallow pond just back of *Adkins Bay.* On the west side of the entrance is a small but rather steep hill of a peculiar white-looking rock, studded here and there with scrub, fir, and spruce trees, and called **Morse Hill**, and sometimes **Morse Little Mountain**, in contradistinction to a high bluff hill of the same kind of rock, wooded with the same species of trees, which rises abruptly out of the marsh a quarter of a mile to the northwestward of it, and called **Morse Mountain.** Both are used as landmarks for mariners bound in from sea and falling in with the shore between **Small Point** and the *Kennebec.*

HERON ISLAND,

or **Heron Islands,** as the group should properly be called, is a group of three small rocky islets off the mouth of *Morse River*, three-eighths of a mile from shore and half a mile S W. by W. from the **Fox Islands.** They lie north and south of each other, separated by very narrow clefts in the rock hardly wide enough for the passage of a small boat, and are entirely bare. Their shores are very bold-to, except the northern and eastern shores of the northernmost, which are obstructed by reefs of rocks, bare at low water. There is no passage to the northward of them except for very light-draught vessels in the hands of experienced pilots.

Although bold-to, these islets should not be closely approached by a stranger, for several detached pinnacle rocks lie off their southern end, and two very dangerous ones—one bare at low water, and the other at half-ebb—lie to the westward at the distance of a quarter and half a mile, respectively. The one bare at low water is the nearer to **Heron Island**, and has no name. The other is called **Bold Dick.**

From *Morse River* the shore, still formed by a sand-beach dotted with sand-hillocks, continues on a W. by S. ½ S. course for a mile to the entrance to another small river, called *SPRAGUE RIVER.* It is very similar in its character to *Morse River;* is dry at low water, narrow and crooked, and empties into the bay between a low sandy point on the east and a high bluff rocky head on the west, the latter known to the fishermen as **High Rocks.** To the northward of it a cleared and cultivated field appears, called **Sprague Pasture.** The shore is not bold-to, but the soundings decrease gradually as you approach the beach.

At **High Rocks** the shore now becomes rocky and thinly wooded, turns abruptly and runs SOUTH for half a mile to a bare rocky point, called **Isaiah Head.** This point is much indented on its eastern and southern faces by small shallow coves. About a hundred yards off its southern point lies a low grassy islet about a hundred yards square, surrounded by rocks, ledges, and shoals, and called **Seal Island.**

North of **Isaiah Head**, one hundred and seventy-five yards distant, and two hundred yards from the shore, lie two rocks, bare at half-tide, called the *Coot Rocks.* None of them are dangerous to strangers, because no stranger has any business inside of **Cape Small Point** without a pilot. Mackerel fishermen often pursue the fish up into these bights, and sometimes anchor here in fine weather; but even they (although well acquainted with the reefs) will not anchor unless the weather is very fine and the wind too light to enable them to get off shore before night. The whole of the coast from **Seal Island** to **Heron Island** is dangerous, and should not be approached except in cases of dire necessity.

West of **Seal Island** a cove is formed, having that island for its eastern boundary; and on the west a long point of moderate height, its summit covered with spruce and fir trees, and thence a long gradual slope of bare weather-beaten rocks descending to the sea. This point is called

CAPE SMALL POINT,

and is the eastern extremity of *CASCO BAY*. Its geographical position is

Latitude - - - - - - - - 43° 42′ 07.5″ N.
Longitude - - - - - - - - 69° 49′ 54″ W.
(Position taken from the summit of the point.)

It is three miles and a half W. ¾ N. from **Seguin Light**; nearly seventeen miles E. ¼ N. from **Portland Head**; a little over nine miles E. ¼ N. from **Half-Way Rock**; and seventeen and three-quarters miles E. by N. ¼ N. from **Cape Elizabeth Lights**.

From **Cape Ann** (**Thatchers Island**) it bears N E. ¼ N., distant seventy-two and a half miles.

The cove formed between **Cape Small Point** and **Seal Island** is called *Seal Cove*. There is no good holding-ground in it, but the water is deep, the entrance unobstructed, and vessels may anchor there in fine weather in from two to six fathoms.

GLOVER OR FULLER ROCK.

Six hundred yards SOUTH from the extremity of **Cape Small Point** lies a bare rocky islet, called **Glover,** and sometimes **Fuller Rock.** It is tolerably bold-to on its NORTH and EAST sides, but on the SOUTH and WEST sides is shoal and must not be approached too closely. Between this rock and the cape is a good channel with from three to ten fathoms of water, but obstructed by the dangerous *Button-Mould Ledges* and the *Bill Wallace Ground.* It is, however, very much used by coasters, and, if the ledges were buoyed, would be perfectly safe at all times.

BALD HEAD COVE.

West of **Small Point** the shore takes a sweep to the northward and around by west to the southward, where **Southern Head** and **Bald Head** are formed. It thus makes a wide cove nearly three-quarters of a mile in width, with deep water but poor holding-ground, the bottom being either rock or hard sand. This is *Bald Head Cove.* It is obstructed by *Bald Head Ledge* and by the *Bill Wallace Ground*, and is not at all a safe or good anchorage.

CASCO BAY.

This very extensive bay occupies the space between **Cape Small** and **Cape Elizabeth,** a distance of seventeen and three-quarters miles. Its eastern headland, **Cape Small Point,** is in

Latitude - - - - - - - - 43° 42′ 07.5″ N.
Longitude - - - - - - - - 69° 49′ 54″ W.

Its western headland, **Cape Elizabeth,** is in

Latitude - - - - - - - - 43° 33′ 53″ N.
Longitude - - - - - - - - 70° 11′ 45″ W.

Between these two capes the bay extends up into the land an average distance of about twelve miles. It is full of islands, and the shore-line of the main land is very much cut up by rivers and indented by long and deep coves.

The whole number of islands in *Casco Bay* is one hundred and thirty-six. Very many are fertile and under cultivation, and nearly all are inhabited. Nearly every island lies N E. and S W., which is the general course of the *Casco Bay* and of all the rivers and coves contained within its limits.

A stranger bound to **Portland** falling in with the eastern shores of the bay would recognize **Cape Small Point** as the rocky point crowned with fir, but bare of all trees

or vegetation from its wooded summit to the sea, toward which it slopes easily and regularly. A bare rocky islet south of it is **Glover Rock**; the bare bluff head a little to the westward is **Bald Head**; the half-bare and half-wooded islet seen up in the bay to the northwestward of **Bald Head** is **Wood Island.** West of **Wood Island**, **Mark Island** will appear, low, rocky, and crowned with fir. To the westward of **Mark Island**, a tolerably high, partially-wooded island, showing on its southwestern face a peculiar white-looking surface, dotted with scrub-growth, is **Ragged Island.**

A tall granite light-tower, appearing to rise from the water well to the westward of **Ragged Island**, is **Half-Way Rock Light-House,** built on **Half-Way Rock**, as a guide for the bay to vessels going either to the eastward or westward. It shows a fixed white light, varied by red flashes. Far to the westward of **Half-Way Rock** will appear the high land of **Cape Elizabeth**, and on a clear day the light-houses may plainly be seen. Sometimes, but seldom, **Portland Head Light-House** is visible; but owing to its insufficient height it is hidden by its back-ground of trees, except when the sun shines directly upon it.

When a stranger has these light-houses (viz: **Half-Way Rock Light** and **Cape Elizabeth Lights**) in view, he may shape his course for *Portland Harbor* with safety.

The shores of *Casco Bay* must necessarily be described in detail; and beginning at **Cape Small Point** and proceeding to the westward, the first considerable indentation in the shore-line is made by *NEW MEADOWS RIVER*, which empties into the bay between **Horse Island** on the east and **Cundiz Point** (the southeastern end of **Great Island**) on the west. Here it is a mile and a quarter wide. Its shores are fertile and thickly settled, but there is comparatively little commerce. Fishermen only enter and depart.

DESCRIPTION OF SHORES OF CASCO BAY FROM CAPE SMALL POINT TO THE MOUTH OF NEW MEADOWS RIVER.

W N W. from **Cape Small Point**, three-quarters of a mile, is a bluff and precipitous head-land, called

BALD HEAD,

bare of trees and bushes, and with scarcely any grass upon it. Between it and **Small Point** is a cove with from two to six fathoms of water, but poor holding-ground, called *BALD HEAD COVE.* (See page 542.) **Bald Head** is sixty feet high.

From **Bald Head** the shore turns abruptly and runs nearly **N N W.** for three-quarters of a mile, to a strip of low beach, called **Head Beach.** The shore-line is rocky and the shore precipitous and partly wooded, with a few houses scattered along it, most of them inhabited by fishermen. A generally barren and desolate look always pervades the spot.

There is tolerably good anchorage under the north side of **Bald Head**, in what is called *Head Cove.* During the summer, as many as fifty fishing-vessels will anchor here nightly, in moderate weather, but it is not tenable in southerly winds.

From **Head Beach** the shore-line runs about **N N W.** for a third of a mile, to a low bare point about twenty-five feet high, called **Wallace Head.** The shore is low, but backed by high land between sixty and one hundred and fifty feet high, and wooded here and there with spruce and fir.

From **Wallace Head** the shore runs about **N E. by N.** for a mile and an eighth, to a low point called **Pitch Pine Point,** which is the southwestern point of the entrance to a long and narrow cove, called

SMALL POINT HARBOR,

making in to the southward for a mile and a quarter. The entrance is very much

obstructed, and there is a bar at its mouth with only three feet upon it at low water; so the harbor is only available for light-draught vessels.

From **Pitch Pine Point** the shore-line runs to the northeastward, and then turns again to the southwestward, forming a long and shallow cove, known as *Tottman Cove,* and of no importance. The east point of the entrance to this cove is known as **Newbury Point.** The land is here sixty feet high, and rocky. West of **Newbury Point** a small cove, with tolerably good anchorage, makes in to the northward, called *Fish-House Cove.* Its western point is a rocky, gently-sloping point, called **Cat Point.**

On the western side of **Cat Point** a small and narrow cove, with fair anchorage, called *Carrying-Place Cove,* makes in between the point and a high, thickly-wooded head, called **Carrying-Place Head,** one hundred feet high, gently sloping on its southern face, but bluff and precipitous on the western side.

From **Carrying-Place Head** the general course of the shore is about N N W. for about a mile and a quarter, where it passes behind **Horse Island** and the shores of

NEW MEADOWS RIVER.

To a vessel bound into *New Meadows River* coming from the eastward, after passing **Cape Small Point,** and when **Bald Head** bears N. by E. ½ E., one mile and a quarter distant, **Wood Island** will appear bearing about NORTH, three miles distant. This island will show as a high, partly-wooded island, with bare white rocks showing here and there on its surface. Close to it, and to the eastward, will appear a low thickly-wooded island, called **Little Wood Island.** Between these islands and the shore of **Cape Small Point** is a wide passage with from four to six fathoms of water, but somewhat obstructed, leading up to *Small Point Harbor.*

WOOD ISLAND

lies a little over a mile and a half N. ¾ W. from **Bald Head,** and is half a mile long in a N N E. and S S W. direction. On its southern side it is bold, bluff, and rocky, and its summit is one hundred and twenty feet high. A good channel exists on the north side of this island, between it and **Carrying Place Head,** where there is good anchorage in southerly winds in from three to eight fathoms of water.

To the westward of **Wood Island,** but farther up in the bay, will appear

FLAG ISLAND,

bearing N. ¾ W., and four miles distant. It is low and rocky, about eight hundred yards long, and from this position will appear as a small wooded island in range with distant high land behind it. It may be passed on either hand going into *New Meadows,* but must receive a berth, as it is surrounded by shoals.

Flag Island bears N N W. from **Wood Island,** one mile and a half distant. From **Bald Head** it bears N. by W. ½ W., three miles distant.

N W. by N. ½ N., and about three miles distant, will appear a small, low, rocky island with a thick growth of stunted fir on its summit, showing to the westward of **Flag Island** and against the high land of **Harpswell Neck.** This is

MARK ISLAND,

sometimes call **Woody Mark Island** to distinguish it from the island of the same name in *Mericoneag Sound.* It is one mile and three-eighths W. by S. from the south end of **Wood Island,** the main channel leading between them. It bears N W. ½ W. from **Bald Head,** distant two miles; and S W. by S. ¾ S. from **Flag Island,** distant one mile and a half. A little to the westward from it, but much nearer, bearing N W. by N., and two miles distant, a low, bare, rocky islet, called

THE BROWN COW

will appear. Its shores are bold, and may be approached very close-to on either hand. **Brown Cow** bears from **Bald Head** W. by N. ½ N., one mile and a half distant.

A little to the westward of the **Brown Cow**, on a N W. bearing, a large island, partly bare and partly wooded, will appear. This is

RAGGED ISLAND,

and the white-looking rocky islet in range with it is called the **White Bull.** **Ragged Island** is a rocky island about half a mile long and a quarter of a mile wide; lies N N W. and S S E., and is distant from **Bald Head** three miles and a half. Its southeastern end is a steep bluff one hundred feet high, with the summit covered with a stunted growth of fir. The rock of which the island is formed has been bleached to a peculiar whitish color, which, relieved here and there by a solitary spruce or fir tree, gives the southern slope a very peculiar appearance.

Ragged Island lies off the entrance to *QUOHOG BAY.*

GREAT OR SEBASCODEGAN ISLAND.

If bound up *New Meadows River* from the eastward, the courses lead between **Bald Head** and the **Brown Cow**, between **Mark Island** and **Wood Island**, up to **Carrying Place Head**; pass to the westward of this and to the eastward of **Flag Island**, and keep to the northward toward a green, wooded, gently-sloping point, backed by high lands, cleared, cultivated, and thickly settled. This low point is the southern end of **Great Island,** which forms the western shore of the river from its mouth to **Foster Point,** five miles above. It is split into three low points—the westernmost, forty feet high, called **West Cundiz Point;** the middle point is **East Cundiz Point;** and between the two is contained a narrow cove, known as *Cromwell Cove.* The easternmost point is called **Fort Point,** and between it and **East Cundiz** is a shallow cove, called *Sandy Cove.*

ROGUE ISLAND.

Two hundred yards SOUTH from **East Cundiz Point** lies a low, bare, rocky islet, called **Rogue Island,** quite bold-to on its eastern side. The true mouth of *New Meadows River* is between this island and **Bear Island,** on the eastern shore, three quarters of a mile wide, and perfectly unobstructed.

To the eastward will appear an island with steeply-sloping shores, crowned with spruce and fir. This is

BEAR ISLAND,

and forms the eastern side of the entrance. Its southern point is a steep bluff, sixty feet high, and the rock, from exposure, has a peculiar gray or slate color. To the eastward, in range with the main shore, will be seen a low island, called **Malaga Island,** the high cleared slopes of the main land appearing above all.

On approaching the mouth of the river, after passing **Flag Island,** pass half a mile to the westward of a wooded island about forty feet high, lying close in with the eastern shore. This is

HORSE ISLAND.

It lies nearly N N E. and S S W., and is about three-quarters of a mile long. Behind it, between it and the main shore, is a most excellent anchorage, with from two to six

fathoms, called *HORSE ISLAND HARBOR*. A good mark in approaching this harbor from the westward is a peculiar bald spot of a yellowish-white color appearing on the top of the wooded hills behind **Carrying Place Head**, and known as **Tottman's Bumper.** Passing **Horse Island** come to **Rogue Island**, and then the course leads between **East Cundiz** and **Fort Points** on the west and **Bear Island** on the east. There is a deep but narrow passage close along the eastern shore of the river, behind **Malaga Island**, but strangers must not attempt it.

After passing **Fort Point** a large cove opens, with several bare rocky islets to the eastward of it, and quite a village upon its banks. This is *CUNDIZ HARBOR*, or, as it is usually called, *THE HARBOR*. It is an excellent anchorage, with every facility for obtaining wood, water, or fresh provisions. A large hotel is a prominent feature on its shores. The bare islets off its mouth are *Cedar Ledges*.

Nearly all of the shores of *Great Island* are cleared and cultivated. The eastern shores of the river are also, for the most part, under cultivation, more especially those abreast of the *Harbor*. They are steep and bold, and the crests of the hills are from one hundred to one hundred and forty feet high.

After passing *Cedar Ledges* another cove opens on the **Great Island** shore, which appears to be contained between two small islands lying off the western shore. The eastern of these is a rocky sparsely-wooded islet, called **Sheep Island,** and is a quarter of a mile off shore. The western islet is close to the **Great Island** shore, and is called **Hopkins Island.** The entrance to the cove leads between the two up to the southern end of a larger island, also lying along the western shore, and called **Dingley Island.** The cove is called *Dingley Cove.*

On the eastern shore of New Meadows River, after passing **Bear Island**, the shore-line turns away to the eastward and forms a large and deep bay, called **Winnegance Bay.** Immediately opposite to the south point of **Sheep Island** a narrow and deep passage passes from the river between two high and steep bluffs into a perfectly land-locked cove called *THE BASIN*. In this passage there is not less than eighteen feet at mean low water, and it is entirely unobstructed. In the *Basin* lie at anchor in from three to seven fathoms, soft bottom, completely sheltered from all winds of whatever strength. Vessels passing up the river will not be able to see the entrance to the *Basin*, but will see the masts of the vessels at anchor there as soon as they are abreast of **Basin Point.**

WINNEGANCE BAY

is formed by a deep indentation in the eastern shore of *New Meadows River*, between **Birch Point** on the north and **Basin Point** on the south. At the entrance it is about a mile wide, but gradually contracts as it extends to the northeastward until it becomes a mere creek. The bay proper makes in about a mile, but several small arms make into the shore still farther, and finally a brook connects it with *Winnegance Creek* on the *Kennebec*.

On the north shores of this bay is situated the township of **West Bath,** a suburb of the city of **Bath.** The shores are mostly very steep and bluff, and the land well cleared and cultivated.

BIRCH POINT

is sixty feet high and well wooded, except on the extreme point, which is bare.

DINGLEY ISLAND

is very nearly bare of trees, but under cultivation, and lies about one hundred and fifty yards off the shore of **Great Island.** Its southern end has a gradual slope, but the north-

eastern point is high and steep. Immediately opposite to the centre of **Dingley Island**, and about four hundred yards from it, is the southern end of

LONG ISLAND,

which is a mile and three-eighths in length, and quite narrow; lies along the eastern shore of **Great Island**, extending in a NORTH and SOUTH direction, and has between it and **Great Island** a passage available at high water for light-draught vessels, but bare at low water. **Long Island** is, in places, thickly wooded, in others the land has been lately cleared.

The channel now lies between **Long Island** and the steep shores of **West Bath**, and when abreast of the northern end of **Long Island** there will be seen ahead, and about a quarter of a mile off, a group of islets in mid-river. The easternmost is well wooded, and is called **Bragdon Island.** The others are much smaller than **Bragdon Island**, and bare of trees. The whole group is known as the **Three Islands,** though really four in number. To the westward of them is a large but shallow cove, indenting the **Great Island** shore; to the northward, a quarter of a mile distant, will appear the southern end of **Williams Island,** low, but thickly wooded with a variety of trees.

A little to the eastward of **Williams Island** is another small thickly-wooded island, called **Merrit Island,** in range with a high steep hill whose sides are thickly wooded, but its summit bare. This hill is called **Rich Mountain;** is one hundred and forty feet high, and is visible as a landmark from the approaches to *Casco Bay.*

To the eastward of **Rich Mountain** appears the undulating shores of the western portion of that peninsula on which is built the city of **Bath.** They are mostly well wooded with oak, maple, spruce, pine, birch, and other trees.

Between **Merrit Island** and the main land is the entrance to a long narrow cove, called *Mill Cove,* which leads up to a large saw-mill at its head.

Between **Williams Island** and **Merrit Island** is a good channel, with two fathoms at low water, leading into a large, wide, but shallow cove, called *Broad Cove.* Between **Williams Island** and **Foster Point**, to the westward of it, is another entrance to this cove, but it is dry at low water.

FOSTER POINT

is a high, cleared, and cultivated peninsula on the eastern shore of the river, just to the westward of **Williams Island.** Several houses occupy the summit, and the rest of the land is mostly grass and grain land, although there is some wood. The river here turns to the westward, running between **Foster Point** and

INDIAN POINT,

the northeastern extremity of **Great Island. Indian Point** is low and wooded with a variety of trees, but the land behind, as it approaches the high lands, is cleared and cultivated. To the northwestward of this point, a quarter of a mile off, is a low bare islet, lying NORTH and SOUTH, called **Bombazine Island.**

When past the northern end of **Bombazine Island** a wide passage opens leading to the westward, between the north end of **Bombazine** and a group of islets lying south of **Woodward Point.** This is the entrance to an inland passage leading along the north shores of **Great Island** into *Quohog Bay*, and called *SIMON GURNET.* The passage is not available except for small boats, as it is bridged by a permanent bridge connecting **Great Island** with the main land at **Buttermilk Point.**

The north point of the entrance to *SIMON GARNET* is formed by

WOODWARD POINT,

a high, gradually sloping point of land, mostly cleared, but with a good deal of oak wood upon it. The summit is occupied by farm-houses, outbuildings, and cleared land, mostly grain-fields. Two bare rocky islets lie SOUTH from the point at one hundred and two hundred yards distant, and one-quarter of a mile S W. from it is a small wooded island, called **Coombs Island.** The channel into *Simon Gurnet* leads between this island and the north shore of **Great Island.**

From **Woodward Point** to the northward, the western shores of *New Meadows River* are undulating, of moderate height, cleared, and cultivated. About a mile above the point is a large wharf, and several houses back of it, on the summit of the hill. This is **Cushman Wharf.** Here ships were built when ship-building was a profitable occupation. The wharf and ship-yard are now deserted and fast falling to decay.

One mile and a quarter above **Woodward Point,** and about a quarter of a mile above **Cushman Wharf,** the river divides, the main channel going off to the northeastward, hugging the eastern shore; and on the western side a deep bay, bare at low water, called *Middle Bay.* Between **Middle Bay** and the main channel is a high round hill, forming the southern end of the peninsula separating the two bodies of water. This is

HOWARD POINT.

Its crest and part of its sides are wooded, its shores are steep, and at its southern extremity is built a large stone wharf for the use of vessels loading with stone. Here is a large granite-quarry, and considerable business was formerly done here in that line.

The surveys of the Coast Survey extend no farther to the northward than **Howard Point.** Half a mile above **Howard Point** the river is bridged by a permanent bridge, called **Bull Bridge.** **Howard Point** is, therefore, the head of navigation.

DANGERS

IN APPROACHING AND ENTERING NEW MEADOWS RIVER.

I. *Coming from the eastward.*—A vessel bound into this river and coming from the eastward will leave **Glover Rock** to the eastward and steer up toward **Mark Island.** The first danger encountered on this course is

BALD HEAD LEDGE,

bare at half-tide, and one of the most dangerous on the whole coast. It lies three-eighths of a mile S. by W. ½ W. off **Bald Head,** and W. ½ N. three-quarters of a mile from **Cape Small Point.** It always breaks, even in the calmest weather.

After passing *Bald Head Ledge,* the course leads to the northward, between **Bald Head** and **Brown Cow**; and approaching **Mark Island,** look out for

WYMAN LEDGE,

a very dangerous ledge, nearly in the middle of the passage, with four feet upon it at mean low water. It is half a mile E. by S. ½ S. from the southern end of **Mark Island** and one mile and a half N W. ½ W. from **Bald Head,** *and is not buoyed.*

When past *Wyman Ledge,* beware of getting too close to **Wood Island.** Off the south end of this island is a bad ledge, extending three hundred yards to the southwestward; and in the same direction, at the distance of five hundred yards, there is also a small shoal spot with sixteen feet at mean low water, having a deep passage between it and the ledge. Give the point a berth of one-third of a mile in beating in or out; this will lead clear of danger.

CHIVERS LEDGE.

About three-eighths of a mile N E. ½ E. from **Mark Island**, and one mile **WEST** from the south end of **Wood Island**, is a bad ledge, with six feet at mean low water, called *Chivers Ledge.* There is a channel with six and a half fathoms between it and **Mark Island**, but it is dangerous for strangers. This ledge obstructs the channel into *New Meadows* and into *Small Point Harbor, and is not buoyed.*

After passing *Chivers Ledge* there are no obstructions until up with **Carrying Place Head**, when there will be seen ahead *a black spar-buoy* about in the middle of the passage between the **Head** and **Flag Island.** This buoy is on

JAMISON LEDGE,

a long and dangerous ledge, extending in a N. by E. and S. by W. direction for nearly half a mile from the buoy. Its southern end is half a mile N W. by W. from **Carrying Place Head** and the same distance E S E. from the southern end of **Flag Island.** Thus it is nearly midway between the two points.

It is bare in many places at low water, and it is not safe for strangers to go to the westward of it on account of a dangerous ledge between it and **Flag Island,** called *Flag Island Ledge. Jamison Ledge* is marked by a *black spar-buoy* (No. 1) placed off its southwestern end in three and a half fathoms water.

FLAG ISLAND LEDGE,

bare at low water, lies midway between *Jamison Ledge* and **Flag Island.** *It is not buoyed.*

NORTH BLACKSNAKE.

When passing between **Burnt Coat Island** and *Jamison Ledge* there will be seen, bearing about **NE.**, a bare rocky islet, guarding the entrance to *Horse Island Harbor.* This is the **North Blacksnake;** lies about three hundred yards **NORTH** from **Burnt Coat,** and its shores are quite bold-to. Between this ledge and *Jamison* the channel is about nine hundred yards—or half a mile wide.

Vessels going into *Horse Island Harbor* usually leave the **Blacksnake** to the southward, going between it and *Horse Island.* Sometimes those well acquainted with the dangers will pass between **Burnt Coat** and the **Blacksnake.** Light-draught vessels may safely do this, as the only ledge in the way has twelve feet at low water.

SHOAL GROUND NORTH OF FLAG ISLAND.

Vessels drawing over eight feet should never attempt to stand across the northern end of **Flag Island,** as the ground is shoal in a N N E. direction for nearly three-quarters of a mile. There are four distinct shoals, with deep water between them, and the soundings upon them vary from ten to fifteen feet. As a good rule, do not stand to the westward of **Mark Island,** bearing S W. by S. ½ S., until to the northward of *Goudy Ledge.* Then stretch clear over to **Rogue Island.**

GOUDY LEDGE.

When past **Flag Island** and the **Blacksnake,** and approaching **Horse Island,** *a spar-buoy, painted with horizontal black and red stripes,* will appear to the westward. This is on *Goudy Ledge,* which obstructs both the eastern and western channels into *New Meadows;* is bare at half-tide; is three-eighths of a mile S. ½ E. from **Rogue Island** and a little over half a mile N. ½ E. from **Flag Island.** There is a passage a quarter of a mile wide, with thirteen fathoms, between it and **Rogue Island,** and one nearly half a mile wide, with the same depth, between it and *North Jenny Ledge,* east of **Jenny Island.**

Goudy Ledge is marked by *a spar-buoy, painted in black and red horizontal stripes*, placed in twenty feet off the SOUTH point of the rock. Vessels using the eastern channel leave it to the westward; those coming from the westward leave it to the eastward.

If beating, do not approach **Horse Island** too closely on its western side. The water is shoal for about three hundred and fifty yards from the island, and it is best not to go inside of **Carrying-Place Head** bearing S. ¾ E., which bearing gives **Horse Island** a berth of four hundred yards.

After passing *Goudy Ledge* the channel is clear until past **Bear Island**, when there will be seen to the northwestward

THE CEDAR LEDGES,

a group of bare rocks, lying N N E. and S S W., and forming the northern boundary of the entrance to *Cundiz Harbor*. They are quite bold-to, and being always bare there is no difficulty in avoiding them. Just to the northward of them are two more small bare rocks, called **Green Ledges,** obstructing the entrance to *Dingley Cove*.

Passing to the northward of *Cedar Ledges*, there is a very dangerous rock, exactly in the middle of the channel, called

SHEEP ISLAND LEDGE.

It is bare at low spring tides; lies three hundred and fifty yards S E. ¾ E. from the south end of **Sheep Island**; *is not buoyed*, and is therefore a source of great trouble to mariners. A buoy has been recommended to mark this ledge.

After passing **Sheep Island,** there is nothing in the way until up with the **Three Islands.** But vessels beating in or out must beware how they approach the southeastern shores of *Winnegance Bay*. Here are two small islands, or rather rocks, lying NORTH and SOUTH of each other, about three hundred yards apart and about four hundred yards from the shore, known as **Bushy Island** and **Hen Island.** They are surrounded by shoal water; and nearly five hundred yards WEST from **Hen Island** is a half-tide rock nearly on the eastern edge of the channel. This rock is connected with **Hen Island** by a line of ledges, and the whole is known as **Hen Island Ledge.**

When nearly up with the northern end of **Bragdon Island,** beware of

BRAGDON ROCK,

which lies four hundred and seventy-five yards EAST from the north point of the island and four hundred yards SOUTH from **Merrit Island.** It is bare at low water, *but not buoyed.* As it also very much obstructs the channel into *Mill Creek*, a buoy has been recommended to mark it.

Beyond *Bragdon Rock* the way is now clear until past **Foster Point,** and approaching **Woodward Point,** when look out for the southern point of the

MIDDLE GROUND.

This extensive mud-bank occupies the centre of the channel, and extends in a N N E. and S S W. direction nearly seven-eighths of a mile. It is bare at low water throughout a great part of its length, and is growing in size every year. At present (1871) it extends from a point nearly six hundred yards S E. from **Woodward Point** to within three-eighths of a mile of **Howard Point,** and the shoal water at the mouth of *Middle Bay* makes off to nearly the same distance; thus contracting the channel above **Cushman Wharf** to about one hundred and fifty yards.

A bare ledge lies off the western shore, four hundred and fifty yards to the northward of the southern extremity of **Woodward Point** and about two hundred yards from shore.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING NEW MEADOWS RIVER.

I. *Coming from the eastward.*—Pass outside of **Glover Rock**, so as to avoid the *Button-Moulds* and the *Bill Wallace Ground*, and when **Bald Head** bears **N.** by **E.** ½ **E.**, the **Brown Cow** **N W.** by **N.**, and **Half-Way Rock Light** **WEST**, with fourteen fathoms, hard bottom, steer **N.** ¾ **W.** for **Flag Island.** Continue this course, carrying not less than eight fathoms water, until abreast of the southern end of **Wood Island**, in nine and a half fathoms, hard bottom, when steer **N.** by **E.** ½ **E.** for **Malaga Island**, carrying not less than ten fathoms, and leaving *Jamison Ledge Buoy* to the westward.

On this course, if wishing to enter Horse Island Harbor, when abreast of the northern end of **North Blacksnake**, in eight and a half fathoms, haul up to the eastward, steering for the shore, and keep midway between the south end of **Horse Island**, called **Horse Island Point**, and the **Blacksnakes**, until the harbor opens, when steer up the middle of the cove, anchoring at discretion. On the eastern course there is not less than eight fathoms, and to the anchorage not less than four.

This is a very comfortable harbor of refuge in bad weather. The holding-ground is good, and the anchorage safe and well protected.

But if bound up to Cundiz Harbor, when past *Jamison Ledge Buoy*, and the southern end of **Flag Island** bears **W.** ¾ **N.**, steer **NORTH**, about midway between **Bear Island** and **Fort Point**, carrying not less than four and a quarter fathoms, and continue this course until the point is exactly abeam, bearing **WEST**, and about three hundred yards off. *Cundiz Harbor* will now be completely open to the northward, and if wishing to anchor in it, alter the course to the eastward enough to keep off the eastern shore, (about **N.** ½ **E.**,) and rounding the point at about one hundred and fifty yards distance, anchor in from three to five fathoms, mud and clay.

Or, if bound up river, when **Fort Point** bears **WEST**, as above, steer **N E.** by **N.**, keeping the eastern shore best aboard, and carrying not less than twelve fathoms, until past the middle of **Sheep Island** and the southern end of **Long Island** bears **N.** ¾ **E.**, in eight fathoms, soft bottom; this clears *Sheep Island Ledge.* Now steer **N.** by **E.** ½ **E.**, nearly for **Merrit Island**, and continue this course until abreast of the middle of **Bragdon Island**, which leave to the westward, (as close as desiring, for it is bold-to,) and steer **N W.** by **N.** ¼ **N.** for **Woodward Point**, carrying not less than four fathoms water. This course leads along the eastern shore of the river, which is the boldest. On this course, when the north point of **Bombazine Island** bears **S.** by **W.** ½ **W.**, and off the entrance to *Simon Gurnet*, steer **N.** by **E.** ½ **E.**, keeping the northwestern shore aboard to avoid the *Middle Ground*, and anchor half a mile above **Woodward Point**, in sixteen feet at low water. Above this it is not safe for strangers to go. A pilot can be obtained on either shore of the river, who will direct up to **Howard Point** or above it.

DANGERS.
IN APPROACHING AND ENTERING NEW MEADOWS RIVER.

II. *Coming from the westward.*—The first obstruction met with by vessels coming from the westward and bound into *New Meadows River* is

LUMBO LEDGE,

an extensive piece of shoal ground, with only one very shoal spot upon it, and that marked by a buoy. *Lumbo Ledge* is four and three-quarters miles **E.** ½ **N.** from **Half-Way Rock Light-House**, and **S W.** from **Mark Island**, two miles and three-quarters distant. There is one spot upon the ledge which has eleven feet upon it at low water, and this

is marked by an *iron nun-buoy* of the second class, *painted in red and black horizontal stripes.* Vessels bound into *New Meadows* leave this buoy to the southward.

Two miles **N. ½ E.** from *Lumbo Buoy* is

BOLD DICK,

bare at a quarter ebb. It is a small rock, lying W. by S. ⅝ S., five-eighths of a mile distant from the **White Bull**; S S W. from the centre of **Ragged Island,** distant five-eighths of a mile. *It is not buoyed*, but nearly always shows itself by breakers.

When past **Bold Dick**, the

WHITE BULL

will be seen bearing about E. by N. This is the turning point for this channel. It is a rocky islet, very much like the **Brown Cow** in appearance; is bold on all sides except on the north shore, and lies W. ½ N. from **Mark Island,** distant one and one-eighth mile, and half a mile S E. ¾ S. from **Ragged Island.**

Rounding the **White Bull,** a ledge, bare at half-tide, nearly in range with **Mark Island,** will be passed well to the eastward. This is

MARK ISLAND LEDGE,

or, as it should be called, to distinguish it from the other ledge of the same name, *Woody Mark Island Ledge.* It is five hundred and fifty yards W S W. from **Woody Mark Island,** and E. by S. ¾ S. from the **White Bull**, seven-eighths of a mile distant; *it is not buoyed*, but always shows itself by breakers.

LITTLE BULL LEDGE

is not in the way except of vessels beating in or out. It is a bare rock, lying nearly half a mile N. ½ W. from the **White Bull** and a quarter of a mile N E. by E. from the southern extremity of **Ragged Island.** There are from four to eight fathoms water on all sides of it, but it should not be approached from the southward and southeastward nearer than one-eighth of a mile.

Passing **Little Bull Ledge**, the next danger met with is also on the west side of the channel, and is called the

SISTERS GROUND.

It is a mass of shoal ground and detached ledges, lying S E. from the **Sisters**, and having from five to twelve feet upon them at low water. They occupy nearly the whole space between the northern edge of this channel and the **Sisters**, *and are not buoyed*, but a buoy has been recommended to be placed upon them.

The southeastern extremity of the *Sisters Ground* lies three-quarters of a mile E N E. from the south end of **Ragged Island**; the same distance N E. by N. ½ N. from the **White Bull**; and one mile N W. ½ N. from **Mark Island.** Strangers must beware of these ledges, and in beating must not stand to the westward of the **White Bull,** bearing S W. ½ S. At night keep **Half-Way Rock Light** open to the southward of **Ragged Island.**

After passing the *Sisters Ground* the channel is clear to **Flag Island.** The course leads between that island and

LONG LEDGE.

This is composed of two narrow, bare, rocky islets, lying in a N N E. and S S W. direction, joined at low water, and each about three hundred yards long. They are tolerably bold-to, except that off the northern end of the upper islet there is a rock awash at a distance of one hundred and twenty-five yards. There is good water on each side of **Long Ledge**, but the main channel leads between it and **Flag Island,** which is half a mile S E. from it.

The northern end of Flag Island must not be too closely approached. On the contrary, vessels should keep over toward **Long Ledge**; for there is a sunken ledge, with seven feet at mean low water and five at low spring tides, which lies two hundred yards N W. from the north point, and is known as *North West Ledge*, or *Flag Island North West Ledge*. Several vessels have struck upon this ledge, *as it is not buoyed*, and is very much in the way. Passing *North West Ledge*, avoid the

SHOAL GROUND NORTH OF FLAG ISLAND,

which extends from the north point in a N N E. direction nearly three-quarters of a mile. There are four distinct shoals with deep water between them, and the soundings on them vary from ten to fifteen feet. *They are not buoyed.* (See page 549.)

GOUDY LEDGE,

already described, (see page 549,) is the next obstruction met with. Here the *Western Channel* joins the *Eastern*. *Goudy* is bare at half-tide; it lies five-eighths of a mile N. ¾ E. from **Flag Island** and three-eighths of a mile S. ¼ E. from **Rogue Island**. There is good water on all sides of it.

A *spar-buoy, painted with red and black horizontal stripes*, is placed in twenty feet of water off the SOUTH point of the rock. Vessels using this channel pass to the westward of it.

The *Western Channel* now joins the *Eastern*, and the obstructions in the river are common to both. (See page 550.)

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING NEW MEADOWS RIVER.

II. *Coming from the westward.*—Pass half a mile to the southward of **Half-Way Rock**, in from sixteen to twenty-four fathoms of water, and when abreast of the **light-house** steer E N E. for little over six miles and three-quarters, carrying not less than twelve fathoms, until the middle of the highest part of the **White Bull** bears N W. and is in range with the western part of **Ragged Island**. Now haul up N E. by N. ¾ N., and continue this course, with not less than eleven fathoms, until past **Rogue Island**, and **Fort Point** bears WEST, and about three hundred yards distant. Then steer N E. by N., keeping the eastern shore a little the best aboard, and carrying not less than twelve fathoms water, and continue this course until past the middle of **Sheep Island** and the southern end of **Long Island** bears N. ¼ E., with eight fathoms, soft bottom. This clears *Sheep Island Ledge*. Now steer N. by E. ¼ E., nearly for **Merrit Island**, and proceed as directed on page 551.

Coming from the westward, bound into Horse Island Harbor: When off **Half-Way Rock**, steer N E. by E. ¼ E. The peculiar bald spot on top of the wooded hills, called **Tottman's Bumper**, will be seen over **Carrying-Place Head**, bearing about E N E. This course leads past **Bold Dick** and between the **White Bull** and **Mark Island**, but close to the former, and carries not less than ten fathoms of water. Continue it until abreast of *Jamison Ledge Buoy*, which leave to the northward and westward, and steer N. by E. ¼ E., with not less than six fathoms, until up with the north end of the **North Blacksnake**. Now haul to the eastward, passing midway between **Horse Island Point** and the **North Blacksnake**, with not less than seven fathoms, and so continue until fairly opening the harbor. Then steer up the middle of the passage, and anchor according to draught, in from two to six fathoms of water, sticky bottom.

Vessels may pass between the **White Bull** and **Ragged Island** with six fathoms of water, and enter *New Meadows River;* or go to the northward of **Ragged Island**, and pass

between it and **Blacksnake Ledge**, with eight fathoms water. But neither of these channels should be attempted by strangers. The chart is the best guide for them.

Vessels beating into New Meadows River must remember to give the south point of **Wood Island** a berth of one-third of a mile; not to stand across the north end of **Flag Island** until to the northward of *Goudy Ledge;* in approaching **Horse Island** from the westward, not to go to the eastward of **Carrying-Place Head**, bearing S. ¼ E.; not to stand too close to **Hen Island** in *Winnegance Bay;* and to beware of *Bragdon Rock* and the eastern side of the northern end of **Long Island**. All the other shores are bold-to, and may be closely approached.

QUOHOG BAY.

Next to the westward of the *New Meadows* is the entrance to *Quohog Bay*. This bay is formed by a deep indentation in the southern shore of **Great Island**, and is an excellent harbor of refuge, although otherwise of no commercial importance. The entrance is between **Yarmouth Island** on the east, and **Long Point**, the southwestern point of **Great Island**.

YARMOUTH ISLAND

is thinly wooded, bold, and rocky, surrounded by extensive shoals, bare rocks, and ledges. It is the first island met with to the westward of **West Cundiz Point**, being only half a mile from it; and between it and the point is a broad passage, with seven fathoms water, leading into *Ridley Cove*, an excellent anchorage in all winds except those from the southward and southwestward. **Yarmouth Island** is bluff and precipitous on its eastern face, being one hundred and twenty feet high and descending abruptly to the water's edge; but on its western and southern sides the slope is very regular and gradual. It is nearly three-quarters of a mile square.

RIDLEY COVE

is contained between the west shores of **Cundiz Point** and **Yarmouth Island**; affords an excellent anchorage, and is nearly a mile long and three eighths of a mile wide. Anchorage in from five to seven fathoms may be had in any part of the cove. Its northern side is bounded by two islets; the one to the eastward, close to the **Great Island** shore, called **Great Hen Island**, and the westernmost one known as **George Island**. A small islet, called **Bush Island**, which lies close to the northeastern point of **Yarmouth Island**, forms the western boundary of a narrow but excellent passage, with not less than twenty-one feet, from *Ridley Cove* to *Quohog Bay*.

FLASH ISLAND.

This small rocky islet lies on the western side of the entrance to *Ridley Cove;* is two hundred yards S E. from the southeastern point of **Yarmouth Island**, and surrounded by shoals. It should receive a berth of one hundred and fifty yards to the westward.

JENNY ISLAND.

This rocky islet lies half a mile S W. from **Cundiz Point** and the same distance N W. by N. ¼ N. from the north end of **Long Ledge**. Vessels bound into *Quohog Bay* pass to the westward of it; but there are seven and eight fathoms on all sides of it, and it is tolerably bold-to.

Several islands and islets lie off the approaches to *Ridley Cove* and *Quohog Bay*. Coming from the eastward, outside of all danger, we first meet with

RAGGED ISLAND,

a rocky island about half a mile long and a quarter of a mile wide, lying N N W. and S S E. Its southeastern end is a steep bluff one hundred feet high, with the summit

covered with a stunted growth of fir. The rock of which the island is formed has been bleached by exposure to a peculiar whitish color, which, dotted here and there with a solitary spruce or fir tree, gives the southern face a peculiar appearance.

The course to enter the *Quohoy Bay* from the eastward leads along the west shore of **Ragged Island.** The high grassy island seen two or three miles to the westward is **Bailey Island.** The land to the northwestward is **Orr Island.** The course leads about NW. by N., between dangerous ledges and among sunken reefs, and the first island met with to the northward of **Ragged Island** is

TWO-BUSH LEDGE.

When past the northern end of **Ragged Island,** there will be seen to the north a group of rocky islets, partly bare and partly wooded, in range with **Yarmouth Island.** The southernmost of these is **Two-Bush Ledge,** a bare rock about three hundred yards long, lying NNE. from **Ragged Island** at a distance of one mile and a quarter. It is twenty feet high and bare of all vegetation, and is tolerably bold-to. The channel leads to the westward of **Two-Bush,** between it and a long line of bare rocks known as **Cedar Ledges.**

Two hundred yards to the northeastward of **Two-Bush** are two other islets composing the group, called

ELM ISLANDS.

The easternmost islet is the larger; is three hundred yards long, forty feet high, and bare. The other rock is much smaller, about twenty feet high, with a few trees upon it. A small, round, bare rock lies off the southern end of the larger islet, about one hundred yards distant. Shoal water extends off on their southern sides a distance of six hundred yards, but on their western faces they are bold-to.

Passing to the northward of **Elm Islands,** enter *Quohog Bay* between the low shores of **Yarmouth Island** and a long, low, cleared point, with many bare rocky islets and ledges, lying south from it. This is the southwestern point of **Great Island,** and is called

LONG POINT.

The land to the westward and to the northward of this point rises very gradually to a height of about eighty feet, and about a quarter of a mile to the northward a bluff head, eighty feet high, extends into the bay. Behind this, to the northward, rise the high lands of **Great Island,** diversified with cleared and cultivated slopes, settlements, and thickly-wooded hills.

Bare ledges, known as the **Ballast-Stone Ledges,** appear to the eastward, off the south shore of **Yarmouth Island;** and still farther to the eastward will appear the little bare rock known as **Flash Island,** on the western side of the entrance to *Ridley Cove.*

On entering the bay there will be seen ahead, bearing nearly NNE., an island in mid-channel, rising to a considerable height. This is

POLE ISLAND,

one hundred feet high, and bare of trees. North and south of it bare ledges extend to a distance, each way, of nearly half a mile; but its eastern shores are bold-to. It is one and five-eighths miles above **Long Point,** and exactly in mid-channel.

When past **Yarmouth Island** a passage will open, leading along its northern shore to the eastward, into *Ridley Cove.*

The channel of *Quohog Bay* leads on either side of **Pole Island;** and nearly three-quarters of a mile above the island lies another—a small bare islet exactly in the mid-

dle of the channel. It is called **Centre Island**, and, like **Pole Island**, may be passed on either hand.

Here the eastern shore of the bay spreads away to the southward and eastward, and then turning again to the northward, forms at the head of the bay a wide cove, with deeply indented shores, and obstructed by a group of islets surrounded by ledges and shoals. The westernmost of these islets is the largest; is called **Snow Island**, and is a quarter of a mile east of **Centre Island**. The space between **Snow** and **Great Island** is occupied by a group of four rocky islets, the northernmost of which is the largest, and is called **Ben Island**.

The bay widened by the curve of the eastern shore is here three-quarters of a mile wide; but the best water is west of the islands. Strangers should not attempt to go to the eastward of **Snow Island**.

Three-eighths of a mile above **Snow Island** is the north shore of the bay, which is indented by no less than four narrow coves. The easternmost is called *Rich Cove*. Next to the westward is a long and very narrow cove, called *Brickyard Cove*. Then comes *Mill Cove;* and the westernmost, which is the largest and longest of the four, is called *Orr Cove*.

Of these four, *Mill Cove* and *Orr Cove* are safe for strangers. The others are too much obstructed, and are dangerous for any to attempt except those familiar with the locality.

DANGERS
IN APPROACHING AND ENTERING QUOHOG BAY.

I. *Coming from the eastward.*—The best passage into this bay from the eastward is along the southwestern shores of the **White Bull** and **Ragged Island**. The first obstruction met with by vessels using this passage, after passing the **Brown Cow**, is

BOLD DICK,

a small ledge, lying W. by S. ½ S., five-eighths of a mile from the **White Bull**, and the same distance S S W. from the centre of **Ragged Island**. It is bare at one-quarter ebb, *is not buoyed*, but is quite bold-to, and always shows itself by breakers. (See page 552.)

When between the **White Bull** and **Bold Dick** a large ledge will show itself, except at high water in very calm weather. This is

SADDLE-BACK LEDGE,

lying half a mile W S W. from the southern end of **Ragged Island** and one-third of a mile N W. by N. ½ N. from *Bold Dick*. It is bare at half-tide, and is tolerably bold, except on the southern side. Vessels must be very careful in standing across between *Bold Dick* and this ledge; for, although there is good water between them, the passage is rendered dangerous by a *detached rock*, bare at low water, one hundred and seventy-five yards S E. from the *Saddle-Back*. It is not named, and *Saddle-Back Ledge is not buoyed*. There is another dangerous rock on the eastern side of the channel, directly abreast of *Saddle-Back Ledge*. It lies two hundred and fifty yards S W. by W. ½ W. from the southwestern end of **Ragged Island**; is bare at low tide, and surrounded by deep water.

Passing these ledges, the next obstruction lies well on the western side of the channel, in the way of vessels bound in from the westward; but is only dangerous to vessels using the eastern channel when beating in or out. It is called

ROUND ROCK;

is bare at half-tide, and very bold-to; lies W. by S., seven-eighths of a mile distant from

the centre of **Ragged Island**, and N W. by W. ½ W., half a mile from *Saddle-Back Ledge. It is not buoyed*, but shows itself at all times of tide except in very calm weather.

When abreast of the middle of **Ragged Island** the channel turns to the northeastward and leads between two dangerous ledges lying nearly east and west of each other. The shoal to the north and east is

BLACKSNAKE LEDGE,

formed by a reef or line of bare rocks extending in a N. by E. and S. by W. direction three hundred yards, and having ledges bare at low water surrounding them. The whole extent of the shoal in a N. by E. direction is exactly half a mile.

The southern end of **Blacksnake Ledge** is one-quarter of a mile NORTH from the north end of **Ragged Island** and a little over half a mile EAST from the southern end of *Middle Ground Rock*, which lies abreast of it, on the western side of the channel. The passage between them is perfectly clear, as is also that between the **Blacksnake** and the north shore of **Ragged Island.**

This ledge is not buoyed, but is always visible in the day-time. Opposite to it is

MIDDLE GROUND ROCKS,

an extensive piece of shoal ground, obstructing alike the entrance to the *Gurnet* and to *Quohog Bay.* It covers an area of half a mile N N E. and S S W. by the same distance W. by S. and E. by N.; is mostly bare at low water, *and is not buoyed.* The southeastern end of this shoal is a little over half a mile W. by N. ½ N. from the northern end of **Ragged Island**, and about the same distance W. ½ S. from the southern end of the **Blacksnake.**

CEDAR LEDGES

lie four hundred yards to the northeastward of the northern end of the *Middle Ground.* They are a number of bare islets and rocks extending for more than half a mile in a N N E. and S S W. direction on the western side of the channel, and surrounded by ledges bare at low water. The whole extent of the obstruction is over a mile in a N N E. and S S W. direction and one-third of a mile in an E S E. and W N W. direction. The southern end of these ledges is three-quarters of a mile N. by W. ½ W. from the northern end of **Ragged Island**, and the northern point is not quite half a mile S S W. from **Long Point.** Although there are seven fathoms of water between the *Middle Ground Rock* and these ledges, and also between them and **Great Island**, strangers should not attempt either passage.

Vessels beating in or out must, when passing across the northern end of **Cedar Ledges**, give them a berth of three-eighths of a mile to the southward. When approaching the southern end of the shoal, they must not attempt to cross between it and the *Middle Ground Rock*, but must go about as soon as the southernmost of the bare rocks bears N. by E.

YELLOW ROCK.

On the eastern side of the channel, a little over a quarter of a mile N E. by N. from the **Blacksnake** and exactly a quarter of a mile S S W. from **Two-Bush Ledge**, is a small bare rock, called **Yellow Rock.** It is quite bold-to, and is only in the way of vessels beating in or out. There is a good channel between it and **Two-Bush**, and also between it and the **Blacksnake.**

From Yellow Rock the channel leads to the northeastward between **Two-Bush** and **Cedar Ledges**, and on approaching the entrance to the bay there will be seen to the eastward a great mass of shoal ground, composed of bare rocks, reefs, and sunken ledges, extending from the southwestern end of **Yarmouth Island** almost to **Elm Islands**, a distance of three-quarters of a mile, and called

YARMOUTH ISLAND LEDGES.

They lie NORTH and SOUTH between **Yarmouth** and **Elm Islands**, and are formed by six or seven distinct ledges grouped closely together, some always bare, some bare at half-tide, some bare at low water, and some with from two to ten feet upon them. To avoid them, in beating, do not go to the eastward of **Two-Bush**, bearing S. by W. ¾ W. *They are not buoyed.*

After passing **Yarmouth Island Ledges** the channel is clear to abreast of the middle of **Yarmouth Island**, when there will be seen to the northward and westward a line of bare rocks extending to the southward from the southern end of **Pole Island.** These are

POLE ISLAND SOUTH LEDGES,

extending S W. from **Pole Island** for half a mile, and tolerably bold-to. In the line of, and at the distance of five hundred yards from, the southwestern extremity of the bare part of these ledges there lies a *sunken rock* exactly in mid-channel, with thirteen feet at mean low water. There is a good channel on either side, perfectly unobstructed, and both of about equal width. **Pole Island** itself is bold-to, and may be approached quite closely with five fathoms.

When abreast of the northern end of **Pole Island** another line of bare ledges will be seen extending to the northward of the island. These are

POLE ISLAND NORTH LEDGES,

a reef of bare rocks extending N E. from the northern end of the island for a third of a mile. They are also bold-to like the **South Ledges**, and the channels on both sides of them are equally good.

Above these ledges there are no obstructions in the channel of the bay. It may be necessary, however, to state that vessels drawing over twelve feet passing on the western side of **Centre Island** should give it a berth of two hundred and fifty yards.

Vessels must not go to the eastward of **Snow Island.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING QUOHOG BAY.

I. *Coming from the eastward.*—Bring **Bald Head** to bear N E. and **Half-Way Rock Light-House** to bear W. ¼ S., with thirteen fathoms, hard bottom, and steer N W. ¼ W. for the middle of **Pond Island.** Continue this course past the **White Bull**, leaving *Bold Dick* and *Saddle-Back Ledge* well to the westward, and carrying not less than ten fathoms, until **Half-Way Rock Light** bears S W. ½ W. and the **Sisters** have just opened clear of the northern end of **Ragged Island**, when there will be sixteen fathoms, soft bottom. Now steer N E. by N. ¾ N. for **Pole Island**, and continue this course, with not less than seven fathoms, until abreast of the middle of **Yarmouth Island** and about two hundred and fifty yards from the southern end of **Pole Island South Ledges.** Now, if wishing to anchor in the bight, edge over toward the **Yarmouth** shore, steering about N E. ¼ E., just so as to give the **South Ledges** a small berth, and anchor anywhere in the harbor formed by **Pole Island** and **Great Island** on the NORTH and EAST and **Yarmouth Island** on the SOUTH, and in from two to four fathoms, soft bottom.

But, if bound up the bay, keep either shore aboard, only taking care to give the **South** and **North Ledges** a berth of fifty or sixty yards, and when past the **North Ledges** round the point on the eastern shore, and anchor between it and **Snow Island**, in from twelve to twenty-one feet water, sticky bottom.

Or, give **Centre Island** a berth, and anchor under the north shore of the bay, or in *Orr Cove*, in from ten to eighteen feet.

Through the channel west of **Pole Island** eight fathoms may be taken as far as the north end of the island, and beyond that not less than four fathoms. Through the eastern channel five fathoms can be carried as far as the north end of **Pole Island**, and not less than four as far as **Central Island.**

II. *Coming from the southward, to pass to the westward of Bold Dick, and between the Saddle-Back and Round Rock, and enter Quohog Bay.*—When **Half-Way Rock Light** bears WEST, distant two and three-quarters miles, and **Woody Mark Island** N E. by E. ½ E., in range with **Carrying-Place Head, Mark Island Monument** will bear N W. by N. ½ N. and **Pole Island** N E. by N. ⅝ N., and there will be about twenty-eight fathoms of water. Steer for **Pole Island,** which will lead safely, with not less than seven fathoms, between *Round Rock* and the *Saddle-Back*, and up the middle of the bay until abreast of the middle of **Yarmouth Island,** and about two hundred and fifty yards below the southern end of **South Ledges.** Then follow the directions given above for anchoring in the bight or proceeding up the bay.

Vessels may also enter the *Gurnet* by the eastern passage into *Quohog Bay*, passing to the westward about midway between **Long Point Rocks** and the northernmost bare rock of the **Cedar Ledges.** But it is a channel that should never be attempted by strangers. Seven fathoms may be taken through it.

DANGERS
IN THE APPROACHES TO QUOHOG BAY.

II. *Coming from the westward.*—There are three commonly-used channels leading from the westward into *Quohog.* The first and most southerly leaves **Half-Way Rock** to the northward and passes clear of all dangers until **Pole Island** is brought to bear N E. by N. ⅝ N. The next to the northward leads to the northward of **Half-Way Rock,** and the first danger met with is

WEBSTER ROCK.

This dangerous ledge has eight feet at low spring tides, and lies NORTH from **Half-Way Rock** at a distance of three hundred and fifty yards. Between it and the rock it is not safe to go, as the ground is shoal and broken. This ledge is marked by a *black spar-buoy* anchored in three fathoms of water on the northern end of the shoal ground. It is a very long spar, and can be seen from a considerable distance.

Webster Rock was so called from the circumstance of the steamer **Daniel Webster** striking on it in the summer of 1856.

DRUNKER LEDGES.

This extensive piece of shoal ground lies between the bearings of N E. by N. and N N E. from **Half-Way Rock,** at a distance of two miles. It bears from *Webster Rock Buoy* between N E. ½ N. and N E. by N. ½ N., lies between the bearings of S. ½ E. and S. ½ W. from **Mark Island Monument,** and is distant from it one mile and a quarter.

There are two distinct ledges lying S E. ½ E. from each other, with a channel a quarter of a mile wide, and with fourteen fathoms of water between them. It is not at all an unusual thing for vessels to pass between them at low water. Both rocks are always visible at half-tide, the northernmost being bare at that time and the southernmost showing by breakers. The latter has four feet at mean low water, and at low spring tides it is nearly bare. Off the western end of the northernmost ledge is placed a *spar-buoy painted with black and red horizontal stripes*, and in six fathoms at low water.

The third channel from the westward leads between *Drunker Ledges* and a sunken ledge nearly three-quarters of a mile to the northeastward of it, called

MARK ISLAND LEDGE,

with three feet upon it at low water, and sometimes awash. It bears S E. by S. ½ S. from **Mark Island Monument**, distant nearly three-quarters of a mile, and N E. by N. ½ N. from **Half-Way Rock**, distant two and three-quarters miles. There are from four to nineteen fathoms of water all around it, and vessels may pass on either side of it by giving it a good berth. A *black spar-buoy* (No. 15) marks this ledge. It is placed in four fathoms on the northwestern side of the rock.

There is still another channel, very much used by fishermen, yachts, and steamers, leading to the northward of **Mark Island Ledge**, between it and

JAQUISH ISLAND,

a small, low, rocky island, lying off the south end of **Bailey Island**, from which it is separated by a narrow passage full of ledges, called *Jaquish Cut.* The island has a grove of spruce and fir on its summit occupying about one-third of the surface.

Jaquish Cut is two hundred yards wide. A bare rocky islet, lying S E. from **Jaquish**, and one hundred and fifty yards from it, is called **Little Jaquish Island.**

In this in-shore passage the first danger met with after passing *Mark Island Ledge* is

JAQUISH LEDGE,

a long point making off from the southwestern end of **Jaquish Island** to a distance of two hundred and seventy-five yards. It is nearly all bare at low water, is quite bold-to, *and is not buoyed.* The channel between it and *Mark Island Ledge* is five-eighths of a mile wide.

After passing **Jaquish Island**, the next ledge met with is

CHARITY LEDGE,

and is not dangerous to light-draught vessels except at low water. There are fifteen feet on it at mean low tides. It lies half a mile E. by N. from **Little Jaquish Island** and a mile and a quarter S W. ½ W. from **Pond Island.** *It is not buoyed,* and is quite bold-to.

After passing this danger, the next one met with is formed by a line of bare rocks extending in a N N E. and S S W. direction on the northern side of the channel. These are

POND ISLAND LEDGES,

which extend off half a mile from **Pond Island** and are surrounded by shoal water for one hundred and fifty yards to the southward of the bare rocks. *They are not buoyed.*

Pond Island is that bare rocky island which appears bearing N E., and nearly two miles distant, when passing to the eastward of **Jaquish Island** and looking up into the *Gurnet.* It is about seven hundred yards long and three hundred and fifty wide, is surrounded by shoals and sunken rocks, and lies in the middle of the passage into the *Gurnet.*

After passing **Pond Island Ledges** the channel leads toward the northern end of **Ragged Island**, and passing between *Round Rock* on the south and *Middle Ground Rock* on the north, turns to the northeastward and enters *Quohog Bay.*

ROUND ROCK

obstructs equally all the channels from the westward. It is bare at half-tide and very bold. It bears W. by S. from the centre of **Ragged Island**, from which it is distant seven-eighths of a mile. From this rock **Pond Island** bears N N W., nearly one mile distant. (See page 556.)

MIDDLE GROUND ROCK

is an extensive shoal obstructing the entrance to *Quohog Bay* and the *Gurnet.* It lies N N E. and S S W., and covers an area of half a mile square. It is mostly bare at low water, and *is not buoyed.* The southeastern end of this shoal is a little over half a mile W. by N. ½ N. from the northern end of **Ragged Island**, and about the same distance W. ½ S. from the southern end of the **Blacksnake.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING QUOHOG BAY FROM THE WESTWARD.

I. *By the outside passage, south of* **Half-Way Rock.**—Pass half a mile to the southward of **Half-Way Rock**, and when the **light-house** bears N. by W. ½ W., and in twenty-four fathoms water, steer E N E. until **Mark Island Monument** bears N W., carrying not less than twenty fathoms, when **Pole Island** will bear N E. by N. ½ N., and there will be fifteen fathoms, soft bottom. Then steer for **Pole Island**, and pass safely up the bay to **Yarmouth Island**, with not less than seven fathoms. When abreast of the island, and about two hundred and fifty yards from **Pole Island South Ledges**, give the latter a berth, edge over to the eastern shore, and anchor in the bight, in from two to four fathoms, soft bottom. Or, following the direction given on page 558, keep on up the bay, and anchor at pleasure, in from two to three and a half fathoms. This channel is the best for strangers.

II. *By the channel between Half-Way Rock and Drunker Ledges.*—Pass five-eighths of a mile to the northward of **Half-Way Rock.** This clears *Webster Rock*, leaving the buoy more than a quarter of a mile to the southward. When this buoy and the light-house are in range on a bearing of S. by E., and in about nineteen fathoms, steer E N E., (heading for the passage between the **White Bull** and **Ragged Island**,) and carrying not less than twelve fathoms water. When **Mark Island Monument** bears W. by N. ½ N., **Pole Island** will bear N E. by N. ½ N., and there will be twenty fathoms, sticky bottom. Now steer for **Pole Island** on this course, and it will lead safely up the bay, with not less than seven fathoms, until close up with **South Ledges**, when give them a berth to the eastward, and pass up the bay according to directions given on page 558; or, give the **South Ledges** a berth to the westward, edge over toward the eastern shore, and anchor in the bight, in from two to four fathoms, soft bottom.

III. *By the channel between Drunker and Mark Island Ledges.*—To use this channel, bring the north end of **Ragged Island** to bear E. by N. ½ N., and **Mark Island Monument** N E. ½ N., and **Half-Way Rock Light** SOUTH, one mile and three-quarters distant, when there will be twenty-five fathoms, hard bottom. Then steer E. by N. ½ N. for the northern end of **Ragged Island**, passing about midway between *Drunker* and *Mark Island Ledges;* to the southward of *Charity Ledge* a quarter of a mile; to the northward of *Round Rock* two hundred and fifty yards; and to the southward of *Middle Ground Rock* more than a quarter of a mile, and carrying not less than six fathoms of water. When within half a mile of **Ragged Island**, in fifteen fathoms, soft bottom, **Pole Island** will bear N E. by N. ½ N. Steer that course, which will lead safely up the bay, with not less than seven fathoms, to within two hundred and fifty yards of **South Ledges**, when follow the directions given on page 558.

IV. *By the in-shore channel, between Mark Island Ledge and* **Jaquish Island.**—The use of this channel presupposes having come through the bay by the passage among the islands. To enter it, bring **Mark Island Monument** to bear N E. by E. ½ E., one mile distant, **Half-Way Rock Light** to bear SOUTH, and the western end of **Eagle Island** NORTH, three-

quarters of a mile distant, when there will be from twelve to fifteen fathoms, dark green mud. Then steer E. ½ N., nearly for the southern end of **Ragged Island**, leaving **Jaquish Island** nearly a quarter of a mile to the northward and **Mark Island Ledge** the same distance to the southward, and carrying not less than seven fathoms water. Continue this course until the monument is just shut in behind **Jaquish Island** and **Half-Way Rock Light** bears S W. ½ W., with seventeen fathoms, soft bottom. Then **Pond Island** will bear N N E. and the ledges will be in range with it, distant half a mile in a N N E. direction. Now steer E. by N. ½ N. for the north end of **Ragged Island**, carrying not less than six fathoms, and leaving *Round Rock* two hundred and fifty yards to the southward and *Middle Ground Rock* a quarter of a mile to the northward; when **Pole Island** bears N E. by N. ½ N., steer that course, and continue it up the bay, with not less than seven fathoms, until within two hundred and fifty yards of the ***SOUTH LEDGES.*** Give them a berth to the eastward, and continue up the bay according to the directions given on page 558; or, give them a berth to the westward, and steer N E. ½ E. into the bight, and anchor at discretion.

THE GURNET.

The *Gurnet* is a long and narrow cove contained between the southern part of **Great Island** and **Orr Island**. There was formerly a strait or passage between **Great Island** and the northeastern end of **Orr Island**; but it is now bridged and all communication cut off except for small boats.

The *Gurnet* is two miles long, half a mile wide at its mouth, and gradually contracts until at its head it is not quite a quarter of a mile in width. It is of no importance except as a harbor of refuge in northerly storms, and of little then, as vessels prefer to run into *Stover Cove* or *Harpswell Harbor*, or to anchor in *Horse Cove* on the northern end of **Bailey Island.**

ORR ISLAND,

forming the western side of the cove, is a large island of considerable height, lying N E. and S W., and about three miles long. It is pretty thickly settled, and the surface is diversified by wooded slopes and cleared and cultivated lands studded with houses. The woodlands are mostly near the southern end, but wood is being rapidly cut and the appearance of the land changing accordingly. The northern end is indented by a long, shallow, and very narrow cove, called *Long Cove,* which splits the north side into two small peninsulas. The easternmost of these is joined at its extremity by a bridge to **Great Island**, thus closing the head of the *Gurnet.* This northeastern point is bluff and steep.

On the western side, **Orr Island** is indented by two coves—one near the middle of the island, large and wide, but very shallow, and called *Reed Cove.* The other is small, almost entirely bare at low water, opens into the island about a mile above its southwestern point, and is called *Beal Cove.* Neither is of any importance.

On the southern side of the island there is a deep cove making into the land between the southeastern and southwestern points, nearly half a mile long, and a third of a mile wide at its mouth. This is *Lowell Cove,* and affords capital anchorage in from two to four fathoms, soft muddy bottom.

Orr Island is separated by a narrow and crooked passage, called *WILLS STRAIT,* from a large, well-settled, and cultivated island, called

BAILEY ISLAND,

two miles long, but very narrow. It lies N E. by N. and S W. by S., the upper end mostly bare of trees and under fine cultivation; the southern end showing a bare and bluff

appearance, and the summit of the bluff covered with a thick grove of spruce. Houses dot the cleared surfaces. The highest land on the island is sixty feet above sea-level.

On the north, **Bailey Island** is separated from **Orr Island** by a passage three hundred and fifty yards wide, called

WILLS STRAITS,

leading into *Harpswell Sound*, and very much used by fishermen and yachts. But it is so narrow, so extremely crooked, and so full of ledges and rocks that no stranger, however light his draught, should ever dare to use it. As it is a very useful cut-off for light-draught vessels, such will always find pilots at *Stover Cove* or on **Orr** or **Bailey Islands.** Six feet at low water can be brought through this passage.

At half-flood or high water a N. by W. or S. by E. course *made good* will carry a vessel safely through, but at low water no one course will do it.

On the northern shore of **Bailey Island** a small but convenient anchorage is formed by

HORSE COVE.

It is very easy of access, there being no obstructions in it, and vessels may anchor in from two to four fathoms, soft bottom, and lie secure from all winds. It is very frequently used.

Off the southern end of **Bailey Island** lies a small, low, rocky island, crowned with spruce and fir, called **Jaquish Island.** (See page 560.) About three hundred yards to the westward of **Jaquish Island** is a small, bare, rocky islet, called **Turnip Island.** It is very bold-to on its eastern side, and **Jaquish** is bold-to on its western side. The passage between them leads into *JAQUISH CUT.* It has seven fathoms of water, but *Jaquish Cut* is shallow, and dangerous except for light-draught vessels.

Orr Island separates the *Gurnet* from *Harpswell Sound.* **Bailey Island** separates the approach to the *Gurnet* from *Mariconeag Sound.*

MACKEREL COVE.

On its southwestern side **Bailey Island** is indented by a large and deep but narrow cove, called *MACKEREL COVE.* It is a great resort of fishermen, and affords good anchorage except in SW. winds, when it is somewhat rough. The holding-ground is good, and the water deep, five to six fathoms being the depth at the best anchorage.

POND ISLAND,

low, bare, and rocky; is about six hundred yards long and three hundred broad, and lies in the middle of the passage toward the *Gurnet*, a little over three-quarters of a mile from the eastern shore of **Bailey Island**, and a mile and a quarter northwestward of **Ragged Island.** It is surrounded by bare rocks and dangerous sunken ledges, and must receive a good berth on either hand.

Nearly three-quarters of a mile NE. by N. from **Pond Island** is a smaller bare rock, called

RAM ISLAND,

only about three hundred yards long, and very narrow, and is surrounded by shoals. There is a passage between it and **Pond Island**, through which five fathoms may be taken, which is often used by fishermen; but no stranger should attempt it, as the dangerous *Middle Ground* and **Ram Island Ledges** obstruct it. They are *sunken rocks*, and *are not buoyed.*

The eastern shores of the *Gurnet* are formed by a part of **Great Island**; are mostly wooded, and the land rises gradually to a height of eighty feet above high-water mark.

DANGERS
IN APPROACHING AND ENTERING THE GURNET.

I. *Coming from the eastward.*—The first obstruction met with, in approaching the *Gurnet* from the direction of **Cape Small Point**, is

LUMBO LEDGE,

an extensive piece of shoal ground, with only one very shoal spot upon it, and that marked by a buoy. It is four miles and three-quarters E. ½ N. from **Half-Way Rock Light-House** and two miles and a half S. ¾ W. from **Ragged Island.** Eleven feet at low water is found in one spot near the western end of the ledge, and here an *iron nun-buoy* of the second class, *painted with black and red horizontal stripes*, has been placed. The buoy is one hundred yards SOUTH from the shoalest part.

Passing *Lumbo Ledge*, the course leads to the northwestward, and two miles to the northward is

BOLD DICK,

bare at a quarter ebb. It is a small ledge, five-eighths of a mile W. by S. ⅝ S. from the **White Bull** and the same distance S S W. from the centre of **Ragged Island,** *and is not buoyed.*

This rock is very bold-to, and may be approached very closely (see page 556) with five fathoms of water.

Passing to the westward of *Bold Dick* a quarter of a mile, and continuing the course to the northwestward, the next danger is

SADDLE-BACK LEDGE,

a large ledge, bare at half-tide. It is only three-eighths of a mile to the northward of *Bold Dick* and half a mile W S W. from the southern end of **Ragged Island,** and is tolerably bold-to. A good channel exists between it and *Bold Dick*, but is not available for strangers on account of a rock bare at low water, which lies in the channel one hundred and seventy-five yards S E. from the *Saddle-Back. It is not buoyed.*

ROUND ROCK

is half a mile N W. by W. ¾ W. from *Saddle-Back Ledge*, seven-eighths of a mile W. by S. from the centre of **Ragged Island**; is bare at half-tide, very bold-to, *and not buoyed*, but, except in the calmest weather, shows itself by breakers at high water.

As soon as past *Round Rock*, the course leads directly up the middle of the *Gurnet* in a northeasterly direction, passing to the westward of *Middle Ground Rock* and to the eastward of

POND ISLAND LEDGES,

formed by a line of bare rocks extending from the southern extremity of **Pond Island** half a mile in a N N E. and S S W. direction. They are surrounded by shoal water extending one hundred and fifty yards to the southward of the bare rocks, *are not buoyed*, but are tolerably bold-to on their eastern side.

Pond Island itself is surrounded by shoals, and its eastern shore should not be approached nearer than two hundred yards. (See page 560.)

MIDDLE GROUND ROCK,

nearly opposite to **Pond Island,** is an extensive shoal, partly dry at low water, but composed for the most part of sunken ledges. It covers an area of half a mile square, and, *having no buoy*, is a very dangerous obstruction both to *Quohog Bay* and the *Gurnet.* It is best avoided by knowing its bearings; but a vessel passing up with a fair wind, by keeping about four hundred yards from **Pond Island,** will go clear of everything in the best water.

The southwestern end of *Middle Ground Rock* lies W. by N. ¾ N., seven-eighths of a mile from the centre of **Ragged Island**, and S E. by E. ⅝ E., five-eighths of a mile from the southern end of **Pond Island**. (See page 561.) *There is no buoy here.*

When past the *Middle Ground*, the course leads between **Cedar Ledges** and **Ram Island**.

CEDAR LEDGES

are a number of bare rocks extending in a N N E. and S S W. direction more than half a mile; their southern end four hundred yards to the northeastward of the northern end of *Middle Rock*. These bare rocks lie on the eastern side of the channel, between it and that leading into *Quohog Bay*, and bare ledges and sunken rocks extend off from them north, south, and west, so as to form a very dangerous piece of ground more than a mile long by a third of a mile wide.

The southern end of **Cedar Ledges** is three-quarters of a mile N. by W. ¾ W. from the northern end of **Ragged Island**, and their northern point is not quite half a mile S S W. from **Long Point**. There is a passage between these ledges and **Great Island**, and another along their south side, between them and *Middle Ground Rock*, but no stranger dare attempt either. (See page 557.)

Vessels beating through this channel must not approach the bare rocks on **Cedar Ledges** nearer than a quarter of a mile. The best way is to go about as soon as the eastern point of the entrance to the *Gurnet* bears N E. by N. ¾ N., and continue so to do until abreast of the northern end of **Ram Island**. Then keep the western side of the passage, going about as soon as the highest part of the land on the eastern side of the *Gurnet* bears N E. by N. ¾ N., to avoid

SLOOP LEDGES,

a group of dangerous sunken rocks lying along the northwestern end of **Cedar Ledges** and close to them. They have three feet at low water, *and are not buoyed.*

From **Ram Island** the southwestern end of *Sloop Ledges* bears E N E., distant nearly half a mile, and the shoal extends in a N E. by N. direction for over three-eighths of a mile toward **Oak Island**, the small rocky island off the southern end of **Great Island**.

With a fair wind the course given in the directions (see page 566) avoids all dangers; but in beating, vessels must be careful to go about on the bearings mentioned above, to avoid these dangerous sunken rocks.

After passing *Sloop Ledges*, the next danger is on the eastern shore of **Orr Island**. It is a sunken rock, called

EASTMAN ROCK,

has three feet at mean low water, and *is not buoyed.* It is nearly three-quarters of a mile above the southeastern point of **Orr Island**, only two hundred yards from shore, and is not, therefore, dangerous to any but those beating in or out.

MIDDLE ROCK.

One mile and a quarter above the southeastern point of **Orr Island** is a ledge with seven feet at mean low water, called *Middle Ledge*, or *Middle Rock*, and almost exactly in the middle of the passage. It is nearly five-eighths of a mile above *Eastman Rock, is not buoyed*, but is easily avoided by keeping either shore of the *Gurnet* aboard.

Three-quarters of a mile above the southern point of **Great Island**, and on the eastern shore of the *Gurnet*, begins *a series of shoals*, which at a distance of about two hundred or two hundred and twenty-five yards from the eastern shore extend to the head of the cove. Their extent in a westerly direction is marked by a number of bare rocky islets which lie along the western edge of the shoals, and by giving these a berth to the eastward as approaching them the ledges surrounding them are easily avoided.

SAILING DIRECTIONS
FOR ENTERING THE GURNET.

I. *Coming from the eastward.*—Bring **Half-Way Rock Light** to bear W. ½ S. and **Ragged Island** N. by W. ¾ W., with twenty fathoms, soft bottom, and steer N W. ½ N. for about the middle of **Bailey Island**, carrying not less than six fathoms water, and passing to the westward of *Bold Dick*, *Saddle-Back*, and *Round Rock*. When just past *Round Rock*, and the northern end of **Ragged Island** bears E. by N. ½ N., with the **Sisters** open to the northward of it, with ten fathoms of water, haul up N N E. and steer up the middle of the passage, carrying not less than five fathoms, passing between *Middle Ground Rock* and **Pond Island**; between **Cedar Ledges** and **Ram Island**; and two hundred and twenty-five yards to the westward of *Sloop Ledges*. Continue this course until past **Oak Island** and abreast of the southern end of **Great Island**, in five or six fathoms, hard bottom. Now alter the course to the eastward or westward so as to closely hug either shore, according as the wind favors; by this means avoiding the dangerous *Middle Rock*. When past *Middle Rock* keep the middle of the passage, and anchor at pleasure, in from three to four fathoms, soft bottom.

DANGERS
IN APPROACHING AND ENTERING THE GURNET.

II. *Coming from the westward, outside of* **Half-Way Rock.**—When **Half-Way Rock** bears N. by W. ½ W., half a mile off, the course for the *Gurnet* is N E. by N. nearly. On this course the first danger met with is called

DRUNKER LEDGES.

These bear N E. by N. from **Half-Way Rock Light**, distant two miles, and S. ½ E. from **Mark Island Monument**, one mile and a quarter. There are two distinct ledges, but the eastern is the only one obstructing this channel. It has four feet at low water, is not buoyed, but the sailing-lines will lead to the eastward of it, and it is, therefore, only dangerous to vessels beating in or out. (See page 559.)

MARK ISLAND LEDGE

lies three-quarters of a mile to the northeastward of *Drunker Ledges*, and like them is only dangerous to vessels beating up or down the bay. It bears from **Mark Island Monument** S E. by S. ¾ S., three-quarters of a mile distant; and N E. by N. ½ N. from **Half-Way Rock**, two miles and three-quarters distant. It has three feet upon it at mean low water, and is at times awash, but there are from four to nineteen fathoms water all around it.

A *black spar-buoy* (No. 15) is placed on the western side of this ledge as a guide to **Harpswell**. Vessels passing into the **Gurnet** must give it a wide berth to the westward.

CHARITY LEDGE,

although in the middle of the western passage, is not dangerous except in heavy weather, and for heavy-draught vessels. It has fifteen feet at mean low water; is half a mile E. by N. from **Little Jaquish Island**, and a mile and a quarter S W. ½ W. from **Pond Island**; *is not buoyed*, and is quite bold-to. (See page 560.)

POND ISLAND LEDGES,

already described, (on page 560,) are the next obstructions met with in this channel, and are to be left well to the eastward. They are a series of bare rocks making off from the southern end of **Pond Island** half a mile in a S S W. direction, and

have shoal water extending one hundred and fifty yards to the southward of the bare rocks. *They are not buoyed.*

THE MIDDLE GROUND AND RAM ISLAND LEDGES.

Just after passing **Pond Island**, and before reaching *Horse Cove*, the passage between **Bailey** and **Ram Islands** will be found to be obstructed by three separate sunken ledges, rendering the use of this channel dangerous to strangers. The largest of these lies exactly in the middle of the passage, and is called the *Middle Ground.* It lies nearly **NORTH** and **SOUTH**, and covers a space a quarter of a mile long by three hundred yards wide. Six feet at mean low water, or four feet at low spring tides, are found upon this shoal, and *it is not buoyed.*

The southern end of the *Middle Ground* lies **N W.** by **N.** from the highest part of **Pond Island**, and is distant three-eighths of a mile. It is a little over a quarter of a mile off the eastern shore of **Bailey Island**, and vessels, to avoid it, need only keep that shore aboard—never going farther to the eastward than to bring the highest part of the southeastern end of **Orr Island** to bear **N E.** by **N.**

Two hundred and twenty-five yards to the eastward of the *Middle Ground* is another sunken ledge with ten feet at mean low water, and nearly two hundred yards **N E. ½ E.** from this ledge is another with only seven feet at low water. The latter lies **S W.** by **W.** from **Ram Island**, distant three hundred yards, and both ledges are called *Ram Island Ledges.* There is good water on all sides of them, and a channel with seven fathoms between them and the **Middle Ground**; but it is unsafe for a stranger to attempt either passage. It is, indeed, very unsafe for any stranger to attempt to pass between **Ram** and **Pond Islands**, not only on account of the *long lines of bare ledges surrounded by shoal water which make off to the northeastward from* **Pond Island** *to a distance of six hundred yards*, but also because the *Ram Island Ledges* almost close the passage, leaving only a narrow channel between them. *As these ledges are not buoyed*, the risk of striking upon one or the other is too great for a stranger to accept.

From **Ram Island**, southern end, a line of bare ledges extends toward **Pond Island** two hundred yards, and shoal water extends to the southwestward over two hundred yards farther, or to a quarter of a mile from the south end of **Ram Island.** Thus the passage between the two islands is contracted at its beginning to a width of two hundred and seventy-five yards, with sunken rocks on each side. It should, therefore, never be attempted by those unacquainted with its dangers.

LITTLEJOHN ROCK.

After passing the *Middle Ground*, the next obstruction met with is also on the eastern side of the channel, and is called *Littlejohn Rock.* It lies a quarter of a mile **SOUTH** from the southeastern point of **Orr Island** and six hundred yards **W N W.** from **Ram Island.** Six feet at mean low water and four feet at low spring tides may be found upon this rock. There is a good channel on either side of it, but the usual and safest one is between it and **Orr Island.** The channel now leads to the eastward, between the island and the rock; after passing the rock, keep a quarter of a mile off **Orr Island** shore, to avoid *a ledge with twelve feet at mean low water*, which lies two hundred and fifty yards from shore five-eighths of a mile above the southeast point. This ledge is bold and has good water on all sides of it. Strangers should not, however, attempt to go between it and the island.

Vessels beating in or out must beware of

SLOOP LEDGES

when standing over to the eastward. These ledges lie along the northwestern side of

Cedar Ledges, and close to them; have three feet at low water, and *are not buoyed.* To avoid them, go about as soon as the highest part of the land on the eastern side of the *Gurnet* bears N E. by N. ½ N. (See page 565.)

Next above the *Twelve-Feet Rock* is

EASTMAN ROCK,

on the western side of the channel, *and not buoyed.* This rock is a knubble, formed on the southern end of the ledge making off in a southerly direction from the shore of **Orr Island**, nearly three-quarters of a mile above the southeastern point. It is two hundred yards from shore, has three feet at mean low water, and is therefore nearly awash at low spring tides.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING THE GURNET.

II. *Coming from the westward, outside of* **Half-Way Rock.**—Pass three quarters of a mile to the southward of **Half-Way Rock**, and when the light-house bears N W. by N. steer N E. by N. ½ N. for the southeastern end of **Orr Island**, carrying not less than five and a half fathoms. *If bound into Horse Cove*, when past **Pond Island** and the *Middle Ground*, and the middle of **Ram Island** bears EAST, the cove will open, and steer N W. by W. ½ W., about for the south side of the entrance to *Wills Straits*, and carrying not less than five fathoms. When passing the northeastern point of **Bailey Island** give it a berth of four hundred yards, and anchor in the bight to the westward of it, in from three to five fathoms at low water.

If bound into Lowell Cove, continue the course; steer N E. by N. ½ N., which will lead straight up to the entrance of the cove, passing to the westward of the *Middle Ground* and *Littlejohn Rock.* When within about four hundred yards of the southeastern point of **Orr Island**, alter the course to N E. by N. ½ N., which will lead safely into the cove.

There is nothing less than four and a half fathoms on the above courses, and from four to six fathoms, soft bottom, at the anchorage.

If bound up into the Gurnet, continue the course N E. by N. ½ N. until within four hundred yards of the southeastern end of **Orr Island.** **Ram Island** will then bear S E. by E. ½ E., and *Littlejohn Rock* will be in range with it, two hundred yards off, and there will be about five and a half fathoms, hard bottom. Then steer E N E. for **Oak Island**, keeping it in range with the small bare islet south of **Long Point**, and carrying not less than twenty-one feet. On this course, when **Ram Island** bears S. by W. ½ W. and the highest part of **Two-Bush Ledge** E S E., seen just clear of the northeastern end of **Cedar Ledges**, with seven fathoms, soft bottom, steer N E. by N. up the cove, keeping the western shore aboard, as soon as past *Eastman Rock*, to avoid *Middle Rock.* After passing *Middle Rock* keep nearly in the middle of the channel, and anchor when at pleasure. There is not less than five fathoms until past the *Middle Rock*, and after passing it not less than twenty feet.

These courses pass *Drunker Ledge* about twelve hundred yards to the eastward; three hundred and fifty yards to the westward of *Charity Ledge;* one hundred and twenty-five yards to the westward of the *Middle Ground;* one hundred and fifty yards to the northward of *Littlejohn Rock;* one hundred and seventy-five yards to the eastward of *Twelve-Feet Rock;* and one hundred and eighty yards to the westward of *Eastman Rock.*

DANGERS
IN APPROACHING AND ENTERING THE GURNET.

III. *Coming from the westward, between* **Half-Way Rock** *and Drunker Ledges.*—In this channel, which is a very commonly-used passage through *Casco Bay*, the first danger met with is on the south side of the passage. It is

WEBSTER ROCK;

lies three hundred and fifty yards NORTH from **Half-Way Rock**, and has eight feet at low spring tides. It is not safe to go between the rock and **Half-Way Rock**, the ground being shoal and broken. *Webster Rock* is marked by a *black spar-buoy* (No. 17) placed in three fathoms of water on the northern end of the shoal. The buoy is thirty-five feet long, and can be seen from a considerable distance. (See page 559.)

The "steamer **Daniel Webster**" struck upon this rock in the summer of 1856, and received considerable damage.

DRUNKER LEDGES

guard the northern side of the entrance to this channel. They are not in the way unless a vessel is beating through and standing to the northward. The southeastern ledge, which obstructs this channel, bears N E. ½ N. from *Webster Rock Buoy*, one mile and three-quarters distant; and S. ½ E. from **Mark Island Monument**, one mile and a quarter distant; has four feet at mean low water and two at low spring tides; *is not buoyed*, but the western ledge *has a buoy painted in red and black horizontal stripes* placed in six fathoms of water off its western end, which serves as a mark for both ledges. (See page 559.)

CHARITY LEDGE

(already described on page 560) is the next obstruction met with, and is common to all the channels leading in from the westward; lies exactly in the middle of the passage, but on the starboard side of the western channel; has fifteen feet at mean low water, and *is not buoyed.*

Charity Ledge is half a mile E. by N. from **Little Jaquish Island** and a mile and a quarter S W. ½ W. from **Pond Island.**

All the western channels here join, and the dangers will be found described on pages 565 to 568.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING THE GURNET.

III. *Coming from the westward, between* **Half-Way Rock** *and Drunker Ledges.*—Pass half a mile to the northward of **Half-Way Rock**, and when the light-house bears S S E., with about ten fathoms water, hard bottom, steer E N E. until **Mark Island Monument** bears **N. by W. ½ W.** and **Half-Way Rock Ligh** S W. ¾ W. On this course there is not less than twelve fathoms water. Then steer N E. by N. ½ N. for the southeastern end of **Orr Island,** and continue this course, carrying not less than five and a half fathoms, until within four hundred yards of the island, and follow the directions given, on page 568, for entering the *Gurnet.*

These courses pass a quarter of a mile to the northward of *Webster Rock Buoy* and twelve hundred yards to the eastward of *Drunker Ledges.*

DANGERS
IN APPROACHING AND ENTERING THE GURNET.

IV. *Coming from the westward, between Mark Island Ledge and Drunker Ledges.*—This channel leads to the eastward, between *Mark Island Ledges* on the north and the westernmost of the *Drunker Ledges* on the south, and joins the other channels about a third of a mile south of **Jaquish Island.**

MARK ISLAND LEDGE

lies on the northern side of the entrance to this passage, bears from **Mark Island Monument** S E. by S. ½ S., three-quarters of a mile distant, and N E. by N. ½ N. from **Half-Way Rock Light**, two and three-quarters miles distant. Three feet at mean low water are found upon it, and it is at times awash. There are from four to nineteen fathoms all around it.

A *black spar-buoy* (No. 15) is placed on the western side of this ledge as a guide to *Mericoneag Sound* and **Harpswell**. Vessels passing into the *Gurnet* must give it a wide berth to the northward. (See page 566.)

DRUNKER LEDGES

lie on the southern side of the entrance to this passage. The western ledge is three-quarters of a mile S W. by S. from *Mark Island Ledge*, and N N E. from **Half-Way Rock Light**, distant two miles. It is bare at half-tide, and is marked by a *spar-buoy with black and red horizontal stripes* placed in six fathoms water on the southwestern side of the ledge.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING THE GURNET.

IV. *Coming from the westward, between Drunker Ledges and Mark Island Ledge.*—When **Half-Way Rock Light** bears SOUTH, and **Mark Island Monument** N E. ½ N., and **Portland Head Light** W. by S. ½ S., with twenty-five fathoms, hard bottom, steer E. by N. ½ N. for the northern end of **Ragged Island**, carrying not less than six fathoms of water. Continue this course until the western end of **Jaquish Island** bears N W. by N. ½ N., half a mile off, and **Mark Island Monument** bears W. by N. ½ N., with about ten fathoms of water. Then steer N E. by N. ½ N. for the southeastern point of **Orr Island**, and follow the directions given, on page 568, for proceeding up into the *Gurnet*.

These courses pass a quarter of a mile to the northward of *Drunker Ledge Buoy* and four hundred yards to the southward of *Mark Island Ledge*.

DANGERS
IN APPROACHING AND ENTERING THE GURNET.

V. *Coming from the westward by the In-shore Channel, between Mark Island Ledge and* **Jaquish Island**.—The use of this channel presupposes having come through the bay by the inside passage among the islands, and it is, therefore, not used by vessels seeking a harbor of refuge, there being very much better and safer harbors to the westward of it. But a vessel bound for the *Gurnet* by this passage will meet at the entrance with a bare rocky islet on the north side of the channel, called

WHALE ROCK,

and sometimes the **Whale Back**. It is a bare rocky islet lying nearly EAST and WEST, and tolerably bold-to; bears S W. by W., eight hundred yards from **Mark Island Monument**, and nearly three miles N. by E. from **Half-Way Rock Light**.

MARK ISLAND LEDGE

is on the south side of the passage, three-quarters of a mile farther to the eastward. It bears S E. by S. ½ S. from **Mark Island Monument**, three-quarters of a mile off, and N E. by N. ½ N. from **Half-Way Rock**, distant two miles and three-quarters, and has three feet at mean low water.

A *black spar-buoy* (No. 15) marks this ledge. It is placed on its western side in four fathoms of water. (See above.)

JAQUISH LEDGE.

After passing *Mark Island Ledge*, a long ledge will be met with making off from the southwestern end of **Jaquish Island** to a distance of nearly three hundred yards. This is *Jaquish Ledge;* is nearly all bare at low water, and *is not buoyed.* Its southern end is, however, quite bold-to. The channel leads past **Jaquish Island** and **Little Jaquish** and joins the main channel close under the shore of the latter.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING THE GURNET.

V. *Coming from the westward by the In-shore Channel, between Mark Island Ledge and* **Jaquish Island.**—When **Eagle Island** bears **NORTH**, **Mark Island Monument** NE. by E. ½ E., and **Half-Way Rock Light** SOUTH, with from twelve to fifteen fathoms, dark green mud, steer E. ½ N., nearly for the southern end of **Ragged Island**, passing nearly a quarter of a mile to the southward of **Jaquish Island** and the same distance to the northward of *Mark Island Ledge*, and carrying not less than seven fathoms of water. On this course continue until **Pond Island** bears NE. ½ E., with about six fathoms, rocky bottom, when steer NE. by N. ½ N. for the southeastern end of **Orr Island**, and follow the directions given on page 568.

RIDLEY COVE.

This name is applied to that broad and deep passage contained between **Great Island** on the north and east and **Yarmouth Island** on the west, and leading into *Quohog Bay.* Good anchorage will be found here, in from four to seven fathoms, with smooth water except in southerly and southwesterly winds. A number of islands lie off the **Great Island** shore, which somewhat diminish the width of the passage, but at the same time form a secure harbor in all winds between them and the northern shore. The width of the entrance is further contracted by a small rocky island lying off the southeastern end of **Yarmouth Island**, and called

FLASH ISLAND.

It is a bare rock, destitute of vegetation; lies two hundred yards southeast of **Yarmouth Island**, and is surrounded by shoal water. There is no safe passage between it and **Yarmouth Island.**

WEST CUNDIZ POINT

is the eastern point of the entrance to *Ridley Cove.* It is forty feet high and wooded, and forms the southwestern point of **Great Island.**

YARMOUTH ISLAND,

which forms the western shore of *Ridley Cove*, is a thinly-wooded, bold, and rocky island, its summit rising to one hundred and forty feet above high-water mark. On all sides but the eastern it is surrounded by extensive shoals, bare rocks, and ledges, but the eastern shore is tolerably bold. The island is nearly three-quarters of a mile square. (See page 554.)

Within a hundred yards of the northeastern head of **Yarmouth Island**, and connected with it at low water, is a small bare islet, called **Bush Island,** marking the southeastern point of entrance to the passage leading into *Quohog Bay.* Abreast of it, on the eastern side of *Ridley Cove*, is a small island, called **George Island,** which is twenty five feet high and thinly wooded, with no passage between it and **Great Island.** The deep cove which here indents the western shore of **Great Island**, nearly separating it into two parts, is known as *Hen Cove,* and three islands, called

HEN ISLANDS,

occupy a considerable portion of it. The smallest two lie close in to the shore, at the head of the cove, and are connected with it at low water. The largest, known as **Great Hen Island,** lies a little over two hundred yards to the southwestward and the same distance southeast of **George Island,** and is only about fifty yards from the **Great Island** shore. There is no passage between it and **George Island.** On its northwestern end it is bluff and forty feet high, with a wooded summit.

The north shores of **Ridley Cove** are formed by the southern shore of **Great Island.** The land is about sixty feet high, with wooded slopes, but the summit is partially cleared. The best and safest anchorage in the cove is on the northern side of **George Island,** between it and the wooded shore, in from two to four fathoms water, soft bottom.

DANGERS

IN THE APPROACHES TO RIDLEY COVE.

I. *Coming from the eastward.*—Coming into *Ridley Cove* from the eastward, the course leads to the northward past **Bald Head,** and the first danger to be avoided is

BALD-HEAD LEDGE,

lying three-eighths of a mile S. by W. ½ W. from **Bald Head,** and W. ½ N., three-quarters of a mile from **Cape Small Point.** It is bare at half-tide, and always breaks, even in the calmest weather. (See page 548.) After passing it, there are no obstructions until up with

WYMAN LEDGE,

on the western side of the channel. It is a very dangerous ledge, with four feet at mean low water, half a mile E. by S. ½ S. from the southern end of **Woody Mark Island** and one mile and a half N W. ½ W. from **Bald Head.** *It is not buoyed.* (See page 548.)

CHIVERS LEDGE.

This dangerous rock is also on the western side of the channel into *Ridley Cove,* has six feet at mean low water, and is half a mile N N W. from *Wyman's Ledge,* three-eighths of a mile N E. ½ E. from **Mark Island,** *and is not buoyed.*

After passing *Chivers Ledge,* there are no dangers in this channel until past **Flag Island** and abreast of **Long Ledge.** Here another bad ledge is met with, still on the western side of the channel, and called

DAVID'S CASTLE,

bare at half-tide, one mile W. ½ S. from the highest part of the southernmost **Long Ledge** and one mile and one-eighth S W. from **Jenny Island,** and always shows itself by breakers. *It is not buoyed.*

Passing *David's Castle,* go to the westward of a large ledge, known as

JENNY LEDGE,

half a mile S S W. from **Jenny Island.** It covers an area about six hundred yards square, is awash at low water on its shoalest part, has a good channel between it and **Long Ledge,** but the usual channel into *Ridley* leads to the westward of it. *It is not buoyed.*

When abreast of *Jenny Ledge,* the channel turns to the northeastward and leads directly for the edge of the bluff on **Big Hen Island.** A vessel in beating up will encounter several obstructions on the western side of the channel, but the eastern side is clear until past **Jenny Island.**

Of the dangers on the western side, the first met with, after passing *David's Castle,* is called

ELM ISLAND LEDGE.

The **Elm Islands** are two rocky islets lying EAST and WEST from each other, a quarter of a mile to the northeastward of **Two-Bush Ledge**. The easternmost is the larger, is three hundred yards long and forty feet high, and bare. The other is smaller, twenty feet high, and has a few trees upon it. A small, round, bare rock lies about one hundred yards off the southern end of the larger islet. From these islands shoal ground extends due SOUTH for a quarter of a mile, with spots of five and six feet upon it here and there. This is *Elm Island Ledge*, and is only dangerous to vessels beating in or out. The general rule to avoid this shoal is not to approach the eastern island nearer than two hundred and fifty yards, and if standing across its southern end to give it a berth of at least five hundred yards. But strangers should not attempt to stand to the westward of the highest part of this island bearing N. ¾ W., as in seeking to avoid the southern point of *Elm Island Ledge* they run a risk of getting on a bad ledge on the south side, called

DICK'S SHOAL.

This ledge, bare at low water, lies half a mile SOUTH from the easternmost of the **Elm Islands**, and the shoalest part of it is six hundred yards WEST from *David's Castle.* From the summit of the rock, however, the shoal water extends to the eastward to within fifty yards of *David's Castle. This ledge is not buoyed.*

BALLAST-STONE LEDGES.

When abreast of **Jenny Island**, there will be seen to the northwestward two rocky islets with bare ledges to the southward of them, and a group of three or four bare islets much larger than these to the northward. These rocks, covered with boulders and pebbles of various sizes, have received the name of **Ballast-Stone Ledges.** They are surrounded by shoal ground and intersected by narrow and tortuous channels, the whole shoal surface being three-quarters of a mile long by six hundred yards wide. A channel with six fathoms at low water leads along their eastern side into the bight or cove on the south side of **Yarmouth Island.**

A rock with nine feet at mean low water, and not named, lies WEST from **West Cundiz Point** three hundred and fifty yards, and N E. by N. from **Jenny Island** six hundred yards.

Flash Island should receive a berth to the westward of one hundred yards.

GEORGE ISLAND ROCK.

From **Big Hen Island** and **George Island** the shoal water extends to the west and southwest a quarter of a mile, and on the extreme southwestern end of the ledge is a knubble with only two feet at mean low water, and bare at low spring tides. This rock lies nearly three hundred yards S W. by S. from **George Island**, a quarter of a mile WEST from **Big Hen**, and is called *George Island Rock.*

Vessels intending to anchor between the southern shore of **Great Island** and **George** and the **Hen Islands** must hug the north side of **George Island**, keeping about ninety or a hundred yards from it when rounding its northern end, to avoid the shoals which fill up the head of the cove and extend to within two hundred yards of **George Island.** A bare rocky islet marks the southern end of these shoals. Give it a berth of fifty yards and go safely into the anchorage.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING RIDLEY COVE.

I. *Coming from the eastward.*—When **Half-Way Rock Light** bears W. ¼ N., and **Bald Head** N. by E. ¼ E., and *Bald Head Ledge* is on with **Southern Head**, steer N. by W. ¼ W., car-

rying not less than five fathoms water, and continue this course until abreast of southern end of **Long Ledge**, in twelve fathoms, soft bottom, and **Jenny Island** bears N. ½ E.; now steer for the island, round it to the westward at a distance of two hundred and fifty yards, having eight and nine fathoms of water; bring the bluff on **Big Hen Island** to bear N E. by N. ½ N. and steer for it, anchoring at pleasure, in from three to four fathoms, soft bottom. Continue this course until abreast of **Flash Island**, when haul up to the northward and steer N. by E., keeping the **Yarmouth Island** shore aboard to avoid *George Island Rock*. On this course there is not less than five and a half fathoms water until past **George Island**. If the wind be easterly, westerly, or northerly, anchor under the southwestern shore of **Big Hen Island**. But if it be southerly, keep the N. by E. course until up with the north end of **George Island**; round the island, keeping about one hundred yards from it; steer to the eastward, and anchor in from fifteen to twenty feet, sheltered from all winds.

DANGERS
IN THE APPROACHES TO RIDLEY COVE.

II. *Coming from the southward and westward.*—This channel leads to the northeastward, between the **Brown Cow** and the **White Bull**, and between the latter and **Woody Mark Island**. Vessels coming from seaward will first fall in with

LUMBO LEDGE,

four miles and three-quarters E. ½ N. from **Half-Way Rock Light** and two miles and a half S. ½ W. from **Ragged Island**. One small spot upon this ledge has eleven feet at low water, and is marked by an *iron nun-buoy of the second class, painted with black and red horizontal stripes.* This buoy is one hundred yards south of the shoal. (See page 551.)

After passing *Lumbo Ledge* there are no obstructions until past **Brown Cow** and nearly up with **Mark Island**. Here there will be seen, bearing about NORTH, a bare ledge off **Mark Island**, called

MARK ISLAND LEDGE,

or sometimes *Woody Mark Island Ledge,* to distinguish it from the other ledge of the same name to the westward. It is five hundred and fifty yards W S W. from **Mark Island** and seven-eighths of a mile E. by S. ½ S. from the **White Bull**; *is not buoyed*, but always shows itself by breakers.

THE SISTERS GROUND.

After passing **Ragged Island**, the next danger is on the western side of the channel, and is called the *Sisters Ground,* a mass of shoals and detached ledges, having from five to twelve feet upon them at mean low water, and lying about S E. from the **Sisters**. Their southeastern end is three-quarters of a mile E N E. from the southern end of **Ragged Island**; same distance N E. by N. ½ N. from the **White Bull**; and one mile N W. ½ N. from **Mark Island**. Strangers beating in or out must not stand to the westward of **White Bull**, bearing S W. ½ S. At night keep **Half-Way Rock Light** open to the southward of **Ragged Island**.

These ledges are not buoyed. A buoy has, however, been recommended (1870) to mark them.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING RIDLEY COVE.

II. *Coming from the southward and westward.*—When **Half-Way Rock Light** bears W. ½ S., distant three miles and three-quarters, and the centre of **Ragged Island** N E. by N. ½ N., with twenty-six fathoms, soft bottom, steer N E. ½ N., passing between **Mark Island** and

White Bull, but closer to the latter, and carrying not less than thirteen fathoms. Continue until the highest part of **Mark Island** bears S E. by S. ½ S. and the southern point of **Ragged Island** W. ½ S., with fourteen fathoms, hard bottom; then steer N. ½ E. until abreast of *David's Castle* and up with *Jenny Ledge*, in ten fathoms, soft bottom. **Two-Bush Ledge** will now bear W. ½ N., and the highest part of **West Cundiz Point** will just touch the southern point of **Jenny Island** on a bearing of N E. ½ N.; now steer N E. by N. ½ N. for the bluff on **Big Hen Island**, on which course the eastern and western channels join off **West Cundiz Point**, and follow the directions given on page 573.

For the other passages leading into *Ridley Cove* the chart will be the best guide.

MERICONEAG AND HARPSWELL SOUNDS.

Next to the westward of the *Gurnet* is the entrance to *Mericoneag* and *Harpswell Sounds*. The entrance to the former is between **Jaquish Island** on the east and **Little Mark Island** on the west, and is about a mile wide.

Mericoneag and *Harpswell Sounds* are formed by an arm of the sea extending in a northeasterly direction for seven miles to the mouth of *Stover River*. On the east this arm of the sea is bounded by **Bailey, Orr**, and **Great Islands**, on the west by **Haskell Island** and a long peninsula of the main land, calle **Harpswell Neck.** The southernmost part of this body of water, which is embraced between **Bailey Island** on the east and **Haskell Island** on the southeastern point of **Harpswell Neck** on the west, is called *Mericoneag Sound.* The northern part, from **Stover Point** to the mouth of *Stover River*, is called *Harpswell Sound.*

LITTLE MARK ISLAND

is a bare islet, rocky and bold-to, lying six hundred yards south from the southwestern point of **Haskell Island** and the same distance N E. by E. from **Whale Rock.** Upon its summit and near the centre is built a square stone obelisk, fifty feet high, as a guide to vessels passing through the bay or bound into **Harpswell.** It is a conspicuous mark when standing in from sea anywhere between **Cape Small Point** and **Cape Elizabeth**, and is known as **Mark Island Monument.** It was formerly painted in perpendicular black and white stripes, but long exposure to the weather has bleached the black and obliterated the white stripes, so that it now has a uniform dirty gray color. Its geographical position is

Latitude - - - - - - - - -	43° 42′ 32″ N.
Longitude - - - - - - - - -	70° 01′ 53″ W.

Its bearings are—

	Miles distant.
From Half-Way Rock Light, N. by E. ½ E.	3⅛
From Cape Small Point, W. by N. ¾ N.	8¼

TURNIP ISLAND

is a small bare rock N W. from **Jaquish Island**, and two hundred and seventy-five yards off. It is on the eastern side of the entrance, is very bold-to on its eastern side, but the other sides are bounded by shoals. There is no passage between it and **Bailey Island**, but there is a good channel between it and **Jaquish**, which leads to a narrow strait, fit only for light-draught vessels, between **Bailey** and **Jaquish Islands.** This strait is called *JAQUISH CUT;* is full of ledges and bare rocks, and has seven feet at mean low water.

JAQUISH ISLAND

has already been described, on page 560, as a small, low, rocky island S E. from **Turnip Island** and a little over two hundred yards SOUTH from **Bailey Island**, from which it is separated by *Jaquish Cut.* A grove of spruce and fir occupies about one-third of its surface.

On the western side of the entrance to *Mericoneag Sound* lies

HASKELL ISLAND.

It is north of **Little Mark Island** six hundred yards, and extends in a N E. and S W. direction seven-eighths of a mile; is eighty feet high, mostly bare, and under cultivation. The northeastern end is the lower, and has scattered groups of trees and a number of houses upon it. Its eastern shore is tolerably bold-to. On its northern side it is indented by two small coves; the eastern is called *GREAT HARBOR COVE*, and is used as an anchorage by fishermen, while the other is smaller, shallower, and has no name.

GREAT MARK ISLAND.

Three hundred yards off the eastern shore of **Haskell Island**, and six hundred yards N E. ¼ N. from **Little Mark Island**, is a bare rocky islet, known as **Great Mark Island.** It is forty feet high, bold-to on its eastern side, but its south side is shoal, and between it and **Haskell Island** there is a passage with ten feet at low water.

The eastern shores of *Mericoneag Sound* are formed by

BAILEY ISLAND.

This island lies N E. by N. and S W. by S., is two miles long, irregular in shape, and quite narrow. Its southwestern end shows a bare bluff appearance, and the summit of this bluff is covered with a thick growth of spruce and is sixty feet high. Near the middle of the island the land descends to a height of forty feet, and again rises to sixty. It again descends, approaching the northeastern end, to forty feet, and again rises to sixty feet, thus giving the surface an undulating appearance. The upper end of the island is mostly cleared land dotted with houses and under fine cultivation.

On the western side, **Bailey Island** is indented by a long and narrow but deep cove, called

MACKEREL COVE.

This is an excellent harbor and is very much used. It makes in in a N E. direction between the southwestern end of the island and a low gently-sloping point, about forty feet high, making out from the western shore of **Bailey Island** about S W. The cove is half a mile long, and has a uniform width of about two hundred yards. It is perfectly free from obstructions, and affords excellent holding-ground, although somewhat exposed to S W. winds. On its northern side, **Bailey Island** is separated from **Orr Island** by *WILLS STRAITS*, a rocky channel three hundred and fifty yards wide. This passage is very much used by small light-draught vessels, but it is so narrow, crooked, and full of ledges that no stranger dare attempt it. Six feet at low water can be carried through. At half-tide or high water a N. by W. or S. by E. course *made good* will carry a vessel safely through, but at low water no one course will do it. (See page 563.)

The northeastern shore of **Bailey Island** is indented by two coves, of which the easternmost only is important. It is called *HORSE COVE*, (see page 563,) and is a very convenient anchorage.

The southeastern end of **Harpswell Neck** presents a regularly sloping hill about one hundred feet high, cleared and thickly settled. The land is under cultivation, as indeed is most of the peninsula. On its southern side it sends off a long, low, rocky point, nearly three-quarters of a mile long and very narrow, called **Potts Point.** Between this and the northern end of **Haskell Island** is the eastern entrance to a most commodious land-locked harbor, called *POTTS HARBOR.* This excellent anchorage is contained between the southern shores of **Harpswell Neck** on the north, east, and west, and **Upper Flag Island** and **Haskell Island** on the south and southwest, and is further protected from westerly winds by **Horse Island** and **Little Birch Island.**

The northeastern point of **Harpswell Neck** is tolerably low, and called **Stover Point,** on the western side of which the land falls away to the southward and westward and forms a semi-circular cove, called *Harpswell Harbor* or *STOVER COVE.* Here *Mericoneag Sound* ends and *Harpswell Sound* begins.

HARPSWELL NECK

is an irregularly-shaped peninsula, about eight miles long, making off from the main land in a SW. direction, between *Harpswell Sound* on the east and *Middle Bay* on the west. Its shores are much indented by coves; its surface is undulating, varying from forty to one hundred and forty feet in height; it is almost entirely cleared and under cultivation, and is thickly dotted with houses, forming the town of **Harpswell.**

HARPSWELL HARBOR,

or *Stover Cove* as it is mostly called, is the first indentation of importance on the eastern shore of the *Neck.* It is a semi-circular cove with from two to four fathoms of water, contained between **Stover Point** and the main shore; is three and one-eighth miles above the entrance to *Mericoneag Sound,* about half a mile wide and half a mile deep, and unobstructed.

CLARK COVE

is the next indentation on the eastern shore of the **Neck,** one mile and three-quarters above **Stover Point,** and is of little importance, as at low water it is nearly all bare. It is separated by a low and narrow point from

MERRIMAN COVE,

another small, shallow, and unimportant cove, with three feet at low water, only used by those who live upon its shores. Just to the northward of *Merriman Cove* the shore is deeply indented by two long and narrow but shallow coves. The westernmost, running NNE., is called

WIDGEON COVE,

and is three-quarters of a mile long and nearly all bare at low water. It is likewise of little importance. The eastern cove, which runs into it, has a NE. and SW. course, and is called

MILL COVE.

It is a mile long and from an eighth to a quarter of a mile wide, is nearly all bare at low water, but seven feet may be taken through a very narrow and crooked channel for about a third of a mile up the cove. Its eastern shores are formed by a long, narrow, and irregularly-shaped peninsula, terminating in a broad round head eighty feet high, called **High Head.** This peninsula separates *Mill Cove* from the upper part of *Harpswell Sound.*

High Head is two miles and three-quarters above **Stover Point.**

Stover River empties into *Harpswell Sound* a mile above **High Head,** and is three miles long. The northern part of the river is called *Harpswell Cove.*

The eastern shores of *Harpswell Sound* are formed, as stated before, by **Orr Island** and part of **Great Island.**

ORR ISLAND

(see page 562) is large, of considerable height, lies NE. and SW., and is about three miles long. It is thickly settled, and the surface is diversified with wooded slopes and cleared and cultivated lands studded with houses. The woodlands are mostly

near the southern end, but wood is being rapidly cut and the appearance of the land constantly changing. The island is one hundred feet high, and on the western side is indented by two coves. First is *Beal Cove*, situated about a mile above the entrance to *Wills Straits;* runs about S W., and is nearly all bare at low water. The other makes in about five-eighths of a mile above it, is called *Reed Cove*, is wide but shallow, and the approach to it is obstructed by ledges.

There are two more small shallow coves to the northward of *Reed Cove*—the northernmost making in on the extreme northwestern end of the island. They are not named, and are of no importance.

On its northern face **Orr Island** is indented by a very long and narrow cove, called

LONG COVE,

nearly a mile and a quarter long and only about two hundred yards wide. Six feet at low water can be taken up to about five-eighths of a mile from its mouth, and it is perfectly sheltered. Its shores are from eighty to one hundred and twenty feet in height.

On its eastern shore **Orr Island** has one small cove one mile above its southern end, called *Cow Cove.* It is of no importance. On the south side is the large and commodious cove, called

LOWELL COVE,

nearly half a mile long, and a third of a mile wide at its mouth; it affords capital anchorage in from three to five fathoms, soft muddy bottom.

The northeastern point of **Orr Island** is connected with **Great Island** by a bridge crossing the head of the *Gurnet.*

The western shore of **Great Island**, which forms the eastern boundary of the upper part of *Harpswell Sound*, is steep and high, the summit being over one hundred and forty feet above high-water mark. The land is wooded. Approaching *Stover River* the shore is lower, and much cut up by small coves, and a creek, bare at low water, empties into the *Sound* a little over a quarter of a mile below the mouth of the river. This is *Strawberry Creek.*

From the mouth of *Stover River* to **Doughty Point,** the northwestern point of **Great Island**, is a mile and three-quarters, and the shore-line is much cut up by small unimportant coves. The land is nowhere higher than sixty feet, and has a very gradual slope toward the water. A few houses will be seen on the summits.

DOUGHTY POINT

is narrow, quite low, and wooded, and forms the northwestern end of **Great Island**, the southern shore of *PRINCE GURNET*, and the western point of the entrance to *LONG REACH.*

On the north side of **Great Island** there is a long cove running to the southwestward, two miles and a quarter long, with an average width of five hundred yards. This is

LONG REACH,

and it nearly cuts **Great Island** into two parts. A strip of land, seventy-five yards wide, alone separates the head of the *Reach* from another narrow and irregular-shaped cove which makes in on the eastern side of the island abreast of **Pole Island**, and one mile and a half above **Long Point.**

Long Reach affords comfortable anchorage, in thirteen feet at low water, seven-eighths of a mile from its mouth.

PRINCE POINT

is long, low, and forms the southern extremity of a peninsula making out from the main

land, and bounding *Harpswell Cove* on the east. It laps **Dingley Point**, its southern end bearing about **WEST** from that point; and between the two is a narrow and crooked passage, called *Prince Gurnet*, with seventeen feet at low water, leading into *Long Reach*. From the junction of *Long Reach* and *Prince Gurnet* a narrow channel leads to the northeastward into *Buttermilk Cove* and *Simon Gurnet*, (see page 574.) The latter is bridged by a permanent bridge connecting **Great Island** with **Buttermilk Point** on the main. This passage is, therefore, not available for vessels. Small boats only can use it.

A mile and a half above **Prince Point** is the head of *Stover River*. Here the narrow water-way which formerly existed has been filled up by meadow-grass.

ISLANDS IN MERICONEAG AND HARPSWELL SOUNDS AND IN STOVER RIVER.

Coming into Mericoneag Sound: When abreast of the north end of **Haskell Island** there will be seen, bearing about **NORTH**, a small, bare, rocky island a little to the eastward of **Potts Point**, and close in with the shore. This is

RAM ISLAND.

It is nearly a quarter of a mile from shore, and bears E. ¾ N. from the extremity of **Potts Point**. There is no passage between it and **Potts Point**, the deep water running up into a pocket behind the island.

Ram Island is surrounded by shoals. Beyond it there are no islands in the passage until past **Bailey Island** and approaching the north end of **Orr Island**, when there will be seen, bearing about N E., and close to shore, a small rocky islet, called

WYER ISLAND.

This is a bare islet connected with **Orr Island** by a chain of bare rocks. It is a little over two hundred yards from the shore, and surrounded by flats. Westward of it the shoal water extends a quarter of a mile with less than six feet.

DOG HEAD.

Passing **Wyer Island**, there will be seen well over toward **Great Island** shore a small bare rock lying about one hundred and fifty yards off the north end of **Orr Island** and three hundred yards from the shore of **Great Island**. This is **Dog Head**. It is surrounded by shoal water, and obstructs the entrance into **Long Cove**, the channel leading into that cove passing between **Dog Head** and the **Great Island** shore. The passage is narrow, the shores on both sides being flat, but fifteen feet at low water may be carried through.

Six hundred yards above **Dog Head** is

UNCLE ZEKE ISLAND,

a bare rock, lying nearly in the middle of the *Sound*, and surrounded by ledges and flats which extend over two hundred yards from the rock to the eastward, but on the channel side the islet is tolerably bold. There is a crooked passage, with fourteen feet at low water, between **Uncle Zeke** and **Great Island**, but it must not be attempted by strangers.

A small bare islet, not named, lies about a hundred yards from shore off the mouth of *Strawberry Creek*, and is connected with **Great Island** at low water.

Another small nameless islet lies two hundred yards **SOUTH** from **Prince Point** and the same distance **WEST** from **Dingley Point**, the passage into *Prince Gurnet* leading between them with seventeen feet at low water. Above this there are no islands in the passage.

DANGERS
IN APPROACHING AND ENTERING MERICONEAG AND HARPSWELL SOUNDS.

I. *Coming from the eastward.*—A vessel bound into **Harpswell** from the eastward will meet with no obstructions until within a mile of **Mark Island Monument**, where the channel passes between **Jaquish Island** and

MARK ISLAND LEDGE.

This dangerous sunken ledge lies SE. by S. ⅜ S. from the **monument**, three-quarters of a mile distant, and SW. by W. from **Jaquish Island**, nearly a mile distant; has three feet at mean low water, and is at times awash; but there are from four to nineteen fathoms water all around it. A *black spar-buoy* (No. 15) is placed on the western side of this ledge, to which a good berth must be given by vessels coming from the eastward. (See page 560.)

JAQUISH LEDGE,

which is on the north side of the channel, is a long point making off from the southwestern end of **Jaquish Island** to a distance of two hundred and seventy-five yards; is nearly all bare at low water, is quite bold-to, and *is not buoyed.* The channel between it and **Mark Island Ledge** is five-eighths of a mile wide.

Passing *Jaquish Ledge*, there will be seen on the north *a red spar-buoy*, on the southern end of

TURNIP ISLAND LEDGE,

which lies a quarter of a mile W. by S. ½ S. from **Turnip Island**, is bare at low water, and bears from the **Monument** EAST, a little over three-quarters of a mile distant.

Vessels should not attempt to pass between this ledge and **Turnip Island**, as there is a ledge with ten feet at mean low water two hundred and fifty yards NE. from the buoy. Ledges also extend from **Turnip Island** to the southward two hundred and fifty yards.

RAM ISLAND LEDGE.

From the southeastern end of **Ram Island** a bare ledge extends in a SW. direction, and is surrounded by shoal water to a distance of six hundred yards from the island. This is **Ram Island Ledge.** There are four fathoms of water between it and **Haskell Island**, in the passage leading into *Potts Harbor.*

The western shore of **Bailey Island** is bold-to, and may be approached very closely, with four fathoms of water; but the shore of **Harpswell Neck**, from **Potts Point** to the south side of **Stover Point**, is lined with flats, and must not be approached by vessels drawing twelve feet or more nearer than a quarter of a mile.

A little over half a mile ENE. from **Ram Island** is a ledge with sixteen feet at low water, called

INTERVAL SHOAL.

It is not buoyed, but is only dangerous to vessels of heavy draught; lies exactly in the middle of the passage, being six hundred yards from either shore, and at low spring tides it has fourteen feet.

The eastern side of **Stover Point** is bold, and may be closely approached with four fathoms of water; but off its northern end, and obstructing the entrance to *Harpswell Harbor*, is a long shoal, called

STOVER POINT SHOAL,

which extends in an E. ½ N. direction three hundred yards, and is bare at low water for nearly the whole distance. A *black spar-buoy* (No. 7) is placed in good water off the eastern point of the shoal, as a guide to *Harpswell Harbor.*

Off the northwest point of **Bailey Island**, and obstructing the entrance to *Wills Straits*, extends *a long shoal with dry ledges*, N E. by N., *four hundred yards.* Vessels standing across this point must give it a berth to the southward of a quarter of a mile to avoid the ledge. *It is not named nor buoyed.*

Three hundred yards N E. by N. from the dry part of these ledges there is a sunken rock obstructing the approach to *Wills Straits*, and dangerous for vessels beating in or out. It lies about three hundred yards off the western shore of **Orr Island** and nearly opposite to the black buoy on *Stover Point Shoal.* It has eleven feet at lowest spring tides, but there is deep water all around it.

MERRIMAN LEDGE.

After passing *Stover Point Ledge* the next danger met with is a ledge dry at low water, lying nearly in mid-channel, and called *Merriman Ledge.* It is one mile above **Stover Point** and three hundred and seventy-five yards from shore.

Merriman Ledge extends in a N E. by N. and S W. by S. direction for nearly six hundred yards. For one-fourth of this distance it is dry at low water, and *it is not buoyed.*

There is a shoal spot with thirteen feet at low spring tides to the southwestward of *Merriman Ledge*, and about two hundred yards from shore. Vessels beating in or out must beware of it if they draw twelve feet of water.

Passing *Merriman Ledge*, the next danger is

DIPPER COVE LEDGES.

These extensive shoals make off from the south point of the entrance to *Reed Cove*, have from eight to seventeen feet upon them at mean low water, and the shoal of the ledges is between seven and eight hundred yards N. by E. ½ E. from the south point of the entrance to *Reed Cove.* Vessels must not stand to the eastward of the summit of **High Head**, bearing N E. ½ N. This bearing clears not only *Dipper Cove Ledges*, but also the flats off **Wyer Island.**

CLARK LEDGE,

Nearly opposite to *Dipper Cove Ledges*, and one quarter of a mile S. by W. ½ W. from the eastern point of *Clark Cove*, is a ledge with six feet at low spring tides, called *Clark Ledge.* It lies three-eighths of a mile N E. from *Merriman Ledge, and is not buoyed.* To avoid it, vessels do not stand to the westward of **Stover Point**, bearing S W., but when once past the long point separating *Clark* and *Merriman Coves* stand close in to the mouth of the latter with safety.

Opposite to *Merriman Cove*, and off *the shore of* **Orr Island**, *extensive flats and ledges make out to a distance of six hundred yards* with less than five feet at mean low water. And from **Wyer Island** a long shoal extends toward **High Head** four hundred yards. These together form a very extensive piece of shoal ground, and so obstruct the channel as to render the passage unsafe for strangers. The channel at **High Head** is only about fifty yards wide.

The north shore of **Orr Island** is also quite shoal, and vessels must keep the **Harpswell** shore aboard. The shoals also extend out from **Great Island** to **Zeke Island**; but vessels may go close to the latter, leaving it to the eastward. After passing *Strawberry Creek* there are no shoals in the channel of *Stover River*—the rule being to keep the middle of the passage.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MERICONEAG AND HARPSWELL SOUNDS.

I. *Coming from the eastward.*—When **Bald Head** bears N. by E. ½ E. and **Half-Way Rock Light** W. ½ N., with fourteen fathoms, hard bottom, steer N W. by W. ¾ W. for **Mark Island Monument**, carrying not less than five fathoms, and passing nearly midway between **Jaquish Island** and *Mark Island Ledge.* On this course continue until abreast of *Turnip Island Ledge Buoy* and three-quarters of a mile from the **Monument**, with sixteen fathoms of water, when steer N. ¼ W. for the northeastern end of **Haskell Island**, carrying not less than sixteen fathoms water. When the north end of **Great Mark Island** bears W N W. and **Turnip Island** E S E., with sixteen fathoms, muddy bottom, steer N E. ¾ N., having **High Head** a little open on the northeast, and carrying not less than ten fathoms of water.

On this course, if wishing to anchor in *Harpswell Harbor*, when abreast of the *black buoy* on *Stover Point Shoal*, and in thirteen fathoms, steer N. by W. ½ W., carrying not less than eleven fathoms water, until the buoy bears S W. ½ W. and is about two hundred yards off, when steer W N W. and anchor at discretion, in from two to four fathoms, soft bottom.

But if bound up the *Sound*, continue the course N E. ¾ N., carrying not less than five fathoms water, until exactly between the long point separating *Clark* and *Merriman Coves* and the southwestern point of *Reed Cove*, having them bearing NORTH and SOUTH, respectively, with seven fathoms, soft bottom. **High Head** will then bear N E., and steer for it, carrying not less than five fathoms, until within two hundred and fifty yards. Then steer E N E., passing **High Head** at a distance of one hundred yards, in four fathoms of water, and continue until **Dog Head** bears E. by S. ¾ S., a quarter of a mile off, and there is five fathoms, soft bottom. Now steer N E. by N. ½ N. past **Uncle Zeke Island**, with not less than twenty feet of water, and continue the course until the small islet off the mouth of *Strawberry Creek* bears E. by N. ½ N., when steer N. ¾ E. into *Stover River*, carrying three and a half fathoms water. After entering the river the chart will be the best guide, the general rule being to keep the middle of the passage. Seventeen feet at mean low water can be taken up to **Prince Point**, through a narrow and crooked channel, nearly half a mile to the westward of *Jaquish Ledge;* six hundred and fifty yards to the eastward of *Mark Island Ledge;* two hundred and fifty yards to the westward of *Turnip Island Ledge;* one hundred and twenty-five yards to the eastward of *Interval Shoal;* two hundred and seventy-five yards to the eastward of *Stover Point Shoal;* two hundred and seventy yards to the eastward of *Merriman Ledges;* one hundred and seventy-five yards to the westward of *Dipper Cove Ledges;* the same distance to the eastward of *Clark Ledges;* one hundred yards to the westward of the flats off **Orr Island** and **Wyer Island**; and one hundred yards to the eastward of **High Head.**

DANGERS
IN APPROACHING MERICONEAG AND HARPSWELL SOUNDS.

II. *Coming from seaward or from the southward.*—Coming from the southward, the first prominent object met with is also an obstruction to the approaches to **Harpswell**, and is called

HALF-WAY ROCK,

a bare rocky islet, elevated about sixteen feet above high-water mark, and about one hundred and fifty yards square, with no vegetation of any kind upon it, and surrounded by shoal water. Off its western end extend the dangerous *Southwest Ledges*, bare

at low water to a distance of three hundred and seventy-five yards. On the southern and eastern sides it is much bolder. On the northern side the ground is broken, and a number of ledges crop up, rendering it unsafe for vessels to go close to the islet on that side. The most northerly of these ledges is *Webster Rock*, three hundred and fifty yards north of **Half-Way Rock**; has eight feet at lowest tides, and is marked by a *black spar-buoy* placed off its northern end. (See page 559.)

HALF-WAY ROCK LIGHT-HOUSE.

On **Half-Way Rock** is erected a granite light-tower sixty-six feet in height, which shows a fixed white light, varied by red flashes once every minute, from a height of eighty feet above sea-level. The light is of the third order of Fresnel, and visible in ordinary weather fifteen nautical miles.

Half-Way Rock Light House bears—

	Miles distant.
From Seguin Light-House, WEST	12½
From Cape Small Point, W. ⅝ S.	9⅛
From Mark Island Monument, S. by W. ½ W.	3⅛
From Portland Head Light-House, E. ⅛ N.	7¾
From Cape Elizabeth Light-Houses, E N E.	9

Passing **Half-Way Rock**, the next obstruction met with is

DRUNKER LEDGES.

This extensive piece of shoal ground bears N N E. from **Half-Way Rock**, distant two miles. There are two distinct ledges, lying N W. ½ W. and S E. ½ E. from each other, with a deep channel a quarter of a mile wide between them. But it is with the northwestern ledge that we have to do, as the other does not obstruct this passage. It is bare at half-tide.

Off this northwestern ledge a *spar-buoy, painted with red and black horizontal stripes*, is placed in six fathoms at low water, and is to be left to the eastward going into *Mericoneag*. Vessels do, however, in day-time, and at low water when both ledges show, pass to the eastward of this buoy and go between the ledges. Vessels coming from the eastward also sometimes pass between this buoy and *Mark Island Ledge Buoy*, but the safest course coming from seaward is to leave the *Drunker Ledge Buoy* to the eastward. (See also page 559.)

After passing *Drunker Ledges*, the course leads to the northeastward and approaches

MARK ISLAND LEDGE,

also on the eastern side of the channel. (See page 560.) It lies N E. by N. from *Drunker Ledges*, three-quarters of a mile distant, and S E. by S. ⅝ S. from **Mark Island Monument** the same distance. It is marked by *a black spar-buoy* (No. 15) placed on the western side of the ledge, which must be left to the eastward by vessels using this channel.

Abreast of *Mark Island Ledge Buoy*, and on the western side of the channel, is

WHALE ROCK,

a bare rock, lying nearly EAST and WEST, and about two hundred yards long. It is eight hundred yards S W. by W. from **Mark Island Monument** and nearly three miles N. by E. from **Half-Way Rock Light**, and is tolerably bold-to.

TURNIP ISLAND LEDGE

is a ledge bare at low water, three-quarters of a mile N E. ¼ N. from **Mark Island Ledge**, and EAST from the **Monument** three-quarters of a mile; is marked by a *red spar-buoy* placed on its southern side, which is to be left to the eastward. (See page 580.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MERICONEAG AND HARPSWELL SOUNDS.

II. *Coming from the southward or from sea.*—Bring **Portland Head Light** to bear **WEST** and **Mark Island Monument** N E. by N. ½ N., with between twenty and thirty fathoms, sticky bottom, and steer N E. ¾ N., which course will lead clear of everything, and with not less than five fathoms, through *Mericoneag Sound*, and into *Harpswell Sound*, until between *Clark* and *Reed Coves*, in eight fathoms, having the long point separating the former from *Merriman Cove* bearing **NORTH**, and the south point of *Reed Cove* bearing **SOUTH**. Then steer N E. for **High Head**, and follow the directions given on page 582.

On these courses, wishing to anchor in *Mackerel Cove*, on the N E. ¾ N. course, when **Mark Island Monument** bears W. by S. ¾ S. steer N E. by E. ¾ E., which will lead clear of danger, and with not less than ten fathoms, into the cove. When fairly in, keep the middle of the passage up to the head of the cove, and anchor or moor as desiring, in from three to ten fathoms, soft bottom.

If intending to anchor in *Harpswell Harbor*, when abreast of the *black buoy* off **Stover Point**, and in thirteen fathoms, steer N. by W. ½ W., carrying not less than eleven fathoms, until the buoy bears S W. ½ W., about two hundred yards off, when steer W N W. and anchor at discretion, in from two to four fathoms, soft bottom.

The above courses for entering *Mericoneag Sound* pass nearly six hundred yards to the westward of *Drunker Ledges;* three-eighths of a mile to the westward of *Mark Island Ledge;* nearly eight hundred yards to the eastward of **Whale Rock**; and about six hundred yards to the westward of *Turnip Island Ledge.*

The course into *Mackerel Cove* passes four hundred yards to the northward of *Turnip Island Ledge.*

DANGERS
IN APPROACHING MERICONEAG AND HARPSWELL SOUNDS.

III. *Coming from the westward.*—There are two commonly-used channels for vessels coming from **Portland** bound into *Mericoneag.* The southernmost and safest is from **Portland Head**, outside of the **Green Islands.** The other is used by vessels which have come out of **Portland** by the *White Head Passage*, and leads between **Outer** and **Inner Green Islands.**

Vessels using the outer channel, on leaving **Portland Head**, steer to the eastward, leaving to the northward a low, grassy islet, called

RAM ISLAND,

which lies **NORTH** and **SOUTH**, and is about a quarter of a mile long. It is half a mile south of **White Head** and a mile and an eighth N E. by E. ¾ E. from **Portland Head Light.** There is a deep channel between it and **White Head**, but from its southern end makes off a long ledge with many bare rocks scattered over its surface. This is

RAM ISLAND LEDGE.

Its southern end bears E. by N. ½ N. from **Portland Head Light**, distant nearly one mile, and **WEST** from **Half-Way Rock Light**, distant six miles and three-quarters. *It is not buoyed*, as it always shows itself; but a **day-beacon**, in the shape of a wooden tripod fifty feet high, has been erected on its southern end about high-water mark. It is covered in one-third of the way down, and **painted red.**

Passing *Ram Island Ledge*, there will be seen a *nun-buoy, painted red*, bearing about S S E., and marked with the letters W. R. in white. This is on

WITCH ROCK,

one of the obstructions to *Portland Entrance.* It has four fathoms at low water and about twenty-two feet at low spring tides. The buoy bears E. by S. from **Portland Head,** distant nearly a mile and a half, and S S E. from the centre of **Ram Island** seven-eighths of a mile, and is placed in good water southeast of the ledge.

After passing *Witch Rock*, there are no dangers until up with

OUTER GREEN ISLAND,

a small, grassy island, bare of trees, which bears E. ¼ N., two miles and three-quarters from **Ram Island**; E. by N., four miles from **Portland Head Light**; W. ¾ N., three miles and three-quarters from **Half-Way Rock**; and S W. ½ W., one mile and three-quarters from **Jewell Island.** Two hundred and fifty yards S E. from it is a bare rock, surrounded by ledges, called

JUNK OF PORK.

This rock is quite bold on its southeastern side, but there is no passage between it and **Outer Green Island** except for small boats. It is best, in passing along its eastern or western sides, to give it a berth of two hundred yards on its eastern, and two hundred and fifty yards on its western side.

After passing **Junk of Pork** the channel turns to the northeastward, and there is nothing in the way until entering the *Sound.*

2. *The inner or northern channel*, leading through *Casco Bay* to *Mericoneag Sound*, is used by vessels having come through the *White Head Passage.* The course leads to the eastward between **Outer** and **Inner Green Islands,** and the first obstruction met with is

THE HUSSEY,

a pinnacle rock, with twelve feet at low water, bearing N E. by E. ¾ E. from **Portland Head Light,** in range with the southern end of **Ram Island,** and E. ¾ N., two and one-eighth miles from **White Head.** It is marked by a *third-class iron can-buoy, painted red and black* in horizontal stripes. The rock is bold-to, and the buoy may be approached quite closely with seven fathoms water.

INNER GREEN ISLAND

is a mass of rock surrounded by shoals and ledges. It lies N E. ½ E. from **Outer Green Island** a little over a mile and an eighth, and E. ¼ N. from **White Head,** distant three miles and three-quarters. The shoals extend a quarter of a mile north from the island, two hundred and fifty yards east, a quarter of a mile south, and two hundred yards west from it. It is not safe to approach it within these distances.

The large partially-wooded island half a mile N E. from **Inner Green Island** is **Jewell Island.** There is an excellent channel between the two with five fathoms water.

The next danger met with is between the two **Green Islands,** a very dangerous ledge, called

GREEN ISLAND REEF.

It is an extensive shoal, lying W N W. and E S E., covering an area of a quarter of a mile long by two hundred and fifty yards wide, and bare in places at low spring tides.

From **Inner Green Island** it bears S W. ½ S., half a mile distant; from **Outer Green Island** N E. by E., three-quarters of a mile distant. It is marked by a *red spar-buoy* (No. 2) placed on its southwestern point in three and a half fathoms, to be left to the northward by vessels bound to the eastward through this channel. There is a good passage north of this reef, between it and **Inner Green Island.**

After passing *Green Island Reef* the channel joins the main channel, and there are no obstructions until entering the *Sound*.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MERICONEAG AND HARPSWELL SOUNDS.

III. *Coming from the westward.*—1. *By the Outside Channel:* From **Portland Head** steer **EAST, NORTHERLY,** for **Half-Way Rock Light**, and on this course continue until **Outer Green Island** bears **N. by E. ¾ E.**, a little over half a mile off, and **Mark Island Monument N E. by E. ½ E.**, in range with **Whale Rock,** and there is fifteen fathoms, hard bottom. Now steer **N E. by E. ¼ E.**, passing three hundred and fifty yards to the southward of **Whale Rock** and four hundred yards to the southeastward of **Mark Island Monument.** This course will lead, with not less than eight fathoms water, directly into *Mackerel Cove.* But if bound into *Harpswell Cove*, or up into *Stover River*, when **Mark Island Monument** bears **W. ¼ S.** and the south end of **Jaquish E. by S. ¼ S.**, with seventeen fathoms, muddy bottom, steer **N E. ¾ N.**, which will lead up to **Stover Point** in not less than ten fathoms water.

Wishing to anchor in *Harpswell Harbor*, when *Stover Point Buoy* bears **N W. ¾ W.**, or is abeam, and there is thirteen fathoms, steer **N. by W. ½ W.**, carrying not less than eleven fathoms, until the buoy bears **S W. ½ W.**, about two hundred yards off. Then steer **W N W.**, and anchor at discretion, in from two to four fathoms, soft bottom. But if bound up to *Stover River*, continue the course **N E. ¾ N.**, with not less than five fathoms, until exactly between the southern point of the entrance to *Reed Cove* and the long point separating *Clark* from *Merriman Cove*, with eight fathoms water, and having the former bearing **SOUTH** and the latter **NORTH**; **High Head** will then bear **N E.**; steer for it, and follow the directions given on page 582.

These courses pass three hundred and seventy yards to the southward of *Ram Island Ledge;* six hundred yards to the northward of *Witch Rock;* a quarter of a mile to the southward of **Junk of Pork**; and three hundred and fifty yards to the southward of **Whale Rock.**

2. *By the Inside Channel, from* **White Head.**—It is not safe for sailing vessels to use the *White Head Passage* unless there is a strong breeze, as they are apt to be becalmed under the high bluff of **White Head** and run a risk of being set on *White Head Ledge* or *Trott Rock.* With a good breeze the passage is safe, and it is an excellent cut-off for steamers.

Vessels coming out of *White Head Passage*, and bound to the eastward or through *Mericoneag Sound*, must, as soon as clear of **White Head**, steer **E. ¼ S.**, passing between the two **Green Islands**, and leaving the *red spar-buoy* on **Green Island** about one hundred yards to the northward. On this course there is not less than eight fathoms, and when **Half-Way Rock Light** bears **E. by S. ¼ S.** and **Inner Green Island N. ¾ W.**, in range with the southwestern end of **Crotch Island**, steer **N E. by E. ¼ E.**, which course will lead clear of all dangers, and with eight fathoms of water, into *Mackerel Cove.* Or if bound into *Harpswell Harbor*, when **Mark Island Monument** bears **W. ¼ S.** steer **N E. ¾ N.**, carrying ten fathoms water, until abreast of *Stover Point Buoy*, in thirteen fathoms. Then steer **N. by W. ½ W.**, with eleven fathoms, until the buoy bears **S W. ½ W.**, when steer **W N W.**, and anchor at pleasure, in from two to four fathoms, soft bottom.

But if bound up into *Stover River*, continue the course **N E. ¾ N.**, with not less than five fathoms water, until **High Head** bears **N E.**, the long point separating *Clark* and *Merriman Coves* bears **NORTH**, and the southern point of the entrance to *Reed Cove* bears **SOUTH**, now exactly between *Clark Ledge* and *Dipper Cove Ledges;* steer **N E.** for **High Head**, and follow the directions given on page 582.

These courses pass nearly eight hundred yards to the southward of the *Hussey;* three hundred and fifty yards to the southward of *Green Island Reef;* and three hundred and fifty yards to the southward of **Whale Rock.**

The passage between **Inner Green Island** and **Jewell Island** should not be attempted by a stranger except under the pressure of necessity. The chart will be the best guide for it. By keeping a little nearer to **Jewell Island** than to **Green Island**, and steering N W.½W., five fathoms may be carried through.

POTTS HARBOR.

This excellent harbor of refuge lies on the southwestern side of **Harpswell Neck.** It is bounded on the north by the shores of the **Neck**; on the east and southeast by **Potts Point**, making off from the **Neck**; on the south by *HASKELL ISLAND;* on the southwest by **Upper Flag Island**; and on the west and northwest by **Horse Island** and the southwestern point of the **Neck**, known as **Basin Point.** Thus it is almost completely land-locked, forming a capacious harbor, with from three to six fathoms, soft bottom, at low water. The anchorage ground is half a mile long in a NORTH and SOUTH direction, and three-quarters of a mile wide in an EAST and WEST direction.

The main entrance into the harbor is from the westward, between **Horse Island** and **Upper Flag Island.** There is a good but narrow channel, with sixteen feet, leading into the harbor from the eastward between **Potts Point** and **Haskell Island.** *It is well buoyed,* and safe with a fair wind.

The southern shore of **Harpswell Neck** is very much cut up by coves. Of these, the easternmost and largest is contained between the upper part of **Potts Point**, where it joins the main, and a bare point on the west, forty feet high, called **Ash Point.** This cove forms the northern part of *Potts Harbor*, and is called

ASH POINT COVE;

is half a mile wide and nearly three-quarters of a mile long, and has from four to seventeen feet in it. It is divided longitudinally by a bar, dry at low water, which extends off from the head of the cove, southwesterly, to its mouth. A small, low, bare islet, called **Bar Island,** lies near the southern end of this bar. That portion of the cove to the eastward of it is shallow and of no importance. Anchorage in ten feet at mean low water may, however, be had in the western cove a quarter of a mile above its mouth. Its shores are mostly cleared and settled.

BASIN COVE.

To the westward of **Ash Point** a narrow and crooked channel, with eleven feet at low water, leads to the northeastward into a long cove, called *Basin Cove.* The entrance is between **Ash Point** on the east and a long, narrow, and cleared point from twenty to forty feet high, called **Basin Point,** which presents a somewhat saddle-like appearance when viewed from the southward, being quite low in the middle and forty feet high at both ends. Several houses occupy the lower land, which forms the southwestern point of **Harpswell Neck.**

Eight feet at low water may be safely carried up *Basin Cove* for three-quarters of a mile from its mouth. Above this it is bare at low water. The channel is narrow but unobstructed.

HORSE ISLAND.

Four hundred yards S W. by S. from **Basin Point** lies a small island about twenty feet high, and bare of trees except two lone trees on its summit. It is called **Horse Island.** There is no passage between it and **Basin Point.** Its southern side is quite bold-to, but on the eastern side shoal water extends off two hundred yards. It forms the northern side of the entrance to *Potts Harbor.*

LITTLE BIRCH ISLAND.

One-quarter of a mile WEST from **Horse Island** is a low, grassy islet lying N E. and S W., a quarter of a mile long but quite narrow, and bold-to on its eastern side. South, west, and north, it should receive a berth on account of the shoal water making off in those directions; but an excellent and unobstructed channel exists between it and **Horse Island.**

About eight hundred and seventy-five yards S. by E. from **Little Birch Island** is

UPPER FLAG ISLAND,

bare, about forty feet high at its southern end, but quite low near the northern end. It lies N E. and S W., and is half a mile long. From **Horse Island** its northern end bears S. ¾ E., six hundred yards distant, with the entrance to *Potts Harbor* between them. From the southwestern extremity of **Haskell Island** the summit of the island bears N N W., three-quarters of a mile distant.

Upper Flag Island is surrounded by very extensive ledges and shoals. To the northeastward they extend nearly three-quarters of a mile—the northeast end being marked by a *black buoy.* To the southeastward they extend half a mile, nearly to **Haskell Island,** but leaving a narrow channel close along the shore of the latter. From the northeastern end of **Upper Flag Island** shoals extend to the northward a quarter of a mile; but near the southern end this shore is bold. On the southeastern side the deep water runs close along shore into a pocket near the northern end.

HADDOCK ROCK

is a mass of rough, bare rock, forming an islet, lying about five hundred yards WEST from the western end of **Haskell Island.** It is tolerably bold on its eastern side, and there is a good and much-used channel between it and **Haskell Island**; but on the western side it must receive a berth of two hundred and fifty yards. Between this rock and **Eagle Island,** to the west of it, is a wide and deep channel with five fathoms of water, but obstructed by shoals.

EAGLE ISLAND

lies half a mile WEST from **Haddock Rock**; three-quarters of a mile WEST from **Haskell Island**; and the same distance S W. by S. from **Upper Flag Island.** From **Half-Way Rock Light** it bears NORTH, three miles and a quarter distant; is a quarter of a mile long in a N E. by N. and S W. by S. direction, and surrounded by ledges and bare rocks. It is densely wooded with a variety of trees except near the north end, where it is bare; and a long, low, rocky point makes off to the northward, ending in a ledge, bare at low water. The island is between sixty and seventy feet high. It must not be approached closely on any side, but especially on the north and west sides, on account of the ledges and rocks surrounding it.

Stave Island, Ministerial Island, and **Bates Island** are three islets lying on the western side of *Broad Sound,* but somewhat obstructing the approach to *Potts Harbor* from the westward.

STAVE ISLAND

is the most northerly and irregularly shaped island, lying N E. and S W., about six hundred and fifty yards long, and presents when viewed from the southward a somewhat saddle-shaped outline, being lowest in the middle, but nowhere higher than twenty feet. Scattered fir trees are seen, and there is a grove on the summit of the bluff on the north side. Viewed from the northward and northwestward, it shows a low surface with a few scattered fir trees upon it; the southwestern end is bare and twenty feet

high, but in the middle the outline descends into a small valley, again rising, as approaching the eastern end, to a height of twenty feet. Here the surface is thinly wooded, and from this end a long ledge, bare at half-tide, makes to the northeastward. Off the end of this ledge is *Stave Island Ledge*, nearly awash at low water, and marked by a *black spar-buoy.*

Southeast of **Stave Island** the ground is shoal and broken all the way to **Ministerial Island,** a quarter of a mile off. It is not safe to attempt to pass between the two. **Stave Island** lies seven hundred yards N E. from **Crotch Island**; half a mile S S E. from the southwestern end of **Little Bangs Island**; a mile and a half W S W. from **Little Birch Island**; and the same distance WEST from **Upper Flag Island.**

MINISTERIAL ISLAND

is a quarter of a mile S E. from **Stave Island**, its northeastern end bearing E. by S. ½ S. from the northeastern end of **Stave Island**, and it extends from that point S W. for nearly half a mile. It is very narrow, being nowhere more than one hundred and fifty yards wide, quite low and bare except near the middle, where it rises to twenty feet above sea-level and has a few trees on the summit. Long ledges make off from its southwestern end, shoal water surrounds it, and a bar or reef, bare at low water, connects it with

BATES ISLAND,

two hundred yards S E. from it. **Bates Island** is about twenty feet high, lies N E. and S W., is half a mile long and one hundred and fifty yards wide, bare with the exception of a clump of spruce and fir trees almost in the centre of the island. On its eastern side it is bold-to; but northeast of it the shoals extend nearly three hundred yards, and southwest of it three-eighths of a mile. There is no passage between it and **Ministerial Island.**

DANGERS

IN ENTRANCE TO POTTS HARBOR FROM MERICONEAG SOUND.

I. *Coming from the eastward and bound into Potts Harbor*, vessels first enter *Mericoneag Sound* and pass to the northward of **Haskell Island.** The first obstruction met with will be seen on the north side of the entrance. It is called

RAM ISLAND LEDGE,

and has many bare rocks upon it; makes off from the southern end of **Ram Island** in a S W. direction to a distance of six hundred yards, *and is not buoyed.* Passing it, take care not to approach the northeastern end of **Haskell Island,** as *the ledges and shoals make out toward* **Potts Point** to within two hundred and seventy-five yards of it, and are bare at low water two hundred and fifty yards from the **Haskell Island** shore. These are the

GREAT HARBOR COVE LEDGES;

so called because off the mouth of *Great Harbor Cove.* They are very extensive, nearly filling up the passage between **Haskell Island** and **Potts Point,** making the channel very narrow and crooked, *and are not buoyed.* When past these ledges look out for

POTTS POINT LEDGE,

making off to the southwestward from **Potts Point** two hundred and fifty yards. It is bare at low water, and marked by a *red spar-buoy* (No. 2) placed in three fathoms southwest of it. This buoy must be left to the northward and eastward, but must be passed close-to.

When past this buoy the channel turns abruptly to the northward, and there will be seen ahead *a black spar-buoy.* This is on

NORTHWEST LEDGE,

which makes off from the northwestern point of **Haskell Island** in a due **NORTH** direction for a quarter of a mile, is bare in several places at low water, and awash close to the buoy, which is a *spar*, marked No. 1, and placed in good water **EAST** from the point of the ledge. Pass to the eastward of it.

TORRY ROCK.

This is a detached rock, bare at half-tide, and lies one-quarter of a mile **W. ½ N.** from **Potts Point** and **E. ¾ N.** from the eastern end of **Flag Island**, half a mile distant. There is no passage for strangers between it and **Flag Island**, fourteen feet at low water being the best water between the two, and the channel narrow and crooked. Light-draught vessels sometimes go in and out this way, but no stranger should attempt it.

Torry Rock is marked by a *black spar-buoy* (No. 3) placed in eighteen feet water on the eastern side of the ledge, and must be left to the westward. After passing it look out for

THRUMBCAP LEDGE.

The **Thrumbcap** is a bare rocky islet, which lies **NE.** by **E.** from **Upper Flag Island**, half a mile from its northeastern end, and is the most easterly of a line of bare rocks, visible here and there above water, between it and the island. There is no passage on its western side. To the northward and eastward from **Thrumbcap** the shoal water extends four hundred yards farther, forming *Thrumbcap Ledge*, which has five and a half feet at mean low water, and is marked by a *black spar-buoy* (No. 5) placed on its northeastern end in fourteen feet of water. Pass to the eastward of it. There are no other obstructions in the harbor.

SAILING DIRECTIONS

FOR ENTERING POTTS HARBOR FROM MERICONEAG SOUND.

Bring the extremity of **Potts Point** to bear **NW.** by **N. ½ N.** and steer for it, carrying not less than four fathoms, until **Ram Island** (highest part) bears **NE. ¾ E.**, six hundred and fifty yards off, and about three hundred yards from **Potts Point.** Now steer **WEST**, with not less than three fathoms, about for the *red spar-buoy* on *Potts Point Ledge*, which pass close-to, leaving it to the northward; and rounding it sharply to the northward, steer **N. ½ E.** for the *black buoy* on **Northwest Ledge**, which leave close-to to the westward, passing in sixteen feet water, and continue the course, which will lead, with not less than five fathoms, to the anchorage, where there will be from three to five fathoms, soft bottom.

APPEARANCE OF APPROACHES

TO POTTS HARBOR COMING FROM THE WESTWARD.

Vessels coming from the westward and bound into *Potts Harbor* use the passage among the islands leading between **Little** and **Great Chebeag** on the north and **Long** and **Hope Islands** on the south, and thence to **Little Bangs Island.** When off the western end of **Little Bangs Island**, and close under its southern shore, the entrance to *Potts Harbor* will be visible.

Bearing **E. by N.**, and two miles and a half off, a cleared point, of moderate height, will appear, and just to the southward, bearing **E. ¾ N.**, a low, grassy islet. This islet is **Little Birch Island**, and the bare point **Basin Point.** **Horse Island** is not visible, being hidden behind **Little Birch.**

A *black spar-buoy*, bearing E. ½ S., and three-quarters of a mile off, is *Stave Island Ledge Buoy.* Just to the southward of it is the bare summit of **Upper Flag Island**, bearing E. ¾ S. The distant high bare land bearing E S E. is the southwest end of **Haskell Island**, and the low bare point in range with it, and one mile distant, is the northeastern end of **Ministerial Island.** The thickly-wooded summit of **Eagle Island** will appear over the middle of **Ministerial**, and in range with the northeastern end of **Stave Island.** The low part of **Stave Island** will bear S E. ½ S., half a mile off.

Proceeding eastward, an islet, low and grassy, opens out from behind **Little Birch Island.** This is **Horse Island**, and marks the north side of the entrance to the harbor. Between it and **Flag Island** the high cleared hills of **Harpswell Neck** appear, the houses and the church on the summit forming conspicuous objects.

DANGERS
IN APPROACHING AND ENTERING POTTS HARBOR.

II. *Coming from the westward, through the bay,*

STAVE ISLAND LEDGE,

bare at low water, is a quarter of a mile N E. from the long rocky point on the northeastern end of **Stave Island**, the bare portion of the rock being two hundred and fifty yards from that point, and the shoal water extending out two hundred yards farther. Off the end of the ledge is placed a *black spar-buoy* (No. 13) in seven feet water, which must receive a berth of one hundred and fifty yards to the southward and westward.

UPPER FLAG ISLAND LEDGE

is three hundred yards N W. from **Upper Flag Island**, lies N E. and S W., is four hundred yards long, quite narrow and bold-to, has five feet at mean low water, *and is not buoyed.* The channel into *Potts Harbor* leads between this ledge and **Horse Island**; but there is also an excellent channel, entirely unobstructed, between it and **Flag Island.**

Birch Island must receive a berth to the northward of one hundred and fifty yards.

The northeastern part of **Flag Island** (which is also the lowest part) must not be approached nearer than three hundred yards, to avoid the flats which make off from it, and, as a general rule, *vessels should not go to the eastward of* **Bar Island**, bearing N E. by E. ¾ E., thus avoiding all of the shoals between **Flag Island** and **Thrumbcap.**

THRUMBCAP LEDGE

extends out to the northeastward from **Thrumbcap** four hundred yards; has five and a half feet at mean low water, and is marked by a *black spar-buoy* (No. 5) placed in fourteen feet off its northeastern end. Pass to the westward of it.

There are no obstructions after passing this buoy. It is only necessary to recollect that the dry bar extends to the southward of **Bar Island** nearly three hundred yards, and not to approach it too closely.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING POTTS HARBOR.

II. *Coming from the westward, through the Bay.*—Pass to the southward of the southwestern end of **Little Bangs Island** and close to it, in about six fathoms, and steer E. ½ N. for **Little Birch Island**, carrying not less than seven fathoms, until abreast of *Stave Island Ledge Buoy*, and in seven fathoms, hard bottom; when steer E. ½ S., passing two hundred yards **SOUTH** from **Little Birch Island** and three hundred and twenty-five yards **NORTH** from *Upper Flag Island Ledge*, and carrying nine fathoms of water. Continue this course until the highest part of **Horse Island** bears N E. ½ N., with **Basin Point** just open

to the westward of it, with about ten fathoms water, when steer E N E., nearly for **Bar Island**, and anchor at pleasure, in from three to five fathoms, soft bottom.

This course passes three hundred yards to the northward of *Thrumbcap Ledge.*

PASSAGE BETWEEN HASKELL ISLAND AND UPPER FLAG ISLAND.

Vessels sometimes use the narrow and crooked channel which leads along the northwest shore of **Haskell Island**, and between *Northwest Ledge* and *Torry Rock.* This channel must never be used by strangers, however, as it is so full of rocks and sunken ledges, none of which are marked, as to render it utterly unsafe. The passage enters between **Whale Rock** and *Eagle Island Ledge,* passes between **Haskell Island** and **Haddock Rock,** and continues close along the **Haskell Island** shore to its northwestern end. It then turns to the northward, runs between *Northwest Ledge* and *Torrey Rock Buoy,* and joins the eastern channel.

DANGERS IN THE PASSAGE BETWEEN UPPER FLAG ISLAND AND HASKELL ISLAND.

EAGLE ISLAND LEDGE,

dry at low water, lies two hundred and fifty yards S E. ½ S. from the southern end of **Eagle Island**; but from the dry rock the shoal ground extends S E. three hundred yards, and EAST a quarter of a mile, with from eight to ten feet at low water. The eastern extremity of the ledge is nearly a quarter of a mile S W. from **Haddock Rock.** This ledge *is not buoyed.*

WHALE ROCK

is a bare rocky islet, lying nearly EAST and WEST, and tolerably bold-to. From **Mark Island Monument** it bears S W. by W., eight hundred yards distant, and from **Half-Way Rock Light** N. by E., nearly three miles.

The channel now leads to the northeastward, toward

HADDOCK ROCK,

which must be left to the northwestward one hundred and fifty yards off. This rock is about fifty yards square, pefectly bare, and surrounded by ledges; is five hundred yards west from the western end of **Haskell Island**, and from its southwestern end shoals extend more than two hundred yards from shore.

HASKELL ISLAND POINT,

on the eastern side of the passage, immediately opposite to **Haddock Rock,** has seven feet at mean low water, extends in a westerly direction from the southwestern end of **Haskell Island** two hundred and forty yards, *and is not buoyed.*

After passing between **Haddock Rock** and *Haskell Island Point* the channel turns to the northeastward, closely hugging the shore of **Haskell Island.** **Two large bare rocks** will be seen to the northwestward, which must receive a wide berth. These rocks lie in the midst of the shoals which extend off from **Flag Island** toward **Haskell,** and *the western rock must not be approached nearer than four hundred yards. The easternmost bare rock may receive a berth of two hundred yards to the northwestward.* In other words, on the straight course through this channel **Upper Flag Island** *must be left to the northwestward about half a mile.*

SAILING DIRECTIONS
FOR THE PASSAGE BETWEEN UPPER FLAG ISLAND AND HASKELL ISLAND.

Bring **Half-Way Rock Light** to bear SOUTH, with fifteen fathoms, dark green mud, and **Mark Island Monument** N E. by E. ½ E., in range with **Whale Rock**, and steer N E. ½ N., carrying not less than four fathoms water. When safely past *Haskell Island Point*, **Mark Island Monument** will bear S E. by S. and **Potts Point** N E. ½ N., with six fathoms, soft bottom. Steer that course for **Potts Point**, keeping pretty close to **Haskell Island**, and continue it, carrying not less than fifteen feet, until nearly up with the northwestern point of **Haskell Island**. **Basin Point** will bear N. by W. ¾ W. and **Ash Point** N. by E., with *Thrumbcap Buoy* in range with it, and there will be five fathoms water. Now steer N. by E. ½ E. for *Torry Rock Buoy*, which will be seen a little to the eastward of *Thrumbcap Buoy*. On this course there will be not less than three fathoms; but great care must be taken to avoid being set to the eastward, as the slightest deviation from the course in that direction will be apt to set a vessel ashore on *Northwest Ledge*. But making this course good, give *Torry Buoy* a berth of fifty yards to the westward, and steer N. by E. ¾ E. to the anchorage, in from three to five fathoms, soft bottom.

BROAD SOUND, MIDDLE BAY, AND MAQUOIT BAY.

Next to the westward of the entrance to *Mericoneag Sound* is the entrance to *BROAD SOUND;* and thence to *MIDDLE* and *MAQUOIT BAYS*, which lie on the western side of **Harpswell Neck.** There is no commerce in either of these bays, but vessels of large size are sometimes built there. Both afford good anchorage, with from two to six fathoms at low water.

Broad Sound is bounded on the north by **Stockman** and **Whaleboat Islands**; on the east by **Little Birch, Upper Flag,** and **Haskell Islands**; and on the west by **Stave, Ministerial,** and **Bates Islands,** and a group of bare rocks and rocky islets lying south of **Bates Island.** The most prominent of these rocks is called the **Brown Cow**, or the **Brown Cow of Broad Sound.** **Eagle Island** lies in the middle of the *Sound*.

STOCKMAN ISLAND

is narrow, lies E N E. and W S W., and is about six hundred and fifty yards long. It bears W N W. from **Little Birch Island**, one mile and a quarter; N W. by N. ¾ N. from **Eagle Island,** one mile and seven-eighths; and N. ¾ W. from the east end of **Ministerial Island,** one mile distant.

This island is low, and bare of trees except a very few spruce trees scattered here and there over its surface. Even these diminish year by year, and in a few years none will remain.

Three hundred and seventy-five yards W S W. from the western end of **Stockman Island** is the western end of a long but narrow island, called

LITTLE BANGS ISLAND,

extending in a N E. and S W. direction, three-quarters of a mile long, and from twenty to forty feet high. Its highest part is the bluff at the southwest end, which is forty feet high and crowned with spruce trees, while the rest of the surface has scattered spruce trees, except the northeastern end, where there is quite a grove. In the middle the land is quite low, but at the northeast end it rises to a height of twenty feet. The shores are bold-to on all sides.

Between this island and **Stockman Island** is an excellent channel with eight fathoms, entirely unobstructed. Both islands are very bold-to, and strangers may use the passage with entire safety.

WHALEBOAT ISLAND

lies in the middle of the entrance to *Middle Bay*, extends in a N E. and S W. direction, is a mile and a half long and from fifty to three hundred yards wide. It lies along the western shore of **Harpswell Neck** at a distance of half a mile, leaving an excellent and unobstructed channel between them. From **Stockman Island** its southwestern end bears E. ½ N., three-quarters of a mile distant.

The southern end of **Whaleboat Island** is forty feet high, with a gentle slope from its summit to the shore. The top is crowned with a few spruce and fir, but the rest of the surface is bare. In the middle the island is very low and grassy, but the northern part is formed by a steep hill covered with trees, and sixty feet above high-water mark, while parts of the surface are cleared and cultivated, and a few houses show along its southeastern face. Its shores are very bold-to, except at the northeast end, but there are ledges off this end extending to a distance of three hundred yards.

DANGERS
IN BROAD SOUND AND APPROACHES.

In approaching *Broad Sound* from the bay the first danger encountered is on the western side of the channel, a low, bare, grassy islet, surrounded by shoals, ledges, and bare rocks, called

BROWN COW,

which is twenty feet high and about fifty yards square; bears from the western end of **Bates Island** S. ¾ E., three-quarters of a mile distant; from **Mark Island Monument** W. by S., nearly two miles; and from **Half-Way Rock Light** N. by W. ½ W., two miles and three-quarters. To the northwestward of it a group of bare rocks and one or two small islets extend the shoal water to a distance of half a mile. The whole extent of the shoal ground surrounding the **Brown Cow** is three-quarters of a mile N E. and S W. by one-quarter of a mile N W. and S E.

These two large masses of bare rock present the appearance of a semicircle ruptured in the middle of the curve. Hence the whole group has received the name of the *Broken Cave.*

None of these ledges are buoyed, as the bare rocks lying close to the edges of the shoals are sufficient guides for avoiding them.

In approaching the *Sound from the eastward*, the first danger met with is

DRUNKER LEDGES.

Of these (as before mentioned) there are two distinct ledges. They lie between the bearings of N E. by N. and N N E. from **Half-Way Rock**, at a distance of two miles. From **Mark Island Monument** they bear S. ½ E and S. ½ W., respectively, and are distant from it one mile and a quarter. They lie S E. ½ E. and N W. ½ W. from each other, with a fourteen fathom channel a quarter of a mile wide between them. The easternmost ledge has four feet at mean low water, and at low spring tides is nearly bare. The western rock is bare at half-tide, and is marked by a *spar-buoy painted black and red* in horizontal stripes, placed in six fathoms west of the ledge.

MARK ISLAND LEDGE.

Passing to the northward of *Drunker Ledges* there will be seen, bearing about E N E., *a black spar-buoy.* This is on **Mark Island Ledge**, a dangerous sunken rock with three

feet at mean low water, which lies S E. by S. ½ S. from **Mark Island Monument** three-quarters of a mile, and S W. by W. from **Jaquish Island** nearly a mile. The buoy is on the western side of the rock. Pass well to the westward of it. (See page 560.)

WHALE ROCK

is also on the eastern side of the channel, and is a bare rocky islet, lying nearly EAST and WEST, and about two hundred yards long. It is eight hundred yards S W. by W. from **Mark Island Monument**, and nearly three miles N. by E. from **Half-Way Rock Light-House**, and is tolerably bold-to. After passing it, approach

EAGLE ISLAND LEDGE,

still on the eastern side of the main channel, dry at low water, and two hundred and fifty yards S E. ½ S. from the southern end of **Eagle Island**. From the dry rock the shoal ground extends S E. three hundred yards and EAST a quarter of a mile, with from eight to ten feet at mean low water. The eastern extremity of the ledge is nearly a quarter of a mile S W. from **Haddock Rock**. *This shoal is not buoyed.* (See page 592.)

Off the western shores of **Eagle Island** *ledges and bare rocks extend* three hundred and fifty yards. From its southern end they extend two hundred yards, and from the northern end three hundred and seventy-five yards. The island must receive a berth accordingly.

On the western side of the channel, just to the northward of **Brown Cow** and the **Broken Cave**, lies another group of ledges and bare rocks, called

MINK ROCKS,

occupying a space three-eighths of a mile long by five hundred yards wide, extend nearly NORTH and SOUTH, and are mostly bare at low water, many of them being always bare. There is no passage between them and the **Brown Cow**.

A good channel a quarter of a mile wide, and with not less than ten fathoms, exists between these rocks and **Bates Island**.

SAILING DIRECTIONS

FOR ENTERING BROAD SOUND, AND THROUGH IT, MIDDLE AND MAQUOIT BAYS AND FREEPORT RIVER.

I. *Coming from the eastward; Inside Channel.*—Bring **Half-Way Rock Light-House** to bear S W., and **Haddock Rock** W N W., with ten fathoms water, and steer for the latter, carrying not less than six and a half fathoms, and passing between **Mark Island Monument** and **Haskell Island**, with five and a half fathoms. Continue this course until within three hundred yards of **Haddock Rock**, in seven fathoms, hard bottom, and **Half-Way Rock Light-House** is over the western end of **Whale Rock** on a bearing of S. by W. Now steer N. by W. ½ W. three hundred and seventy-five yards, heading for the western end of **Upper Flag Island**, and carrying six fathoms water. When the northern end of **Eagle Island** bears WEST and **Haddock Rock** S W. by S., and there is seven fathoms, hard bottom, steer N W. ½ N. for the middle of **Stockman Island**, carrying not less than eleven fathoms water, until the northeastern end of **Ministerial Island** bears WEST, with eighteen fathoms, mud and sand, when steer N. ½ W. If bound into *Freeport River*, continue this course, carrying not less than fourteen fathoms water. *If bound up Middle Bay*, when the extremity of **Basin Point** bears E. ½ S. and the southwest end of **Whaleboat Island** N. by E., with fifteen fathoms, soft bottom, steer N E. along the southeastern shore of the latter, with not less than seven fathoms, as far up as **Shelter Island**. Or, pass to the northwestern side of **Whaleboat Island** on the N. ½ W. course, and when the southwestern end of **Whaleboat** and the northeast end of **Little Birch Islands** are in range, with fourteen

fathoms, soft bottom, steer N E. ¼ E., passing about midway between **Whaleboat** and **Little Whaleboat Islands**, and carrying not less than six fathoms as far as **Shelter Island**.

If bound up Maquoit Bay or Mare Point Bay, continue the course N. ¾ W., carrying not less than nine fathoms, until past **Little Whaleboat Island** and its northern extremity bears E. ¼ N., three-quarters of a mile off, when there will be nine fathoms, soft bottom; steer N E. for **Mare Point**, which will lead up to the entrance of either bay with five fathoms of water.

If bound to **Portland**, when the north end of **Eagle Island** bears WEST and **Haddock Rock** S W. by S., with seven fathoms water, steer N W. ¾ W. for the lowest part of **Little Bangs Island**, carrying not less than eight fathoms, and giving **Stave Island Buoy** a berth of one hundred and fifty yards to the westward. On this course, when past the buoy, and it bears about S. by W., steer W. ½ S. to clear the western end of **Little Bangs Island**, carrying not less than six fathoms.

Main Channel.—When off the entrance to *Quohog Bay* bring **Mark Island Monument** to bear N W. ¼ W. and **Half-Way Rock Light** S W. ¾ W., with seventeen fathoms, soft bottom; then steer W. by N. ¼ N., passing between *Mark Island Ledge* and *Drunker Ledges*, and carrying not less than six fathoms. Continue this course until **Eagle Island** bears N. ½ E. and **Half-Way Rock Light** SOUTH, with fifteen fathoms, dark green mud, when steer N. by W. ¼ W. for the eastern end of **Stockman Island**. On this course there is nothing less than ten fathoms of water.

If bound up Freeport River, when the highest part of **Eagle Island** bears S E. by E. ¾ E., with sixteen fathoms, muddy bottom, steer N. ½ E., which will lead safely up between **French** and **Upper Green Islands** with not less than ten fathoms.

If bound up Maquoit Bay or Mare Point Bay, continue this course N. ½ E. past **Whaleboat** and **Little Whaleboat Islands**, and when the northern extremity of the latter bears E. ¼ N., with twelve fathoms, muddy bottom, steer N. E. for **Mare Point**. This course leads with nothing less than five fathoms to the entrance of either bay.

If bound up Middle Bay, when the highest part of **Eagle Island** bears S E. by E. ¾ E. as before, steer N. by E. ½ E. for the highest part of the southwestern end of **Whaleboat Island** until within three hundred and fifty yards of it, and have **Basin Point** bearing S E. by E. ½ E. On this course there will be nothing less than ten fathoms, and at the bearing thirteen fathoms. Then steer N E. up the bay. Or, on the N. ½ E. course, continue until the southwestern end of **Whaleboat Island** and **Potts Point** are in range on a bearing of S E. ¾ E. and in fourteen fathoms. Then steer N E. ¼ E., passing about midway between **Whaleboat** and **Little Whaleboat Islands**, and carrying not less than six fathoms to abreast of the **Goslings**.

If bound to **Portland**, when **Eagle Island** bears N. ½ E., and **Half-Way Rock Light** bears SOUTH, as before, steer N. by W. ¼ W., with nothing less than ten fathoms, until **Ministerial Island** bears S W. ½ W., and the lowest part of **Little Bangs Island** bears N W. ¾ W., with ten fathoms, soft bottom; now steer that course for **Little Bangs Island**, giving **Stave Island** buoy a berth of one hundred and fifty yards. On this course there will be not less than eight fathoms; and when past the buoy and it bears about S. by W., steer W. ½ S. to clear the western end of **Little Bangs Island**, carrying nothing less than seven fathoms.

II. *Coming from the westward.*—When off **Outer Green Island**, in fifteen fathoms, with **Junk of Pork** bearing N. by W. ¼ W., a quarter of a mile off, **Half-Way Rock Light** will bear E. ½ S. Steer N E. ¾ E. for **Haskell Island**, and continue this course, with not less than fifteen fathoms, until **Half-Way Rock Light** bears S. ½ E. and **Brown Cow** W. ½ N., when there will be thirty-four fathoms, coarse gravel; then steer N. ½ E. This course leads, with not less than ten fathoms, as far up as **Upper Green Islands**, off the entrance to *Freeport River*.

If bound into Middle Bay, when on the N. ½ E. course, the highest part of **Eagle Island** bears SE. by E. ¾ E. as before, steer N. by E. ½ E. for the highest part of the southwestern end of **Whaleboat Island.** On this course there will be nothing less than ten fathoms water. Continue it until within three hundred and fifty yards of the island and **Basin Point** bears SE. by E. ½ E.; then steer NE. up the bay. (See directions for *Middle Bay*, given above.)

If bound up Maquoit Bay or Mare Point Bay, continue the N. ½ E. course past the two **Whaleboat Islands** until the northern extremity of **Little Whaleboat** bears E. ¼ N. and in eleven fathoms; then steer NE. for **Mare Point.** This course leads up to the entrance of either bay. (See directions for these bays, given above.)

DESCRIPTION OF THE SHORES OF MIDDLE, MARE POINT, AND MAQUOIT BAYS, AND OF THE ISLANDS LYING IN THOSE BAYS AND THEIR APPROACHES.

MIDDLE BAY is contained between the western shore of **Harpswell Neck** on the east and a number of islands of *Casco Bay* on the west. On the northeast it is bounded by the main land. The bay extends NE., is over six miles long from **Whaleboat Island** to its head, and is a little over a mile wide at its mouth, the width gradually diminishing to a half mile at **Scrag Island**, where it unites with *Mare Point Bay.*

The islands which form the western side of *Middle Bay*, beginning at its mouth, are **Whaleboat, Little Whaleboat, Lower Goose, Upper Goose, Birch, White,** and **Scrag Islands.** Besides these, three islets lie south of **Lower Goose Island**, and connect with it by shoals. They are **The Goslings** and **Irony Island.**

The approaches from the westward are mainly through *Luckse Sound*, a wide and good channel, contained between **Long Island** and **Hope Island** on the west and **Crotch Island** on the east. Northeast of **Long Island** is **Great Chebeag Island**, the second island in size in the bay. Northeast of **Hope Island** is **Sand Island**, and beyond it **Little Bangs** and **Stockman Islands.**

Northeast of **Crotch Island** are **Stave, Ministerial,** and **Bates Islands.** South and southeast of it are **Inner Green Island** and **Jewell Island.**

LONG ISLAND

is two miles long and from half to three-quarters of a mile wide, and lies NE. by E. and SW. by W. The southwestern end of this island is three miles and three-quarters NE. ¼ N. from **Portland Head Light.** The surface is undulating—the height varying from ten to one hundred feet; and the highest land, one hundred feet above the sea, is at the northeastern end of the island.

Long Island is well settled. Much of the land is cleared and cultivated, but the summits are still well wooded with spruce, pine, fir, and other trees. Viewed from the southward, it presents a hilly and undulating surface, with cleared lands interspersed with groves of trees and dotted here and there with small houses. The southern shore is much cut up by small coves, which, however, are of no importance.

Two hundred yards south of the western end of **Long Island** is

OVERSET ISLAND,

bare, sixty feet high, and about four hundred yards long. It is bold-to on its southern side, but there is no passage between it and **Long Island.**

Eight hundred yards east of **Overset Island**, and nearly three hundred yards from the shore of **Long Island**, is

MARSH ISLAND,

an irregularly-shaped islet, about three hundred and fifty yards long. Its southern

face is about twenty feet above high-water mark and bold-to, but the rest of the island is low. Its surface is entirely bare of trees, and in many places under cultivation. There is no passage between this islet and **Long Island.**

A very small rocky islet, low and bare, lies N E. ¾ E. from **Marsh Island**, eight hundred yards off, and is called

OBED ROCK.

It is six hundred and fifty yards southeast from the **Long Island** shore, and there is no passage in-shore of it, but it is quite bold-to on the off-shore side.

THE STEPPING STONES.

Near the northeastern end of **Long Island**, and three hundred and four hundred and fifty yards from its southern shore, are two bare, rocky islets, called the **Stepping Stones.** They lie N W. and S E. from each other, with a narrow passage between them with three fathoms at mean low water. There is no passage between the inner rock and **Long Island.** The outer rock is shoal on its southern side, and must not be closely approached.

CROW ISLAND,

bare, grassy, and joined to the shore at low water, lies four hundred yards E. by N. from the northern point of the eastern end of **Long Island**, and forms the turning-point for vessels using the inside channel through *Casco Bay.*

GREAT CHEBEAG ISLAND

is, with the exception of **Great Island**, the largest island in *Casco Bay.* Its southwestern end is six miles N E. from **Portland Head**, and the southeastern point, called **Deer Point**, a little over three-eighths of a mile E N E. from the eastern end of **Long Island.** Between the two points leads the inside channel through the bay, much used by coasters.

Great Chebeag is three miles long with an average width of one mile; lies N E. and S W., and its shores are indented by coves, some of which form good harbors. The land is high, gradually rising toward the centre of the island, where it attains a height of one hundred and eighty feet; thickly settled, and in most places cleared and under cultivation. The northeastern point is called **Chebeag Point;** is low and cleared, with several houses upon it, and a small hillock upon the extreme point.

The southwestern end of **Great Chebeag** is deeply indented by a large and commodious cove, called *CHANDLER COVE*, and is thus separated into two points. The southeastern one is **Deer Point;** the southwestern, **Indian Point.** **Deer Point** is steep, wooded, and sixty feet high. **Indian Point** is quite low and bare.

On the southeastern face of **Great Chebeag**, half a mile to the eastward of **Deer Point**, is a small cove, affording good anchorage in northerly winds, and called *COLEMAN COVE.* Next to the eastward, and one mile from **Deer Point**, is *JOHNSON COVE*, large, shallow, and of little importance. There are many other indentations in the shore-line of the island, but none of them worthy of note.

The southeastern face of this island is tolerably bold; but the northwestern is shoal, and the approach to it obstructed by bars and ledges. Off the southeastern face, about midway of the island, and a quarter of a mile from the shore, is a low bare islet, surrounded by ledges, and known as **Crow Island.**

Six hundred yards S W. by W. from **Indian Point**, with which it is connected at low water by a shingly bar, lies

LITTLE CHEBEAG ISLAND,

of moderate height, gently sloping, and bare of trees with the exception of a beautiful

grove of spruce, pine, and other trees on the summit. Grass-land and cultivated fields form the rest of the island surface, and near the highest part of the land, and close to the grove, is a large white house surrounded by the usual out-buildings. This is used as a family hotel or boarding-house in the summer season, and is the residence of the owner of the island. This place was formerly much resorted to, but is now seldom used, although it is one of the most beautiful islets in the bay. It is triangular in shape, lies nearly EAST and WEST; its southern point is a quarter of a mile NORTH from the northeastern end of **Long Island**, and the inside channel through the bay leads between them. Its eastern end is six hundred yards from **Indian Point**, and at low water a bar or reef of shingle joins the two islands. This bar and the island itself form the northern and western shores of *Chandler Cove.*

Nearly seven hundred yards southeast of **Deer Point** lies

HOPE ISLAND,

at the northeastern end and on the northwestern side of *Luckse Sound.* It lies N E. and S W., is nearly three-quarters of a mile long, with steep shores, and the land rises to a height of sixty feet, its surface presenting the appearance of cleared land interspersed with scattered groves of spruce and fir. The shores are bold-to.

Two hundred yards S E. from the eastern end of **Hope Island** is a small, grassy islet, called **Rogue Island,** surrounded by shoals. There is a narrow passage with five fathoms water between it and **Hope Island.**

On the southeastern side of *Luckse Sound*, and a little over half a mile to the southeastward of **Hope Island**, is

CROTCH ISLAND,

of a very peculiar shape. The main portion lies N E. and S W.; is one mile and seven-eighths long and three hundred and fifty yards wide, with an undulating and varied surface, the heights varying from twenty to eighty feet. The southern end is cleared and has one or two houses, but woods occupy a large portion of the remaining surface. But from the southeastern face, nearly five-eighths of a mile below the northeastern end, the island sends out a spur of low, grassy land exactly at right angles to the main portion, and terminating in a precipitous head or bluff forty or fifty feet high at a distance of half a mile from the main shore. This bluff at a distance has the appearance of a separate island, the low land being invisible. This peculiar spur or crotch has given the name to the island.

The main shores of **Crotch Island** are bold-to except the southwestern point, from which a bad ledge makes off to the southwestward nearly six hundred yards. But the shores of the crotch or spur are surrounded by shoals, ledges, and bare rock, rendering it unsafe to approach them. Fishermen, however, who are well acquainted with these dangers, often pass between the hill on the southeastern end of the spur and **Jewell Island.** As there is a bad ledge in the middle of this passage, they hug the **Jewell Island** shore.

JEWELL ISLAND

lies S E. from **Crotch Island**, three-quarters of a mile from the southwestern end, and E N E. from **Portland Head**, five miles and a half; extends N E. and S W.; is a mile and one-eighth long, and has an average width of five hundred yards. It presents an undulating surface, varying in height from twenty to eighty feet, and mostly wooded; but the southern half of the southwestern end of this island is bare, and backed by trees on the north and west. The centre is thickly wooded. The northeastern end is deeply indented by a long, narrow, and deep cove, forming a good harbor for vessels of light draught, and called *JEWELL ISLAND COVE.*

There is a good channel between **Jewell Island** and **Inner Green Island**, with five fathoms at low water. The two islands are half a mile apart, but the actual channel is not quite three hundred yards in width.

SAND ISLAND.

Six hundred yards NE. from **Hope Island** lies a small, low, and very narrow islet known as **Sand Island.** It is entirely bare of trees and covered with grass. Ledges and shoals, bare at low water, extend NE. and SW. from it three hundred and fifty yards. The inside channel through the bay leads north of this island, between it and **Little Bangs Island**, and there is also a good channel between **Sand** and **Hope Islands.**

Passing **Sand Island, Little Bangs Island** is left to the northward and **Stockman Island** to the northwestward. **Whaleboat Island** may be left either to the eastward or westward. If the former course be taken, there will be seen, when approaching the northern end of the island, another of very different appearance, bearing about NNE. This is

LITTLE WHALEBOAT ISLAND,

of irregular shape, moderate height, and wooded with spruce and fir. Long bare ledges and shoals dry at low water make off from the southern end to a distance of three-eighths of a mile in a southwesterly direction and half a mile in a westerly direction. From the north end ledges extend NORTH nearly a quarter of a mile. There are excellent channels on all sides of it. Its shores are boldest-to on the eastern side.

LOWER GOOSE ISLAND.

This island forms part of the western shore of *Middle Bay;* lies one mile and one-eighth NE. by N. from **Little Whaleboat**, and extends in a NE. and SW. direction for exactly a mile. It is low, being in no place higher than forty feet above high-water mark, and reaching that height only at the northeastern end.

This island is thickly wooded with spruce and fir, and surrounded by shoals. Two low islets, called

THE GOSLINGS,

lie off its southwestern end at distances of one hundred and fifty and four hundred yards, respectively. The eastern islet is very low and nearly bare of trees, but there are still standing (1871) a few spruce and fir near the western shore. The western islet is equally low but quite thickly wooded, and both are surrounded by shoals and bare ledges. There is no passage between the two islets, nor between the western islet and **Lower Goose Island.**

Two hundred and twenty-five yards to the eastward of the outer **Gosling** is a very small low islet, called

IRONY ISLAND,

only a hundred yards long and not over twenty in width. The eastern side is tolerably bold-to, but on all other sides it is shoal. There is a shoal passage between this island and the outer **Gosling** with eight feet at low water, and fit for vessels of light draught, but it is never used.

UPPER GOOSE ISLAND

is joined at low water to **Lower Goose Island** by a dry reef two hundred yards long, with a bare rock in the middle. It lies NE. by N. and SW. by S.; is five-eighths of a mile long, forty feet high, and well wooded. Shoals surround it in all directions.

In the centre of *Middle Bay*, and five-eighths of a mile SE. from **Upper Goose Island**, lies

SHELTER ISLAND.

a low, thinly-wooded islet, lying N E. and S W., and about four hundred yards long. It is bold-to except off the north end, where a ledge makes off in a northerly direction for an eighth of a mile. There are good channels on all sides of **Shelter Island**, but the best is on its northwestern side, as the other (between it and **Harpswell Neck**) is full of ledges.

BIRCH ISLAND,

about a mile long, lies on the western side of *Middle Bay*, between it and *Mare Point Bay*. It is about half a mile to the eastward of **Upper Goose Island** and three-quarters of a mile from the shores of **Harpswell Neck.** The surface is undulating. The highest land is on the southeastern side of the island, where it attains a height of between eighty and ninety feet, and presents a steep bluff appearance, with a few houses on the summit and along the shore, and a few scattered spruce and fir trees on the western slope. The western portion of the island is lower, the highest land being sixty feet near the southern end, and the two portions are separated by a valley. This western part of the island is wooded, especially toward the northern end. The southern end has a few scatterd trees and houses. Both shores are indented by coves.

A good channel, with six fathoms water, leads between **Upper Goose Island** and **Birch Island** into *Mare Point* and *Maquoit Bays*.

A small, low, grassy islet a quarter of a mile N E. from **Birch Island** is called **Little Birch Island.**

Six hundred yards N E. from **Birch Island**, and connected with it at low water by a bare flat with ledges, is

WHITE'S ISLAND,

low, bare, and grassy, lying N E. and S W., three-quarters of a mile long, and about twenty feet high. The shores rise abruptly to that height, and the summit is a level plain, bare of trees. All of the islands from **Birch Island** to the northward are connected with **Mare Point Neck** and the main land by dry flats.

Three islets, low and bare of trees, lie on these flats. The southernmost, called **Little Iron Island,** is nearly three hundred yards EAST from the southern end of **White's.** It is a little over a hundred yards long, and lies near the eastern edge of the flats. The largest of the three is called **Scrag Island,** and is two hundred and seventy-five yards to the northeastward of **Little Iron Island** and three hundred yards to the eastward of **White's.** It is over six hundred yards long and not quite a hundred wide, and is low and grassy.

The northernmost is called **Crow Island;** is a little over a hundred yards square, lies two hundred and seventy-five yards south of **Miller Point**, on the main land, and seven hundred yards N E. from **White's Island.**

The western shores of **Harpswell Neck** present a somewhat different appearance from the eastern slopes. They are more regular, not so much cut up by coves, and are, as a rule, steeper and more thickly settled. Five-eighths of a mile above **Basin Point** is a small low island, with a few trees upon it, lying close to the shore, with which it is connected at low water. This is **Barnes Island.** Just above it is a small semi-circular indentation in the shore-line, of no importance, and called *Old Cove.*

Passing along the low land north of *Old Cove*, approach the highest slopes, and under the wooded sides of the hills (which here rise to a hundred feet) is a comfortable anchorage for light-draught vessels, called *PETERS COVE.* It makes in in a southwesterly direction between the high land on the east, and the low grassy point with one

or two houses on it, which marks the northern limit of the low lands. It is only fit for vessels drawing six feet and under.

Passing along the shore, which now presents the appearance of cleared and cultivated lands, interspersed with groves of trees and thickly-wooded hills, and half a mile above *Peters Cove*, come to a low bare point, called **White's Point.** A hillock with precipitous face on the north shore of the point will serve to distinguish this from any other projection.

One mile and a quarter above **White's Point** a long, low, bare point makes out from the shore in a northerly direction, called the **Lookout.** The land at this point is quite thickly settled. The **Lookout** is exactly opposite the southern end of **Birch Island,** and about half a mile above it is a wide and tolerably deep cove, called *WILSON COVE.* The northern side of this cove is marked by a steep hill one hundred and forty feet above sea-level, and almost entirely bare of trees.

One mile above *Wilson Cove* is **Jordan Point,** low and bare, with one or two houses on it; and half a mile above this is **Barnes Point,** also low, as is all of the land at this point. Above this begins *MIDDLE BAY COVE*, bare at three-quarters ebb.

DANGERS
IN APPROACHING AND ENTERING MIDDLE BAY.

The approaches to this bay through *Broad Sound* have already been described on pages 594 and 595. In approaching from the westward, through *Luckse Sound*, the first obstruction met with, after passing the entrance to **Portland,** is

HUSSEY ROCK,

or the *Hussey* as it is often called. (Both names are used.) This dangerous sunken rock is almost exactly in the middle of the channel, and has twelve feet upon it at low water. It bears N.E. by E. ½ E. from **Portland Head Light,** and E. ½ N. two and one-eighth miles from **White Head.** From the southwestern end of **Crotch Island** it bears S.W. ½ W., distant two miles. This ledge is marked by a *can-buoy of the second class, painted red and black in horizontal stripes.* The rock is bold-to, and the buoy may be approached quite closely with seven fathoms water. (See page 585.)

Passing the *Hussey*, the course leads to the northeastward between **Crotch Island** and **Long Island,** then between **Crotch** and **Hope Islands,** and to the N.E. between **Stave Island** and **Little Bangs Island,** and between the two **Whaleboat Islands** into the bay. *There are no dangers in the channel* until past **Little Whaleboat Island,** but vessels beating in will beware of the shoal water southwest of **Crotch Island,** called

CROTCH ISLAND LEDGE.

It has three feet upon it in places, and the southwestern point of the reef is a quarter of a mile S.W. from the island. *It is not buoyed,* but a buoy has been recommended. There is no passage between this ledge and **Crotch Island.**

THE STEPPING STONES

should not be approached too closely from the southward, as there is a ledge with three feet at mean low water about one hundred and fifty yards SOUTH from the southernmost one. *It is not buoyed.* (See page 598.)

Long bars make off from **Sand Island** both N.E. and S.W. From the southwestern end the bar extends S.W. nearly four hundred yards, bare at low water. From the northeastern end the shoal extends nearly a quarter of a mile in a N.E. direction, and is marked by a *black spar-buoy*, (see page 600,) which is a guide to vessels coming from

the eastward through the inside channel. Vessels bound to the eastward leave it to the southward and westward.

STAVE ISLAND LEDGE

lies on the eastern side of the channel, and is not dangerous except to vessels beating in or out. It is also marked by a *black spar-buoy* (No. 13) placed in seven feet of water off the end of the shoal. This buoy is left to the southward. **Stave Island Ledge** is bare at low water, and lies one-quarter of a mile NE. from the long rocky point on the northeastern end of **Stave Island.** (See page 591.)

BIRCH ISLAND LEDGE

lies on the southeastern side of the eastern channel, is bare at three-quarters ebb, and lies nearly six hundred yards NORTH from the northeast end of **Little Birch Island.** There is a good channel between the ledge and the island with nine fathoms of water, but it is not safe for strangers. *The ledge is not buoyed*, but always shows itself, either by breakers or the bare rock. It is easily avoided by keeping the **Whaleboat Island** shore aboard.

The northwestern shores of **Basin Point** *are shoal* from **Barnes Island** nearly to the pitch of the point. Flats, ledges, and bare rocks are scattered all along the line from **Barnes** to **Little Birch Island.** The rule for vessels beating in or out is not to go to the eastward of **Barnes Island,** bearing NE. by E., until up with the island.

After passing **Barnes Island** the shores are bold-to, and the channel clear, until the eastern and western channels unite, above **Whaleboat Island.**

In the Western Channel, vessels beating up will find the shores bold-to until past the southwestern point of **Whaleboat Island**; then keep the latter shore a little more aboard, not standing too far to the westward, to avoid, *First*,

WHALEBOAT LEDGE,

or *Whaleboat Island Ledge*, a small rock, with nine feet at mean low water, lying nearly three-quarters of a mile NW. by N. ½ N. from the southwestern point of **Whaleboat Island** and one mile SW. ½ W. from **Little Whaleboat Island.** *A red spar-buoy* (No. 12) is placed in three fathoms on the western side of the ledge, and is a guide to *Yarmouth* and *Freeport Rivers.* By vessels bound up *Middle Bay* it is to be left to the northward and westward.

This ledge has only seven feet on it at low spring tides. *Secondly*,

LITTLE WHALEBOAT LEDGE,

three-eighths of a mile NE. ½ E. from *Whaleboat Ledge*, and awash at low spring tides. From **Little Whaleboat Island** it is distant three-quarters of a mile. *It is not buoyed.*

Thirdly, The line of ledges and bare rocks which extends in a SW. direction from **Little Whaleboat Island** a distance of nearly half a mile. They are entirely bare at low water, and many of the rocks are always out.

There is from eight to twelve fathoms between and on all sides of the two *Whaleboat Ledges*, and a channel with six fathoms between *Little Whaleboat Ledge* and the ledges making off from the island. Strangers, however, must not attempt either of these passages.

On the western side of **Little Whaleboat Island** there are also extensive ledges and shoals. The island should receive a berth to the eastward of not less than half a mile from vessels bound up *Mare Point* or *Maquoit Bay.*

THE GOOSE NEST,

a bare, rocky islet, about six hundred yards NORTH from the eastern end of **Little Bangs**

Island and the same distance **N W.** from **Stockman Island.** There is an excellent channel between this rock and the above-named islands, but on its northern side ledges and shoals, some bare at half-tide and some at low water, extend in a **N.** by **E.** direction for three-eighths of a mile, and *are not buoyed.* Vessels standing across the northern end of the **Goose Nest** must give it a berth to the southward of not less than half a mile.

GOOSE LEDGE

is a small ledge, with four feet at mean low water, lying between **Little Whaleboat Island** and the **Goslings,** three-eighths of a mile **S W.** by **S.** from the latter. There are from seven to nine fathoms water all around it. *It is not buoyed,* but is not in the way except for vessels beating up, or those who use the passage between the **Goslings** and **Little Whaleboat Island** into *Maquoit* and *Mare Point Bays.*

GRASSY LEDGE

is a bare ledge, about a quarter of a mile long, which lies nearly three-eighths of a mile **N E.** by **N.** from **Irony Island** and six hundred yards **S E.** from the shore of **Lower Goose Island.** There is good water on all sides of it, and it is tolerably bold-to. It is easily avoided, being always visible.

Abreast of **Shelter Island,** and close in with the shore of **Upper Goose Island,** lies another ledge, bare at half-tide, called

BRANNING LEDGE.

It lies two hundred and fifty yards from the shore of **Upper Goose Island,** *and is not buoyed.* A channel with twelve feet exists between the ledge and the island.

The northeastern end of **Shelter Island** has *a bare ledge lying a hundred and fifty* yards **N N E.** from it, and should receive a berth to the southward of at least two hundred yards.

BRANT LEDGES.

In the *Eastern Channel,* and abreast of **Shelter Island,** there is a line or group of ledges, bare at low water, extending in an **E N E.** direction half a mile, and called *Brant Ledges.* The southwestern end of this reef is marked by a large bare rock about six hundred yards to the southeastward of **Shelter Island** and about seven hundred yards from the shore of **Harpswell Neck.** The water is very shoal between the various bare rocks. There is a narrow channel between the *Brant Ledges* and **Harpswell Neck,** with three and a half fathoms, but it is not safe for a stranger.

BLACK ROCK.

Seven hundred yards above the western end of the *Brant Ledges* is a bare rock, very bold, called **Black Rock.** It is almost exactly in the middle of the passage, bearing from **Shelter Island E N E.** nearly half a mile distant.

Two hundred yards **E N E.** from **Black Rock** is *another ledge* about two hundred and fifty yards long, which has *nine feet* at mean low water, *and is not buoyed.* There is five fathoms water between it and the *Brant Ledges,* and vessels may use either the channel between **Shelter Island** and **Black Rock** or between this ledge and **Brant Ledges.** The former is preferable.

Half a mile above the southwestern point of **Birch Island,** and three hundred yards from the shore, is *a ledge, bare at extreme low tides, not named nor buoyed,* nor is it in the way except for vessels beating in or out. It is nearly opposite to the **Lookout** on **Harpswell Neck,** the channel leading between them.

Above the **Lookout** the shore of **Harpswell Neck** is shoal. Vessels drawing twelve feet of water should not approach it nearer than three hundred yards until up with

Wilson Cove, half a mile above the **Lookout.** Here they should not approach nearer than seven hundred yards; and when approaching the upper side of the cove must keep nearly half a mile off, to avoid

WILSON LEDGES,

a dangerous group, bare at low water, and about seven hundred yards long, lying N E. and S W. along the shores of the **Neck,** and near the upper end of *Wilson Cove.* The southwestern end of this line of rocks is about seven hundred yards from the shore of the cove, and the eastern end extends nearly to the shore. *These ledges are not buoyed.*

Above *Wilson Ledges* the flats begin. There are no rocks in the channel, and the flats show themselves at low water. The chart and lead are here the best guides for a stranger. Vessels drawing twelve feet cannot pass above **Scragg Island,** either to **Pennell's** or **Dunning's Wharf,** at low water. **Dunning's** may be reached at high water, but there is never more than ten or eleven feet at **Pennell's Wharf** at the top of the tide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MIDDLE BAY.

I. *Coming from the eastward, through Broad Sound.*—When off the entrance to *Quohog Bay*, bring **Mark Island Monument** to bear N W. ¾ W. and **Half-Way Rock Light** S W. ¾ W., with seventeen fathoms, soft bottom, and steer W. by N. ¼ N., passing between *Mark Island Ledge* and *Drunker Ledges*, carrying not less than six fathoms water. Continue this course until **Eagle Island** bears N. ¼ E. and **Half-Way Rock Light SOUTH,** with fifteen fathoms, dark green mud, when steer N. by W. ¼ W. for the eastern end of **Stockman Island.** On this course there will be nothing less than ten fathoms water, and when the highest part of **Eagle Island** bears S E. by E. ¾ E., with sixteen fathoms, muddy bottom, steer N. by E. ½ E. for the highest part of the southwestern end of **Whaleboat Island.** Continue on this course, with nothing less than ten fathoms water, until within three hundred and fifty yards of the island, and **Basin Point** bears SE. by E. ½ E., when there will be thirteen fathoms; now steer N E. ¼ N. up the bay. This course will carry clear of everything, with not less than six fathoms water, until abreast of the **Lookout.** Then steer N E. by E. for **Barnes Point** until abreast of the southwestern end of **Scrag Island.** On this course there will be not less than sixteen feet water. Then, if bound for **Dunning's,** steer N E. by N. ¾ N., having the wharf a little to the north. But no detailed directions can be given above **Scrag Island.** The chart will be the best guide.

The above courses pass nearly three hundred yards to the westward of *Brant Ledges;* about one hundred and fifty yards to the westward of **Black Rock;** one hundred and fifty yards to the eastward of the ledge southeast of **Birch Island;** and nearly four hundred yards to the westward of *Wilson Ledges.*

At night a vessel entering to make a harbor must not, when steering for **Whaleboat Island,** shut **Half-Way Rock Light** in behind **Little Birch Island,** but must keep it open a little to the westward. This will lead clear of *Birch Island Ledge.*

Vessels of the largest draught may pass the southwestern end of **Whaleboat Island** close to, and enter the bay by the passage between the two **Whaleboat Islands.**

Another channel from the eastward into Broad Sound: Bring **Half-Way Rock Light-House** to bear S W. and **Haddock Rock** W N W., in ten fathoms, hard bottom, and **Mark Island Monument** W. by N. ¼ N. Steer W N W., passing between **Haskell Island** and the **Monument,** with not less than five and a half fathoms, and continue the course until within three hundred yards of **Haddock Rock** and **Half-Way Rock Light** is over the western end of **Whale Rock** on a bearing of S. by W., when there will be seven fathoms. Now steer N. by W. ½ W. for three hundred and seventy-five yards, heading for the western end of **Upper Flag Island,** and carrying seven fathoms. This carries through between **Had-**

dock Rock and **Haskell Island.** On this course, when the northern end of **Eagle Island** bears WEST and **Haddock Rock** S W. by S., with seven fathoms, hard bottom, steer N W. ¼ N. for the middle of **Stockman Island** until the northeastern end of **Ministerial Island** bears WEST. On this course there will be not less than ten fathoms, and at the bearing seventeen fathoms. Then steer N. ¾ W. until **Basin Point** bears E. ¼ S., and three hundred and fifty yards S. by W. from the southwestern end of **Whaleboat Island.** On this course carry nothing less than fifteen fathoms, and at the bearing there will be the same depth. Then steer N E. ¼ N. up the bay. (See directions given above.)

This entrance can only be used in day-time. It is then an excellent channel, and is much used by fishermen and coasters.

II. *Coming from the southward or from seaward.*—Pass a third of a mile WEST from **Half-Way Rock Light,** in about twenty fathoms, and steer N. ½ E. This course leads clear of everything into *Broad Sound* with not less than twenty fathoms. Continue it with not less than eleven fathoms until **Half-Way Rock Light** bears S. ¼ E., **Mark Island Monument** S E. ¾ S., and **Basin Point** E. ¾ N., with fourteen fathoms, soft bottom; then steer N E. ¼ N. up the bay. Or continue the course N. ½ E. past the southwestern end of **Whaleboat Island** until **Mark Island Monument** is shut in behind **Upper Flag Island,** carrying on this course not less than fourteen fathoms; then steer N E. ¼ E., which course will lead, with not less than six fathoms, up the western channel to **Shelter Island.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MIDDLE BAY THROUGH LUCKSE SOUND, FROM THE WESTWARD.

When off **Cape Elizabeth,** in seventeen fathoms water, with **East Light** bearing N W. ¼ N., one mile and one-eighth distant, **Portland Head Light** N. ⅝ W., and **Half-Way Rock Light** N E. by E. ¼ E., steer N E. by N ½ N., carrying not less than nine fathoms water. Continue this course, which leads between **Outer Green Island** and the *Hussey,* until **Half-Way Rock Light** bears S E. by E. ½ E., seen between **Inner Green Island** and the southwestern end of **Jewell Island,** in sixteen fathoms; steer N E. ¼ E., which leads clear of all dangers, and in not less than five fathoms, up the western channel to **Stockman Island.** When exactly abreast of the north end of that island, in twelve fathoms of water, steer N E., which will lead safely, with not less than six fathoms, up to **Shelter Island.** On this course continue until well past the island and the extreme northeastern point of **Upper Goose Island** bears N W.; then steer N E. by E. ½ E. until the **Lookout** is abeam, when N E. by E. leads clear of *Wilson Ledges.* Then follow the directions on page 605.

These courses leave the *Hussey* to the westward six hundred yards; *Whaleboat Ledge* and *Little Whaleboat Ledge* to the westward six hundred and fifty yards; and **Grassy Ledge** and *Branning Ledge* about seven hundred yards to the westward. This is a perfectly safe channel.

II. *Bound into Middle Bay from Portland Harbor.*—1. *By way of Whitehead Passage:* Having come through the *Whitehead Passage,* steer E. ½ S., carrying not less than nine fathoms water, until **Portland Head Light** bears S W. by W. ¼ W., seen over the middle of **Ram Island;** now in fifteen fathoms, steer N E. ½ E. up the *Sound,* and proceed as above directed.

This course leaves the *Hussey* about seven hundred and fifty yards to the eastward.

2. *By the Inside Channel, through Casco Bay.*—Vessels using this channel pass to the northward of **Long Island,** and between its eastern end and **Deer Point,** the southern end of **Great Chebeag,** in from four to seven fathoms water. When abreast of **Deer Point,** having it bearing due NORTH and about one hundred and fifty yards off, in about ten fathoms, soft bottom, steer E N E. toward **Little Bangs Island.** On this course there is

nothing less than nine fathoms; and when about half a mile along the southeastern shore of **Great Chebeag**, and the extreme eastern point of **Hope Island** bears SE. ¾ E., and in ten fathoms, soft bottom, steer NE. by E., passing between **Great Chebeag** and **Little Bangs Island**, and between the **Goose Nest** and **Stockman Island**, and carrying not less than eighteen feet, which will be found in one spot off *Johnson Cove.* Continue this course up between the two **Whaleboat Islands**, and when abreast of the southwestern end of **Little Whaleboat** steer NE., and follow the directions given for the western channel on page 606.

These courses pass a quarter of a mile to the northward of the *black buoy* on **Sand Island Point**; two hundred yards to the southward of the **Goose Nest**; about five hundred yards to the southward of *Whaleboat Ledge;* and three hundred and fifty yards to the southeastward of *Little Whaleboat Ledge.*

SHORES OF MARE POINT BAY.

Mare Point Bay is contained between **White's** and **Birch Islands** on the southeast, and a long narrow neck or peninsula of the main land, called **Mare Point Neck**, on the northwest. It is properly a cove, and not a bay, being of small dimensions.

The head of the bay is formed by the main land, and here a creek, dry at low water, and called *Miller Creek*, empties into the bay. Thus formed, this cove or bay extends in a NE. by E. direction for a length of two miles and five-eighths, and with an average width at high water of about seven hundred yards. At low water its length to the edge of the dry flats is a mile and a quarter. Nine feet at low water may be carried up to the edge of the flats through a very narrow channel.

MARE POINT NECK

is a narrow peninsula making out in a SW. by W. direction from the main land for a distance of three miles. Its surface is undulating, the heights varying from forty to eighty feet. The shores have easy slopes except at **Mare Point**, its southwestern extremity, where there is a tolerably steep bluff, about sixty feet high. On this bluff are a few spruce and fir trees. Viewed from the southward and westward, however, it appears almost bare, as the trees are rather on the northern slope of the hill.

Mare Point Neck is composed mostly of cleared and cultivated lands. These are interspersed with small groves of trees, and scattered trees dot the surface here and there. Its western shores are tolerably well settled, and are steeper on the *Maquoit Bay* side than on the eastern shore.

The shores of **Birch Island** (which bounds *Mare Point Bay* on the southeast) present, when viewed from the southwestward, a different appearance from that presented to one coming up *Middle Bay.* While, in the latter case, the steep bluff eighty feet high, and with only a few trees upon it, on the eastern shore of the island, forms a very prominent mark in coming up the bay, on the western shores the land is only about forty feet high, with a very gentle slope, bare of trees with a very few exceptions, and with one or two houses near the highest part; but the northern side is lower, and covered with a thin growth of spruce and fir. These trees do not appear, except at intervals, when the island is viewed from the approaches to **Mare Point.** *But in coming up the Western Channel into Middle Bay* they show over the low land connecting the two parts of the island.

Mare Point Bay may be entered: *First*, by the passage leading from *Middle Bay* between **Birch** and **Upper Goose Islands**; *secondly*, by the passage between **Lower Goose Island** and **Little Whaleboat**; *thirdly*, by the *Broad Sound Passage*, and thence by the channel between **Lower Goose Island** and **French Island**; *fourthly*, by the passage between **Littlejohn Island** and **Great Chebeag**, and thence between **French Island** and **Bibber Island**;

fifthly, by the channel along the southern face of **Great Chebeag**; and *sixthly*, by *Luckse Sound*, between **Little Bangs Island** and **Stave Island**, and thence to the northward along the northeast shore of **Stockman Island**. Most of these channels are common to *Mare Point* and *Maquoit Bays*.

MAQUOIT BAY

is contained between **Mare Point Neck** and the main land. It lies N. E. and S. W.; is three and three-quarters miles long, and about a mile and a quarter wide at high water in its widest part. At low water the channel for vessels of six or seven feet draught is not over seven hundred yards wide, all the rest of the bay being occupied by flats nearly bare at low water.

The entrance is between **Mare Point** on the east and a low bare point of the main land, called **Little Flying Point**, on the west. There are several islands off the mouth, and the passages leading to the bay are full of islands.

On the northwest the main land presents the appearance of a hilly country, the slopes cleared and cultivated, and studded with houses near the summits, and the whole backed by woodlands covering the crests of the hills. Sailing along the northwestern shore of the bay it will be seen that the hills are cut up by ravines intersecting them at short intervals. Especially is this the case at the head of the bay, where the shore-line is cut up by numerous creeks, all bare at low water, and most of them already filling up with marsh and salt-meadow grass.

The land north of the head of the bay is high, in some places forming hills from one hundred and fifty to two hundred feet high. In the immediate vicinity of the shore-line it forms plateaux not over forty feet high, partly cleared and thinly settled, the cleared spaces alternating with groves of trees.

LITTLE FLYING POINT

is in reality a small, low, grassy island of triangular shape, connected with the main land at low water. Its southeastern face is tolerably bold-to.

BUNGANUC LANDING.

This is the settlement on *Maquoit Bay*. It is a hamlet built on the shores of a small creek which empties into the bay on its northern shore two miles above **Little Flying Point**. Vessels are sometimes built here. The creek is dry at low water, as indeed is the greater portion of the bay.

FLYING POINT AND FLYING POINT NECK.

Westward of **Little Flying Point** the shore curves away to the westward and round to the southward and eastward, forming a shallow cove not quite three-quarters of a mile wide. The western point of this cove is about twenty feet high, with a very few scattered trees upon it, but mostly cleared and cultivated. Houses appear on the summit of the land behind this point, and the shore-line taking an abrupt turn to the westward runs about S W. by W. for a little over a mile to a long, low, bare point, called **Flying Point.** There are a few trees on the shore, but the point itself has none. From **Flying Point** it again turns sharply to the NE. and joins the main land a mile and a half above the point, thus forming a long irregularly-shaped peninsula of low land, called **Flying Point Neck.**

Westward of **Flying Point** is the entrance to *Freeport River*.

ISLANDS IN THE APPROACHES TO MAQUOIT AND MARE POINT BAYS.

In approaching these bays by way of *Broad Sound* or *Luckse Sound*, the courses lead among the islands already described in the directions for *Middle Bay* and *Broad*

Sound. But on coming near the entrance to the bays, after passing **Stockman Island**, there will be seen to the northward, and lying to the westward of **Goose Islands**, a small bluff island crowned with spruce and fir trees and about forty feet high. This is

FRENCH ISLAND,

and is uninhabited. It lies NE. and SW., is about three-eighths of a mile long, and a little over two hundred yards wide at its widest part; the southern shores bold-to, but the north shore shoal, rocky, and dangerous. From the northeastern point of the island bare rocks, rocky islets, and ledges extend in an ENE. direction about seven hundred yards. The north shore of **French Island** should not be approached nearer than five hundred yards, and its northeastern end should receive a berth to the westward of half a mile.

UPPER GREEN ISLANDS.

SW. from **French Island** a little over half a mile lie two very small, bare, rocky islets, united at low water. These are **Upper Green Islands.** From **Chebeag Point** they bear NE. seven-eighths of a mile distant. They are quite bold-to on the south and east, but on the western side, although quite as bold-to as on the others, the approach to them is obstructed by a sunken ledge, called *Green Island Ledge*, which has only six feet at mean low water. *It is, however, marked by a buoy.*

The main channel into *Freeport River* from the southward leads between **French Island** and the **Upper Green Islands** with seven fathoms at low water.

BIBBER ISLAND.

The course leads between **Lower Goose Island** and **French Island**; and passing to the northeastward of the latter there will be seen on the north, and about three-quarters of a mile off, an island lying ENE. and WSW., with a very few scattered spruce trees upon its surface, which is nowhere over forty feet high. This is **Bibber Island. Flying Point** will be behind it, but will very soon open to the eastward of it. Four small islands will appear in a line abreast, spreading out from its eastern end in a line about ENE. These are all rocky and mostly bare, though one or two have a very few trees upon them. Two or three houses will appear on the southern face of **Bibber Island**, near the shore. The island is on the northwestern side of the entrance to *Mare Point* and *Maquoit Bays*, and on the eastern side of the approach to *Freeport River*.

The first of the small islands to the eastward of **Bibber Island** is bare and rocky, and is called, with the outlying rocks surrounding it, the **Sow and Pigs.** It is connected at low water with the shore, from which it is distant nearly seven hundred yards, and is three hundred and fifty yards from **Bibber Island.**

PETTINGILL ISLAND,

the next to the eastward, lies two hundred and fifty yards to the eastward of the **Sow and Pigs,** and is also connected with **Flying Point Neck** at low water. It is forty feet high and bare of trees.

Next to the eastward of **Pettingill Island** appears a somewhat larger one, lying NE. and SW., about six hundred and fifty yards E. by N. from **Pettingill Island** and nearly half a mile from the shore. This is

WILLIAMS ISLAND;

is low (being in no place over twenty feet in height) and bare, except for a few spruce and fir trees on its northern face near the summit. Its southern face is very bold-to,

and vessels of heavy draught may go almost up to the rocks. There is no passage on the northern side. A good channel, with sixteen feet at low water, exists between this island and the easternmost of that group which lies a quarter of a mile to the eastward, and is called

SISTER ISLAND.

It is small and low, its northern face only showing a precipitous front twenty feet high, and a few scattered trees appear on the surface. It is N N W. from the northern end of **Upper Goose Island**, from which it is distant half a mile. The channel leads between them, and the shores on either side are bold-to.

Mare Point is distant from **Sister Island** five-eighths of a mile, (about twelve hundred yards.) The channel into *Mare Point Bay* leads to the eastward of the point, between it and **Birch Island**, (which is the large island, with a few trees in groups here and there, which is seen just to the eastward of **Mare Point**.)

The channel into *Maquoit Bay* leads along the western side of **Mare Point** to the northward, between it and **Sister Island**.

DANGERS

IN THE APPROACHES TO AND ENTRANCE OF MAQUOIT AND MARE POINT BAYS.

I. *Through Broad Sound.*—A vessel bound into either of these bays by way of *Broad Sound* would, if coming from the eastward, fall in with **Half-Way Rock Light-House**, and bring it to bear S W. ½ W., a little over three miles distant, and steer W. by N. ½ N. On this course the first danger met with is

MARK ISLAND LEDGE,

lying N E. by N. from **Half-Way Rock**, two miles and three-quarters distant, and S E. by S. ½ S. from **Mark Island Monument**, three-quarters of a mile. It is dry at extreme low tides. A *black spar-buoy* (No. 15) is placed on the western side of it, and *must be left to the northward* by vessels coming from the eastward through the channel.

Opposite to *Mark Island Ledge*, and in range between it and **Half-Way Rock**, on a bearing S W. by S., lie two ledges at a distance of three-quarters of a mile from the buoy on *Mark Island Ledge*, and called

DRUNKER LEDGES.

They lie N W. and S E. from each other, with good water between them. The northwestern ledge is bare at half-tide, and is *marked by a buoy painted red and black* in horizontal stripes. The southeastern one has four feet at mean low water, and is not marked. The channel into *Broad Sound* from the eastward leads between *Mark Island Ledge* and the *Drunkers*.

Passing these, continue the course to the entrance of *Broad Sound*, and then turn to the northward, leaving **Eagle Island** to the eastward. The first obstruction met with is on the eastern side of the channel, in approaching **Eagle Island**. It is called

EAGLE ISLAND ROCK;

is dry at low water, lies two hundred and fifty yards S E. ½ S. from the southern end of **Eagle Island**, and from the dry rock the shoal ground extends S E. three hundred yards, and EAST a quarter of a mile, with from eight to ten feet at mean low water. Its eastern end is nearly a quarter of a mile S W. from **Haddock Rock**. *The ledge is not buoyed.*

From the southern end of **Eagle Island** shoal ground extends in a southwesterly direction for nearly two hundred and twenty yards. It is called *Eagle Island Point,*

and has no buoy. To avoid it, vessels give the island a berth of about three hundred yards.

Continuing the course to the northward, leave **Bates** and **Ministerial Islands** to the westward and **Little Birch** and **Whaleboat Islands** to the eastward, pass between the last named and **Stockman Island**, and the *red spar-buoy* will be seen on

WHALEBOAT LEDGE,

about half a mile to the northward. This ledge has nine feet at mean low water and about seven at low spring tides. Vessels which pass up *Middle Bay* pay no attention to it; but those which are bound into *Freeport River*, or up *Maquoit* or *Mare Point Bay*, leave it to the westward close-to, and *Little Whaleboat Ledge* to the eastward. The channel here is not wide, but deep, and the ledges are bold.

Whaleboat Ledge is a "*pinnacle rock*," and of small extent. It is three-quarters of a mile **N W. by N. ½ N.** from the southwestern point of **Whaleboat Island**, and one mile **S W. ½ W.** from **Little Whaleboat Island.** *A red spar-buoy* (No. 12) is placed on the western side of the ledge in three fathoms. Leave it two hundred yards to the westward.

LITTLE WHALEBOAT LEDGE

lies three-eighths of a mile N E. ½ E. from *Whaleboat Ledge*, is awash at low spring tides, and *is not buoyed.* From **Little Whaleboat Island** it is distant three-quarters of a mile.

When three-quarters of a mile north of *Whaleboat Ledge*, the course leads to the northeastward, in the direction of **Mare Point**; and care must be taken not to make this turn too soon after passing the *buoy*, to avoid the *line of ledges and bare rocks* which extend from **Little Whaleboat Island** to the westward a distance of half a mile. Most are bare at low water, and some are always out, forming rocky islets.

FRENCH ISLAND REEF

is the long line of bare rocks which extends from the northeastern point of **French Island** in a **N E. by E. ½ E.** direction nearly three-eighths of a mile. It is quite bold, and but little in the way. But due **NORTH** from the eastern end of the reef, at a distance of a quarter of a mile, lies another group of rocks, bare at low water, surrounding several small, bare, rocky islets. This is

BIBBER LEDGE,

or *Bibber Rocks.* It is three hundred and fifty yards long in a N W. and S E. direction, in the middle of the passage between **Bibber Island** and **French Island**, and *is not buoyed*, as it always shows itself.

In *Maquoit Bay*, one hundred and seventy-five yards due **NORTH** from **Sister Island**, is a bare ledge, called

SISTER ISLAND LEDGE.

There is good water on all sides of it.

The flats, with less than five feet at low water, extend off from the northwestern shore of **Mare Point Neck** into *Maquoit Bay* an average distance of half a mile. From the main land on the north shore of the bay *flats, bare at low water*, extend off to the southward three-eighths of a mile. Thus the channel is narrowed to a very small compass, but at low water the flats on the north side are bare, and as they are also bold, vessels by keeping the edge of them aboard will avoid the more dangerous ones on the south side.

BUNGANUC ROCK

is a bare rock, lying on the flats half a mile **SOUTH** from **Bunganuc Landing.** Vessels bound up to the landing leave it well to the eastward.

In *Mare Point Bay* the flats begin about half way up the bay on the **Mare Point** side, and extend off toward the southern shore a quarter of a mile. The southern shore is bolder. There are no obstructions except the flats.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING MAQUOIT AND MARE POINTS BAYS.

I. *Coming from the eastward, through Broad Sound.*—Bring **Half-Way Rock Light** to bear S W. ¾ W., a little over three miles distant, and **Mark Island Monument** to bear N W. ¾ W., with seventeen fathoms, soft bottom, and steer W. by N. ¼ N., passing between *Mark Island Ledge* and *Drunker Ledges*, and carrying not less than six fathoms water. Continue this course until **Eagle Island** bears N. ½ E. and **Half-Way Rock Light** SOUTH, with fifteen fathoms, dark green mud, when steer N. by W. ¼ W. for the eastern end of **Stockman Island.** On this course there will be nothing less than ten fathoms of water, and when the highest part of **Eagle Island** bears S E. by E. ¾ E., with sixteen fathoms, muddy bottom, steer N. ½ E., and so continue, with not less than eleven fathoms, past **Whaleboat Island**, between the two *Whaleboat Ledges*, and until **Mare Point** bears N E. when, in eleven fathoms, steer for the point. On this course there will be not less than four and a half fathoms, and when abreast of the eastern end of **Sister Island**, bearing N W. ¼ W., with four and a half fathoms water, and bound up *Maquoit Bay*, steer N. by W. ½ W. for **Little Flying Point**, carrying not less than three fathoms. When within four hundred yards of the point, in three fathoms, soft bottom, steer N E. ¼ N. about one mile, or until **Bunganuc Rock** bears N E. by E., when, if bound to the landing, continue the course N E. ¼ N. across the flats until the middle of the entrance bears N. by E. ¼ E., when steer that course. *This course can be used only at high water.* But if bound toward **Wharton Point**, when **Bunganuc Rock** bears N E. by E., as before, steer E. by N. ¾ N., which will lead up. Do not cross the flats except at high water.

If bound into Mare Point Bay, when abreast of the eastern end of **Sister Island**, bearing N W. ¼ W., as before, steer E N E. toward **White's Island**, carrying seventeen feet of water. When within a quarter of a mile of this island, steer about up the middle of the passage. But no sailing directions can be given above this point. The bay is bare at low water.

The above courses pass a quarter of a mile to the southward of *Mark Island Ledge;* nearly half a mile to the northward of *Drunker Ledges;* two hundred yards to the westward of *Eagle Island Point;* fifty yards to the eastward of *Whaleboat Ledge;* nearly a quarter of a mile to the westward of *Little Whaleboat Ledge;* a quarter of a mile to the westward of the bare ledges off **Little Whaleboat Island**; and two hundred yards to the eastward of *Sister Island Ledge.*

II. *Coming from the southward or from sea.*—Leave **Half-Way Rock** one-third of a mile to the eastward, and steer N. ½ E. through *Broad Sound*, and follow the directions as given above.

DANGERS.

II. *In the passage between the* **Goslings** *and* **Little Whaleboat Island.**—Vessels using this passage from *Middle Bay* to *Mare Point* and *Maquoit Bays* must beware of

GOOSE LEDGE,

a pinnacle rock, with four feet at mean low water, which lies nearly in the middle of the passage, three-eighths of a mile S. ¾ W. from the westernmost **Gosling** and three-quarters of a mile N E. ½ E. from the middle of **Little Whaleboat Island.** *It is not buoyed.* There is from seven to nine fathoms on all sides of it.

SAILING DIRECTIONS
FOR ENTERING MARE POINT OR MAQUOIT BAYS.

II. *By the passage between the* **Goslings** *and* **Little Whaleboat Island.**—On the course **N E. ½ N.** up *Middle Bay*, when just past the northeast point of **Whaleboat Island** and it bears **N W.** by **W. ½ W.**, and in twelve fathoms, steer **N. ¾ W.** for **Flying Point.** On this course carry not less than nine fathoms, and when **Mare Point** bears **N E.** steer for it, and follow the directions given above, carrying nothing less than nine fathoms. These courses pass one hundred and fifty yards to the westward of *Goose Ledge.* But the channel is otherwise entirely unobstructed, and *Goose Ledge* may be past on either hand by keeping the **Little Whaleboat Island** shore aboard, or by passing close along the southern side of the **Goslings.**

DANGERS.

III. *In the passage through Luckse Sound and into Maquoit and Mare Point Bays.*—The first danger encountered by a vessel coming from the westward through *Luckse Sound*, and having passed **Ram Island**, is

THE HUSSEY,

or *Hussey Rock* as it is often called. This dangerous *sunken rock* is almost exactly in the middle of the channel, and has twelve feet upon it at low water. It bears **N E.** by **E. ¾ E.** from **Portland Head Light** and **E. ¾ N.**, two miles and an eighth, from **White Head.** From the southwestern end of **Crotch Island** it bears **S W. ¾ W.**, distant two miles.

This ledge is marked by *a can-buoy of the second class, painted red and black* in horizontal stripes, but is bold-to, and the buoy may be approached quite closely with eight fathoms water. (See page 602.)

CROTCH ISLAND LEDGE

is the next danger met with continuing up the *Sound.* It makes off in a southwesterly direction from the southwest point of **Crotch Island** for a quarter of a mile, and has spots of three feet upon it at mean low water, but is only dangerous to vessels beating to windward which may stand across the southwestern end of **Crotch Island.** *It is not buoyed*, but a buoy has been recommended to mark it. (See page 602.)

THE STEPPING STONES.

These islets, which lie off the southeastern shores of **Long Island**, should not be approached too closely from the southward, as there is a ledge with three feet at mean low water about one hundred and fifty yards SOUTH from them, *which is not buoyed.* (See page 598.)

SAND ISLAND POINT.

Long bars make off from **Sand Island** both **N E.** and **S W.** From the northeastern end the shoals run out nearly a quarter of a mile, and a *black spar-buoy* marks its northeastern point. This buoy is a guide to vessels coming from the eastward through the *Inside Channel.* Vessels bound east leave it to the southward. (See page 600.)

STAVE ISLAND LEDGE

lies in the *Southern Channel*, which leads along the southern shores of **Hope, Sand, Little Bangs, and Stockman Islands**, and between these and **Crotch** and **Stave Islands.** It is only dangerous to vessels beating to windward. It lies one-quarter of a mile **N E.** from the long rocky point on the northeastern end of **Stave Island**, is bare at low water, and is marked by a *black spar-buoy* (No. 13) placed in seven feet of water off the end of the

shoal. Vessels bound to the eastward leave this buoy to the southward. (See page 603.)

THE GOOSE NEST AND GOOSE NEST LEDGES.

These ledges and bare rocks lie in the *Northern Channel*, which leads along the southern and eastern shores of **Great Chebeag**, and on the north side of **Hope Island, Little Bangs Island**, and **Stockman**. The **Goose Nest** is a bare rocky islet, about six hundred yards NORTH from the eastern end of **Little Bangs Island** and the same distance N W. from **Stockman Island**. There is an excellent channel between these islands and the **Goose Nest** with from three to eight fathoms water. The *Goose Nest Ledges* are a line of rocks, bare at half-tide, extending from the island in a N. by E. direction three-eighths of a mile. They *are not buoyed*, but are easily avoided by keeping the shore of **Great Chebeag** aboard. Vessels standing across the northern end of the **Goose Nest** must give it a berth to the southward of not less than half a mile. (See page 603.)

WHALEBOAT LEDGE.

This ledge, before described, (see page 611,) lies nearly midway between the **Goose Nest** and **Whaleboat Island**; three-quarters of a mile N W. by N. ½ N. from the southwestern point of **Whaleboat Island**; and one mile S W. ½ W. from **Little Whaleboat Island.** It has nine feet at mean low water, and is marked by a *red spar-buoy* (No. 12) placed on its western edge in three fathoms of water. This buoy is red, as a guide to *Freeport River.* Vessels bound to the eastward leave it to the northward. Those bound up *Maquoit* or *Mare Point Bay* leave it to the eastward.

Passing this buoy, come next to

LITTLE WHALEBOAT LEDGE,

also on the eastern side of the channel; *not buoyed*, and awash at low spring tides. It is three-eighths of a mile N E. ½ E. from *Whaleboat Ledge Buoy* and three-quarters of a mile S W. of **Little Whaleboat Island**, and should be given a good berth to the eastward.

SHOALS
TO THE WESTWARD OF LITTLE WHALEBOAT ISLAND.

From this island shoal ground extends to the westward and southwestward half a mile. In many places the ledges are bare at half-tide and at low water, *are not buoyed*, and vessels, to avoid them, should not approach the island, in coming from the southwestward, nearer than three-quarters of a mile.

GREEN ISLAND LEDGE,

which lies between the **Upper Green Islands** and **Chebeag Point**, is an obstruction to the entrance to *Freeport River.* It is only dangerous to vessels beating to windward into or out of *Maquoit* or *Mare Point Bays.* It has six feet at mean low water and four at low spring tides. From **Upper Green Islands** it bears S W., distant one-quarter of a mile, and from **Chebeag Point** N E., distant five-eighths of a mile. A *red spar-buoy* (No. 10) is placed in three fathoms on the southwestern side of the rock, as a guide to *Freeport River.* By vessels bound up *Maquoit Bay* by way of *Luckse Sound*, it is left well to the westward. By those using the channel between **Littlejohn Island** and **Great Chebeag**, it is left to the southward.

FRENCH ISLAND REEF

is a line of bare rocks, part of it out at high water, extending in a N E. by E. ½ E. direction from the northeastern point of **French Island** nearly three-eighths of a mile. These

rocks are quite bold, and are but little in the way. But due **NORTH** from the eastern end of the reef, a quarter of a mile distant, lie

BIBBER ROCKS,

or **Bibber Ledges**, a group of bare rocks surrounded by shoals, extending in a **N W.** and **S E.** direction for three hundred and fifty yards in the middle of the passage between **Bibber** and **French Islands.** *There is no buoy.*

All the channels into the two bays unite in one at this point, and the dangers in the bays are described in full on page 611.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING MAQUOIT OR MARE POINT BAYS.

III. *Coming from the westward, through Luckse Sound.*—1. *By the Main or South Channel, outside of everything:* When off **Cape Elizabeth**, in seventeen fathoms, with **East Light** bearing **N W. ¼ N.**, one mile and an eighth distant, **Portland Head Light N. ¾ W.**, and **Half-Way Rock Light N E.** by **E. ¼ E.**, steer **N E.** by **N. ½ N.**, carrying not less than nine fathoms water. Continue this course, which leads between **Outer Green Island** and the *Hussey*, until **Half-Way Rock Light** bears **S E.** by **E. ½ E.**, seen between **Inner Green Island** and **Jewell Island.** Now, in sixteen fathoms, steer **N E. ½ E.**, which will carry clear of all dangers, and in not less than five fathoms, up to **Stockman Island.** When past the eastern end of this island, and **Upper Green Islands** bear **N. ¼ E.**, steer for them, carrying not less than five fathoms, until **Chebeag Point** bears **W.** by **N. ¼ N.**, and there is nine fathoms. Then steer **N E.** for **Mare Point**, carrying not less than six fathoms, and follow the directions given, on page 612, for the two bays.

2. *Having come from* **Portland** *through Whitehead Passage:* Steer **E. ½ S.**, with not less than nine fathoms, until the middle of **Ram Island** is in range with **Portland Head Light** on a bearing of **S W.** by **W. ½ W.**; then steer **N E. ½ E.**, carrying not less than six fathoms, and follow the directions given above.

3. *By the North or Inside Channel:* When clear of *Whitehead Passage*, with **Portland Head Light** bearing **S W. ¾ W.**, just clear of the north end of **Ram Island**, and in twelve fathoms of water, steer **N E. ½ E.** past **Marsh Island** and **Obed Rock**, and until the **Stepping Stones** are in range on a bearing of **N W. ¼ W.** On this course the least water is nine fathoms. Then steer **N E.** by **N. ¾ N.** for **Deer Point**, carrying eight fathoms, until the extreme southwestern end of **Hope Island** bears **E.** by **S. ½ S.**, when there will be nine fathoms, soft bottom; then steer **N E. ¾ E.** up the middle of the passage between **Great Chebeag** and **Hope Island.** On this course carry not less than eighteen feet, and when the southwestern end of **Little Bangs Island** bears **S E. ½ E.**, a quarter of a mile distant, and **Upper Green Islands** bear **N E.** by **N. ¾ N.**, in fifteen fathoms, steer that course, carrying not less than six fathoms, until the southwestern end of **Stockman Island** is in range with **Mark Island Monument** on a bearing of **S E. ½ S.**; now, in eight fathoms, soft bottom, steer **N E.** for **Mare Point**, and follow the directions for either bay, given on page 612.

DESCRIPTION OF SHORES OF

FREEPORT RIVER AND APPROACHES TO STROUT POINT VILLAGE.

The entrance to *FREEPORT RIVER* is between **Moore Point** on the east and **Stockbridge Point** on the west. **Moore Point** is the southwestern end of **Wolf Neck. Stockbridge Point** is the eastern extremity of a peninsula or neck of land making off from the main land on the western side. Several islands lie off the mouth of the river, the principal of which are **Bibber Island**, which guards the right or eastern side of the approach, and **Great Moshier Island**, which guards the western side.

A vessel approaching *Freeport River* through *Broad Sound* steers a straight course N. ½ E. until past **Little Whaleboat Island**, and approaching **French Island.** The **Upper Green Islands** will be to the northward and **Chebeag Point** about abeam on the western hand. The entrance to the river is now open, and the course leads midway between **French Island** and **Upper Green Islands.** When between them there will be seen, bearing about N N E., an island about forty feet high, and bare with the exception of a very few scattered spruce trees upon its surface. Two or three houses will be seen on its southern face near the shore. This is

BIBBER ISLAND,

and lies on the eastern side of the approach to *Freeport River*. It extends in an E N E. and W S W. direction, and is nearly three-quarters of a mile long. (See page 609.) Off its western end, and bearing N. ½ E., is a small, low, and bare rocky islet, called

BUSTING ISLAND.

It is one-eighth of a mile W S W. from the western point of **Bibber Island**, and there is a good but narrow channel with four fathoms water between them. The main channel, however, leads between **Busting Island** and **Great Moshier.**

To the westward of **Busting**, and bearing N. ½ W., will be seen a point of land about sixty feet high, its summit and southern face thinly wooded with fir and spruce trees, and with two or three houses on it. This is

MOORE POINT,

the southwestern end of **Wolf Neck.** To the eastward of the point the land descends to a low plateau, and then rises to a hill eighty feet high with a somewhat steep precipitous face on the southern side. The summits are wooded, but cleared land appears at intervals along the extent of the **Neck.**

A little to the eastward of **Moore Point**, the village of **Strout Point** will appear as a settlement on a high hill, (about one hundred feet above high-water mark;) and a very steep and precipitous hill, wooded to its summit, will appear just to the eastward of the village, over **Moore Point.** This hill is two hundred feet high.

Just clear of the western extremity of the village, and about a mile and a quarter distant, will appear a low islet without trees, and bearing N. by W. ½ W. This is

CRAB ISLAND,

seven-eighths of a mile SOUTH from **Moore Point**, and on the western side of the channel, on the edge of the immense flats which occupy nearly all of the space between *Yarmouth River* entrance and **Great Moshier Island.** There is a dwelling-house on this island, and out-buildings attached to it.

GREAT MOSHIER ISLAND.

Bearing about N W. by N., will appear an island of about the same size as **Bibber Island**, guarding the entrance to *Freeport River* on the west. Its centre will bear N W. by W. The eastern end will show as a steep bluff eighty feet high, and from it the land slopes gently away toward the western end, where it is quite low, while a few spruce and fir trees are seen on the summit near the eastern end. The rest of the surface appears bare as viewed from the southward, although in reality the northern face of the island is partly wooded. One house will be seen on the southwestern point. This island is called **Great Moshier Island.** On its northern side flats, dry at low water, extend off a quarter of a mile to a much smaller island lying at that distance N W. from the western end of **Great Moshier.** This is

LITTLE MOSHIER ISLAND.

It lies E. by N. and W. by S.; is nearly half a mile long and quite narrow. It is eighty feet high, steep, precipitous, and bare of trees, and there are flats on all sides of it.

The course now leads in the direction of **Wolf Neck**, between **Busting Island** and **Great Moshier**, past **Crab Island**, leaving it to the westward; looking to the eastward will be seen, on the north side of **Flying Point Neck**, a large cove, formed by the shores of **Wolf Neck** and **Flying Point Neck**, and the main land between them. The shores of this cove are undulating, backed by wooded hills, with cleared and settled country, and groves of trees interspersed.

This cove is almost entirely bare at low water, and is of no importance. Into its northwestern part empties a shallow creek, called *Little River*, bare at low water throughout its length, and much of it occupied by salt-meadow.

Approaching **Moore Point** there will be seen, bearing about N E., a low, grassy islet in range with **Stockbridge Point**, and called

BOWMAN ISLAND.

It lies one hundred and seventy-five yards S S E. from **Stockbridge Point**, with which it is connected at low water. The channel passes on its eastern side.

STOCKBRIDGE POINT,

which is left to the westward, is a low, grassy point, forming the western point of entrance to the river and the eastern point of **Staples Island.** The latter is a low bare peninsula, connected with the main land by a very narrow neck or causeway. The centre of the island (or peninsula) is a hillock about twenty feet high, bare of trees. A few houses are seen on the southern face of the peninsula near its southwestern point, which is called **Staples Point.**

Passing **Stockbridge Point**, a large cove is seen on the western side of the river, between the north shore of **Staples Island**, (which runs about W. by S.,) and the main land, (which runs about N E. and S W.) This cove is bare at low water, and is called *Staples Cove.* At its northern point begins *Spar Cove,* a small narrow inlet, which runs to the westward along the southern shore of **Strout Point.** The western shores of *Staples Cove* are about eighty feet high, slope gradually, and are well wooded.

STROUT POINT VILLAGE

lies on the west bank of *Freeport River*, about five eighths of a mile above **Stockbridge Point.** The general course of the river is about N E. from **Stockbridge Point** to **Bartol Island**, a distance of a mile and three-quarters. But the channel is somewhat crooked.

The principal business in *Freeport River* is the importation of lumber and ship-timber and the building of vessels. The latter was formerly quite a prominent feature of the business of **Strout Point.**

At **Bartol Island** the river divides, one branch going to the northeastward along the southeastern shores of **Bartol**, and the other running nearly **NORTH** to a village on the west bank, half a mile above, called **Bartol Point Village.** This is the head of navigation.

The shores of **Wolf Neck**, which form the southeastern bank of *Freeport River*, are more steep and precipitous than the southeastern shores of the **Neck.** Otherwise they have the same general appearance as when seen from the southward—undulating, and diversified with cleared lands and groves of trees.

The northwestern bank of the river above **Strout Point** shows low, cleared, and cultivated lands, dotted at intervals with houses, and rising very gently as it extends back from the shore-line to the height of about forty feet, where it meets the base of the precipitous hill mentioned in the description of the approaches, (page 616.) This hill rises abruptly to a height of two hundred feet, and is well wooded with the usual growth of spruce and pine trees.

BARTOL POINT

is a broad, flat piece of ground, in no place over forty feet high, and in most places not over thirty. It will be seen, on passing **Strout Point Village**, as a cleared point, dotted with houses on its eastern slopes, and with a large pier and wharves extending out to the edge of the channel from its eastern end.

Above this point the most of the river is bare at low water.

BARTOL ISLAND

lies in the middle of the river, a mile and three-quarters above its mouth, and close to the north shore or head of the stream. Meadow-grass joins it to the main land. It is forty feet high, and bare of trees except on its northern side, where there are a few spruce and fir trees. It is three-eighths of a mile **N E.** from the pier or quay on **Bartol Point.**

DANGERS

IN APPROACHING AND ENTERING FREEPORT RIVER.

I. *Coming from the eastward or seaward, through Broad Sound.*—Vessels coming from the eastward and bound into *Broad Sound* will find a safe and convenient entrance by bringing **Half-Way Rock Light-House** to bear **S W. ¾ W.**, a little over three miles distant, and **Mark Island Monument N W. ¾ W.**, and steering **W. by N. ½ N.** On this course the first danger met with is

MARK ISLAND LEDGE,

already described, (page 560.) It will be seen on the **W. by N. ½ N.** course, bearing about **N W. by W.** It lies on the north side of the entrance, **S E. by S. ⅝ S.** from **Mark Island Monument**, three-quarters of a mile distant, and **N E. by N.** from **Half-Way Rock Light**, two miles and three-quarters. It is awash at low spring tides.

A black spar-buoy (No. 15) marks this rock. It is placed on the western point of the shoal as a guide for vessels using the inside channel through the bay. By vessels bound into *Broad Sound*, however, and using the channel between this ledge and *Drunker Ledges*, it must, of course, be left to the northward.

DRUNKER LEDGES.

These ledges will be seen, on approaching *Mark Island Ledge*, bearing about **S W. by W.** They lie **S W. by S.**, three-quarters of a mile from the latter, and two miles **N E. by N.** from **Half-Way Rock Light.** There are two distinct ledges, lying **N W. ½ W.** and **S E. ½ E.** from each other, about a quarter of a mile apart, with a deep channel between them. The southeastern ledge has four feet at mean low water and two at low spring tides, but the other is bare at half-ebb.

Off the western end of the northwestern ledge is placed a *spar-buoy, painted red and black* in horizontal stripes. It is intended as a guide to vessels passing **EAST** or **WEST** between these ledges and **Half-Way Rock.** Those passing between it and *Mark Island Ledge* must give it a wide berth to the southward.

EAGLE ISLAND LEDGE,

or *Eagle Island Rock* as it is sometimes called, will be seen bearing **NORTH** on

hauling to the northward to enter the *Sound*. It is dry at low water, and lies two hundred and fifty yards S E. ½ S. from the southern end of **Eagle Island**. From the dry rock the shoal ground extends S E. three hundred yards and EAST a quarter of a mile, with from six to eight feet at low spring tides. *It has no buoy*, but is not in the way of vessels bound in or out with a fair wind.

EAGLE ISLAND POINT.

From the southern end of **Eagle Island** shoal ground extends in a southwesterly direction for an eighth of a mile. *It has no buoy upon it*, but one has been recommended. To avoid it, vessels give the island a berth of not less than three hundred yards to the eastward.

After passing **Eagle Island**, there are no obstructions in the channel until through the *Sound* and to the northward of **Whaleboat Island**. Then

WHALEBOAT LEDGE

is met with, which will be recognized by its buoy, which is a *spar painted red*. The ledge is three-quarters of a mile N W. by N. ½ N. from the southwestern end of **Whaleboat Island**, and S W. ½ W., one mile from **Little Whaleboat Island**. It is a "pinnacle rock," with seven feet at low spring tides, and is marked by a *red spar-buoy* (No. 12) placed in eighteen feet water on the western side of the ledge.

The course now leads to the northward, between **French Island** and the **Upper Green Islands**, and toward **Moore Point**. On this course pass between two ledges, neither of which, however, is dangerous to such vessels as can pass up *Freeport River*, unless the tide be low. Also pass to the westward of

BUSTING ISLAND LEDGE,

which lies three hundred and fifty yards S S E. from **Busting Island**, and has never less than sixteen feet at low spring tides. At mean low water it has eighteen feet, and *is not buoyed*. Nearly opposite to it, on the western side of the channel, lies

MOSHIER LEDGE,

with ten feet at mean low water and eight at low spring tides. It lies one-quarter of a mile off the eastern shore of **Great Moshier Island**, and is quite bold-to on all sides, but *has no buoy*.

Only three hundred and fifty yards to the northward of *Moshier Ledge* will be seen a *black spar-buoy*, bearing about N W. This is on

CRAB ISLAND LEDGE,

a small ledge, bare at half-tide, lying on the western side of the channel, S E. by S. ½ S. from **Crab Island**, six hundred yards distant, and nearly half a mile W ½ S. from **Busting Island**. A *black spar-buoy* (No. 19) is placed in three fathoms on the eastern end of the rock.

FLYING POINT LEDGES

are a number of ledges, some bare rocks, and some bare at low water, with numerous sunken rocks with from two to four feet at low tides, extending off from **Flying Point** in a W. ½ S. direction for three-quarters of a mile. There are various channels between and among them, and one very good passage between them with eleven feet water, leading into the cove between **Flying Point** and **Wolf Neck**. Strangers, however, should not attempt these passages. These ledges *are not buoyed;* being generally visible, and lying on the eastern side of the channel, are not much in the way.

FOUR-FEET ROCK

lies also on the eastern side of the passage, a quarter of a mile N W. ½ N. from the western end of the *Flying Point Ledges*, and has two feet at low spring tides. From **Moore Point** it bears S E. ¾ E., distant half a mile; from *Crab Island Ledge Buoy* it bears N. by E. ½ E., distant nearly three-quarters of a mile. *It is not buoyed*, but is not dangerous except to vessels beating to windward.

MOORE POINT ROCK.

This is a bare ledge, lying an eighth of a mile S. by E. from **Moore Point.** It is always in sight, and is of no importance; but vessels standing across to the eastward should not, when on the south side of **Moore Point Rock**, go to the eastward of the rock bearing N. ¾ W. Otherwise they might be brought up on the flats.

FLATS BETWEEN CRAB ISLAND AND BOWMAN ISLAND.

Between these two islets, on the western side of the passage, a mass of flat ground extends, covering almost the entire space between *Freeport Entrance* and *Yarmouth Entrance.* A very large part of these flats is bare at low water. Their eastern edge extends over the range of **Bowman** and **Crab Islands**, and is tolerably bold-to. Vessels, to avoid being set on them, must not go to the westward of **Spar Cove Point**, bearing N W. by N. ½ N., in range with the extremity of **Stockbridge Point.**

FREEPORT UPPER LEDGE

is very improperly named. It extends from **Pound of Tea Islet** first S E. by S., and then S W. by S. ½ S., its whole length being a quarter of a mile. Four feet at mean low water is found on this ledge, and it is marked by a *red spar-buoy* (No. 16) placed in two fathoms water on the south end of the shoal. This ledge is just opposite to **Bowman Island**, and should have been named from that island. Passing to the westward of the buoy, there will be seen ahead, and nearly a quarter of a mile distant, a *black spar-buoy.* This is on

BOWMAN ISLAND LEDGE,

which lies off **Stockbridge Point** at a distance of one hundred and seventy-five yards. It is not connected with **Bowman Island**, has four feet at mean low water, and is marked by a *black spar-buoy* (No. 21) placed in eleven feet water on the eastern end of the ledge.

After passing this buoy, (which is left to the westward,) the course leads past **Pound of Tea**, and between the small island N E. from it and a bare rock which lies three hundred yards N E. from **Stockbridge Point.** Above this point the most of the passage is filled by flats bare at low water, leaving only a narrow channel in the middle, through which eighteen feet at low water can be carried to **Strout Point Village** and ten feet up to **Bartol Point.** Vessels cannot go up to **Bartol Point Village** except at high water or two-thirds flood.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING FREEPORT RIVER, AND FOR PROCEEDING UP AS FAR AS STROUT POINT.

I. *Coming from the eastward, through Broad Sound.*—Bring **Half-Way Rock Light** to bear S W. ¾ W., nearly three miles distant, and **Mark Island Monument** to bear N W. ¾ W., with seventeen fathoms, soft bottom, and steer W. by N. ½ N., passing between *Mark Island Ledge* and *Drunker Ledges*, and carrying not less than six fathoms water. Continue this course until the centre of **Eagle Island** bears N. ½ E. and **Half-Way Rock Light** SOUTH, with fifteen fathoms, dark green mud, when steer N. by W. ½ W. for the eastern

end of **Stockman Island.** On this course carry nothing less than ten fathoms water. Continue it until the westernmost of the **Upper Green Islands** bears **NORTH,** and is seen just clear of the eastern point of **Great Moshier Island**; now in ten fathoms, soft bottom, abreast of the northeastern end of **Ministerial Island,** steer **NORTH** for **Upper Green Islands** until abreast of the *red spar-buoy* on *Whaleboat Ledge.* On this course there is less than six fathoms water. Pass to the westward of this, and steer **N.** by **E.** for **Busting Island,** carrying not less than nine fathoms. On this course, when midway between **French Island** and the **Upper Green Islands,** in eight fathoms of water, and the summit of **Moore Point** bears **N. ¾ W.,** steer that course, carrying not less than four fathoms, leaving *Crab Island Ledge Buoy* well to the westward. On this course, when past **Crab Island,** and **Flying Point** bears **E.** by **N. ¾ N.,** with four fathoms, soft bottom, steer **N W.** for **Stockbridge Point,** carrying four fathoms water; leave the *red spar-buoy on Freeport Upper Ledge* to the eastward, and steer **N.** by **W. ¾ W.** up the middle of the channel; pass to the eastward of the *black spar-buoy on Bowman Ledge,* and continue the course until past **Pound of Tea**; then steer **N N E.** for four hundred yards, until the end of the long pier in **Strout Point Village** bears **N.** by **W. ½ W.**; then steer **N. ¼ W.,** and anchor off the village. Not less than four fathoms may be taken on the above courses to the anchorage.

If bound farther up, when the end of the long wharf mentioned before bears **W. ½ N.,** about a hundred and twenty-five yards off, the course is **N E. ¾ E.** until the house on **Bartol Point** bears **N.** by **E. ¼ E.,** then steer **N E. ¾ N.** for **Bartol Island.** But no reliable sailing directions can be given above **Strout Point Village.** Strangers bound farther up the river should take a pilot. Four fathoms at low water may be carried up to **Strout Point Village,** ten feet at low water to **Bartol Point,** and from ten to twelve feet at *high water* up to **Bartol Point Village.**

The above courses pass to the westward of *Whaleboat Ledge* three hundred and fifty yards; to the eastward of *Moshier Ledge* one hundred and fifty yards; to the westward of *Freeport Upper Ledge Buoy* seventy-five yards; and to the eastward of **Bowman Island Ledge** the same distance.

II. *Coming from sea, to pass to the eastward of* **Half-Way Rock** *and enter Freeport River.*—Falling in with **Half-Way Rock,** bring it to bear **N W.** by **N.,** about one mile and three-quarters distant, and steer **N.** by **W. ¼ W.,** passing five-eighths of a mile to the eastward of the rock. Continue this course, which will lead into *Broad Sound,* clear of all dangers, with not less than thirteen fathoms, until past **Eagle Island,** and the westernmost of the **Upper Green Islands** bears **NORTH** and there is ten fathoms, soft bottom; then steer for them, and follow the directions given above.

III. *Coming from sea or from the southward, to pass to the westward of* **Half-Way Rock** *and enter Freeport River.*—Falling in to the southward of **Half-Way Rock,** bring the light to bear **N.** by **E. ¼ E.,** two miles off, when there will be fourteen fathoms, and it will be in range with **Haskell Island,** western end, and **Mark Island Monument** will be open a little to the eastward of it; steer **N. ½ E.,** passing one-third of a mile to the westward of **Half-Way Rock Light.** This course *made good,* will lead safely up to **French Island** in not less than nine fathoms water, and leave *Whaleboat Ledge Red Buoy* one hundred and fifty yards to the westward. When between **French Island** and **Upper Green Islands,** with **Moore Point** bearing **N. ¾ W.,** and in eight fathoms water, steer for that point, and follow the directions given above.

Or, not wishing to pass between the two Whaleboat Ledges, on the **N. ½ E.** course continue until the middle of **Eagle Island** bears **S E.** by **E. ¼ E.** and the southwestern point of **Whaleboat Island N.** by **E.** There will be from fifteen to eighteen fathoms at this point; steer **N. ¼ W.** for the eastern point of **Great Moshier Island,** carrying not less than nine fathoms, until abreast of *Whaleboat Ledge Buoy,* which leave to the eastward, and steer

N. by E. for **Busting Island.** This course carries up to **French Island** with not less than nine fathoms of water. When between **French Island** and the **Upper Green Islands**, in eight fathoms, steer N. ¾ W. for **Moore Point**, and follow the directions for the river, on pages 620 and 621.)

DANGERS
IN APPROACHING AND ENTERING FREEPORT RIVER.

II. *Coming from the westward, through Luckse Sound.*—The approaches to *Freeport River* through *Luckse Sound* are identical with those which lead into *Maquoit* and *Mare Point Bays*, and which are described on pages 610 to 612. They are: *First*, The *Hussey*, with *twelve feet*, lying two miles S W. ¾ W. from **Crotch Island**, off the entrance to the *Sound*, marked by a *can-buoy of the second class, painted red and black* in horizontal stripes. *Secondly*, *Crotch Island Ledge*, off the southwestern point of **Crotch Island**, with three feet, and *not buoyed*. *Thirdly*, The **Stepping Stones**, off the southeastern shore of **Long Island**, which have a ledge with three feet one hundred and fifty yards SOUTH from them. *Fourthly*, *Sand Island Point*, a long bar N E. from **Sand Island**, marked by a *black spar-buoy*. *Fifthly*, *Stave Island Ledge*, bare at low water, and marked by a *black spar-buoy*. *Sixthly*, The **Goose Nest** and *Goose Nest Ledges*, which are in the channel between **Great Chebeag** on the north and **Little Bangs** and **Stockman Islands** on the south. *Seventhly*, *Little Whaleboat Ledge*, three-quarters of a mile S W. from **Little Whaleboat Island**, *not buoyed*. *Eighthly*, *Whaleboat Ledge*, with nine feet, one mile S W. ½ W. from **Little Whaleboat Island**, and marked by a *red spar-buoy*. *Ninthly*, *Green Island Ledge*, with six feet, between **Upper Green Islands** and **Chebeag Point**, marked by a *red spar-buoy;* and lastly,

CHEBEAG POINT,

off which a shoal exist with three feet at mean low water, and awash at low water an eighth of a mile N E. from the point. It is marked by a *black spar-buoy* (No. 11) placed in eighteen feet water off the northeastern end of the shoal.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING FREEPORT RIVER THROUGH LUCKSE SOUND.

I. *Outside of everything.*—When off **Cape Elizabeth**, in seventeen fathoms, with **East Light** bearing N W. ½ N., one mile and one-eighth distant, **Portland Head Light** N. ¾ W., and **Half-Way Rock Light** N E. by E. ½ E., steer N E. by N. ½ N., carrying not less than nine fathoms water. This course leads between **Outer Green Island** and the *Hussey*. Continue it until **Half-Way Rock Light** bears S E. by E. ½ E., seen between **Inner Green Island** and the southwestern end of **Jewell Island**; then steer N E. ½ E., which will lead clear of all dangers, and in not less than five fathoms, up to **Stockman Island**. When past this island, and **Busting Island** bears N. ¾ E., steer for it until between **French** and **Upper Green Islands**. On this course there will not be less than five fathoms. Then, when **Moore Point** bears N. ¾ W., steer for it, and follow the directions given for the river.

Or, if **Busting Island** cannot be seen from off **Stockman Island**, haul up N. ¾ E. as soon as **Half-Way Rock Light** bears S. ½ E. **Stockman Island** is bold-to, and do not fear coming too close to it in turning.

The above courses pass to the eastward of the *Hussey* about six hundred yards; to the westward of *Whaleboat Ledge* three hundred and fifty yards; and to the eastward of *Green Island Ledge* three-eighths of a mile.

II. *Coming from Portland, through Whitehead Passage.*—Having come through *Whitehead Passage* on an E. ½ S. course, bring **Portland Head Light** to bear S W. ¾ W., and just

clear to the westward of **Ram Island**; when in twelve fathoms, soft bottom, steer N E. ½ E. past **Peaks Island**, across the entrance to *Hussey Sound*, past **Marsh Island** and **Obed Rock**, and carrying not less than ten fathoms water. When the **Stepping Stones** bear N W. ¼ W., one quarter of a mile off, and are in range, steer N E. by N. ¾ N. for **Deer Point**, carrying eight fathoms. On this course, when the extreme southwestern point of **Hope Island** bears E. by S. ½ S. there will be nine fathoms, soft bottom; steer N E. ¾ E. up the middle of the passage between **Great Chebeag** and **Hope Island**. On this course carry not less than eighteen feet. After passing *Johnson Cove*, and when the southwestern end of **Little Bangs Island** bears S E. ½ E., and in fifteen fathoms, steer N E. by N. ¼ N., nearly for the **Upper Green Islands**, having them a little on the north. On this course carry not less than six fathoms, and when past these islands, with **Moore Point** bearing N. ¾ W., and in eight fathoms water, steer for that point, and follow the directions for the river, on pages 620 and 621.

Or, continue the course N E. ¾ E. past **Little Bangs Island**, and between the **Goose Nest** and **Stockman Island**, until **Half-Way Rock Light** bears S. ½ E., when steer N. by E. for **Busting Island**, carrying not less than eight fathoms water. On this course, when between **French** and **Upper Green Islands**, in eight fathoms, soft bottom, steer N. ¾ W. for **Moore Point**, and proceed as before directed.

Or, when off the southwestern end of **Little Bangs Island**, in fifteen fathoms water, and it bears S E. ½ E., steer N E. by N. ⅝ N. for **Upper Green Islands**, carrying not less than six fathoms. On this course, when the end of **Chebeag Point** is nearly abeam on a bearing of N W. by W., and in eight fathoms, sticky bottom, steer NORTH for **Great Moshier Island**, passing to the westward of *Green Island Ledge*, and carrying not less than five fathoms water. On this course, when the highest part of **French Island** bears E. by N. ¼ N., and in four fathoms, soft bottom, steer N E. ½ N. for **Busting Island**, in range with **Flying Point**. On this course there will be not less than twenty-three feet water. When **Moore Point** bears N. ¾ W. steer for it, and follow the previous directions, on pages 620 and 621.

These courses, if the first set of directions are followed, pass to the southward of **Obed Rock** a quarter of a mile; to the southward of **Stepping Stones** the same distance; to the northward of **Sand Island Point** four hundred yards; to the northward of the **Goose Nest** a quarter of a mile; to the westward of *Goose Nest Ledges* three hundred yards; and to the eastward of **Upper Green Islands** one hundred and fifty yards.

If the second set of directions are followed, pass three hundred and fifty yards to the westward of *Whaleboat Ledge* and three hundred yards to the eastward of **Upper Green Islands.**

If the third set are followed, pass to the northward of the **Goose Nest** a quarter of a mile; to the westward of *Goose Nest Ledges* three hundred and fifty yards; and to the westward of *Green Island Ledge* a quarter of a mile.

INSIDE PASSAGE
THROUGH CASCO BAY, FROM PORTLAND HARBOR TO FREEPORT RIVER.

This is a very commonly used passage for coasters when wind or sea is unfavorable for an outside passage to *Freeport* or *Yarmouth River*. Beginning at *Hog Island Ledge*, upon which the large granite fort, called **Fort Gorges**, stands, it runs in a northeasterly direction, past **Hog Island, Clapboard Island, Basket Island, Little** and **Great Chebeag Islands, Cousin Island**, and between **Great Chebeag** and **Littlejohn Islands**, and joins the *Luckse Sound Channel* off **Chebeag Point.** The whole distance is nine miles from **Breakwater Light** to **Chebeag Point.** The water is always smooth, and the channel in

most places wide and deep. Fourteen feet at low water, between **Mackey Island** and **Fort Gorges**, is the shoalest water.

MACKEY ISLAND.

On leaving the *Inner Harbor* of **Portland** and steering to the northeastward, pass one mile SOUTH from a round island, almost entirely under cultivation, but having a grove of spruce and pine on its summit, close to a group of houses, and a small group of oak, birch, maple, &c., near the southern shore. The southern side of the island presents a somewhat precipitous face about twenty feet above high-water mark, and behind this the land slopes more gently to the summit, which is forty feet high. This island is called **Mackey Island**, and lies on the eastern side of the entrance to the *PRESUMPSCOT RIVER*, and about three-eighths of a mile from shore. It is oval in shape, the longest diameter (EAST and WEST) being half a mile and the shortest about five hundred yards. From its southern face a long bar extends seven hundred yards, in a southerly direction, to a bare rock, called **Half-Way Rock.**

FORT GORGES.

To the southward pass a large granite fort built upon a very extensive ledge, covered at high water, called *Hog Island Ledge*, which lies three-eighths of a mile WEST from **Little Hog Island.** The fort is **Fort Gorges**, and is a pentagonal casemated work, built of granite, but is not yet completed.

GREAT HOG ISLAND

is the large, partly-wooded and partly-cleared island which lies on the southern side of this passage. When seen from the westward or northward it is easily recognized by one half of its southern and northern faces being cleared and under fine cultivation, with one or two small groves of ornamental trees on the slopes, two or three orchards, and a group of houses on the hill. The cleared land is undulating, and in no place over eighty feet high, and the northern shores slope gently. The rest of the island is wooded with a great variety of trees—oak, spruce, pine, fir, hemlock, birch, elm, &c. The southern face presents a steep bluff appearance to a height of sixty feet.

Great Hog Island is nearly oval in shape, lies N E. and S W., and is over a mile in length. Its northern shores are shoal, and must receive a good berth from vessels using this channel. On its northeastern face it is indented by a deep and commodious cove, called *DIAMOND COVE*, famous as a resort for pleasure parties during the summer season.

LITTLE HOG ISLAND.

From its extreme southwestern end **Great Hog Island** sends off a long and very narrow neck of sand and pebbles, connecting it with a smaller island two hundred and fifty yards to the southward of it, called **Little Hog Island.** This island also lies N E. and S W., is half a mile long, and its southern and western faces present a somewhat precipitous slope about sixty feet high, while the northern shores have a more gentle rise. The island is wooded with a variety of trees near the northern end, but the southern half is bare of trees, and grassy.

There is a passage between **Little Hog Island** and *Hog Island Ledge* with four fathoms at low water. Strangers, however, should not attempt it.

COW ISLAND.

About one hundred and seventy-five yards to the northeastward of the eastern end of **Great Hog Island** lies **Cow Island**, small, forty feet high, nearly three hundred yards wide, and about three-eighths of a mile long. A few stunted firs skirt its northern face.

Seen from the westward, it is noticeable for having on its eastern end (which is otherwise bare) two tall spruce trees standing close together, and appearing like a brig under full sail. This mark distinguishes **Cow Island** from any other in the bay.

Three-quarters of a mile to the northeastward of **Mackey Island** lie two low, grassy islets, called

THE BROTHERS,

N N W. and **S S E.** from each other, about one hundred and seventy-five yards apart, and the northernmost one is nearly a quarter of a mile from the main land. They are surrounded by shoals.

CLAPBOARD ISLAND.

One mile and a quarter **NORTH** from **Cow Island,** and on the northern side of the channel, lies a long narrow island, called **Clapboard Island.** It was formerly called **Woody Clapboard Island,** to distinguish it from **Sturdivant Island,** which was then known as **Smooth Clapboard Island.** But the trees have disappeared from its surface and there is now but a growth of bushes and shrubs upon it, with one rough hut near the centre of the island. The surface is undulating, being forty feet high near the southern end, the same height in the middle, and twenty feet high at the northern end. It is nearly three-quarters of a mile long and extremely narrow, being in no place more than two hundred and fifty yards wide. Bare rocky islets lie near the southwestern end, the approach to which is very shoal, and in many places bare at low water.

When abreast of **Clapboard Island,**

BASKET ISLAND

will appear, bearing about N E., and a mile and a half off. It is a small island of an oval shape, about four hundred yards long. It is quite low, with a few trees near its southern end and a house near the centre of the island, and its shores are tolerably bold. **Sturdivant Island,** formerly called **Smooth Clapboard Island,** lies a little over half a mile **N W.** from it, and **Cousin Island** lies about a mile **N E.** from it. Deep channels exist among all of these islands.

The channel leads between **Basket Island** and

LITTLE CHEBEAG ISLAND,

which lies a mile and an eighth **S.** by **E.** from the former and six hundred yards **S W.** by **W.** from **Great Chebeag,** with which it is connected at low water. It is of moderate height, gently sloping, and bare of trees with the exception of a beautiful grove of spruce, pine, and other trees on the summit. Grass-land and cultivated fields form the surface of the rest of the island. A large white house and out-buildings stand near the grove, on the north side. The house is used as a family hotel or summer-boarding house, and is the residence of the owner of the island.

Little Chebeag was formerly much resorted to, but is now almost deserted. It is triangular in shape, and lies nearly **EAST** and **WEST.**

On the northern shore of this island, nearly midway between the east and west ends, a cliff about thirty feet high will be noticed. The highest part of **Little Chebeag** is occupied by the grove above mentioned, and is forty-five feet above sea-level. (See page 598.)

Passing **Little Chebeag,** the course leads between **Cousin Island** and **Littlejohn Island** on the north and **Great Chebeag** on the south.

GREAT CHEBEAG ISLAND

is, with the exception of **Great Island,** the largest in *Casco Bay.* It is three miles long

in a NE. and SW. direction, and has an average width of a mile. The highest land is near its centre, and is one hundred and eighty feet above high-water mark. On the northern shore of this island, along which the course leads, the shores are steep, and present to the view wooded lands and cleared fields alternately, with groups of houses here and there. The western point, called **Indian Point,** is a long, low, bare point, from which a bare shingly bar extends to **Little Chebeag Island** at low water. The northeastern point is called **Chebeag Point,** is also low and cleared, with several houses upon the slopes to the westward of it, and a small hillock on the extreme point.

The northern shore of **Great Chebeag** is irregular in outline, being much indented by coves. It is also quite shoal in places—bare bars, such as *Seal Ledge* and *Chebeag Bar*, extending off some distance from the shore. (See page 598.)

COUSIN ISLAND

lies on the north side of the channel, extends in a NE. and SW. direction, is a mile and three-quarters long, and has an average width of half a mile. It is, however, very irregular in shape, and its shores are much indented by coves. From its northeastern end a long low neck of land extends in an easterly direction for a quarter of a mile, when it divides into two points, one extending in a southeast and the other in a northeasterly direction. Both of these points are low and bare. The northernmost one is called **Blaney Point,** and has a group of houses at its junction with the body of the island. The southernmost point is called **Cornfield Point,** and is composed of cleared and cultivated land, but has no houses upon it.

Between the two points a nearly circular cove exists, which is, however, bare at low water.

Cousin Island is eighty feet high in its highest part, with an undulating surface varying from twenty to eighty feet above high-water mark. It is partly cleared and settled and partly wooded, the surface showing occasional groves of trees and houses scattered at intervals along its northwestern face. The southwestern end is divided into two points, called **Birch Point** and **Spruce Point.** The former is the northernmost, is low, and almost bare of trees. A few remain, however, of the grove of birch, which formerly gave the point its name. A few houses stand on the slopes of the hill behind the point.

Spruce Point, the southernmost point, is sixty feet high and somewhat steep, and covered with trees, mostly spruce, whence its name. Half a mile EAST from **Spruce Point** is **Doyle Point,** the southern extremity of **Cousin Island.** It is forty feet high and cleared, and has one or two houses upon it. In passing it bound through this inside channel the thickly-wooded hill which forms the highest part of the island will be seen.

Three-eighths of a mile EAST from **Doyle Point** is

LITTLEJOHN ISLAND,

lying about ENE. and WSW., a mile long, and of irregular shape. Near the western end the land rises abruptly to a height of eighty feet, and is tolerably thickly wooded, most of the trees being spruce and fir. The eastern end of the island is lower, generally bare of trees, and about twenty feet high. On the northern shore the land slopes very gently.

Between the eastern shore of **Cousin Island** and the northern shore of **Littlejohn Island** is a passage about three hundred yards wide, bare at low water, and of no importance.

One mile ENE. from **Littlejohn Island** is **Great Moshier Island,** which lies on the western side of the approaches to *Freeport River*. Here this inside channel joins the

other channels into the river, for a description of the shores of which see pages 615 to 618.

DANGERS
IN THE INSIDE PASSAGE FROM PORTLAND TO FREEPORT RIVER.

HALF-WAY ROCK

is a bare rock, lying seven hundred yards SOUTH from **Mackey Island**, with which it is connected by a long bare bar. Flats extend to the westward of it half a mile, obstructing the entrance to *Presumpscot River*. From **Half-Way Rock** shoal water extends to the southward about three-quarters of a mile, with from seven to ten feet at low water.

The northwestern shore of **Great Hog Island** must not be approached nearer than six hundred and fifty yards until the middle of the island has been passed. For shoal ground, with eight feet water, is found at a distance of six hundred yards from high-water mark. But after passing this point the approaches to the shore are deeper, until up to

BRIMSTONE POINT LEDGE,

which lies NW. from **Brimstone Point**, (eastern end of **Hog Island**,) at a distance from shore of nearly four hundred yards. It has three and a half feet at mean low water, and is marked by *a red spar-buoy* (No. 2) placed in two fathoms water off its northern end. There is no passage inside of it except for light-draught vessels.

COW ISLAND LEDGE.

One mile N E. ½ E. from **Brimstone Point Buoy** will be seen a *black spar-buoy* lying nearly midway between **Clapboard Island** and **Cow Island**. This is on *Cow Island Ledge*, bare at low water. This ledge lies three-quarters of a mile S. by E. from the southwestern end of **Clapboard Island** and a little over half a mile N. by W. from the eastern end of **Cow Island**. The buoy (No. 1) is placed on its southeastern side.

After passing *Cow Island Ledge Buoy*, which is left to the northward, the channel is clear until up to

LOWER BASKET ISLAND LEDGE,

lying a little over two miles N E. ¾ E. from *Cow Island Ledge Buoy* and half a mile S E. ¼ E. from **Basket Island**. This ledge is bare at half-tide, but has from four to seven fathoms of water on all sides of it, and is marked by a *black spar-buoy*, (No. 9,) which is placed in four fathoms on the southeastern side of the shoal.

The channel here leads between **Basket Island** and **Great Chebeag**, leaving the *black buoy* on *Lower Basket Island Ledge* to the northward, and passing between it and a *red spar-buoy* off the northwestern shore of **Great Chebeag**. This buoy is off

SEAL LEDGE,

which extends in a northerly direction from the shore of **Chebeag** to a distance of three-eighths of a mile, and is bare at two hours before low water. The *red spar-buoy* which marks it is placed in two and a half fathoms on its northwestern end, bears E. ½ N. from the *black spar-buoy* on *Lower Basket Ledge*, and is distant from it three-quarters of a mile.

UPPER BASKET ISLAND LEDGE

is not in the way of vessels using this channel unless tacking to windward. It lies about midway between **Spruce Point**, on **Cousin Island**, and **Basket Island**, bearing S W. ¾ W. from **Spruce Point** and nearly half a mile from it, and N. ¾ E. from *Lower Basket Ledge*, five-

eighths of a mile distant. It is bare at half-tide in many places, thus forming several ledges about fifty or a hundred yards apart.

A black spar-buoy (No. 7) is placed in twenty feet of water on the N E. side of the ledge, and is to be left to the northward by vessels passing east or west.

After passing the *red buoy* on *Seal Ledge*, the passage between **Cousin Island** and **Great Chebeag** is entirely clear of obstructions until abreast of **Doyle Point**, when there will be seen about half a mile ahead, and close under the shore of **Littlejohn Island**, *a red spar-buoy*. This is on

CHEBEAG BAR,

a long pebbly bar making off in a northerly direction from the middle of the north side of **Great Chebeag** to within one-eighth of a mile of the south shore of **Littlejohn Island.** The bar is dry at low water for a distance of three-eighths of a mile from the shore of **Great Chebeag.** *A red spar-buoy*, marked No. 8, is placed in three fathoms of water off the north end of the bar, and is two miles N E. ⅞ E. from *Lower Basket Island Ledge.*

After passing this buoy, the channel is clear to **French Island.** (See pages 619 and 620.)

SAILING DIRECTIONS

FOR THE INSIDE PASSAGE FROM PORTLAND TO FREEPORT RIVER.

Leaving *Portland Harbor*, bring the **Breakwater Light** on end of *Staniford Ledge* to bear S W. ⅛ W., and steer N E. ⅛ E. past *Hog Island Ledge*, **Little Hog Island**, and **Great Hog Island**, and carrying not less than fourteen feet water until abreast of *Brimstone Point Ledge*, in four fathoms, soft bottom; when steer N E. by E. ¼ E. past *Cow Island Ledge*, with not less than four and a half fathoms, until the southwest point of **Clapboard Island** bears N W. ¾ W. and the hotel on **Little Chebeag** EAST, and in nine fathoms water; then steer N E. ½ E. toward *Chebeag Bar Buoy*, passing to the southward of *Lower Basket Ledge* and to the westward and northward of *Seal Ledge*, and carrying not less than four fathoms. On coming up with *Chebeag Bar Buoy* pass to the northward of it, in eight fathoms, and steer N E. by E. ¾ E., carrying twenty-one feet water, until the highest part of **French Island** bears E. by N. ¼ N., and the westernmost of the **Upper Green Islands** bears S E. by E., and in four and a half fathoms. Now steer N E. ½ N. for **Busting Island**, in range with **Flying Point**, with not less than twenty-three feet water. When **Moore Point** bears N. ¾ W., and in five fathoms, steer for it, and follow the directions given for *Freeport River* on pages 620 and 621.

YARMOUTH RIVER AND COUSIN RIVER.

One mile and three-eighths west of the entrance to *Freeport River* is **Fogg Point,** the eastern point of the entrance common to *Cousin* and *Yarmouth Rivers.* The entrance is here three-eighths of a mile wide between **Fogg Point** and **Parker Point,** which forms the west side of the entrance.

The land between **Staples Point** and **Fogg Point** is low and bare, with wooded slopes one hundred feet high behind it. One or two houses are seen, but the land is not under much cultivation. But

FOGG POINT

is one hundred feet high, with scattered trees upon it, and one or two houses near the shore. Large flats extend from it to the southward as far as **Cousin Island**, there being no passage into *Yarmouth River* between **Fogg Point** and **Blaney Point.** The channel into *Yarmouth River* leads between **Sandy Point**, the northwestern point of **Cousin Island**, and **Drinkwater Point** on the main land.

PARKER POINT,

on the western shore of the entrance, is twenty feet high, bare of trees, and has one or two houses on it.

COUSINS RIVER

is a narrow creek, about three-quarters of a mile long, and having an average width of one-eighth of a mile. It is very shoal, having only three feet at mean low water, in a very narrow channel, and is of no importance. The western point of entrance to this river, called **Brown's Point,** is narrow, forty feet high, and has a few trees upon it.

YARMOUTH RIVER

passes to the westward, between **Brown's** and **Parker Points**, and at its mouth is a quarter of a mile wide. Its course is about west for three-quarters of a mile, and then turns abruptly to the northwest for about a mile farther, to **Yarmouth Falls Village,** situated on its western bank.

The channel is extremely narrow, and has but four feet at mean low water, or about thirteen feet at high water. The bed of the river at low water is bare with the exception of a very narrow slue forming the channel. The shores are of moderate height, varying from twenty to sixty feet, mostly cleared and under cultivation. **Yarmouth Falls** is a small village, in which there is some little business done in ship building.

DESCRIPTION OF THE SHORES

OF CASCO BAY, FORMING THE APPROACHES TO YARMOUTH RIVER.

The approach to *Yarmouth River* from **Portland**, or from the westward, leads between **Clapboard Island** and **Prince Point** on the main land.

PRINCE POINT

is low, broad, cleared and settled, except on the summit, which is forty feet high and occupied by groves of trees. Behind it to the northward the land gradually rises to one hundred feet above high-water mark, is almost entirely cleared, and under fine cultivation. Some of the finest farming-lands on the coast are in this vicinity.

Prince Point is seven-eighths of a mile west of **Clapboard Island** and a mile and a half northwest of **Mackey Island.**

On the north side of **Prince Point** a small cove, bare at low water, makes in about a quarter of a mile. Its northern point of entrance is a cleared point with one or two houses on it, called **Bartlett Point.** On the north side of **Bartlett** is a larger cove, of irregular shape, called *Mussel Cove.*

From *Mussel Cove* the shore takes a general course N E. ½ E. for two miles to the entrance to *Broad Cove.* The land rises gradually to a height of over one hundred feet, the slopes cleared and cultivated, and the summits of the ridges thickly settled. Three-quarters of a mile N E. from **Bartlett Point** is a small creek or cove, called **York Landing.** Nearly three-eighths of a mile above **York Landing,** and one mile and one-eighth above **Bartlett Point,** is **Foster's Landing.** All of these waters afford good anchorage.

STURDIVANT ISLAND,

or **Smooth Clapboard** as it is sometimes called, is low, cleared, and cultivated, with a few houses on it. It lies south of the mouth of *Broad Cove;* three-quarters of a mile E. by N. from **Foster Landing;** seven-eighths of a mile N E. by N. from **Clapboard Island;** five-eighths of a mile N W. from **Basket Island;** and about half a mile from the main land.

BROAD COVE

is a large and deep indentation in the northwestern shores of *Casco Bay*, two miles and a half to the northeastward of **Prince Point** and the same distance west of **Parker Point.** It is a mile and a half long, and one mile wide at its mouth. Nine feet at mean low water may be safely carried up the cove a mile from its mouth. The shores are high, steep, and cleared in most places, with occasional wooded hills, and houses dotting the slopes here and there.

The eastern point of the entrance to this cove is called

PRINCE POINT;

or, to distinguish it from the point of the same name three miles and a half to the southwestward, **Upper Prince Point.** It is low, nearly bare of trees, and thinly settled. This point is two miles and a quarter to the westward of **Parker Point,** and one mile N W. from **Birch Point** on the southwestern end of **Cousin Island.**

One mile and a quarter to the westward of **Prince Point** is a low broad point, partly cleared and partly wooded, called

DRINKWATER POINT,

where there is a landing-place and several wharves. **Sandy Point,** the northwestern point of **Cousin Island,** is not quite three-eighths of a mile S E. from it.

A small cove, dry at low water, called *White's Cove,* makes in on the north side of **Drinkwater Point.** Its shores are wooded and somewhat steep.

Parker Point, the western point of the entrance to *Yarmouth River*, is one mile to the eastward of **Drinkwater Point.**

LANE ISLAND

is a low, wooded island, lying south of **Fogg Point** at a distance of a quarter of a mile. It lies **EAST** and **WEST;** is half a mile long, and at low water is connected with the main land and also with **Cousin Island** by dry flats.

DANGERS
IN APPROACHING AND ENTERING YARMOUTH RIVER,
COMING FROM THE WESTWARD.

I. *By the channel leading along the eastern shores of* **Clapboard** *and* **Sturdivant Islands.**—There is no passage into this river from the eastward or southward except at high water, and then only for light-draught vessels. The dangers in the approaches from *Portland Entrance* are, *first:*

HALF-WAY ROCK,

(see page 627,) *and the shoals which make off from it to the southward.* This is a bare rock, lying seven hundred yards **SOUTH** from **Mackey Island,** with which it is connected by bare flats. Shoal water extends from it to the southward about three-quarters of a mile, but vessels of six feet draught may go within two hundred and fifty yards of the rock.

SHOAL WATER WEST OF HOG ISLAND.

The western shore of **Great Hog Island** must not be approached nearer than six hundred and fifty yards until having passed the middle of the island. Eight feet at mean low water is found at a distance of six hundred yards from high-water mark; but after passing the middle of the island the approaches to the shore are deeper, until up with

BRIMSTONE POINT LEDGE,

(see page 627,) which lies N W. from **Brimstone Point**, (eastern end of **Great Hog Island**,) four hundred yards from shore. It has three and a half feet at mean low water, and is marked by *a red spar-buoy* (No. 2) placed in two fathoms off its northern end. There is no passage inside of it except for light-draught vessels.

COW ISLAND LEDGE.

After passing **Brimstone Point Buoy**, *a black spar-buoy* (No. 1) will be seen bearing about N E. ½ E. This is on *Cow Island Ledge*, which lies one mile to the northeastward of **Brimstone Point**; is three quarters of a mile S. by E. from the southwestern end of **Clapboard Island**, and a little over half a mile N. by W. from the eastern end of **Cow Island**. The buoy is placed on the southeastern side of the ledge. Vessels bound to *Yarmouth Entrance* pass to the northward of it, between the ledge and **Clapboard Island.** (See page 627.)

CLAPBOARD ISLAND UPPER LEDGE,

or *Upper Clapboard Island Ledge* as it is sometimes called, is the next danger met with. It lies S E. from the west end of **Sturdivant Island**, half a mile off; N E. ½ E. from the northeast end of **Clapboard Island**, nearly three-quarters of a mile; and a third of a mile WEST from the south end of **Basket Island.** Seven feet at mean low water is found on this ledge, which is small, and surrounded by deep water.

A red spar buoy (No. 4) is placed in three fathoms off the western side of the ledge. It may be left on either hand, but if left to the westward must receive a berth of three hundred and fifty yards.

STURDIVANT ISLAND LEDGES.

A group of bare ledges lies S W. from the western end of **Sturdivant Island** at a distance of nearly half a mile. Shoal water extends from the bare rocks to the island, so that vessels must not attempt to pass between it and the ledges except at high water. Strangers must never attempt this passage.

These ledges *are not buoyed*, as they always show themselves. Vessels passing east of **Sturdivant Island** leave them to the westward. Those passing between the island and the main land leave them to the southward and eastward.

SANDY POINT LEDGE.

After passing **Sturdivant Island** there are no more dangers in this channel until past **Birch Point** and approaching the passage between **Sandy Point** and **Drinkwater Point.** Nearly three-quarters of a mile southwest of **Sandy Point**, and a mile northeast of **Birch Point**, will be seen a ledge, bare at low water, called *Sandy Point Ledge.* The bare rock is nearly half a mile from shore, and a long shoal, bare at low spring tides, extends in a northeasterly direction from it for three-quarters of a mile.

Above **Sandy Point** the channels are so narrow and crooked, and so full of flats and shoals, as to render it impossible to give any intelligible information in regard to them.

DANGERS.

II. *In the In-shore Passage between* **Clapboard Island** *and the* **Main Land.**—Vessels using this passage haul up to the northward as soon as past the middle of **Great Hog Island.** When past the **Brothers**, look out for

CLAPBOARD ISLAND LOWER LEDGE,

or *Lower Clapboard Island Ledge* as it is sometimes called. This ledge has three feet at mean low water; lies WEST from the southern end of **Clapboard Island**, a quarter of a mile distant, and *has no buoy.* At low water the kelp shows the position of the ledge, but at high water there is no sign of it. A buoy has been recommended to mark it.

Passing *Clapboard Island Lower Ledge*, come next to

JONES LEDGE,

which lies two hundred and fifty yards off the west shore of **Clapboard Island**, a quarter of a mile above its southern end, and a little over a quarter of a mile above the *Lower Ledge;* has four feet at mean low water on its eastern end, but there is a rock a little over one hundred and fifty yards EAST from it, which is awash at mean low water and is out at low spring tides. *There is no buoy.* Kelp shows in one small spot about five or six yards square.

Four hundred yards N W. from the northeastern end of **Clapboard Island** are a couple of bare rocks. There is no passage inside of them, as a line of shoals extends to the island; but their western side is bold-to and may be approached closely. They are not named.

On the western side of the channel, when past **Prince Point**, there is a ledge with five feet at mean low water, which lies EAST from the entrance to *Mussel Cove* at a distance from **Bartlett Point** of half a mile. From **Prince Point** its shoalest part bears N E. ½ E. a little over half a mile. But the ledge is quite a long one, extending in a S W. direction a quarter of a mile. *It is not buoyed, and has no name.*

YORK LEDGE.

Nearly one mile N E. ½ E. from **Prince Point** *a black spar-buoy* (No. 3) will be seen. This is on *York Ledge,* which lies S E. from **York Landing**, six hundred yards from shore. It is bare at extreme low tides, and the buoy is placed close to the bare rock and on its southeastern end. From the bare part of the ledge shoal water extends N W. for one hundred and fifty yards, where there is six feet at mean low water.

It is not safe for strangers to go inside of *York Ledge.* After passing this buoy the course leads between **Sturdivant Island** and the main land, leaving **Sturdivant Island Ledges** (see page 631) to the eastward and a *black spar-buoy* to the westward. This buoy is on

UNDERWOOD LEDGE,

which lies E. ½ S. from **Foster Landing**, about a third of a mile from shore, and has four feet at mean low water. The *black spar-buoy* (No. 5) is placed on its eastern end in three fathoms, and bears from *York Ledge Buoy* about N E. ½ E., distant a little over half a mile. From southwestern end of **Sturdivant Island** it bears W. by S. ½ S., half a mile distant. The ledge is not large, and there is from three to four fathoms of water between it and the main shore; but strangers should always leave the buoy to the westward.

PRINCE POINT SHOALS.

From **Prince Point** the shoal water extends in a southwesterly direction for half a mile. Spots dry at low water lie at that distance from the point, and at low spring tides the whole shoal is bare. Near the southern end of these shoals is a round, bare rock, called **Pumpkin Nob.**

After passing **Pumpkin Nob** the course leads toward **Sandy Point**, and there are no obstructions until up with *Sandy Point Ledge*, already described on page 631.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING YARMOUTH RIVER.

I. *Coming from seaward.*—Bring **Portland Head Light** to bear N W. by N. ½ N. and steer for it. This course leads between *West Cod Ledge Rock* and *Corwin Rock* with not less than twelve fathoms water. When **Cape Elizabeth Lights** are in range, two miles off, with ten fathoms, hard bottom, steer N. by E., carrying not less than nine and a half fathoms, until up with **Peaks Island**, and **Portland Head Light** bears S W. by W. ½ W., in range with the south end of **Ram Island**; now in fifteen fathoms, soft bottom, steer N. by W. for **Cow Island**, which course leads through *Hussey Sound* with not less than eleven fathoms. When up with **Pumpkin Nob** (off the north end of **Peaks Island**) and about a quarter of a mile to the eastward of it, steer N. by E., carrying not less than seven fathoms, and leaving **Cow Island** and **Clapboard Island** to the westward; continue the course until abreast of the *red spar-buoy* on *Upper Clapboard Island Ledge*, in seven and a half fathoms, soft bottom, and the southern end of **Basket Island** bears EAST; then steer N E. ½ N. past **Sturdivant Island**, leaving **Birch Point** well to the eastward, and carrying not less than sixteen feet water; and when past *Sandy Point Ledge;* and the wharf on **Drinkwater Point** bears N. by E., a quarter of a mile off, and **Sandy Point** bears E. by N. ½ N., with eighteen feet water, steer N E. by E., about for the middle of **Lane Island.** This course leads safely through, between **Drinkwater** and **Sandy Points,** with not less than fifteen feet water. Beyond this no sailing directions can be given, as the channel is extremely narrow and crooked, obstructed by many shoals and flats, through which no stranger can possibly trace his way. A pilot should always be obtained either at **Cousin Island** or **Drinkwater Point.**

The above courses pass three quarters of a mile to the westward of the *Hussey;* a quarter of a mile to the eastward of **Pumpkin Nob**; a quarter of a mile to the eastward of *Cow Island Ledge;* two hundred and fifty yards to the westward of *Clapboard Island Upper Ledge;* and one hundred and fifty yards to the westward of *Sandy Point Ledge.*

EASTERN CHANNEL.

II. *Coming from Portland.*—Get the **Breakwater Light** to bear S W. ½ W., half a mile off, and steer N E. ½ E. past **Fort Gorges** and **Great Hog Island**, past *Brimstone Point Ledge* and *Cow Island Ledge*, carrying nothing less than fourteen feet water, and continue this course until abreast of the northeastern end of **Clapboard Island**, in seven fathoms water; then steer N. by E., with not less than seven fathoms, until up with *Clapboard Island Upper Ledge Buoy*, which leave to the eastward, in seven fathoms, two hundred and fifty yards off, and steer N E. ½ N., and follow the directions previously given.

In-shore passage: On the course N E. ½ E. from the **Breakwater Light** continue until abreast of the middle of **Great Hog Island**, in three and a quarter fathoms water; **Half-Way Rock** bears W. by N., nearly three-quarters of a mile off, and the eastern end of **Mackey Island** N W. ½ N., nearly a mile distant; then steer N N E., carrying not less than twenty-one feet water, and leaving **Clapboard Island** to the eastward nearly half a mile distant. Continue this course until up with the *black buoy* on *York Ledge*, in five fathoms water, which leave to the westward, and steer N E. past *Underwood Ledge*, and along the northwestern shore of **Sturdivant Island**, with not less than four fathoms water. When abreast of the eastern end of this island, and about a quarter of a mile from it, in twenty-three feet water, soft bottom, steer N E. by E. ½ E. for **Sandy Point.** On this course there is not less than fifteen feet. When **Birch Point** bears S. by W., and about a quarter of a mile from *Sandy Point Ledge*, in fifteen feet, soft bottom, steer N E. ½ N. for a little over eight hundred yards, until the wharf on **Drinkwater Point** bears N. by E., and **Sandy Point** bears E. by N. ½ N.,

when there will be fifteen feet, soft bottom; then steer N E. by E., which course leads through between **Sandy Point** and **Drinkwater Point**, in fifteen feet at low water. The above courses pass two hundred and fifty yards to the westward of *Clapboard Island Lower Ledge;* one hundred and fifty yards to the eastward of *York Ledge;* two hundred yards to the westward of *Sturdivant Island Ledges;* one hundred and fifty yards to the eastward of *Underwood Ledge;* one hundred and fifty yards to the westward of *Sandy Point Ledge.*

The water is nearly always smooth in this passage, and it is the one mostly used by the fishermen and coasters bound to **Yarmouth Falls.**

If bound into Broad Cove: When past *Underwood Ledge* on the N E. course, bring the southwestern point of **Sturdivant Island** to bear E. by S. ½ S., just clear to the northward of **Basket Island**, and about three hundred and fifty yards off, and there will be seven fathoms water. Now steer N N E. into the cove, carrying not less than seventeen feet, and anchor according to draught, in from twelve to seventeen feet water.

INSIDE PASSAGE

FROM CAPE SMALL POINT TO PORTLAND, THROUGH CASCO BAY.

Bring **Cape Small Point** to bear N N E., one mile distant, and showing just clear of **Glover Rock**, and there will be sixteen fathoms, hard bottom. Now steer W N W. for **Mark Island Monument**, carrying not less than four and a half fathoms, until abreast of *Turnip Island Ledge,* (marked by a *red buoy*, No. 14,) bringing the buoy to bear N E. by N., distant half a mile, in eight fathoms of water. Then steer N W. ¾ W. for the southwest point of **Haskell Island** until **Mark Island Monument** bears W. ½ N. and *Turnip Island Ledge Buoy* E. ½ S., being in sixteen fathoms of water. Then steer W N W. directly for **Haddock Rock** until within a quarter of a mile of it, and in seven fathoms of water, with **Haskell Island** bearing N N E., about two hundred yards distant. Then steer N W., which will bring the **Monument** astern; and this course continue, with not less than six fathoms water, until the centre of **Eagle Island** bears S W. by S. ½ S., and the southwestern end of **Upper Flag Island** bears N E. ½ N., when there will be fourteen fathoms, black mud. Then steer N W. ¾ W. toward **Little Bangs Island**, with not less than six fathoms, and when past *Stave Island Ledge Buoy*, (which leave to the westward close-to,) and in six fathoms water, steer W. ½ S. past **Little Bangs Island** and the buoy on **Sand Island Point**, and carrying not less than seven fathoms. When past this buoy, and **Sand Island** bears S W. by S. ½ S., steer W S W. past **Deer Point** until it bears N E. by N. ½ N., and three hundred yards distant, and the western end of **Hope Island** S E. by S. ½ S., in nine fathoms, soft bottom. On this course the least water is five fathoms. Then steer W. by N. ½ N., and gradually haul to the northward, keeping about three hundred and fifty yards from **Deer Point** to avoid *Deer Point Rock,* which has nine feet of water, and lies two hundred and fifty yards S W. from the point. On this course there will be not less than five and a half fathoms. When **Crow Island** bears W. ½ N., about two hundred yards off, and there is seven fathoms water, steer N W. by N. ½ N. until **Crow Island** bears SOUTH, and carrying not less than eight fathoms water. Then steer W S W. until the hotel on **Little Chebeag** bears N. ½ E., with six fathoms, soft bottom, when steer W. ½ S. past **Cow Island** until abreast of *Brimstone Point Ledge.* On this course the least water is four fathoms. Leave the *red buoy* on this ledge to the southward about three hundred yards off, and steer S W. ½ W. for the **Breakwater Light**, carrying not less than fifteen feet water. When within half a mile if it, haul up for the anchorage. This channel is very frequently used by coasters and fishermen bound east or west through the bay.

PORTLAND HARBOR.

The city of **Portland**, which is the principal maritime port of the State of **Maine**, lies in latitude 43° 39′ N. and longitude 70° 15′ W. The harbor is one of the best on

the coast. It is naturally divided into an *Inner* and *Outer Harbor*. The latter is contained between a line joining **Mackey** and **Great Hog Island** on the northeast, **Peaks Island** on the east, **House Island** on the south, and the shores of **Cape Elizabeth** from **Spring Point** to the **Breakwater** on the west.

HOG ISLAND ROADS, properly so-called, are contained between **Little Hog Island, Peaks** and **House Island.**

The *Inner Harbor* is formed by the waters of *FORE RIVER*, which is an arm of the bay, running in a S W. by W. direction between the peninsula upon which the city is built and the north shores of **Cape Elizabeth.** A bridge crosses the river one mile and a quarter to the westward of the breakwater and forms the western boundary of the harbor. This bridge is called **Portland Bridge**, and connects the city with **Cape Elizabeth.**

The *Inner Harbor* is a mile and a quarter long in a N E. and S W. direction, and at average high tide is about eleven hundred yards wide. At mean low water this is reduced to a width of about one thousand yards.

The northeastern end of the city of **Portland** is built upon a high hill, called **Munjoy Hill,** the summit of which is one hundred and forty feet above sea-level. On this hill stands **Munjoy Observatory,** a very prominent red tower, from which marine intelligence, such as the arrival of vessels, &c., is signaled.

A breakwater, solidly built of granite, extends off from the extreme northern point of **Cape Elizabeth** in a N E. direction six hundred and fifty yards, and upon its extremity is built a low tower, or **Bug Light-House**, which shows a fixed red light as a guide to vessels, to enable them to avoid *Standiford Ledge*, on part of which the breakwater is built. This **Light-House** is called **Breakwater Light.** The light is red until past the westward of the breakwater bound in, and then shows a faint red approaching to white, and so appears from the anchorage in the harbor.

APPEARANCE OF THE SHORES OF PORTLAND HARBOR, AND THE APPROACHES TO IT.

Coming from the eastward, through the Bay: Vessels bound to **Portland** from the eastward, and intending to pass through the bay, leave **Seguin Island** a mile and a half and **Cape Small Point** about two miles to the northward, and steer **W. ¼ N.** for **Portland Head Light.** When off the **Cape**, a gray tower will be seen (if the weather be clear) bearing **W. ¼ N.**, and distant about nine miles. This is

HALF-WAY ROCK LIGHT-HOUSE,

and will appear, until within two or three miles of it, as if standing in the water. It is built upon **Half-Way Rock,** which is a bare rocky islet about sixteen feet high, situated in *Casco Bay*, seven miles and three-quarters E. ¼ N. from **Portland Head Light-House** and nine miles E N E. from **Cape Elizabeth Light-Houses.**

The **Light-house** is a granite tower sixty-six feet in height, which shows a fixed white light, varied by red flashes once every minute, from a height of eighty feet above sea-level. The light is of the third order of Fresnel, and visible in ordinary weather fifteen nautical miles. It bears from

	Miles distant.
Seguin Light-House, WEST	12½
Cape Small Point, W. ¼ S.	9⅛
Mark Island Monument, S. by W. ¼ W.	3⅛
Portland Head Light-House, E. ¼ N.	7¾
Cape Elizabeth Light-Houses, E N E.	9

The geographical position of this light-tower is

Latitude - - - - - - - - 43° 39′ 21″ N.
Longitude - - - - - - - - 70° 02′ 13″ W.

The **Fog-Signal** is a bell struck by hand.

Approaching **Half-Way Rock**, if the weather be clear, a white tower will appear directly ahead and about eight miles off, showing against the land. A little to the southward of this tower, on a high point of land jutting out into the sea, two towers, close together, will appear on a bearing of W. by S. The tower directly ahead is

PORTLAND HEAD LIGHT-HOUSE,

and is built upon **Portland Head,** a prominent headland of **Cape Elizabeth,** three miles and a half above the pitch of the **Cape.** It is a white tower sixty-nine feet high, and shows a fixed white light from an elevation of one hundred and one feet above sea-level. This light is of the second order of Fresnel, and is visible in ordinary weather fifteen nautical miles.

FOG-SIGNAL AT PORTLAND HEAD.

When close to the **Light-house,** a pyramidal structure, painted white, and about thirty feet high, will appear standing at the base of the **Light-tower.** This is the bell-tower, and contains the fog-bell and machinery for striking it.

There is also another fog-signal, a second-class Daboll's air-trumpet, giving blasts of eight seconds at intervals of forty seconds. It is placed in a building adjacent to, and to the northwest of, the bell-tower.

The keeper's dwelling, which is a white stone building, is connected with the light-house by a wooden porch.

Portland Head Light-House is in

Latitude - - - - - - - - - 43° 37′ 42″ N.
Longitude - - - - - - - - 70° 12′ 29″ W.

The two towers seen to the southward of **Portland Head,** on the high land, are

CAPE ELIZABETH LIGHTS.

They stand three hundred yards apart on a line N E. by E. and S W. by W., on the pitch of the **Cape.** The eastern tower (called **East Light**) is of stone striped white and red, there being four broad red horizontal stripes. It shows a fixed white light of the second order of Fresnel from a height of one hundred and forty-three feet above sea-level. The keeper's dwelling is a stone building, whitewashed, connected with the tower by a wooden walk, also whitewashed.

The **Western Light-House** is a stone tower, white, with one vertical stripe on its seaward face. It shows a revolving white light of the second order from a height of one hundred and forty-three feet above sea-level. The keeper's dwelling is brown, connected with the light-house by a wooden porch. Both the towers are fifty-three feet in height.

FOG-SIGNAL AT CAPE ELIZABETH.

In foggy weather a steam whistle ten inches in diameter gives two blasts of five seconds each, with an interval of eight seconds between them, and then a pause of forty-two seconds, every minute.

The course (W. ½ N.) which, steered for **Portland Head,** leads half a mile south of **Half-Way Rock,** passes *New Meadows Entrance, Quohog Bay,* and **Harpswell**; and when SOUTH from **Half-Way Rock, Mark Island Monument** will be seen bearing N. by E. ½ E., four miles distant, showing up against **Haskell Island.**

After passing **Half-Way Rock** there will be seen bearing about W N W. a small, grassy island, bare of trees, and nearly four miles off. This is

OUTER GREEN ISLAND,

about twenty feet in height, with a somewhat steep shore; is about four hundred yards long in a N E. and S W. direction, and bears E. by N. from **Portland Head Light**, four miles distant. To the northeastward of it will be seen, a little over a mile distant, another small low islet, called **Inner Green Island**, (see page 585.) **Jewel Island**, showing as a partly-bare and partly-wooded island of considerable height, will appear still farther to the northeastward.

On approaching the **Head**, after passing to the westward of **Outer Green Island**, a large high island, with its eastern slopes covered with fir and spruce, will appear bearing about W N W. This is

BANGS ISLAND.

Its northeastern extremity, called **White Head,** will bear about N W. ½ W., and will show as a bold bare bluff, with precipitous rocky face, about eighty feet high. The shores of the island to the southward of **White Head** rise gradually to a height of over one hundred feet, and are wooded to within a quarter of a mile from the southwestern end.

This island is irregular in shape, lies N E. and S W., and is about three-quarters of a mile long and half a mile wide. A large brick building, used as a summer hotel by the owners, is built near the summit on the southwestern face of the island. The western part of **Bangs Island** is lower than the eastern slopes, the land varying from twenty to sixty feet in height, with a very gentle rise from the shore. This part of the island is occupied by a farm-house and out-buildings, and there is some cultivation. But the eastern part is rocky and barren.

In range with **Bangs Island**, on a bearing of W. by N. ½ N., will be seen a **low bare islet**, with long ledges extending from it in a southerly direction. This is

RAM ISLAND;

lies NORTH and SOUTH, six hundred yards off the shore of **Bangs Island**, and is about a quarter of a mile long. From **Portland Head Light** it bears N E. by E. ½ E., a little over a mile distant. There is a good passage between **Ram Island** and **Bangs Island** with from three to five fathoms of water.

The bare ledges south of this islet are called **Ram Island Ledges.** (See page 584.)

A **triangular beacon** supported on a high tripod has been erected on the southwestern end of these ledges.

Just to the northward of **White Head** a narrow opening will appear, through which portions of the city may be seen. The north shore of this passage is formed by the southern shore of a large wooded island of moderate height, on which a few houses are seen. This island is called **Peaks Island;** and the passage is *WHITEHEAD PASSAGE*, which runs between **Peaks** and **Bangs Islands** into the *Outer Harbor*.

PEAKS ISLAND

lies nearly NORTH and SOUTH; is about a mile and a half long, and has an average width of nearly a mile. The larger part of the island is wooded, but the western shores are cleared, settled, and under cultivation, so that seen from the harbor it appears like a thickly-settled shore. It is a great resort during the summer season, and there is a large hotel near the summit, on the western side. Off the north end, at a distance of one hundred yards, is a round islet with a few trees upon it, called **Pumpkin Nob.**

HUSSEY SOUND runs between **Peaks Island** and **Long Island.** It has a deep unobstructed channel, but in easterly and southerly winds there is a very ugly choppy sea, so that vessels bound to the eastward usually avoid it by passing along the western shore of **Long Island** through the *Inside Passage.*

The shores of **Cape Elizabeth** are seen, when approaching **Portland Head**, to be composed of hills varying in height, presenting an undulating surface, partly wooded and partly cleared, and under cultivation. Many villas and handsome cottages appear on the slopes, and the shores are sometimes steep and sometimes rise with a very gradual inclination. The shore-line is much cut up by coves, the principal of which, beginning at the pitch of the cape, are *Broad Cove, Zeb Cove, Pond Cove, Ship Cove,* and *Simonton Cove,* sometimes called *Gurry Cove.*

Broad Cove is about three-quarters of a mile above **Dyer Point,** which is the north point of the pitch of **Cape Elizabeth**; *Zeb Cove* is a mile and a quarter above *Broad Cove; Pond Cove* is a mile below **Portland Head**; *Ship Cove* is a small indentation making in on the north side of the **Head**; *Simonton* or *Gurry Cove* is a mile and a half above the **Head** and just below **Spring Point,** on which is built **Fort Preble.**

When within half a mile of **Portland Head Light** the course leads to the northward between **Bangs Island** and the shores of **Cape Elizabeth**, which are here thickly settled and cultivated. The large granite fort, surmounted by heavy sod traverses, which is seen on **Spring Point** on the port bow, is **Fort Preble.** It is in process of construction, (1871.) The barracks and officers' quarters are very conspicuous. Opposite to **Fort Preble**, and a little on the starboard bow, is a square fortification called **Fort Scammel.** This is on

HOUSE ISLAND,

which lies three-eighths of a mile to the northward of **Bangs Island**, is very irregular in shape, lies in a N E. and S W. direction, and is about half a mile long. The island is composed of two oval hillocks connected by a very narrow causeway. The northeastern hillock is about thirty feet high, and has a large house on the summit. The southwestern end of the island, upon which is built the fort, is about fifty feet in height. The fort landing-places are on the western shore.

White Head Passage joins the main channel between **Bangs** and **House Islands.**

To the westward of **House Island**, and about three-quarters of a mile to the northward of **Fort Scammel**, a large granite casemated fort will be seen. This is

FORT GORGES,

a pentagonal work with bastions, built upon *Hog Island Ledge,* (see page 624,) which is an extensive dry ledge, lying three-eighths of a mile **WEST** from **Little Hog Island.** There is a deep but very narrow channel, with twenty feet at low water, between this island and the ledge.

Although visible at intervals over the intervening land, the city of **Portland** does not show clear of the **Cape Elizabeth** shores until abreast of **Bangs Island**, when the houses in **Munjoy** begin to appear; and when approaching **Spring Point** the town gradually opens to the eastward of **Fort Preble.** When abreast of the point nearly the whole town is visible, as well as the settlement on the north shore of **Cape Elizabeth.**

Half a mile N W. from **Spring Point** the **breakwater on Staniford Ledge** will be seen, with the low white light-tower on its eastern end. **There is a wharf alongside the light-house, on which** are usually collected a number of large iron can-buoys.

About midway between the fort and the breakwater a point of land, rather higher than that adjacent, juts out from the shore-line. It has a perpendicular face on the

north side, and is thickly dotted with houses. This point is called **Cushing Point.** The houses upon it form part of the settlement on **Cape Elizabeth**, called **Ferry Village.**

The eastern and southern faces of **Munjoy Hill** are steep, and in some places precipitous. The summit, crowded with houses, is visible a long way up the bay. The **red tower of the observatory** is a prominent object for a great distance.

There are ways for hauling vessels out at **Cape Elizabeth**, and a steam dry-dock on the flats alongside of **Portland Bridge.**

FORE RIVER is crossed by three bridges above **Portland Bridge**—the **Portland, Saco & Portsmouth Railroad Bridge**, a quarter of a mile above it; **Vaughan Bridge**, three-quarters of a mile above the railroad bridge; and another railroad bridge nearly a quarter of a mile above **Vaughan Bridge.** All these have draws in them.

DANGERS
IN APPROACHING AND ENTERING PORTLAND HARBOR.

I. *Coming from the eastward, through the Bay.*—The first danger met with by vessels coming from the eastward, after passing **Cape Small Point**, is the

FLAT GROUND,

or *Temple Ledge* as it is sometimes called. Nothing less than five fathoms at low water is found upon this shoal, and it is not in the way unless one is beating to windward and is to the northward of the true course. Neither is it dangerous except in very heavy gales, when it breaks. *It is not buoyed.* The shoalest spot on the ledge bears W. by S. ½ S., distant two miles from **Cape Small Point**, and S. ¾ E., two and a quarter miles from **Woody Mark Island.**

Passing *Temple Ledge*,

LUMBO LEDGE

is next met with, an extensive piece of shoal ground lying four miles and three-quarters **E. ½ N.** from **Half-Way Rock Light-House** and two miles and three-quarters **SW.** from **Woody Mark Island.** There is only one very shoal spot upon it, and this is marked by an *iron nun-buoy of the second class, painted red and black in horizontal stripes.* There are only eleven feet at low water upon this shoal, which is a pinnacle rock on the ledge. The buoy is placed south of the rock in seven fathoms water.

SOUTHWEST LEDGES OFF HALF-WAY ROCK.

These dangerous ledges, dry at low water, extend off from **Half-Way Rock** in a **WSW.** direction three hundred and seventy-five yards. They are always marked by heavy breakers. Vessels should not, under any circumstances, approach the western side of **Half-Way Rock** nearer than half a mile. The courses give it a much wider berth. Vessels bound to **Portland**, and obliged by circumstances to pass inside of **Half-Way Rock**, must beware of

WEBSTER ROCK,

which lies three hundred and fifty yards **NORTH** from **Half-Way Rock Light**, and has eight feet at extreme low water. At mean low tides there are eleven feet upon it. There is no passage between it and the rock. *A black spar-buoy* (No. 17) is placed in three fathoms on the north side of the ledge. It is a very long spar, and can be seen from a considerable distance. (See page 559.)

After passing **Half-Way Rock** on the **W. ½ N.** course for **Portland Head**, there are no dangers until near **Outer Green Island.** The course leads nearly a mile **SOUTH** from this island; but if obliged to stand to the northward, there is a little bare rock surrounded

by shoal water, which lies two hundred and fifty yards SE. from **Outer Green Island.** This rock is called

JUNK OF PORK,

(see page 585,) and is very bold-to on its southern face; but there is no passage between it and **Green Island** except for small boats. It is only dangerous at night, and then can be avoided by not standing to the northward of **Half-Way Rock Light** bearing E. ½ S.

The next danger met with, after passing **Outer Green Island**, is on the south side of the passage, called

WITCH ROCK,

and is two miles and three-quarters WSW. from **Outer Green Island.** From **Portland Head Light** it bears E. by S., one mile and a half distant. It has four fathoms at mean low water and twenty-two feet at low spring tides, and is marked by *an iron nun-buoy of the second class, painted red,* marked W. R. in white letters, and placed in eight fathoms on the southern side of the ledge. This buoy bears SSE. from the middle of **Ram Island,** distant nearly a mile. The course for **Portland Head Light** leaves this buoy nearly a quarter of a mile to the southward.

RAM ISLAND LEDGE.

This extensive ledge, which is bare at low water, makes off from the southern end of **Ram Island** in a S. by W. direction one quarter of a mile. Its southern end bears E. by N. ½ N. from **Portland Head Light,** distant one mile, and WEST from **Half-Way Rock Light,** distant six miles and three-quarters. The channel between it and *Witch Rock* is over half a mile wide, *but it is not buoyed.* (See page 584.)

A triangular beacon, supported on a high tripod, has been erected on the southern end of this ledge.

When within a quarter of a mile of **Portland Head** the course turns to the northward, and the channel is between **Bangs Island** and the eastern shore of **Cape Elizabeth.** The first obstruction or danger met with is off the southern end of **Bangs Island,** and is called

CATFISH ROCK.

It lies about W. by N. from the extremity of the southwestern point of **Bangs Island,** one hundred and fifty yards from shore, and has sixteen feet at low water. It is really only an extension of the point, but as the current sets strongly on to this point of the island, a *red spar-buoy* has been placed in four fathoms water south of the rock. Vessels must be careful not to get inside of this buoy.

The eastern shore of **Cape Elizabeth** from **Portland Head** to **Spring Point** may be approached to within three hundred and fifty yards with not less than three and a half fathoms. At night vessels beating in may stand pretty close to the shore after passing the **Head** until up with the south end of **Bangs Island.** After passing this they should, unless of light draught, go about as soon as **Portland Head Light** bears S. by E. ½ E., until within a quarter of a mile of **Spring Point** and off the entrance to *Simonton* (or *Gurry*) *Cove.*

The southern end of **House Island** should receive a berth of two hundred and fifty yards, as the shoal water makes off from it in a southwesterly direction for over a hundred yards, and it *is not buoyed.*

SPRING POINT LEDGE.

Spring Point must always receive a good berth, for there is a bad ledge making off from it NE. by N. three hundred and fifty yards. Much of it is bare at three-quarters ebb, and it is bare at low spring tides two hundred yards from shore. A second-class *iron*

can-buoy, painted black, and having the letters S. P. L. marked upon it in white, is placed in five fathoms water on the point of the ledge. *There is no passage inside of it.* This buoy bears S E. by E. ½ E. from **Breakwater Light**, and N. ¾ W. from **Portland Head Light.** Strangers bound in at night should keep these bearings in mind to avoid the ledges.

Spring Point Buoy is the turning point in the channel, which now turns to the northwestward, and the **Breakwater Light** must be kept well on the port bow, and passed at a distance of not less than three hundred and fifty yards; for between **Spring Point** and **Cushing Point** the shoals make off several hundred yards with from six to eleven feet at low water. The water shoals gradually between these two points, however, and the lead will give due warning. The bottom is mostly sand and mud.

STANIFORD LEDGE

makes off from the north point of **Cape Elizabeth** to a distance of a quarter of a mile with less than six feet at mean low water, and two hundred and fifty yards outside of the **Breakwater Light** with less than twelve feet. The breakwater is built upon this ledge, and runs in a N E. by E. direction, six hundred and fifty yards, to the **Light-House.** Two hundred yards N. by E. from the **Light-House** is placed an *iron nun-buoy* of the second class, *painted black*, and marked with the letters S. L. in white. There is no passage between this buoy and the breakwater.

HOG ISLAND LEDGE.

Vessels must not approach **Fort Gorges** from the southward or westward nearer than three hundred yards, to avoid the shoal water surrounding the dry part of *Hog Island Ledge.*

SHOAL WATER NORTH OF HOUSE ISLAND.

Vessels bound into *Hog Island Roads*, if of heavy draught, should give the northwest shore of **House Island** a berth of eight hundred yards, to avoid a piece of shoal ground, with twelve and thirteen feet at extreme low tides, which extends off six hundred and fifty yards from the island. There is a narrow passage, with from three to five fathoms water, close along the north shore of **House Island**, but strangers must not attempt it.

THE MIDDLE GROUND

lies north of the breakwater-light and on the north side of the channel commonly used. It is an extensive flat, with nine feet of water, muddy bottom, extending in an EAST and WEST direction about six hundred yards. On its north side, close to the line of piers, runs a narrow channel with three fathoms at low water, and on its south side passes the usual channel for vessels bound in and out of *Portland Harbor.* This channel passes between *Staniford Ledge Buoy* on the south and the *Middle Ground Buoys* on the north.

Two spar-buoys mark this shoal. One, *a red spar*, is placed in seventeen feet at low water on the southeastern point of the shoal; is three-eighths of a mile (or seven hundren yards) N. ¾ E. from **Breakwater Light** and a quarter of a mile N. ¾ E. from *Staniford Ledge Buoy.* Leave it to the northward.

Passing this buoy, (No. 4,) there will be seen *another red spar* a little over a quarter of a mile to the westward. This is off the west end of the *Middle Ground;* is placed in sixteen feet at mean low water, and marked No. 6. From it the **Breakwater Light** bears S E. ¾ S. a little over seven hundred yards. Leave it to the northward.

UPPER HARBOR LEDGE.

After passing the western buoy on the *Middle Ground*, *a black spar-buoy* will be seen on the south side of the channel bearing about S W. ½ S., and a little over half a mile distant. This buoy (which is marked No. 15) is placed on the northern point of a group of rocks with four feet at low water, which lies on the edge of the flats making off from the **Cape Elizabeth** shore. It is half a mile from the draw in **Portland Bridge.** Many vessels anchor to the eastward of these rocks; but those bound up *Fore River* must be careful to give this *black buoy* a good berth to the southward.

Light-draught vessels frequently anchor on the *Middle Ground.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PORTLAND HARBOR.

1. *Coming from the eastward, through the bay.*—When a mile and three-quarters SOUTH from **Cape Small Point**, in sixteen fathoms water, (if the weather be clear,) **Portland Head Light** should be seen bearing W. ¼ N., nearly seventeen miles distant. This **Light-House** is, however, only visible from this point in very clear weather. In ordinary weather vessels should pass about two miles SOUTH of the **Cape** in fifteen fathoms water, and steer W. ¼ N., with **Half-Way Rock Light** a little on the starboard bow. On this course the least water is eleven fathoms. As soon as **Portland Head Light** is seen steer for it, passing three quarters of mile SOUTH of *Flat Ground* or *Temple Ledge;* one mile SOUTH of *Lumbo Ledge;* nearly half a mile SOUTH of **Half-Way Rock**; three-quarters of a mile SOUTH of **Outer Green Island**; a quarter of a mile NORTH of *Witch Rock;* and the same distance SOUTH of *Ram Island Ledge.* On this course there will be nothing less than ten fathoms water. When within a quarter of a mile of **Portland Head Light**, and **Cape Elizabeth East Light** bears S. by W., there will be seven and a half fathoms, hard bottom; steer N. by W. until past **Spring Point** and **Breakwater Light** bears N W. by W. ¾ W. On this course the least water will be six fathoms; then steer N W. ½ W., passing three hundred yards to the eastward of *Spring Point Buoy*, carrying not less than sixteen feet, and continue this course until past the **Breakwater Light** and the buoy on *Staniford Ledge*, when the *red spar-buoy* on the western end of the *Middle Ground* will be seen directly ahead. Continue the course for this buoy until within two hundred yards of it, and **Breakwater Light** bears S. by E. ¾ E., when there is seventeen feet, soft bottom. Then steer S W. by W. ¼ W. between the line of wharves and **Cape Elizabeth Settlement**, and anchor on the south side of the channel according to draught, in from two to four fathoms, soft bottom.

If of light draught and wishing to anchor on the *Middle Ground*, steer between the two *red buoys* on the ends of the shoals, and anchor when past their range. On this course there is not less than nine feet.

A vessel of heavy draught may, if desirable, use the narrow channel which crosses the bar close under **Munjoy.** This passage has eighteen feet at mean low water. To enter it, when on the N. by W. course past **Spring Point**, bring **Breakwater Light** to bear N W. by W. ¾ W., steer N W. by N. ¼ N. exactly for the extreme eastern point of **Munjoy**; continue it, carrying not less than twenty-two feet water, until within four hundred yards of the shore, when **Breakwater Light** will bear S. by W. ¼ W., and the westernmost of the two large piers which are built near the eastern end of **Munjoy** (commonly called the **Great Eastern Piers**) bears W. ¼ N., and there will be three and three-quarters fathoms; steer for this pier, and go as close to it as possible. Then keep close along the line from wharf to wharf, and when up with the easternmost of the large piers of the Grand Trunk Railway Company, steer about S. by W. ¼ W., which course will clear the western end of the *Middle Ground* and lead into the main channel with not less than eighteen feet at mean low water.

This channel is used by heavy-draught steamers. It is kept open by a dredging-boat under the direction of the United States Engineers.

DANGERS
IN APPROACHING AND ENTERING PORTLAND HARBOR.

II. *Coming from the eastward, from sea.*—Vessels using this passage go to the northward of the *Cod Ledges;* and the first danger encountered is

EAST COD LEDGE,

composed of two distinct shoals, lying nearly N E. and S W. from each other, and over half a mile apart. The most northerly ledge is called *Round Shoal,* and has four and three-quarters fathoms at mean low water. It bears from **Half-Way Rock Light** S. by W. ½ W. three miles and a quarter, and from **Portland Head Light** E S E. seven miles and a quarter.

Thirteen hundred yards (or five-eighths of a mile) southwest from *Round Shoal* is *East Cod Ledge Rock,* which is at the southwestern extremity of *East Cod Ledge.* It has seven and a half fathoms, and bears S E. by E. ½ E. from **Portland Head Light,** distant seven miles. It is not dangerous except in very heavy gales.

Between these two rocks the shoalest water on the ledge is nine fathoms.

BULWARK SHOAL.

This dangerous ledge has fourteen feet at low water and forms the northeastern extremity of *West Cod Ledge,* which is a line or group of ledges extending in a N E. and S W. direction across the entrance to the harbor. The southwestern end of this ledge, *Alden's Rock,* is S E. by E. from **Cape Elizabeth East Light,** and thence the ledge extends five miles to *Bulwark Shoal.* There are several good channels crossing it among the several shoals composing it.

Bulwark Shoal bears S W. ¾ S. from **Half-Way Rock Light,** three miles and a half; from **Portland Head Light** S E. by E. ½ E., six miles; and from *Round Shoal* W. by N., one mile and a quarter distant. It is marked by an *iron nun-buoy of the first class, painted red and black* in horizontal stripes, and placed in good water on the southeastern side of the ledge.

After passing *Bulwark Shoal* vessels using this passage meet with no dangers until up with

WITCH ROCK,

(see page 640,) which lies on the north side of the channel, has twenty-two feet at low spring tides, and is two miles and three-quarters W S W. from **Outer Green Island** and one mile and a half E. by S. from **Portland Head Light.** This rock is marked by an *iron nun-buoy of the second class, painted red,* and marked W. R. in white letters, placed in eight fathoms on the southern side of the ledge, and from it the middle of **Ram Island** bears N N W., distant nearly a mile.

Passing *Witch Rock,* a *nun-buoy, painted with red and black* horizontal stripes, will be seen broad on the port bow. This is on

JORDAN REEF,

sometimes called *Bell Rock.* It has twenty-two feet at mean low water, and lies S E. ½ E. from **Portland Head Light,** distant one mile, and S. by W. from **Ram Island,** also one mile distant. The buoy is placed fifty yards southeast from the reef, and *painted red and black* in horizontal stripes. The ledge extends in a N E. and S W. direction two hundred and fifty yards to the northward of the buoy.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PORTLAND HARBOR.

II. *Coming from the eastward, from sea, to pass to the northward of Round and Bulwark Shoals.*—Bring **Portland Head Light** to bear W. by N. ½ N. and steer for it, carrying not less than eight fathoms, passing half a mile north of *Round Shoal*, two-thirds of a mile north of *Bulwark Shoal*, a quarter of a mile south of *Witch Rock*, and four hundred yards north of *Jordan Reef*. Continue this course until within a quarter of a mile of **Portland Head Light**, in seven and a half fathoms, hard bottom, when steer N. by W. up the harbor, and follow the directions given on page 642.

DANGERS
IN APPROACHING AND ENTERING PORTLAND HARBOR.

III. *Coming from the southeastward, and passing between Bache Rock and West Cod Ledge Rock.*—This channel crosses *West Cod Ledge* about midway between its southwest and northeast ends. On the north side of the passage is

BACHE ROCK,

which has four fathoms at low water. It bears S E. by E. from **Portland Head Light**, five miles and a half; S W. from **Half-Way Rock Light**, four miles and a half; and E. ½ N. from **Cape Elizabeth East Light**, five miles distant. *It is not buoyed*, and breaks only in heavy gales.

Two miles S W. by W. from **Bache Rock**, and on the south side of the channel, is

WEST COD LEDGE ROCK,

with four and a half fathoms at low water. It bears S E. ½ S. from **Portland Head Light** four miles and a half, and E. ½ S. from **Cape Elizabeth East Light**, a little over three miles distant, and *is not buoyed.* Vessels of light draught pay no attention to these rocks except when the weather is heavy.

WILLARD ROCK.

After crossing *West Cod Ledge* there are no dangers until about a mile and a half from **Portland Head Light**, when the course leads about midway between *Pine Tree Ledge* and *Willard Rock.* The latter is on the south side of the channel and has five and a quarter fathoms at low water. It bears N E. by N. from **East Light** two miles and a quarter, and S E. by S. ½ S. from **Portland Head Light** one mile and three-quarters, and *is not buoyed.*

PINE TREE LEDGE

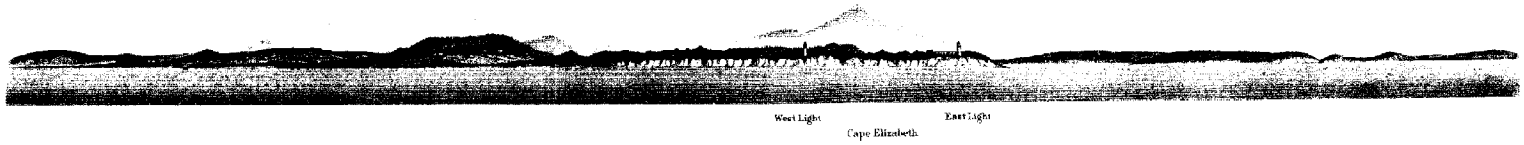
lies on the north side of the channel, has three and a half fathoms at mean low water, and *is not buoyed.* It lies almost exactly midway between *Witch Rock* and *Willard Rock*, on a line running N E. by N. ½ N. and S W. by S. ½ S., and bears from **Portland Head Light** S E. ¼ E., nearly one mile and a half, and from **East Light** N E. by N., nearly three miles distant. It breaks in heavy southerly gales.

The course now leads to the northward, and passes to the westward of

JORDAN REEF,

already described on page 643. This ledge is one mile S E. ¼ E. from **Portland Head Light** and the same distance S. by W. from **Ram Island**, has twenty-two feet at mean low water, and is marked by a *nun-buoy painted red and black* in horizontal stripes. This buoy is placed fifty yards southeast of the reef in seven fathoms water.

View of Entrance to Portland Harbor. Portland Head Lt. bearing N.W.½W. distant 3 miles.



View of Cape Elizabeth, East Light bearing N.N.W. distant 6½ Miles.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PORTLAND HARBOR.

III. *By the channel between Bache Rock and West Cod Ledge Rock.*—Bring **Cape Elizabeth Lights** to bear W. by N. ½ N. and **Portland Head Light** N W. ¾ W., when there will be about twenty-five fathoms, rocky bottom. Then steer N W. ¾ W., leaving *Bache Rock* one mile to the northward and *West Cod Ledge Rock* one mile to the southward. On this course the least water will be nine fathoms. Continue until **Cape Elizabeth Lights** are in range on a bearing of S W. by W. and with a depth of eleven fathoms. Then steer N W. by W. ¾ W. for nearly a mile and a half, carrying not less than eight fathoms, until **Portland Head Light** bears N W. ¾ N., in eight fathoms, hard bottom. Now run for the light, passing midway between *Pine Tree Ledge* and *Willard Rock*, leaving the former one-third of a mile to the northward and the latter the same distance to the southward, and carrying not less than eight fathoms. On this course continue until about half a mile from the light and **East Light** bears S. by W. ¾ W.; now steer N. by W., and follow the directions given on page 642.

Light-draught vessels may, in moderate weather, continue their course N W. ¾ N., which leads almost directly over *Pine Tree Ledge*, with about four fathoms, and about two hundred and fifty yards southwest of *Jordan Reef*. When within a third of a mile of the light, in eight fathoms, hard bottom, and with **East Light** bearing S. by W., steer N. by W., and follow the directions previously given.

APPEARANCE OF THE SHORES
OF PORTLAND HARBOR AND THE APPROACHES TO IT, COMING FROM THE SOUTHWARD AND FROM SEA.

Vessels coming from the southward outside of all dangers keep five miles from **Cape Elizabeth Lights.** These two towers show plainly a considerable distance off. The land to the southwestward of the lights will appear as partly-cleared and partly-wooded slopes, with an undulating surface, dotted here and there with houses. To the northward the islands in the bay will appear as blue outlines, but their features are undistinguishable until more closely approached. **Half-Way Rock Light** will not be visible, as it is projected against the land to the northward. With the **Cape Lights** bearing **NORTH,** and about five miles off, **Portland Head Light** will open to the eastward of them as a white tower showing against distant land. The land just clear to the eastward of the light-house is **Bangs Island.** On a clear day, when five miles from **Cape Elizabeth Lights,** with **Portland Head Light** bearing N W. by N. ½ N., some of the houses on **Munjoy** may be seen just clear of the south end of **Bangs Island.** The top of the **Observatory** on **Munjoy** will show over **Fort Preble.** The range of **White Mountains** is very often visible over the **Cape,** appearing as a blue outline. **Mount Washington** shows as a pyramidal mountain with very regular outlines; but these mountains are, of course, only visible in clear weather.

Coming from the southward, along shore, **Cape Elizabeth Lights** will, of course, first appear, as they are visible from off the entrance to **Saco.** Thus viewed, they appear close together, the *easternmost striped red and white.* On approaching them, when they bear N E. ¾ N. and are five miles off, there will be seen, bearing about N N E., a high bare island about three miles off. This is **Richmond Island.** On its summit will appear a large house and out-buildings. The island is destitute of trees, and has a gentle slope almost to the water's edge, and in the summer season the surface, mainly covered with grass, presents a beautiful appearance. The bare ledge which appears off the eastern end, on a nearer approach is *Watt's Ledge;* and when abreast of the island a large

black spar-buoy will be seen on the eastern end of *Watt's Ledge*, and must be left to the westward. On the starboard bow will be seen a *large nun-buoy, with a rod and ball on it, painted red and black in horizontal stripes.* This is on *Old Anthony*, or *Vapor Rock*. When abreast of **Cape Elizabeth** pass close to the shore, where there is from four to six fathoms of water; but if unacquainted with the locality, it is better to pass about a mile and a quarter from the lights. This will pass about a mile to the westward of a large *black nun-buoy*, and a little over a quarter of a mile to the eastward of a *black can-buoy* marked T. R. in white letters. The former is on *Alden Rock*, the latter on *Taylor Reef*.

When abreast of **Cape Elizabeth**, the course turns to the northward and leads along shore until up with **Portland Head.**

DANGERS
IN APPROACHING AND ENTERING PORTLAND HARBOR.

IV. *Coming from the southward and southwestward, outside of everything.*—Vessels using this passage first encounter the *Hue and Cry Rocks.* The southernmost of these ledges, called

WEST HUE AND CRY,

has four and a half fathoms at low water; bears S S E. from **Cape Elizabeth Lights** two miles and three-quarters, and *is not buoyed.* Three-quarters of a mile EAST from it is

EAST HUE AND CRY,

a bad ledge, with eighteen feet at low water, which will be recognized by an *iron can-buoy of the first class, painted black*, which is placed in six fathoms on the southeastern side of the ledge. The shoalest spot bears S E. ¾ S. from **Cape Elizabeth East Light**, three miles distant.

ALDEN ROCK.

One mile and a half NORTH from the buoy on *East Hue and Cry* will be seen a *black nun-buoy.* This is on *Alden Rock*, which is two miles S E. by E. from **East Light** and four miles and three-quarters S. by E. ¾ E. from **Portland Head Light.** Four feet at extreme low tides is found upon this rock, and six feet at mean low water. It is a very dangerous rock, and the source of much uneasiness to mariners approaching **Portland** in thick weather. *The buoy is an iron nun-buoy of the first class, painted black*, and marked A. R. in white letters on both sides. It is placed on the south side of the rock in eleven fathoms, and is to be left to the westward by vessels bound in by this channel.

CORWIN ROCK.

Nearly half a mile E. by N. from *Alden Rock* is *an iron nun-buoy, painted in red and black* horizontal stripes. This is on *Corwin Rock*, which has about nineteen feet at low tides, and bears S E. by E. ¾ E. from **East Light**, distant two miles and a quarter. The buoy is southeast of the rock, and has C. R. marked upon it in white letters. The channel across *West Cod Ledge* for vessels coming up from the southward leads between this rock and *West Cod Ledge Rock*, and is a mile and a quarter wide.

WEST COD LEDGE ROCK,

on the north side of this channel, has four and a half fathoms at low water, bears S E. ¾ S. from **Portland Head Light** four miles and a half, and E. ¾ S. from **East Light**, a little over three miles distant. *It is not buoyed.* Vessels bound in by this channel leave it to the northward.

MITCHELL ROCK

lies well on the western side of the channel, and bears S. by E. ½ E. from **Portland Head Light**, distant three miles and a half, and E. ⅛ N. from **Cape Elizabeth East Light** one mile and three-eighths. It has five fathoms and a quarter, is not dangerous except in heavy weather, and *is not buoyed.*

BROAD COVE ROCK,

which has seven feet at mean low water, lies off the mouth of *Broad Cove*, at a distance of half a mile from shore. Shoal water exists in spots from this rock to the buoy, which is placed three-eighths of a mile N E. from the shoalest part of the ledge. *The buoy is a first-class iron can, painted black*, with the letters B. C. R. marked upon it in white. It bears N E. by N. from **Cape Elizabeth East Light**, one mile and a quarter distant. The shoal of the ledge bears from the same light N E. by N. ½ N.

TRUNDY REEF

extends off from **Trundy Point** in a northeastely direction nearly half a mile. **Trundy Point** is a mile and a quarter NORTH from the **Cape Lights.** The reef is dry at low water a third of a mile from shore, but spots of shoal ground, with thirteen and seventeen feet at mean low water, exist between its end and the buoy, which is three-quarters of a mile from the point. *This buoy is a first-class nun, painted black*, and marked T. R. in white letters, and placed on the northeastern extremity of the shoal. It bears from **Cape Elizabeth East Light** N E. by N. ½ N., one mile and three-quarters distant, and from **Portland Head Light** S. by E. ½ E., exactly the same distance. *Willard Rock* is only three-eighths of a mile N E. from it, but vessels may go close to *Trundy Reef Buoy*, leaving it to the westward, and pass in good water. But as the current of flood sets on to this reef care must be taken to keep to the eastward of the buoy.

WILLARD ROCK

(*not buoyed*) has five and a quarter fathoms. It bears N E. by N. from **East Light** two miles and a quarter, and S E. by S. ⅜ S. from **Portland Head Light** one mile and three-quarters. Vessels using this channel leave it to the westward.

PINE TREE LEDGE,

with three fathoms, lies two-thirds of a mile N E. by N. ½ N. from *Willard Rock*, and *is not buoyed.* It bears S E. ½ E., one mile and a half from **Portland Head Light**, N E. by N. from **East Light** nearly three miles, and breaks in heavy weather. The channel leads between it and *Willard Rock.* See page 644.

JORDAN REEF,

already described, (page 643,) is one mile S E. by E. from **Portland Head Light** and the same distance S. by W. from **Ram Island.** It has twenty-two feet at low water, is the first danger met with to the northward of *Pine Tree Ledge*, and is marked by a *nun-buoy of the second class, painted red and black in horizontal stripes.* This buoy must be left to the eastward by vessels bound in.

After passing *Jordan Reef Buoy* there are no obstructions until past **Portland Head Light.**

SAILING DIRECTIONS

IN APPROACHING AND ENTERING PORTLAND HARBOR.

IV. *Coming from the southward and southwestward, outside of everything.*—Keep five miles from **Cape Elizabeth Lights** until **Portland Head Light** bears N W. by N. ⅜ N., when

there will be about twenty-five fathoms, hard bottom, and run for the light, crossing *West Cod Ledge* midway between *West Cod Ledge Rock* and *Corwin Rock*, in twelve fathoms water. Continue on this course two miles and a quarter until the **Cape Lights** are in range on a bearing of **S W.** by **W.**, and in eleven fathoms, hard bottom, when, if the sea is rough, or draught of water heavy, stand **N.** by **E.** nearly half a mile, to clear *Willard Rock*. On this course the least water is eleven fathoms. This course and distance will bring **Portland Head Light** to bear **N W. ½ N.**, with eleven fathoms, rocky bottom, when run for the light until within half a mile of it, in eight fathoms water; then **N.** by **W.** leads safely up to **Spring Point** with nothing less than six fathoms water; after which the directions for the *Inner Harbor* (given on page 642) must be followed.

These courses pass two miles to the eastward of the *Hue and Cry Rocks;* nearly three-quarters of a mile to the southward of *West Cod Ledge Rock;* the same distance to the northward of *Corwin Rock;* three-quarters of a mile to the northward of *Mitchell Rock;* three-quarters of a mile to the eastward of *Broad Cove Buoy* and *Trundy Buoy;* a quarter of a mile to the northward of *Willard Rock;* and a quarter of a mile to the southward of *Pine Tree Ledge* and *Jordan Reef.*

Light-draught vessels may, in smooth weather, continue their course **N W.** by **N. ½ N.** for **Portland Head Light** until within a third of a mile of it, in seven and a half fathoms, and **East Light** bears **S.** by **W.**, when **N.** by **W.** will lead safely up to **Spring Point.**

Vessels coming from the eastward, and wishing to use this channel, must bring **Cape Elizabeth Lights** to bear **W.** by **N. ½ N.**, and run for them until **Portland Head Light** bears **N W.** by **N. ½ N.**, with twelve fathoms, rocky bottom. Then steer for it, and follow the directions given above.

DANGERS

IN APPROACHING AND ENTERING PORTLAND HARBOR.

V. *Coming from the westward, along shore.*—This channel leads along the eastern shore of **Richmond Island** and close in with the shore of the **Cape.** The first danger encountered is

WATTS LEDGE,

which lies off the eastern end of **Richmond Island** at a distance of three-eighths of a mile. The dry ledge, which is barely covered at high water, is of considerable extent, being about four hundred yards long. It lies close in with the shore, and the sunken ledge extends off from its eastern end and has fourteen feet at mean low water three-eighths of a mile from shore. A *black spar-buoy* is placed in six fathoms water off the eastern end of the ledge. This buoy bears from the house on **Richmond Island E.** by **S. ½ S.** one mile, and from **East Light S W. ½ S.** one mile and a half. It is not safe to go inside of it.

Passing *Watts Ledge*, the next danger met with will be found on the eastern side of the channel, and is called

OLD ANTHONY,

or *Vapor Rock*, and has three fathoms at low water. It bears from **East Light S.** by **E. ½ E.** one mile and three-quarters, and from the house on **Richmond Island W.** by **N. ½ N.** two miles and a half. *An iron nun-buoy of the second class, bearing a rod and ball, and painted red and black* in horizontal stripes, is placed on the southern end of the rock in eight fathoms. The letters O. A. are marked upon it in white. Vessels using the in-shore passage leave this buoy well to the eastward.

After passing *Old Anthony*, a *black can-buoy* will be seen bearing nearly NORTH. This is on

TAYLOR REEF,

a group of rocks lying off the pitch of the **Cape** at a distance of half a mile from shore. It extends in an E N E. and W S W. direction nearly half a mile, and has thirteen feet on the shoalest spots at low tides. There is an excellent passage inside of the reef, close to the cape shore.

An iron can-buoy of the second class, painted black, and marked T. R. in white letters, is placed in eight fathoms of water on the eastern end of this reef. It is to be left to the westward by vessels bound in. From this buoy **East Light** bears N W. ½ N., distant three-quarters of a mile.

ALDEN ROCK

lies on the eastern side of the passage, and vessels do not approach unless on a wind beating in or out. It is two miles S E. by E. from **East Light** and four miles and three-quarters S. by E. ½ E. from **Portland Head Light**. Six feet at mean low water is found upon this rock, which is marked by an *iron nun-buoy of the first class, painted black*, and with the letters A. R. on both sides. It is placed on the south side of the ledge in eleven fathoms, and is to be left to the eastward by vessels using this channel.

MITCHELL ROCK.

This rock is only dangerous in very heavy weather, and has five and a quarter fathoms at low water. It bears S. by E. ½ E. from **Portland Head Light**, distant three miles and a half, and E. ½ N. from **East Light** one mile and three-eighths, *and is not buoyed.*

BROAD COVE ROCK.

This dangerous rock, which has seven feet at mean low water, lies off the mouth of *Broad Cove* at a distance of half a mile from shore. Shoal water exists in spots from this rock to the buoy, which is placed three-eighths of a mile N E. from the shoalest part. *This buoy is a first-class iron can, painted black*, with the letters B. C. R. marked upon it in white. It bears N E. by N. from **East Light**, one mile and a quarter distant. The shoal of the ledge bears N E. by N. ½ N. from the same **Light-House.**

TRUNDY REEF,

also on the western side of the channel, extends off from **Trundy Point** nearly half a mile in a northeasterly direction. It is dry at low water a third of a mile from shore, but spots of shoal ground with thirteen and seventeen feet at mean low water exist between the end of the reef and the buoy, which is three-quarters of a mile from the point. *The buoy is a first-class nun, painted black*, and marked T. R. in white letters, and is placed on the end of the shoal. It bears from **East Light** N E. by N. ½ N., one mile and three-quarters distant, and S. by E. ½ E. from **Portland Head Light**, being equidistant from both lights. (See page 647.)

WILLARD ROCK

has five and a quarter fathoms at low water, bears N E. by N. from **East Light** two miles and a quarter, and S E. by S. ½ S. from **Portland Head Light** one mile and three-quarters, and is to be left to the eastward by vessels using this channel.

PINE TREE LEDGE

lies N E. by N. ½ N. from *Willard Rock*, and is not in the way unless a vessel be tacking to windward. It has three fathoms on it at lowest spring tides, *and is not buoyed.*

From **Portland Head Light** it bears S E. ½ E. one mile and a half, and from **East Light** N E. by N. nearly three miles. It is to be left well to the eastward.

JORDAN REEF

(already described on page 643) is one mile S E. by E. from **Portland Head Light** and the same distance S. by W. from **Ram Island.** It has twenty-two feet at low water, and is marked by *a nun-buoy of the second class, painted black and red in horizontal stripes.* This buoy must be left to the eastward by vessels bound in. After passing this buoy there are no obstructions until up with **Bangs Island.**

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PORTLAND HARBOR.

V. *Coming from the westward, along shore.*—When five miles from **Cape Elizabeth Lights,** bearing N E. ¾ N., and with **Richmond Island** (centre) bearing N N E., three miles distant, with about twenty fathoms water, steer N E. ½ E. until abreast of the lights, having **East Light** bearing N W. ½ N., one mile and a quarter distant. This course and distance will lead, with not less than sixteen fathoms, up with the *black can-buoy* on *Taylor Reef,* which leave to the westward about a quarter of a mile off, and steer N. ½ E., carrying not less than seven fathoms, until abreast of the large *nun-buoy* on *Trundy Reef* and **Portland Head Light** bears N. by W. ¾ W., when there will be about nine fathoms, and **East Light** will bear S W. by S. ½ S. Then steer N. by W. for the southern end of **Bangs Island,** carrying not less than six fathoms water. After passing the **Head,** alter the course to the westward sufficiently to give the *buoy on Catfish Rock* a berth to the eastward of about one hundred yards, and pass it in eight fathoms. Continue the course up the harbor as directed on page 642.

These courses pass a mile to the eastward of *Watts Ledge;* three-eighths of a mile (or seven hundred and fifty yards) to the westward of *Old Anthony;* seven hundred and fifty yards to the eastward of *Taylor Reef;* half a mile to the westward of *Mitchell Rock;* two hundred and fifty yards to the eastward of *Trundy Reef;* three hundred yards to the westward of *Willard Rock;* and half a mile to the westward of *Jordan Reef.*

WHITE HEAD PASSAGE.

This channel into *Portland Harbor* leads between the north shore of **Bangs** and the south shore of **Peaks Island.** Its general course is E S E. and W N W., and it is three-quarters of a mile long with an average width of a third of a mile.

White Head, which gives the name to this passage, is a bold bare bluff, with precipitous face, forming the northeastern extremity of **Bangs Island.** It is eighty feet high, and the summit is crowned with a stunted growth of spruce and fir.

The shore of **Peaks Island,** which forms the north side of the passage, is low, in some places marshy, and backed by woods.

This is an excellent channel for steamers, and for sailing-vessels with a fair wind; but if the wind be at all scant or light it is unsafe to attempt to go through, as there is danger of being set under **White Head,** where calms and light baffling winds will be met with, which are likely to carry vessels ashore on *White Head Ledge.* On the other hand, if, in avoiding the southern shore, they should be set by the current of flood too far over toward **Peaks Island,** there will be great risk of getting on to *Trott Rock.* Both of these ledges are marked by iron spindles, and with a fair wind it is easy to pass between them; but strangers should not attempt the passage unless compelled by necessity.

DANGERS
IN WHITE HEAD PASSAGE INTO PORTLAND HARBOR.

Coming from the eastward, and designing to enter **Portland** by this channel, there are no dangers met with until the passage is fairly entered, when two **iron spindles** will be seen ahead on each side of the channel. That on the north side is on

TROTT ROCK,

which is a ledge, bare at low water, lying almost exactly midway between **Peaks** and **Bangs Islands,** about three hundred and fifty yards from the former. It is not safe to pass between this ledge and **Peaks Island.**

An **iron spindle with a basket top, all painted red,** is placed upon the bare part of the rock, and is to be left to the northward. Vessels may go quite close to it, as the rock is bold to on its south side.

On the south side of the channel, directly opposite to *Trott Rock Spindle,* is the **spindle** on

WHITE HEAD LEDGE,

a long ledge, making off from **White Head** in a northerly direction one hundred and fifty yards; bare at low water, and with an **iron spindle** on its northern end, **with a basket top, all painted black.** This spindle is one hundred and seventy-five yards south of **Trott Rock Spindle.** The two mark the width of the channel.

After passing these two ledges care must be taken, if the vessel be of heavy draught, to give the **Peaks Island** shore a good berth to the northward, say not less than a quarter of a mile, as it is shoal and rocky. Four hundred yards **W. by N. ½ N.** from **Trott Rock Spindle** is a rock awash at low spring tides, nearly three hundred and fifty yards from shore. Again, half a mile **W N W.** from *Trott Rock* will be seen a small, round, rocky islet near the western end of the passage, about two hundred and fifty yards from the shore of **Peaks Island.** A bad ledge, mostly bare at low water, however, extends in a southwesterly direction from this islet one hundred and fifty yards. Two feet at low water is found on the end of this ledge, four hundred yards from the **Peaks Island** shore.

The northwestern point of **Bangs Island** must receive a berth to the southward of not less than four hundred yards, as there is shoal water off that point to a distance of three hundred yards. Vessels of light draught may, however, go within two hundred and fifty yards.

SAILING DIRECTIONS.

I. *To enter Portland Harbor by White Head Passage.*—Pass between **Outer** and **Inner Green Islands** with not less than seven fathoms water, and steer **W. ½ N.** This course will carry safely up to **White Head** with not less than eight fathoms water. When within half a mile of the **Head** the **two spindles** will be seen ahead, and steer so as to pass directly between them in four and three-quarters fathoms. When past them steer **W. by S.** for a quarter of a mile, carrying twenty-five feet water, until the small islet lying south of the southwestern point of **Peaks Island** bears **NORTH** and the southern angle of **Fort Scammel** on **House Island** bears **N W. by W. ½ W.** Then steer **N W.** for the middle (which is also the lowest part) of **House Island,** carrying four fathoms water, until **Fort Preble** is entirely shut in behind the south end of **House Island;** the latter bears **W. ½ N.,** with a depth of five and a half fathoms, muddy bottom. Then steer **W. ½ S.,** giving **Bangs Island** a berth of four hundred yards to the southward and **House Island** a berth of one hundred and fifty yards to the northward, and carrying not less than four fathoms water. On this course, when **Portland Head Light** bears **S. ½ E.** and **Breakwater Light N W.,** seen just clear of **Spring Point,** in eight fathoms in the main channel, steer **N. by W.,** and follow the directions for the harbor, given on page 642.

II. *To enter by White Head Passage and anchor in Hog Island Roads.*—Steer the courses given above until entering the main ship-channel, when steer N. by W. until past **Spring Point**, and **Breakwater Light** bears N W. by W. ½ W. Then steer N E., and anchor at pleasure in from four to seven fathoms, soft bottom.

There is good anchorage in the roads in from four to six fathoms, soft bottom; and it is a roadstead very much used by coasters and fishermen, who anchor merely for a night, and wish to avoid the risk of having to beat out of the *Inner Harbor.*

BACK COVE.

On the north side of the **City of Portland**, between it and the main land, is a large nearly circular cove, called *Back Cove.* It is nearly all dry at low water; but a narrow slue leads to the southward, along the eastern side of the cove, to a large pier covered with warehouses, &c., situated on the north side of **Portland Peninsula**, and on the south shore of the cove.

The entrance to *Back Cove* is crossed by two bridges. The easternmost is a railroad bridge, the other, which is a quarter of a mile to the westward, is called **Tukey Bridge.** Both have draws. The entrance is carefully buoyed, and marked by a **beacon** and by piles driven on the edges of the channel. Vessels designing to enter it must steer N. by W. ½ W. from off **Spring Point**, leaving *Hog Island Ledge* two hundred yards to the eastward and *Pomeroy Rock* the same distance to the westward. The latter rock is marked by a *black spar-buoy*, (No. 1.) After passing this buoy, the channel turns gradually to the westward toward another *black spar-buoy* six hundred and fifty yards to the northwestward. This buoy is on the northeast point of the flats which make off from the base of **Munjoy Hill.** It should receive a good berth to the westward. When past this buoy, a *red buoy* will be seen ahead, on the north side of the channel, and the course leads to the westward, between it and the *black buoy.* **The iron pile beacon and tripod, painted red,** must be left to the northward, and a straight wake made for the draw in the railroad bridge. No directions can be given beyond the bridges. Vessels bound into the cove always take a pilot. Not less than twenty-two feet at low water can be taken up to the bridge.

PRESUMPSCOT RIVER.

Three-eighths of a mile W. by N. from **Mackey Island** is the end of a long narrow point, about sixty feet high, fringed with woods on its eastern end, and having upon its summit the large square building used as the **U. S. Marine Hospital.** This is **Martin Point,** and is the western point of entrance to *Presumpscot River*—**Mackey Point,** about six hundred and fifty yards N E. from it, forming the eastern point.

Mackey Point is about twenty feet high, cleared and settled. A draw-bridge connects it with **Martin Point.** Above this the river extends about two miles in a northerly direction to the village of **Falmouth Corner.**

Half a mile above **Martin Point Bridge**, and on the western shore of the river, are situated the **Casco Iron Works.** A channel with six feet at low water, but quite narrow, leads in nearly a straight line from the draw to the pier of the works. Above this point the river is bare at low water except in a very narrow and extremely crooked slue, through which six feet at low water may be taken.

No intelligible sailing directions can be given for this channel. Strangers must always take a pilot.

The principal trade in *Presumpscot River* is to and from the **Portland or Casco Iron Works.**

LIGHT-HOUSES
IN CASCO BAY AND PORTLAND HARBOR.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s			Feet.	
Cape Elizabeth Lt. W.	43 33 50	70 12 09	4 40 48.6	Revolv.	1^m 00^s	143	18
Cape Elizabeth Lt. E.	43 53 56	70 12 01	4 40 48.1	Fixed.	.....	143	18
Portland Head Lt...	43 37 22	70 12 29	4 40 49.9	Fixed.	.....	101	16
Portland Breakw'r Lt.	43 39 18	70 14 08	4 40 56.5	F. red.	.....	23	10
Half-Way Rock Lt..	43 39 21	70 02 13	4 40 08.9	F.V.R.F.	1^m 00^s	80	15

TIDES.

Stations for observations of tides have been established at various places in *Casco Bay* during the progress of the survey of the different harbors by the Coast Survey. Full results have been obtained from the gauges at **Portland, Peaks Island, Bird Point,** (the western end of **Cousin Island,**) *Harpswell Harbor*, and *Quohog Bay*, as follows:

	Portland.	Peaks Island.	Birch Point, N. part of Bay.	Harpswell.	Quohog Bay.
Corrected Establishment, or Average Time of High Water after Moon's Meridian Passage	11^h 17^m	11^h 03^m	11^h 10^m	10^h 55^m	11^h 12^m
Mean Rise and Fall of Tides, or Rise of Mean High Water above Mean Low Water....	9.1 ft.	9.0 ft.	9.2 ft.	8.9 ft.	8.8 ft.
Rise of High Water, Spring Tides, above Mean Low Water, average	9.5 ft.	9.7 ft.	9.7 ft.	9.4 ft.	9.6 ft.
Fall of Low Water, Spring Tides, below Mean Low Water, average	0.4 ft.	0.6 ft.	0.6 ft.	0.5 ft.	0.6 ft.
Rise of High Water, Neap Tides, above Mean Low Water, average.....	8.7 ft.	8.4 ft.	8.6 ft.	8.4 ft.	8.2 ft.
Height of Low Water, Neap Tides, above Mean Low Water, average	0.4 ft.	0.6 ft.	0.6 ft.	0.5 ft.	0.6 ft.
Rise of Highest Tides observed above Mean Low Water	11.3 ft.	11.1 ft.	11.4 ft.	11.1 ft.	11.0 ft.
Fall of Lowest Tides observed below Mean Low Water.....	2.5 ft.	1.9 ft.	2.1 ft.	1.5 ft.	2.1 ft.
Mean Duration of Rise.....	6^h 15^m	6^h 18^m	6^h 12^m	6^h 19^m	6^h 20^m
Mean Duration of Fall.....	6^h 10^m	6^h 07^m	6^h 13^m	6^h 06^m	6^h 05^m

For the use of mariners in the determination of the time of high and low water for every day in the year, the Coast Survey Office publishes yearly Tide-Tables for the Atlantic Coast. These may always be had at any nautical store in any of the Atlantic ports.

CURRENTS.

A tolerably full set of current observations has been made in *Portland Harbor*, and the direction and force of the tidal-current ascertained at different periods of ebb

and flood tide. The following table will show these data for each of the three stations occupied.

No.	Station.	First Quarter.		Maximum.		Third Quarter.		Flood or Ebb.
		Set.	Drift.	Set.	Drift.	Set.	Drift.	
1	One-quarter mile N W. by W. from Breakwater Lt.	W. by S. ½ S.	0.2	W S W.	0.7	S W. by W. ½ W.	0.4	Flood.
		N E. ½ E.	0.4	N E. by E. ½ E.	0.8	E. by N. ½ N.	1.0	Ebb.
2	Off Fort Preble..	N. ½ E.	0.2	N. ½ W.	0.5	N E. ½ N.	0.3	Flood.
		S. ½ E.	0.3	S. by E. ½ E.	0.6	S E. ½ E.	0.4	Ebb.
3	Three-quarters of a mile N. from Portland H'd Lt.	N W. ½ N.	0.3	N W. by N. ½ N.	0.5	N W. by W.	0.3	Flood.
		S. by E.	0.4	S E. by S. ½ S.	0.8	S E. ½ S.	0.3	Ebb.

The observations from which the above results were obtained were made, as far as practicable, when the influence of the wind was small. The bearings are magnetic, and the drift per hour is in nautical miles.

VARIATION OF THE COMPASS.

The variation of the magnetic needle in 1875 will be 13° 06′ W., with an annual increase of a little over 2′.

RICHMOND'S ISLAND HARBOR.

The southeastern extremity of **Cape Elizabeth** is a somewhat precipitous bluff, called **High Head,** and is three-eighths of a mile south of the **Light-Houses.** The south shores of the cape take a westerly direction from **High Head** for half a mile to a grassy, gently-sloping point, called **McKinney Point.**

From **McKinney Point** the shore-line turns abruptly to the northward, and sweeping gradually around by west to southwest, forms a large semicircular cove a mile and a quarter wide. It has no authenticated name, but is often called

SEAL COVE.

It has from three to six fathoms water in it, but the holding-ground is poor, and the cove full of rocks and ledges, and is, therefore, unsafe for strangers, and *Richmond Island Harbor* being so near, it is never used. Its western point, which is low, sandy, and backed by wooded slopes, is connected at extreme low tides by a sand-bar with an island eight hundred yards SSE. from it, called **Richmond Island.** The shores of *Seal Cove* are gently sloping, cleared, settled, and carefully cultivated. A summer hotel, called the **Ocean House,** stands on its eastern shore, and is a conspicuous object.

RICHMOND ISLAND

is of moderate height, bare of trees with the exception of a very small grove near the summit, and is about a mile long, and eight hundred yards wide at its widest part. Its eastern extremity, called **East Point,** is one mile S W. by W. ½ W. from **High Head,** the southeastern extremity of **Cape Elizabeth.** The island lies nearly EAST and WEST. A large house with out-buildings stands near the highest part, and is visible in nearly every direction.

East Point is low, and from it the land rises gradually to the middle of the island. The western end is bluff and precipitous, as is also part of the northern face; but as a rule the shores slope gently and gradually to the water's edge.

The southern face is indented by three coves: The most easterly, called *Broad Cove,* is contained between **East Point** and **Watts Point,** (a low bare point a quarter of a mile south of the former.) It has good water in it, but is of no importance. Next to the westward is *Clam Cove,* about midway between the east and west ends of the island. It is contained between **Adams Head** (a long narrow point making out from the south shore a quarter of a mile S W. from **Watts Point**) and **Western Head,** another long and low point a quarter of a mile WEST from **Adams Head.** **Clam Cove** is full of ledges, and is of no importance. On the western side of **Western Head** is *Muscle Cove,* deep and unobstructed, which is the westernmost of the indentations on the south shore.

There are some small coves on the northeast face of the island, but they are of no importance.

On the north side, between **Richmond Island** and the southern shore of **Cape Elizabeth,** is formed *RICHMOND ISLAND HARBOR.* This, which is an excellent harbor of refuge, presents a safe anchorage with the wind from any point between **NORTH** and **S W.,** and is easily entered when vessels cannot get into **Portland.** It is a large and commodious cove, formed by the shores of the **Cape** on the north, **Richmond Island** on the south, and a long sand-spit, dry at extreme low tides, on the east. This sand-spit, when dry, connects the island with the main land.

The cove forming the harbor is a mile wide between the west end of **Richmond Island** and the main, and three-quarters of a mile wide measuring in an EAST and WEST direction. It has but few obstructions, and may be safely entered at all times. The holding-ground is good, the bottom being sand and clay.

DANGERS

IN APPROACHING AND ENTERING RICHMOND ISLAND HARBOR.

I. *Coming from the eastward.*—The first obstruction met with by vessels coming from the eastward and bound into *Richmond Island Harbor* is

WATTS LEDGE,

which lies off **Watts Point,** three-eighths of a mile from shore. The dry ledge, which is barely covered at high water, is of considerable extent, being about a quarter of a mile long. It lies close in with the shore, and the sunken ledge extends off from its eastern end, and has fourteen feet at mean low water three-eighths of a mile from shore. A *black spar-buoy* is placed in six fathoms of water off its eastern end. This buoy bears from **East Light S W. ½ S.** one mile and a half, and from the large house on the summit of **Richmond's Island** E. by S. ½ S., one mile distant. It is unsafe to go to the westward of it.

WEST LEDGE.

After passing *Watts Ledge,* the course leads along the south shore of **Richmond Island,** and there are no dangers until up with *West Ledge,* which extends off from the western end of the island nearly two hundred yards in a WEST direction, and is mostly bare at low water. The western end of the island should receive a berth of about a quarter of a mile to avoid this ledge, *which is not buoyed.*

CHIMNEY ROCK.

Rounding the western end of the island, the course leads along the north shores, and with a fair wind there are no dangers. But if obliged to beat up to the anchorage,

look out, when standing to the northward, for *Chimney Rock*. This ledge, bare at low water, lies on the north side of the channel, three-quarters of a mile NW. by W. ½ W. from the wharf on the north side of **Richmond Island**, and three-eighths of a mile (seven hundred and fifty yards) south of the main land. A small, low, grassy island, about two hundred yards long in an EAST and WEST direction, lies four hundred yards NW. from the rock. This is called **Ram Island.**

Chimney Rock lies NNE. and SSW., and is two hundred and fifty yards long. At low water the bare rock is over one hundred yards long. A rock with seven feet at low water lies off its northeastern end at a distance of one hundred and fifty yards. *A black spar-buoy* (marked No. 3) is placed in three fathoms of water on the southeastern end of the ledge.

THE BROTHERS.

Nearly a quarter of a mile EAST from **Ram Island** lie three small bare rocks surrounded by ledges, called the **Brothers.** They are one-eighth of a mile NE. by N. from *Chimney Rock*, and are not in the way of vessels bound in or out with a fair wind. Vessels sometimes anchor under the north shore of the harbor, and these must be careful to give both *Chimney Rock* and the **Brothers** a good berth to the westward.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING RICHMOND ISLAND HARBOR.

I. *Coming from the eastward.*—When **West Light** bears NNE., one mile and a half distant, and in sixteen fathoms water, steer W. ½ S., giving **Richmond Island** a berth of about half a mile, and carrying eight fathoms water. Continue this course until the western extremity of the island bears NNE. and there is eleven fathoms, soft bottom; then steer N. ½ W., giving *West Ledge* a berth of three hundred yards to the eastward, or the point of the island a berth of a quarter of a mile. On this course there will be nine fathoms, and when **West Light** opens to the northward of **Richmond Island** and bears ENE. steer for it, and if of heavy draught, anchor in from four to seven fathoms when the wharf bears EAST. If of light draught, continue the ENE. course toward the head of the cove, and anchor at pleasure.

The bottom is of clay, with a crust of coarse sand from six inches to a foot in thickness.

With the wharf bearing S. by E., good anchorage will be found in ten feet at low water on the above course.

DANGERS
IN APPROACHING AND ENTERING RICHMOND ISLAND HARBOR.

II. *Coming from the westward.*—Vessels bound into *Richmond Island Harbor* from the westward will find no obstructions in the way unless beating to windward, when look out for the

OLD PROPRIETOR,

which is bare at half-tide, and lies nearly two miles W. ½ N. from the western end of **Richmond Island.** The bare ledge should receive a berth of at least two hundred and fifty yards.

A *black spar-buoy* (marked No. 1) is placed in three fathoms on the southeastern side of the ledge.

SAILING DIRECTIONS.

Coming from the westward.—Bring **West Light** to bear ENE. and the house on **Richmond Island** to bear E. by N. ½ N., distant three miles. Then steer for the Light-House ENE., which course will lead to the anchorage.

This course passes three-quarters of a mile to the southward of the *Old Proprietor* and three hundred and fifty yards north of *West Ledge.*

LIGHT-HOUSES.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s			Feet.	
Cape Elizabeth E. Lt.	43 33 56	70 12 01	4 40 48.1	Fixed.	.....	143	18
Cape Elizabeth W. Lt.	43 33 50	70 12 09	4 40 48.6	Revolv.	1^m 00^s	143	18

TIDES.

Corrected Establishment of Richmond's Island	11^h 30^m
Rise of Highest Tide observed above Mean Low Water	10.42 ft.
Fall of Lowest Tide observed below Mean Low Water	1.58 ft.
Fall of Mean Low Water of Spring Tides, above Mean Low Water	1.28 ft.
Height of Mean Low Water of Neap Tides, above Mean Low Water	0.82 ft.
Mean Rise and Fall of Tides	9.16 ft.
Mean Rise and Fall of Spring Tides	11.0 ft.
Mean Rise and Fall of Neap Tides	7.60 ft.
Mean Duration of Rise, Reckoning from the Middle of one Stand to the Middle of the next	6^h 20^m
Mean Duration of Fall, Reckoning from the Middle of one Stand to the Middle of the next	6^h 15^m
Mean Duration of Stand	0^h 35^m

CURRENTS.

The set of the tidal-current does not exceed four-tenths of a mile per hour, and its direction in the harbor as well as outside is much influenced by the wind.

VARIATION OF THE COMPASS.

The magnetic variation was, in September, 1850, 12° 18′ W. The annual increase is about 3′, which gives, for 1875, 13° 20′ W.

SACO BAY.

Three miles west of **Richmond Island** is **Prout Neck,** the northern point of *Saco Bay.* This bay lies **NORTH** and **SOUTH,** and is six miles long, and in shape is nearly a semicircle. Its shores are low, generally well wooded, and thinly settled except at its southern headland, called **Fletcher Neck,** where there is quite a village. *SACO RIVER* (upon the banks of which are built **Saco** and **Biddeford,** two important manufacturing towns) empties into this bay just to the northward of **Fletcher Neck.**

There are a number of small islands in *Saco Bay*—some near **Prout Neck**; but the greater number in the southern part of the bay, near the entrance to *Saco River.*

PROUT NECK,

the northernmost point of this bay, is a peninsula or neck of land extending in a southerly direction from the main land. It is three miles west of **Richmond Island** and a little over five miles from **Cape Elizabeth.** The land is low, and the centre of the **Neck** is

occupied by a thick grove of spruce and fir. The rest of the surface is dotted thinly with various kinds of trees. Seen from the westward, one or two houses and some cleared land show on its western shore.

On the western side of **Prout Neck** empties *DUNSTAN RIVER*, a small shallow stream of no commercial importance, and nearly dry at low water. Its shores are low and sandy, with a thin growth of spruce, pine, and other trees scattered along their length.

From the mouth of *Dunstan River* a smooth sand-beach, backed by low thinly-wooded and grassy lands, extends in a W. by S. direction for two miles to *LITTLE RIVER*, another small shallow stream, almost entirely bare at low water. On the south shore of this river pine and spruce woods begin, and the shore, faced by a fine white beach, runs S W. for two miles to another small inlet, called *Goose Fair Creek*.

Three-quarters of a mile S W. from *Little River* are the large hotels and other houses of the summer resort known as **Old Orchard Beach.** These houses, being painted white, form prominent land-marks seen against the dark green woods behind them. The beach is extremely white.

From *Goose Fair Creek* the shore-line runs S. ½ W. for a little over two miles, still preserving the same character—a fair white beach backed by wooded land—to the entrance to

SACO RIVER.

The mouth of this river will be recognized by a long granite pier or breakwater extending off from the north shore in an E. by S. direction for eleven hundred yards. The entrance is between this breakwater and two small islands, bare of trees, which lie off the north shore of **Fletcher Neck.** The easternmost of these has on its summit a large round tower of rough stone, surmounted by a cap; it is called **Stage Island,** and the tower is called **Stage Island Monument.** The small round islet to the westward of it is **Basket Island.**

Saco River is a little over three hundred yards wide at its mouth. The north shore at the mouth is simply the white sand point which forms the southern end of **Ferry Beach. Ellis Point,** half a mile above, is wooded with spruce, and has two or three houses on its extremity; but thence to **Ferry Wharf,** nearly three-quarters of a mile from the mouth, the shore is composed of meadow-grass and marsh.

The south shores are higher, averaging forty or fifty feet above high-water mark; but they rise very gently, and do not attain that height for two or three hundred yards back. They are quite thickly settled.

The course of the lowest reach of *Saco River* from the mouth to **Ferry Wharf** is W N W.; the distance is three-quarters of a mile. Just above this wharf the river contracts to a width of less than one hundred yards and turns N N W., running, with deep water and some velocity, about four hundred yards to **Chandler Point,** on the eastern shore of the river. The shores are partly wooded and partly grassy, with occasional houses, warehouses, and shanties on the banks.

At **Chandler Point** the river widens out to about six hundred yards with a very shallow channel, and takes a general course W N W. for a little over two-thirds of a mile to **Johnston Wharf,** which is the westernmost of the two large wharves on the south shore. On the north side much of the width of the river is occupied by salt meadow. Both shores are wooded.

Above **Johnston Wharf** the stream contracts to a width of one hundred and fifty yards and takes an abrupt turn to the northward. Thence with various turns and windings it runs for three-quarters of a mile (W N W. being the general direction) to the

eastern extremity of a long, narrow, wooded peninsula, called **Thunder Island.** This peninsula lies about EAST and WEST. About midway of its length, on the south side, is a large pier or wharf, called **Chase Wharf.** On its western extremity is a rectangular pier, called **Thunder Island Pier.** Here the river takes a short turn to the northward, and then runs in a N W. by W. direction for two-thirds of a mile to the towns. Its greatest width between **Biddeford** and **Saco** is a quarter of a mile.

One-third of a mile above **Thunder Island Pier**, and opposite to **Brickyard Wharf** on the **Saco** side, four wooded islets lie in the middle of the river. They are joined to each other by marsh so as to form one island, lying W N W. and E S E., and about four hundred yards long. This island divides the channel. That which passes to the right and along its northern shore is the deeper of the two. It leads directly to **Saco**; but both channels unite by a passage on the western side of this island, so that vessels, especially steamers, may go either way. The channel leading to the left, along the south shore of the island, is shallower than the northern passage and leads to **Biddeford.** Vessels may use the northern channel, if bound to **Biddeford**, until past the island, and then, skirting its western end, steer over for the town. In this course there will be not less than three feet at mean low water, with a mean rise and fall of eight and a half feet.

Saco upon the north or right bank and **Biddeford** upon the south or left bank are both manufacturing towns of considerable importance. There is but little commerce. Vessel come with coal and some with lumber. Others load with granite at the quarries near **Thunder Island.** But of regular commerce there is scarcely any. Goods are mostly shipped by railroad.

The whole distance by the river from the mouth to the towns is a little over three nautical miles.

FLETCHER NECK.

From the mouth of *Saco River* the north shore of **Fletcher Neck**, which is low, thinly wooded, and faced by a sand-beach, extends in a southeasterly direction a mile and a quarter to the entrance to *BIDDEFORD POOL.* Back of the low lands the main shore of the **Neck** is higher, cultivated, and thickly settled. Seen from the bay, the heights seemed crowned with houses.

The entrance to *Biddeford Pool* is an inlet not quite a hundred yards wide, which cuts into the north shores of the **Neck** between the village called **The Pool,** on the east, and a rocky head, bare of trees, but having several houses on its summit, on the west. The inlet retains its narrow limits for about three hundred yards, and then suddenly widens out into a broad bay three-quarters of a mile in diameter, most of it, however, bare at low water. This is *BIDDEFORD POOL.* Secure anchorage may be found in it for light-draught vessels in all winds, and even vessels of comparatively heavy draught (say twelve feet) may lie afloat at low water just inside the inlet.

The village is built upon the eastern end of the **Neck**, close to the shores of the *Pool.* Its only importance is derived from its advantages as a seaside resort. A large hotel occupies a prominent position facing the outer harbor, and during the season is usually crowded with guests.

Eastward of the village to **Holman Point,** the eastern extremity of the **Neck,** the land is bare of trees, rocky, and barren. Some attempts at cultivation have been made, but with little success. Dangerous ledges and rocks lie off **Holman Point,** and it is not safe to approach it from the southward.

ISLANDS IN SACO BAY.

The most prominent island in this bay lies off the entrance to **Saco,** and is called

WOOD ISLAND.

It is half a mile to the northward of **Holman Point** and four and a half miles S S W. from **Prout Neck.** It is low, and lies EAST and WEST; is wooded with spruce and fir near the middle, and is about eight hundred yards long. On its eastern extremity is

WOOD ISLAND LIGHT-HOUSE,

which consists of a white tower connected with the keeper's dwelling (which is painted brown) by a wooden porch. The tower is forty-seven feet high, and shows a revolving red light of the fourth order of Fresnel from a height of sixty-two feet above sea-level, and visible thirteen miles at sea. The position of this **Light-House** is

Latitude - - - - - - - - 43° 27′ 23″ N.
Longitude - - - - - - - - 70° 19′ 45″ W.

It bears S W. ¾ W. from **Cape Elizabeth Lights,** distant eight miles and a half.

A fog-bell, struck by machinery, is placed near the **Light-House,** and will be sounded two blows in rapid succession, then a pause of twenty-five seconds, followed by a single blow, and so on, alternately, during thick and foggy weather.

Wood Island lies between the two channels leading into *WINTER HARBOR* and *Saco River.* Over three fathoms water is found on both sides of the island, but the channel on the north side is the deepest, having not less than six fathoms.

Winter Harbor is contained between **Fletcher Neck** and the islands lying north of it, including **Wood Island.** It is a comfortable anchorage except in northerly winds, but in such a case vessels run into the *Pool* for safety.

NEGRO ISLAND.

Two hundred and fifty yards west of the western end of **Wood Island** lies a small, low, rocky island, called **Negro Island.** At low water a bare ledge connects it with **Wood Island.** Its surface bears a scant growth of grass and affords subsistence to a few sheep.

Eight hundred yards west of **Negro Island** is

STAGE ISLAND,

rocky, about four hundred yards long, and entirely bare of trees. It lies E N E. and W S W., and upon its northeastern end is built a gray stone monument forty feet high surmounted by a circular cap. This is a day-guide to *Winter Harbor.* The channel for vessels coming from the northward leads between **Stage Island** and **Negro Island.**

There is a large dwelling-house and out-building on the southwestern end of **Stage Island.** At this point a bar of shingle extends across to the shore of **Fletcher Neck** and at low water joins it to the island.

BASKET ISLAND.

A quarter of a mile WEST from **Stage Island** lies a small, round, grassy islet, called **Basket Island,** about a hundred and fifty yards in diameter, and joined at low water to the **Neck.** A tripod is built (1871) upon this island, which will serve to distinguish it. It is a little over five hundred yards from the shore of the **Neck.**

Two thirds of a mile NORTH from the middle of **Stage Island** is another small island, called

RAM ISLAND,

oval in shape, lying EAST and WEST, and about a hundred and fifty yards long. It is low and covered with grass and bushes, but destitute of trees. **Ram Island** is surrounded by shoals.

EAGLE ISLAND.

Three-quarters of a mile NORTH from **Ram Island** lies an irregularly-shaped islet about a hundred and fifty yards in diameter, and bare of trees with the single exception

of a solitary tree near the centre, which is a prominent mark for vessels coming through the bay. This is **Eagle Island**, and lies about a mile EAST from **Ferry Beach** and six miles and a quarter W S W. from **Richmond Island.**

Two miles and a half E N E. from **Eagle Island**, and one mile and a half S. by W. from **Prout Neck**, lies

STRATTEN ISLAND,

the southernmost of two islets lying N W. and S E. from each other. It is of irregular shape, lies N E. and S W., is low and bare of trees, and nearly half a mile long. A group of houses near the southwestern end are the only dwellings upon the island.

One-quarter of a mile N W. from **Stratten Island** is

BLUFF ISLAND,

lying nearly N E. and S W., and about three hundred and fifty yards long. It is higher than **Stratten Island**, and has a grove of spruce trees on its highest part, about the middle of the island. Ledges and sunken rocks extend off from **Stratten Island** to the eastward half a mile. There is no passage between these two islets.

APPEARANCE OF THE SHORES OF SACO BAY AND THE ISLANDS, TO A VESSEL COMING FROM THE NORTHEASTWARD.

A stranger bound into *Saco River* or into *Winter Harbor*, and having come from the eastward, will, when three miles and a half S. by W. from **Cape Elizabeth Lights** and two and a quarter S. by E. ½ E. from **Richmond Island**, have **Wood Island Light** bearing W. by S. ½ S., six miles and a quarter distant. The island, though low, will be distinctly seen on clear days.

Prout Neck, with its thick grove of spruce in the centre, will be seen to the westward of **Richmond Island**, and five miles distant. Continuing the course toward **Wood Island**, when five miles distant from it there will appear on the starboard bow two islets, the nearest one being low and bare of trees, while the other has a grove of spruce and other trees near its centre. These are **Stratten** and **Bluff Islands.** Behind them, on the main land, will be discernible the hotels on **Old Orchard Beach**, and proceeding to the westward the beach itself will show as a bright white line.

When close to **Wood Island**, and about to haul up for the river or to enter **Winter Harbor, Eagle Island**, with is solitary tree, will appear well in-shore and showing against **Ferry Beach.** Behind it and on both sides of it the spires of **Saco** and **Biddeford** will appear over the trees, and here and there houses will be seen.

Stage Island Monument will be seen just to the westward of **Wood Island**, and midway between it and **Eagle Island, Ram Island** will show.

On approaching **Stage Island** the settlement of the **Pool** will appear from behind **Wood Island.** The church-tower and the hotel are the most conspicuous objects. The breakwater off the entrance to *Saco River* will show as a black line, with a **red beacon** about midway between its eastern end and the shore. The entrance to the *Pool* will be directly ahead when steering in between **Wood Island** and **Stage Island.**

DANGERS IN APPROACHING SACO RIVER, OR IN APPROACHING AND ENTERING WINTER HARBOR.

I. *Coming from the northward or eastward.*—The course in from the northward leads directly for the church-steeple in **Biddeford Pool**, and when within a mile and a half of

Wood Island there will be seen on the southwestward a *red spar-buoy*, and on the south a *black spar-buoy*. The *red buoy* is on

RAM ISLAND LEDGE,

which has seven feet at mean low water. This extensive ledge lies E. by S. from **Ram Island** and N E. by N. from **Stage Island Monument.** The buoy is placed on the southeastern side of the ledge, and is half a mile E. by S. from **Ram Island** and two-thirds of a mile N E. by N. from **Stage Island Monument.** From the buoy the ledge extends due WEST for a quarter of a mile. There is a good channel between its western end and **Ram Island**, but strangers must not attempt it.

The *black spar-buoy* is on

NEGRO ISLAND LEDGE,

which lies nearly six hundred yards N. by E. from the western point of **Wood Island**, and has nine feet of water at ordinary tides. From **Stage Island Monument** it bears E. by N. about two-thirds of a mile, and from **Wood Island Light** N W. nearly half a mile. It is a round ledge of about one hundred and fifty yards diameter, and there is excellent water between it and the island. A *black spar-buoy*, marked No. 3, is placed in four fathoms on the north side of the ledge, and vessels passing south of this ledge give the buoy a berth of an eighth of a mile (two hundred and fifty yards) to the northward.

SHARPE ROCKS.

This dangerous ledge, which is bare at half-tide, is an obstruction in the way of vessels bound into *Saco River*. It lies SOUTH from **Ram Island**, a quarter of a mile off; E. by S. from the end of the **Breakwater**, about seven hundred yards; and N. by W. ½ W. from **Stage Island Monument**, eight hundred yards distant. This ledge between the lines of three fathoms is a quarter of a mile long in an EAST and WEST direction, and two hundred and fifty yards wide in a NORTH and SOUTH direction. A *red spar-buoy* is placed on the south side of the rock, but must not be approached too closely, as the breakers extend quite up to it and in heavy weather beyond it.

SHOAL WATER SURROUNDING RAM ISLAND.

Ledges and sunken rocks render a close approach to **Ram Island** very dangerous. East of it there is a depth of twelve feet two hundred and fifty yards from the island, and bare ledges one hundred yards in-shore of that. Southeast and south of it the shoals extend nearly over to *Sharpe Rocks*, there being a rock with twelve feet three hundred and fifty yards south of the island. West of it a ledge, bare at half-tide, is found at a distance of three hundred yards. This island should never be closely approached by strangers.

After passing *Sharpe Rocks* a *black spar-buoy* will be seen ahead about a quarter of a mile off. This is *Lower Bar Buoy*, placed on the large sand-bar which obstructs the entrance to the river. It is shifted after every heavy gale, as the bar changes and shifts.

The mouth of *Saco River* is full of sand-bars and shoals, which are constantly shifting, so that no sailing directions can be given for the river. Strangers must take a pilot, always to be found at the **Pool** if one does not board them outside. The proper course, with no pilot, is to anchor in *Winter Harbor* and obtain one before attempting to enter the river.

If bound into *Winter Harbor*, after passing *Negro Island Ledge*, look out for

STAGE ISLAND POINT,

which is a long reef of rocks making out in an E. by N. direction from the eastern end of

Stage Island nearly three hundred yards. For more than half of this distance it is bare at low water, and the sunken rocks outside of the bare reef are extremely dangerous to vessels bound in with a flood-tide, as the current of flood sets directly upon them. *This point is not buoyed.* Vessels must give the island a berth of not less than three hundred and fifty yards to the westward.

When abreast of **Stage Island Point**, a *black spar-buoy* will be seen on the eastern side of the channel, a quarter of a mile off. This is on

NEGRO ISLAND BAR,

a long bar, composed mostly of shingle and mussel beds, which extends in a S W. by W. direction from **Negro Island** about three hundred yards, and is bare at extreme low tides throughout its entire length. A *black spar-buoy* is placed on its southeastern end, and must be left to the southward and eastward by vessels coming from the northward or northeastward, and to the northward by those using the passage between **Wood Island** and **Fletcher Neck.**

The eastern shore of **Stage Island** must not be approached more closely than three hundred yards, to avoid the flats.

LOBSTER ROCKS.

The whole of the northern shore of **Fletcher Neck** is lined with rocks, most of which are bare at low water, and some are out at half-tide. The most prominent are the *Lobster Rocks*, which lie off the shore opposite the village, and extend out to a distance of a quarter of a mile. There are a great many of them, all bare at low water. The most westerly rock is out at half-tide, and is called *Half-Tide Rock.* This rock had formerly a **spindle** upon it, which is much needed by vessels going into the *Pool*, as it enabled them to avoid being set upon the rocks when covered. This spindle has been carried away and has not as yet (1871) been replaced. These rocks are the only dangers in the passage into the *Pool.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING WINTER HARBOR.

Coming from the northeastward: From a point one mile and three-quarters SOUTH from **Cape Small Point**, with **Seguin Light** bearing E N E., distant four miles, in thirteen fathoms water, steer W S W., keeping **Seguin Light** on a bearing of E N E. This course carries not less than sixteen fathoms water, and leads outside of all dangers. Continue it for sixteen miles, until the *buoy* on *Hue and Cry Rocks* is exactly in range with **Cape Elizabeth East Light**, bearing N W. ½ N., distant one mile, when **Wood Island Light** will bear W. by S., ten miles distant; then steer W. by S. for **Wood Island Light.** When within two miles of it, and **Stage Island Monument** bears W. ½ S., three miles distant, steer WEST, carrying not less than five fathoms, until past *Negro Island Ledge* and **Wood Island Light** bears S E. ½ E. The church-steeple in the **Pool** settlement will then bear S W. by S. ½ S., in seven fathoms, hard bottom, and steer that course, which will lead between **Negro Island** and **Stage Island** with not less than three fathoms water, leaving the former two hundred and fifty yards to the eastward and the latter six hundred yards to the westward. There is good anchorage anywhere between **Stage Island** and **Negro Island** *Bar Buoy* for vessels of over twelve feet draught; but light-draught vessels may, when near this buoy, alter their course a little to the westward, steering exactly for the entrance to the *Pool*, and anchor anywhere between **Stage Island** and the *Lobster Rocks.*

If bound into the *Pool*, when **Wood Island Light** bears S E. ½ E. and **Stage Island Monument** S W. by W. ½ W., steer S W., leaving *Negro Island Bar Buoy* three hundred yards to the eastward and *Half-Tide Rock* one hundred and fifty yards to the southward.

When abreast of the western point of the entrance to the *Pool*, keep the middle of the passage. Anchor as soon as through. Eight feet at low water is the least found on the above courses.

The tidal-current sets with considerable velocity directly through this passage.

The course from the usual anchorage in *Winter Harbor* to the *Pool* is **S W. ½ W.** for the eastern point of entrance. When within a hundred and fifty yards of the point, keep the middle of the passage as before.

Coming along shore from **Cape Elizabeth**: When abreast of *Watts Ledge Buoy*, steer **S W.** by **W. ½ W.**, and see **Stage Island Monument** directly ahead. Continue the course for it until abreast of *Negro Island Ledge Buoy*, and **Wood Island Light** bears **S E. ½ E.**; then steer **S W.** by **S. ½ S.** for the church-spire, and follow the directions previously given.

These courses pass six hundred yards to the eastward of *Ram Island Ledge;* three hundred and fifty yards to the westward of *Negro Island Ledge;* three hundred and fifty yards to the eastward of **Stage Island Point**; and one hundred yards to the westward of *Negro Island Bar*.

No sailing directions can be given for *Saco River Entrance*, as the bar frequently shifts, and it is necessary to take a pilot.

DANGERS

IN APPROACHING AND ENTERING WINTER HARBOR BY THE PASSAGE BETWEEN WOOD ISLAND AND FLETCHER NECK.

This is an excellent channel and but little obstructed. There are two entrances, one on the north and the other on the west side of a bad sunken ledge, called *Dansbury* or *Danceberry Reef*. The first danger met with by vessels coming from the southward lies half a mile off the south shore of the **Neck**, and is called

HUSSEY ROCK.

It has seven feet at mean low water, and lies **S W.** by **S. ½ S.**, one mile and a half from **Wood Island Light**. A *black spar-buoy*, marked No. 1, is placed in eighteen feet water on the southeastern side of the ledge. Give it a berth and leave it to the southward.

Seven hundred yards **N E.** by **N.** from the *Hussey* lies a small low island, called **Sandy Island,** nearly half a mile **S W.** by **S. ½ S.** from the extreme eastern point of **Fletcher Neck, Wood Island Light** being exactly on with the point. It is surrounded by ledges and sunken rocks. Reefs extend **N E.** by **N.** from it three hundred yards, and there are many very dangerous ledges on its southern side all the way to the *Hussey*.

Three hundred and fifty yards EAST from this islet is a sunken ledge with three feet at low water, called

WHALE BACK.

It lies a mile **S S W.** from **Wood Island Light** and seven hundred yards **S. ½ W.** from the eastern extremity of **Fletcher Neck**. *It is not buoyed*, and at high water breaks but seldom except in heavy weather. Vessels should be careful in coming from the southward, when nearing **Fletcher Neck**, not to go to the westward of **Wood Island Light**, bearing **N.** by **W.**, which bearing clears all of the dangers south of the **Neck** but leads directly over *Dansbury Reef*, so that vessels from the southward intending to enter *Winter Harbor* by the passage between this reef and **Wood Island** must not stand to the westward of **Wood Island Light**, bearing **N W.** by **N.**

WASHMAN ROCK.

This rock, which is always bare, is nearly half a mile **N E.** by **E.** from **Sandy Island**; two-thirds of a mile **S.** by **W.** from **Wood Island Light**; and a quarter of a mile **S E.** by **E.**

½ E. from the extremity of **Fletcher Neck.** On its eastern side it is bold-to, but on the west side a line of reefs extends toward the point two hundred yards, and another line extends from the point toward the rock a little over two hundred yards, thus leaving a slue or very narrow passage with over three fathoms at low water between the two reefs. This passage is not available, however, on account of its contracted limits. It is very crooked, and not over fifty feet wide.

Washman Rock is not buoyed, as it always shows itself by breakers.

The western passage from the southward into *Winter Harbor* leads between *Washman Rock* and a *red spar-buoy* a quarter of a mile west of it, on

DANSBURY REEF,

or *Danceberry Reef* as it is sometimes spelled. This extensive shoal lies NORTH and SOUTH, and is three hundred and fifty yards long. The shoalest spot upon it bears S. by E. from **Wood Island Light**, half a mile distant; E. ½ N. from the extreme eastern point of **Fletcher Neck**, eight hundred yards distant; and S E. by E. ½ E. from **Stage Island Monument**, seen over **Gooseberry Island.** Spots of five, seven, nine, and ten feet at mean low water are found upon this ledge. *A red spar-buoy*, marked No. 2, is placed in five fathoms water one hundred and fifty yards south of the ledge. It is incorrectly buoyed, as the best channel is between the ledge and **Wood Island.** A *buoy, painted red and black in horizontal stripes*, has been recommended to be placed on each end of this reef.

GOOSEBERRY ISLAND

is the mass of rock three hundred and fifty yards long by one hundred and fifty wide, which lies three hundred and fifty yards NORTH from the eastern end of **Fletcher Neck** and four hundred yards south of the western end of **Wood Island.** At low water it is connected with the **Neck.** Its northeastern end is tolerably bold-to, and the channel into *Winter Harbor* leads between it and **Wood Island.**

The range of **Stage Island Monument** over the middle of this island is the mark for the shoal of *Dansbury Reef.*

The shore of **Fletcher Neck,** after passing **Gooseberry Island,** must not be approached more closely than an eighth of a mile, (two hundred and fifty yards,) to avoid several half-tide rocks which lie along shore at distances varying from fifty to one hundred and fifty yards from high-water mark.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING WOOD ISLAND HARBOR OR WINTER HARBOR BY THE PASSAGE BETWEEN WOOD ISLAND AND FLETCHER NECK.

I. *Coming from the eastward.*—Bring **Wood Island Light** to bear N W. by W. ½ W. and **Stage Island Monument** to bear W. by N. ½ N., when there will be about twelve fathoms water; then steer W. by N. ½ N., having the western end of **Stage Island** a little to the northward of this course. This course leads four hundred yards north of *Dansbury Reef* and one hundred and fifty yards north of **Gooseberry Island**; leaves *Negro Island Bar Buoy* seventy-five yards to the northward, and carries not less than thirteen feet at low water. When past this buoy steer N W. ½ W. for **Stage Island Monument**, and anchor at pleasure; or continue the W. by N. ½ N. course, and anchor according to draught; or, if bound into the *Pool*, steer S W. by W. ½ W. from the buoy, leaving **Half-Tide Rock** seventy-five yards to the southward. When the entrance is fairly open, keep in the middle of the passage, as directed above.

II. *Coming from the southward, to enter by the passage north of Dansbury Reef.*—Having steered the course N E. by N. ½ N. from **Cape Ann**, when **Boon Island Light** bears WEST, steer N. by E. until **Wood Island Light** bears N W. by N., when steer for it until within eight hundred yards, in about eight fathoms water, and the house on **Stage Island** bears W. by N. ¾ N.; then steer that course until up with *Negro Island Bar Buoy*, in about thirteen feet water, when haul up for **Stage Island Monument** and anchor as before; or if bound into the *Pool*, steer S W. by W. ¾ W., as above directed.

Having steered the course N E. ½ N. along shore inside of **Isles of Shoals** and **Boon Island**, continue it until **Wood Island Light** bears N W. by N., when steer for it as before, and follow the directions just given.

2. *To enter by the western passage, between Dansbury Reef and Washman Rock:* Continue the course N. by E. from off **Boon Island** until **Wood Island Light** bears N. by W. ½ W., and in twenty-two fathoms water, when steer N N W., which course will be directly for the house on the south shore of **Wood Island**, and will carry not less than six fathoms water. Continue this course until within two hundred yards of the shore and **Stage Island Monument** bears W N W.; then steer W. by N. ½ N., and follow the directions given above.

Or coming along shore, on a course N E. ½ N. for **Cape Elizabeth**, when **Wood Island Light** bears N. by W. ½ W. steer N N W., with not less than six fathoms, until within two hundred yards of the shore, and have the **Monument** bearing W N W.; then steer W. by N. ½ N., and follow the directions previously given.

These courses lead between *Dansbury Reef* and **Washman Rock**, passing two hundred and fifty yards to the westward of the former and two hundred yards to the eastward of **Washman Rock.**

The house on the south shore of **Wood Island** is a frame building of a gray color. It stands on the shore a little more than half way from the **Light-House** to the western end of the island, and cannot be mistaken, as it is the only house besides the light-keeper's on this shore.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
Wood Island Lt.	43° 27′ 23″	70° 19′ 45″	4^h 41^m 19^s	Rev., red.	1^m 00^s	62 ft.	13

TIDES.

	Saco Ferry.	Winter Harbor.
Corrected Establishment	11^h 6^m	10^h 52^m
Mean Rise and Fall of Tides	8.2 ft.	10.5 ft.
Mean Rise and Fall of Spring Tides	———	11.7 ft.
Mean Rise and Fall of Neap Tides	———	9.3 ft.

VARIATION OF THE COMPASS.

In September, 1850, the magnetic variation was 11° 18′ WEST, increasing about 3′ yearly, which gives, for 1875, variation 12° 40′.

DESCRIPTION OF
COAST BETWEEN FLETCHER NECK AND CAPE PORPOISE.

From **Holman Point** the shore takes a general course S W. ½ W. for six miles to **Cape**

Porpoise, under which is the first harbor met with south of *Winter Harbor*. The shore-line is much indented by coves and inlets, and several islands lie close in with the main land.

HOYT NECK

is the first point of land to the southward of **Fletcher Neck**. It is a low, grassy point, about twenty feet high, and bare of trees, which lies S W. by W. from **Holman Point**, three miles distant. The shores between these two points are low and bare, being mainly formed by the narrow strip of beach separating *Biddeford Pool* from the sea. Near the **Neck**, however, wooded lands show over the shores, which do not in any case rise higher than twenty feet above sea-level.

A little over half a mile below **Hoyt Neck** is *CURTIS COVE*, a small, nearly circular cove with tolerably good water, but of no importance. Its northern shores, formed by the neck of land which separates it from the small cove under **Hoyt Neck**, are wooded with a variety of trees. The south shores are bare of trees except a grove of spruce near the southern end.

Curtis Cove is separated from

LITTLE RIVER

by a neck of land, partly cleared and partly wooded, called **Cleave Neck.** This land is low, and as stated above is mostly cleared. A grove of trees, mostly spruce, occupies its southern face. Several houses are seen near its northern end on the south shore of *Curtis Cove*, and another house near the extreme southern point of the mouth of *Little River*.

Little River empties into the northeastern part of *GOOSE FAIR BAY* two miles and three-quarters to the northward of **Cape Porpoise** and four miles to the southward of **Fletcher Neck.** It is a narrow and shallow stream, about fifty yards wide at its mouth, but widening to over one hundred yards a short distance above. Its general course is about N N E. between marshy banks. It is of no importance.

Two hundred and fifty yards south of **Cleave Neck**, with which it is connected at low water, lies a low islet with one small grove of spruce upon it. This is

TIMBER ISLAND,

lying **NORTH** and **SOUTH**, oval in shape, and a quarter of a mile long. It is surrounded by ledges, and is connected at low water with **Cleave Neck** by a narrow ledge and a bar of bare shingle. This island forms the northeastern boundary of

GOOSE FAIR BAY,

an indentation in the shore extending from **Timber Island** to *Goose Fair Creek*, one mile and a half to the southward. This bay is of little importance. Its shores are low, the northern part wooded, the southern half grassy and backed by woods. The wooded land back of the shore-line is from forty to sixty feet high. Occasional houses are seen along the shore.

Two large bare ledges occupy the middle of this bay. The easternmost one, six hundred yards from shore and the same distance from **Timber Island**, is called *Eastern Goose Rock.* The western one is called *Western Goose Rock*, and lies six hundred yards S W. from the **Eastern Rock** and the same distance from the shore, with which it is connected at low water.

Goose Fair Creek, which empties into the sea at the southern end of this bay, is a narrow and crooked streamlet, which takes its rise in the high country back of the coast and flows through marshy land to the sea. It is very shallow and of no commercial importance. One mile and a half S. ½ E. from the mouth of this creek is

CAPE PORPOISE,

the eastern point of a barren rocky islet, called **Cape Island,** and is six miles and three-quarters S W. ½ W. from **Wood Island Light**; fifteen miles and a half S W. ½ W. from **Cape Elizabeth**; thirty-two and a half miles S W. by W. ½ W. from **Cape Small Point**; and thirty-five and a half miles W S W. from **Seguin.**

From **Boon Island Light** it bears N N E., fourteen miles distant. This cape, the first to the southward of **Cape Elizabeth,** is in latitude 43° 21′ 43″ N. and longitude 70° 24′ 38″ W. On its northern side is situated *STAGE ISLAND HARBOR;* on its southern side is the entrance to *CAPE PORPOISE HARBOR.*

These two harbors, which afford good shelter in northerly and easterly winds, are formed by a group of islands and islets lying along the main land, most of them west of the cape. Between and among these islands wind various channels, which give excellent anchorage for light-draught vessels, and tolerably good shelter even for vessels drawing from twelve to eighteen feet. The main shore-line is much cut up by long coves, which increase the size of the harbors. These coves are, however, all bare at low water. The most northerly of this group of islands is called

STAGE ISLAND.

It is one mile and three-quarters S W. from **Timber Island** and six miles SW. ½ W. from **Holman Point.** It is of irregular shape, lies N W. and S E., and is about six hundred and fifty yards long. Its western end is three hundred and fifty yards from the main land, and its southeastern point is connected at low water by a reef of rocks with a small, low, rocky islet, called **Little Stage Island.** **Stage Island** is about twenty feet high, and entirely bare of all vegetation except some small bushes and grass. On its northern side there is no passage except at high water; but the entrance to *Stage Island Harbor* is on its south side, between **Little Stage Island** and **Cape Island.**

CAPE ISLAND

is merely a mass of rock covered with a very scant growth of moss and grass. It is four hundred yards SOUTH from **Little Stage Island** and six miles and three-quarters S W. ½ W. from **Wood Island Light.** The island is triangular in shape and three hundred and fifty yards long. At low water a reef of rocks connects it with **Trott Island,** two hundred yards to the westward.

The eastern extremity of **Cape Island** is called **Cape Porpoise.** (See above.)

TROTT ISLAND,

the largest of the islands in this vicinity, lies two hundred yards to the westward of **Cape Island** and six hundred and fifty yards southwest of **Stage Island,** and forms the western shore of *Stage Island Harbor.* It lies NORTH and SOUTH, is about half a mile long, and its greatest width is three hundred and fifty yards. The northern end is about thirty feet high and bare of trees, but from the centre of the island nearly to its southern point there is a dense growth of low fir with a few spruce trees. At low water it is connected on the east with **Cape Island,** on the south with **Goat Island,** and on the north with

REDDING ISLAND.

This is a small, low, grassy islet, about two hundred yards in diameter, which lies nearly two hundred yards north of **Trott Island** and three hundred yards W S W. from the western point from **Stage Island.** It is two hundred yards from the main land, with which it is connected at low water, as well as with **Bickford Island,** two hundred and fifty yards W. by S. from it.

Stage, Cape, Trott, and **Redding Islands** form the boundaries of *STAGE ISLAND HARBOR*, which affords a narrow but comfortable anchorage, with four fathoms at low water, in all winds except easterly gales.

GOAT ISLAND.

This islet lies two hundred and fifty yards S W. from the southern end of **Trott Island,** with which it is connected at low water. It is a barren, rocky islet, lying EAST and WEST, and is about two hundred yards long. There is no vegetation except a little grass.

On this island, at its southwestern end, is built the **Light-House** known as

GOAT ISLAND LIGHT,

or **Cape Porpoise Light,** a white stone tower twenty-five feet high, showing a fixed white light of the sixth order of Fresnel from a height of thirty-eight feet above sea-level. The keeper's dwelling is about one hundred and fifty feet to the northward of the tower, and is connected with the latter by a wooden covered walk. House and walk are painted brown.

This light is visible eleven miles in ordinary weather. It is in

Latitude - - - - - - -	43° 21′ 26.8″ N.
Longitude - - - - - - -	70° 25′ 31.3″ W.

Goat Island Light is the guide to *Cape Porpoise Harbor*, the entrance to which is on the south side of **Goat Island.** The light bears from

	Miles distant.
Wood Island Light, S W. ¼ W.	7¼
Cape Elizabeth, S W. ½ W.	16
Cape Small Point, S W. by W. ¾ W.	33
Seguin Light, W S W.	36
Boon Island Light, N N E.	14½
White Island Light, (**Isle of Shoals,**) N E. by N.	25

FOLLY ISLAND.

Three hundred and fifty yards W S W. from **Goat Island** is an islet formed entirely of sand, pebbles, and loose stones, and destitute of grass or trees. It lies nearly NORTH and SOUTH, and is about two hundred yards long. The entrance to *CAPE PORPOISE HARBOR* is between this island and **Goat Island,** but the passage is so contracted by the rocks which extend off from both islands as to make it somewhat difficult of approach. Long reefs extend from the southern end of **Folly Island** S. by W. seven hundred yards, and for half that distance are bare at low water. Heavy breakers are almost constant upon this point, which is known as **Folly Island Point.**

A little over two hundred yards WEST from **Folly Island** is

GREEN ISLAND,

a low islet, composed of sand and pebbles, and two hundred and fifty yards long. It lies NORTH and SOUTH, and is surrounded by ledges. There are half a dozen spruce trees near its southern end and a group of fir in the centre, but the rest of the island is bare.

There is a passage for light-draught vessels into the harbor between this island and **Folly Island** at high water. But it is so narrow and obstructed by rocks as to render it highly dangerous for strangers.

BASS ISLAND.

Two hundred and fifty yards NORTH from **Green Island** is a low sandy island about three hundred yards long, called **Bass Island.** It has a single spruce tree upon it, but is otherwise bare. At low water the passage between it and **Green Island** is contracted to about thirty yards, and at extreme low tides the two islets are joined by a sand-bar.

Bass and **Green Islands** form the western boundaries of *Cape Porpoise Harbor.*

VAUGHAN ISLAND

lies close in with the main land of **Kennebunk**, from which it is separated by a passage about fifty yards wide leading into *Turburn Creek.* It is triangular in shape, about a third of a mile long in an EAST and WEST direction, and its southern point is a quarter of a mile WEST from **Green Island.** A reef extends from this point S. by W. half a mile, and for nearly six hundred yards of this distance is bare. Heavy breakers are constant on this point, which is called **Vaughan Island Point.** There is a channel for light-draught vessels at high water between **Green** and **Vaughan Islands**, but it is not safe for strangers.

Vaughan Island is low, and bare except for one or two trees near its southern end, and a small grove on the extreme western end of *Turburn Creek.*

BICKFORD ISLAND

is situated at the northern extremity of *Cape Porpoise Harbor*, and connected with the main land by a causeway eighty yards long. It is oval; lies NORTH and SOUTH; is two hundred and fifty yards long, about twenty feet high, bare of trees, and has upon its summit a group of houses. There is a large fish-house near the south end, and several wharves on the southwestern end of the island.

NIGGER ISLAND.

About one hundred yards S W. from **Bickford** is a low bare islet, one hundred and fifty yards long, called **Nigger Island.** It lies one hundred and fifty yards from the main shore, exactly opposite the mouth of the long narrow cove leading up to the settlement. This island, with **Bickford**, forms the northern boundary of the harbor proper.

The main land is, as before remarked, much cut up by coves and other indentations. The first of these, called *Sampson Cove,* opens into the land about two-thirds of a mile to the southward of *Goose Fair Creek* and W N W. from **Stage Island.** It has an average width of two hundred yards, and terminates at the back of the village, but is entirely dry at low water, and fast filling up with salt meadow.

One-third of a mile to the southward of this cove is the second indentation, a long narrow cove running in a northerly direction for a third of a mile with an average width of two hundred yards. The village or settlement of **Cape Porpoise** is built upon the banks and at the head of this cove, which is called *Porpoise Cove.* The neck of land which separates this from *Sampson Cove* to the northward is thirty feet high, cleared, and occupied by a part of the village. A grove of trees is near its northern end. A very conspicuous house with a chimney at each gable is situated on the southern end of the **Neck**, and is a good land-mark. It is known as **Stone's House.**

A low narrow neck of land, cleared and settled, separates this cove from another, called *Ellison Creek,* which makes in to the northward about a third of a mile with an average width of one hundred and fifty yards. It is bare at low water; its western shores are about twenty feet high and mostly cleared, but there are a few scattered trees.

Three-quarters of a mile S W. from the mouth of *Ellison Creek*, and on the western side of **Vaughan Island**, makes in *Turburn Creek*, which, like the others, is of little importance. It runs nearly north and south for about half a mile, but is narrow, crooked, and nearly all bare at low water. Its shores are higher than those to the eastward, being in some places sixty feet high. They are nearly all cleared, but have occasional groves of spruce, pine, oak, and other trees.

CAPE PORPOISE HARBOR.

This harbor of refuge, as mentioned on page 669, is bounded by the main land and **Nigger** and **Bickford Islands** on the north; **Trott Island** on the east; **Goat, Folly,** and **Green Islands** on the south; and **Bass Island** and the main land on the west. Thus is formed an inlet of very irregular shape, with a narrow and difficult channel and a very contracted anchorage, most of the harbor being dry at low water.

Though with such disadvantages this harbor is of great importance to vessels of light draught when caught out in heavy or threatening weather. The holding-ground is good, and should there be doubts of tackling holding out in a very heavy gale you may safely slip and run upon the flats. These are of soft mud and sand, and a vessel can lie aground upon them with entire safety.

The anchorage is so contracted that in the fishing season it is almost impossible to get a berth. The fishermen have their moorings, which occupy almost all of the channel, and coasters or other strangers coming in must anchor so close to each other that fouling is the almost inevitable result.

APPEARANCE OF SHORES OF CAPE PORPOISE HARBOR, TO A VESSEL COMING FROM THE NORTHEASTWARD.

The usual course pursued by coasters bound to *Cape Porpoise Harbor* is S W. ¼ W. from **Cape Elizabeth.** On this course, when four miles below **Fletcher Neck, Cape Island** will be seen bearing W. by S. ¼ S. It will appear as a bare rocky islet about two miles and a half off, and destitute of all growth but a little grass and a few bushes. These evidences of vegetation will not be visible until close to the cape. The **Light-House** will not be seen until one is a little more to the southward, when it will open from behind the southern end of **Cape Island,** and will appear as a **white light-tower** with a brown dwelling-house close to it and connected with it by a covered way, also painted brown.

The thick growth of fir and spruce which appears behind and a little to the northward of **Cape Island** is on **Trott Island,** the bold, bare, northeastern point of which will show almost in range with the southern point of the high, rocky, and bare island bearing **WEST.** This latter is **Stage Island.** The large house which will show between these two points, on a high hill inside the harbor, is on the main land, and is called **Stone's House.** The main land will only be seen at intervals as it opens out from behind the islands. The open space, with partly-cleared and partly-wooded land behind it, which appears between **Stage Island** and **Cape Island,** is the entrance to *Stage Island Harbor.* After passing the cape and **Trott Island,** and arriving off the entrance to the harbor of **Cape Porpoise,** the two small islets to the left of the **Light-House** are **Folly** and **Green Islands,** respectively. The open space between **Folly Island** and the **Light-House** is the harbor entrance. A very little to the westward of the light **a rude pile of stones, surmounted by a pole,** erected upon a large bare ledge, will be seen. This is the **Pilot Beacon** on *Beacon Ledge.* This beacon was erected by the fishermen of the place for their own convenience. **Stone's House,** and **Bickford Island** with the houses upon it, will appear close to the western shore of **Trott Island**; and the houses constituting the village dot the main land to the westward. The low, bare, rocky islet which will appear well to the westward of

Green Island is **Bumpkin Island.** A *red spar-buoy* will show on the eastern side, nearly in range with the **Light-House.** This is on the *Old Prince,* the most dangerous of the obstructions in the entrance to the harbor. On approaching nearer, another *red spar* will show itself close to the western point of **Goat Island.** This is on *Goat Island Point,* a ledge dry at low water, which makes off from this island to the very edge of the channel.

DANGERS

IN APPROACHING AND ENTERING CAPE PORPOISE HARBOR.

Coming from the northward and eastward: Vessels coming from the northward and eastward must be careful to avoid

FOLLY ISLAND POINT,

which makes off to the southward from **Folly Island** to a distance of over a third of a mile. This is a most dangerous ledge, and vessels beating in or out must be careful not to approach it too closely. It is rarely that it does not break on this point in two fathoms. The current of flood also sets strongly upon it, and *it is not buoyed.*

THE OLD PRINCE

lies on the eastern side of the entrance, and has five feet at mean low water and three at the lowest spring tides. It extends in a NORTH and SOUTH direction, and is a little over two hundred yards long. The shoalest part of this ledge bears S E. ½ S. from **Goat Island Light,** distant nearly four hundred yards, and S W. ½ W. from the southern point of **Cape Island,** distant three-eighths of a mile, (eight hundred yards.) A *red spar-buoy,* marked No. 2, is placed in five fathoms water on the southern end of this ledge and one hundred yards SOUTH from the shoalest part.

Two hundred yards EAST from the southern end of **Folly Island** is a shoal spot with thirteen feet at mean low water. To avoid this and the other shoals and rocks east of **Folly Island** vessels must, after passing the *Old Prince Buoy,* steer nearly for the *red buoy* on *Goat Island Point,* and must be careful *not to bring this buoy and the* **Pilot Beacon** *in range,* but keep them well open until almost up with the buoy.

GOAT ISLAND POINT

is a ledge of rocks bare at half-tide, which extends off W S W. from the southwestern point of **Goat Island** to a distance of one hundred and fifty yards. *A red spar-buoy* is placed on its western point, which is extremely bold-to. The buoy is not two yards from the bare rocks at low water, but is in four fathoms water, and may be passed close-to by leaving it to the eastward.

After passing this point the channel becomes extremely narrow, running between dry flats and ledges in the direction of **Bickford Island.** To keep in the deepest water it is necessary to give the **beacon** on *Beacon Ledge* a berth to the eastward of a hundred and fifty yards.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CAPE PORPOISE HARBOR.

I. *Coming along shore from the northeastward.*—Steer S W. ½ W. from **Cape Elizabeth,** carrying not less than ten fathoms, and passing a mile and a half outside of **Wood Island** in about twenty-five fathoms; and when **Goat Island Light** bears N W. by N. ½ N., a mile and a half distant, with twenty-four fathoms water, steer N W. ½ N., leaving the *red buoy on the Old Prince* seventy-five yards to the eastward, *Folly Island Eastern Point* two hundred and fifty yards to the westward, and *Goat Island Point Buoy* close to the

eastward, and carrying not less than five fathoms up to the latter. When past this buoy and the **Light-House**, and the latter bears E. by S. ½ S., with thirteen feet, soft bottom, steer N. ½ W. for **Stone's House**, and anchor abreast of the beacon, or when it bears E. by S. The best water at this anchorage is fifteen feet at mean low water, but is confined to a very narrow slue.

Or, if the weather be mild, round *Goat Island Point Buoy* and steer for the beacon, and anchor with the light bearing E. by S. ½ S. In very heavy weather it is best to run upon the flats, where lie aground at half-tide, soft muddy bottom.

II. *Coming from seaward.*—Bring **Wood Island Light** to bear N. by W., six miles distant, and **Goat Island Light** W. by N. ½ N., distant seven miles, and with forty fathoms water, and steer W. ½ N., carrying not less than twenty-four fathoms, until **Wood Island Light** is on with the eastern point of **Fletcher Neck** (day-time) and **Goat Island Light** bears N W. by N. ½ N., when there will be twenty-four fathoms, and **Wood Island Light** will bear N E. ½ N. Then steer N W. ½ N., carrying not less than five fathoms, and follow the directions previously given.

APPEARANCE OF SHORES OF CAPE PORPOISE HARBOR TO A VESSEL APPROACHING FROM THE SOUTHWARD AND WESTWARD.

Coming from the southward along shore: After passing **Kennebunk Point**, the most prominent object will be **Goat Island Light-House**, which will appear in range with **Trott Island**, whose wooded shores will also show to the right of it. A little farther to the eastward will appear the barren rocky shores of **Cape Island**, and to the westward **Bickford Island**, with the village behind and to the westward of it.

The settlement of the **Pool** on **Fletcher Neck** shows against the horizon to the eastward of the **Cape**, and **Wood Island Light** a very little to the eastward of the **Neck**. In the distance **Cape Elizabeth** will be seen.

DANGERS IN APPROACHING AND ENTERING CAPE PORPOISE HARBOR.

Coming from the southwestward, along shore: **Bumpkin Island**, which lies a little over half a mile S W. from **Vaughan Island**, is surrounded by ledges and sunken rocks. A long reef makes off from its southern end in a southwesterly direction for three hundred and fifty yards, and is called

BUMPKIN ISLAND SOUTHWEST LEDGE,

a very dangerous reef; but many of its rocks are bare at low water, and so indicate its presence at all times of tide. *It is not buoyed.* Vessels to avoid it must not approach the island from the southward nearer than a third of a mile, or seven hundred yards.

BUMPKIN ISLAND EAST LEDGE

extends off from **Bumpkin Island** due EAST for three hundred yards, and has on its extremity a rock bare at half-tide, which serves to mark the eastern boundary of the ledge, which would otherwise require a buoy. Vessels must, in tacking to windward, always give **Bumpkin Island** a good berth to avoid this reef.

VAUGHAN ISLAND POINT.

Southward from the end of **Vaughan Island** a long line of rocks extends for half a mile. For six hundred yards of this distance the reef is bare at low water, and two feet at mean low water is found seven hundred yards (or one-third of a mile) from the island.

This reef is known as *Vaughan Island Point*, and heavy breakers constantly roll in upon it, even in the smoothest weather. *It is not buoyed*, and must be carefully avoided by vessels coming from the southward, as it is almost directly in the way.

FOLLY ISLAND POINT.

From the southern end of **Folly Island** a long point extends S. by W. for a third of a mile. Between five and six hundred yards from the island, on the line of this ledge, there is a depth of but four feet, and, as the rocks are steep, it is rarely that it does not break in two fathoms off the ledge.

This is a very dangerous ledge, especially to vessels falling in with the land to the southward of the **Cape**, and great care should be taken not to get to the westward of **Goat Island Light**, bearing N. ½ W. This bearing leads clear of all dangers on the western side of the channel.

THE OLD PRINCE.

This ledge (see page 672) is on the eastern side of the entrance; has three feet at extreme low tides; lies NORTH and SOUTH, and is two hundred yards long between the lines of three fathoms. The shoal of the ledge bears S E. ½ S. from **Goat Island Light**, distant four hundred yards, and S W. ½ W. from the southern point of **Cape Island**, distant three-eighths of a mile, (eight hundred yards.)

A *red spar-buoy* is placed on the southern point of this ledge one hundred yards SOUTH from the shoalest part.

THIRTEEN-FEET SPOT.

Two hundred yards EAST from the southern end of **Folly Island** is a shoal spot with thirteen feet at mean low water. Vessels must be careful to avoid this spot by steering for *Goat Island Point Buoy* after passing the *Old Prince Buoy.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING CAPE PORPOISE HARBOR.

Coming from the southward: The course along shore from the southward, inside of **Boon Island** and outside of *York Ledge*, is N E. ½ N. On this course bring **Goat Island Light** to bear N. by W. ½ W., three miles and a half off, and **Wood Island Light** to bear N E. by N. ½ N., nine miles off, when there will be twenty-four fathoms, gravel and fine sand. Then steer for **Goat Island Light**, carrying not less than seven and a half fathoms. When past *Old Prince Buoy*, steer N W. ½ N., and follow the directions given on page 672.

To enter Stage Island Harbor, coming from the northeastward: Steer S W. ½ W. from **Cape Elizabeth** until the middle of **Stage Island** bears WEST and the middle of **Cape Island** W. by S. ½ S., with twenty-three fathoms water, when steer W. ½ S. about for the middle of **Trott Island.** On this course the least water is four and three-quarters fathoms. In passing between **Little Stage Island** and **Cape Island**, keep about midway between the two at high water, but at low water hug the low-water line on the **Stage Island** side. As soon as having passed between these two islands, haul to the northward behind **Little Stage Island**, or to the southward behind **Cape Island**, according to which side offers the best shelter. From six to eighteen feet at low water may be found in this harbor. It is unfit for strangers, and necessity only should compel such to attempt it.

Coming from the southward: A vessel bound east, and wishing, on the approach of night or heavy weather, to anchor in *Stage Island Harbor*, must, when on her course N E. ½ N., **Cape Porpoise Light** bearing N. by W. ½ W., steer N. ½ E. for **Timber Island**, carrying

not less than twenty fathoms water, until the middle of **Cape Island** bears W. by S. ½ S. and **Wood Island Light** bears N E. ½ N., with nineteen fathoms. Then steer W. ½ S., which will lead, clear of danger, about midway between **Little Stage Island** and **Cape Island**, in four and a half fathoms water; then follow the directions given above.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich Observatory.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Goat Island Light . . .	43° 21′ 26.8″	70° 25′ 31.3″	$4^h\ 41^m\ 42.1^s$	Fixed.	38 ft.	11

TIDES.

Corrected Establishment . . . . . $11^h\ 31^m$
Mean Rise and Fall of Tides . . . . . 6.0 ft.

(The above are approximate only.)

CURRENTS.

The current of flood sets in a nearly NORTH direction through the main channel into this harbor, and vessels must take care that, with a light wind and strong flood, they are not set upon the *Old Prince* or *Goat Island Point*. Vessels coming from the southward and westward must also beware of *Folly Island Point*, upon which the current of flood sets strongly.

The ebb-tide sets over toward the **Folly Island** shore, and vessels bound in or out must hug the eastern side of the channel to avoid the shallows on the western side. At half-ebb the current runs with considerable velocity, especially in the narrow passage between *Goat Island Point Buoy* and the rocks east of **Folly Island**. But vessels should not attempt to go out of the harbor with a head tide unless the wind should be fair and at least a moderate breeze. Light-draught fishermen sometimes manage with the aid of sweeps to keep off the rocks when going out under such circumstances, but no stranger should risk it.

The above general remarks are the results of casual observations made during a few days' sojourn in the harbor in the autumn of 1871.

COAST-LINE

FROM CAPE PORPOISE TO KENNEBUNK POINT.

From **Vaughan Island** the course of the shore-line is W S W. for a mile and a half to **Kennebunk Point**, the eastern point of entrance to *KENNEBUNK RIVER*. The land is of moderate height and mostly cleared near the shore-line, but the back country is wooded. There are also groves of trees here and there along the shore. Three hundred and fifty yards from the shore, and about two-thirds of a mile S W. from **Vaughan Island**, is

BUMPKIN ISLAND,

low, bare, and rocky, lying NORTH and SOUTH, and about a hundred yards long. It is surrounded by rocks and sunken reefs. There is no passage in-shore of it except for boats in calm weather.

KENNEBUNK POINT

is forty feet high and mostly cleared, but there are groves of trees, and some scattered

trees here and there on its summit. It is one mile W. by S. from **Bumpkin Island.** The *Kennebunk River* empties into the ocean on the western side of this point.

KENNEBUNK RIVER

and **Kennebunk Port** lie two miles and three-quarters W. by S. from **Cape Porpoise** and two miles and a quarter WEST from **Goat Island Light.** The harbor is a good place of refuge for light-draught vessels, but is unfit for strangers on account of its narrow entrance and the dangers which obstruct it. The river is one hundred yards wide at its mouth, where two piers have been built for the improvement of the channel. On the eastern pier there formerly stood a light-house, but this was carried away in a gale in 1869. The pier was nearly two hundred yards long. The absence of the light-house renders it unsafe in the highest degree to attempt to enter this harbor at night, as the dangerous *Fishing Rocks* lie directly in the way.

The general course of *Kennebunk River* from its mouth to the town is about **NORTH,** and the distance is about two-thirds of a mile. At the upper end of the town a bridge closes navigation. Settlements occupy both banks of the river, but the town is situated on the eastern bank. About the middle of the wharf-line two long piers extend more than half-way across the river.

There is a **Custom-house** here, as this is the port of entry for **Cape Porpoise** and vicinity.

DANGERS
IN APPROACHING AND ENTERING KENNEBUNK RIVER.

I. *Coming from the eastward.*—The first danger encountered by a vessel coming from the eastward, and falling in with the land west of **Cape Porpoise,** is the ledges making off from **Bumpkin Island.** Of these there are two.

BUMPKIN ISLAND EASTERN LEDGE

extends off from the island due EAST for three hundred yards, and has on its extreme eastern point a rock, bare at half-tide, which serves as a *buoy* or guide to show the extent of the ledge.

BUMPKIN ISLAND SOUTHWEST LEDGE

extends southwest from the southern end of the island three hundred and fifty yards. It is a very dangerous reef, and vessels to avoid it must not approach the island from the southward nearer than seven hundred yards, or a third of a mile. (See page 673.)

LITTLE FISHING ROCKS,

or *Lord Rocks* as they are often called, lie half a mile S. by W. from the **Light-House Pier.** They have two and a half feet at mean low water, and are marked by a *black spar-buoy* (No. 1) placed in four fathoms water S E. from the rocks. From the **spindle** on *Fishing Rocks* this *buoy* bears EAST, two hundred yards distant.

FISHING ROCKS.

These dangerous ledges lie S. by W. ½ W. from the **Light-House Pier,** distant nearly two-thirds of a mile, (twelve hundred yards.) Upon a rock near their eastern end, which is bare at half-tide, is placed an **iron spindle,** and from this **spindle** sunken ledges extend to the westward two hundred yards.

SEVEN-FEET ROCK.

Half a mile S E. from the **spindle** on *Fishing Rocks* lies a very dangerous sunken ledge with seven feet at mean low water. This *is not buoyed* or marked except by

breakers at low water, and vessels should carefully watch the bearings of the **pier and spindle** to avoid it. Of course at night-time it is hazardous in the extreme to approach **Kennebunk Port**, even for those well acquainted with the dangers. Were the light re-established there would be no trouble. If a vessel should be close in to **Kennebunk Point**, so as to be sure that *Little Fishing Rocks* did not bear anything to the northward of **W. by N.**, she might safely enter the river by keeping close to the point while rounding it, and anchor when near enough to the pier to obtain shelter. With a southerly breeze, she must run up the river.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING KENNEBUNK RIVER.

I. *Coming from the eastward.*—In approaching this harbor from the eastward care must be taken not to shut **Goat Island Light** in behind **Green Island**, but keep the light visible on a bearing of **N E. by E.** until off **Kennebunk Point** and the **Light-House Pier** bears **NORTH**, in about ten fathoms, hard bottom; then run for the pier until **Cape Porpoise Light** is shut in behind **Kennebunk Point**; now in about four fathoms, abreast of *Fishing Rocks*, watch carefully the bearing of the piers, keeping close to **Kennebunk Point**. If bound up the river, run in midway between the piers, after which no sailing directions can be given. A pilot can always be obtained at the mouth of the river.

With westerly winds, or **N E.** winds, this anchorage is unsafe, owing to the heavy undertow, and in such cases vessels must run for **Portsmouth**. But with the wind anywhere from **N W.** to **N.** there is comfortable shelter. Eleven feet at high water and three feet at mean low water is the best that can be taken into *Kennebunk River*.

DANGERS
IN APPROACHING AND ENTERING KENNEBUNK RIVER.

II. *Coming from the westward.*—Vessels coming from the westward must not attempt to pass inside of the *Fishing Rocks*, as, although there exists a channel to the westward, it is not safe, and it is much better to use the channel between those rocks and **Kennebunk Point**. Fishermen and others who are familiar with the approaches to this harbor do sometimes use the western channel, and if the sea is smooth they can do this without much difficulty in the day-time, but at night no one dare use this passage.

In approaching by the usual channel vessels must pass between the *Seven-Feet Rock* and *Little Fishing Rocks*, dangers already described on page 676.

After passing these the eastern channel is entered, and follow the directions given for that passage.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING KENNEBUNK RIVER.

II. *Coming from the westward.*—Bring **Boon Island Light** to bear **S. by W.** and steer **N. by E.** until within one mile of the **Light-House Pier**, in three and a half fathoms, hard bottom. **Cape Porpoise Light** will then bear **N E. by E. ½ E.**, and steer **N E. ½ N.** for **Kennebunk Point**, carrying not less than five fathoms, until the **Light-House Pier** bears **NORTH**, in six fathoms, and eight hundred yards **SOUTH** from the point, and between five and six hundred yards **E S E.** from the **spindle** on *Fishing Rocks*. Now steer **NORTH** for the piers, and follow the directions previously given.

These courses pass a quarter of a mile to the eastward of *Fishing Rocks;* between five and six hundred yards to the northwestward of *Seven-Feet Rock;* and three hundred and fifty yards to the eastward of *Little Fishing Rocks Buoy.*

It is of vital importance to a vessel approaching this harbor in the evening, or after night-fall, to save the tide, as the loss of it would involve serious delay, which, in case of bad weather coming up, might prove very disastrous.

VARIATION OF MAGNETIC NEEDLE.

In August, 1851, the magnetic variation was 11° 24′ W., with an annual increase of about 3′, making the variation for 1875, 12° 38′ W.

COAST FROM KENNEBUNK ENTRANCE, SOUTH, TO CAPE NEDDICK.

From the mouth of *Kennebunk River* the shore takes a broad curve to the westward for a little over three miles, and then turns again to the southward for three miles more; thus forming a bay five miles wide, and making into the land a mile and three-quarters measuring from a line joining its east and west points. **Kennebunk Point** is the eastern end of this bay, and a point called **Wells Neck** forms the western end.

From the mouth of the *Kennebunk*, west to **Gelaspas Point**, is a little over a mile, and the shore-line shows a low beach, backed by thick woods, for two-thirds of a mile; and then grassy land faced with rocks, and mostly cleared, for the remaining third of a mile. One or two houses and occasional groves of trees appear.

GELASPAS POINT

is a long, low, narrow point running out in a S SW. direction for a quarter of a mile from the shore. A group of bare rocks lies two hundred and fifty yards S. by E. from this point, and a large barn with cupola on top shows on the high ground to the northward.

From **Gelaspas Point** the shore has a general course west for nearly three miles to the mouth of a shallow stream, called *WEBHANNET RIVER*. The shore is a low beach backed by salt meadow, and this again by partly-cleared and partly-wooded slopes from twenty to seventy feet high. On the summit of the ridge is seen the village of **Wells**, which extends to the southward and westward for several miles.

The long sand-beach which extends from **Gelaspas Point** to **Ogunquit**, a distance of seven miles, is called **Wells Beach.**

On the western side of **Gelaspas Point** empties the *MOUSAM* or *MAGUNCOOK RIVER*, a small stream running nearly NORTH and SOUTH, and of no commercial importance. Its mouth is easily recognized by a round hillock about fifteen feet high, with a cliff-like face, which forms the eastern side of the entrance. It is the only hillock of this description between **Gelaspas** and **Ogunquit**, and is called **Great Hill.**

A mile and a quarter west of *Mousam Entrance* is the entrance to another stream called *LITTLE RIVER*. It is a very narrow and shallow streamlet, which takes its rise among the hills back of **Wells** and flows through a very crooked channel to the sea. *Little River* entrance is a little over a mile east of the entrance to *Webhannet River*.

WEBHANNET RIVER or *WELLS RIVER* is an arm of the sea which runs into the marsh-land, following the course of the beach for a mile and a half to the southwestward, and sending off many small branches which terminate at the foot of the hills. From the mouth of this river the shore takes a course about SW. by S. for two miles to **Wells Neck**, which may be known by its being the first high land southwest of *Little River*, and by the large hotel, the **Atlantic House**, built right upon the beach, half a mile to the northward of the **Neck.**

On **Wells Neck**, which is forty feet high and bare of trees, are several houses. Several ledges, bare at half-tide, lie off the shore.

From **Wells Neck** to **Ogunquit** the course of the beach is SW. by S., and the distance two miles and a quarter. The character of the shore remains the same—a long pebbly beach backed by wooded slopes, and the higher lands dotted with houses.

Ogunquit is the name of a settlement built upon the west bank of a small arm of the sea extending into the land at the southern extremity of **Wells Beach**, and running to the northeastward behind the beach nearly to **Wells Neck**. There is no harbor here, but the coast is bold-to and can be safely coasted at a distance of three-quarters of a mile in fine weather.

From **Ogunquit** the general course of the shore-line is S E. ½ S., and the distance a mile and three-quarters to **Bald Head Cliff.** The character of the shore is entirely different from that to the northward of this settlement. It is now composed of steep grassy shores, varying in height from sixty to eighty feet, and the ridges partly crowned with trees and partly under cultivation. **Bald Head Cliff** is a precipitous hill eighty feet high, and bare of trees except for a single grove of spruce half way up its northern side. The shore is very bold and steep-to.

From **Bald Head Cliff** the general course of the shore-line is S W. ½ S., a little over three miles and a quarter, to **Cape Neddick;** but it is much indented by coves, some of which afford anchorage and shelter to light-draught vessels. The character of the coast is nearly the same as that around **Bald Head**—grassy, with cliff-like faces, and the lower land backed by thickly-wooded hills. A mile and a quarter below the cliff is *POND COVE*, the first of the indentations between **Bald Head** and the **Cape**. Its shores are low, cleared, and cultivated. Two bare rocks, surrounded by ledges, lie off the mouth of this cove at a distance of two hundred and fifty yards. They are called **Pond Rocks,** or **Pond Cove Rocks.**

Partly-wooded and partly-cleared lands extend from *Pond Cove* a little over a mile to **Weare Point,** the northern point of the entrance to a nearly circular cove, called *CAPE NEDDICK ROADS.* Into this cove empties a narrow streamlet, upon the banks of which, half a mile above its mouth, stands **Cape Neddick Village. Weare Point** is low and grassy except on its summit, where there is a thick growth of oak and other trees. It is shoal in its approaches to a distance of over five hundred yards.

The southern point of the entrance to *Cape Neddick Roads* is called **Barn Point,** and is a low, grassy point about twenty feet high. Shoal water extends from it to a distance of over three hundred yards. On its south side, contained between it and **Cape Neddick**, is a large cove with from three to seven fathoms water, and entirely unobstructed, which often affords shelter to vessels in southerly winds.

CAPE NEDDICK.

This prominent headland extends out from the main shore in a S E. by E. direction for one mile. It is in

Latitude - - - - - - - -	43° 10′ 00″ N.
Longitude - - - - - - - -	70° 35′ 12″ W.

It bears from

	Miles distant.
Cape Small Point, S W. by W. ½ W.	46
Cape Elizabeth, S W. ½ W.	29
Cape Porpoise, S W. ½ W.	14
Boon Island, N W. ½ W.	5¾
Portsmouth Entrance, N E. ½ N.	8¼
Cape Ann, (**Thatcher Island,**) N. by E.	31

The northeastern face of **Cape Neddick** is somewhat steep, and the surface undulating and bare of trees. The height varies from twenty to eighty feet.

Off the eastern point of the **Cape**, at a distance of forty or fifty yards, lies an islet called **Cape Neddick Knubble.** At low water it is connected by a sand-bar with

the **Cape**, and is at no time distinguishable as separated from the **Cape** except the point of view be directly opposite the opening—that is, either **N E.** by **N.** ½ **N.** or **S W.** by **S.** ½ **S.** from it. The **Knubble** is two hundred and fifty yards long, sixty feet high at its southern end, and is rocky and bare of trees.

The anchorage is good on either side of the **Cape**. On the north side, either in the *Roads* or in the cove south of **Barn Point**, is good shelter in southerly winds, with from twelve feet to six fathoms water. On the south side is good anchorage and shelter in northerly and westerly gales, with from two to six fathoms water.

CAPE NEDDICK ROADS.

As before mentioned, (page 679,) these roads are formed by a nearly circular cove opening into the land in a northwesterly direction between **Weare Point** and **Barn Point**. It is about five hundred yards in diameter, but the anchorage, except for light-draught vessels, is narrow. The shelter, however, when once into the cove, is excellent in all northerly and westerly winds, and tolerable in southwesterly winds; but the harbor is open to the south and southeasterly breezes.

DANGERS
IN APPROACHING AND ENTERING CAPE NEDDICK ROADS.

This entrance is obstructed only by the ledges off **Weare** and **Barn Points**, respectively.

WEARE POINT LEDGES

are a number of rocks, bare at low water, extending off in a southerly direction from the point. Shoal water and sunken ledges lie outside of the bare rocks, the whole reef extending five hundred yards from shore. *It is not buoyed.*

BARN POINT ROCKS,

most of them bare at low water, extend in a **N N E.** direction from the pitch of the point three hundred and fifty yards, and always show themselves.

SAILING DIRECTIONS.

A vessel coming from the northward, desiring to enter *Cape Neddick Roads*, should steer **S W.** ½ **W.** about for the middle of the peninsula which forms the cape, and on this course, when **Boon Island Light** bears **S E.** ½ **S.**, six miles distant, with ten fathoms water, steer **N W.** ½ **N.**, keeping the light directly over the stern. When within four hundred yards of **Barn Point**, and the easternmost extremity of **Weare Point** bears **N.** by **E.** ½ **E.**, five hundred yards off, in three fathoms, steer **N.** ½ **W.** into the harbor; anchor according to draught. All the ledges that are dangerous show themselves.

If desiring to anchor between **Barn Point** *and the* **Cape**: Steer **S W.** ½ **W.**, as before, until **Boon Island Light** bears **S E.** ½ **S.**; then steer **W.** ½ **N.**, and anchor in the bight according to draught, in from two to six fathoms. This anchorage is entirely unobstructed, and the water shoals regularly and gradually to the shore.

Coming from the eastward: Run in **WEST** until **Boon Island Light** bears **S E.** ½ **E.** and there is ten fathoms water; then steer **N W.** ½ **N.** until the highest part of the **Knubble** bears **S.** ½ **E.**; then, if bound into the *Roads*, steer **N.** ½ **W.**, with the **Knubble** directly astern, and anchor according to draught. If bound into the anchorage between **Barn Point** and the **Cape**, steer **W.** ½ **N.**, as above directed.

Coming from the southward: Round **Cape Neddick** in about fifteen fathoms, giving the **Knubble** a berth of half a mile to the westward. Gradually haul to the westward after passing the **Knubble**, giving the northern shore of the **Cape** a berth of a quarter of a mile, with about nine fathoms, and run up into the bight, and anchor at pleasure. Vessels do not enter the *Roads* for shelter if the wind be from the southward.

ANCHORAGE ON THE SOUTH SIDE OF CAPE NEDDICK.

There is good shelter under the southern face of the **Cape** in all northerly, northwesterly, and westerly winds. There are no dangers. The approaches are gradual and unobstructed, and there is from two to six fathoms at the anchorage.

SAILING DIRECTIONS.

Coming from the eastward: Bring **Boon Island Light** to bear S W., four miles distant, and the eastern end of **Cape Neddick** W. ½ N., with thirty-five fathoms, and steer **WEST**, carrying not less than fourteen fathoms, until the **Knubble** bears N. ½ W., when W. by N. ¾ N. will lead in. Anchor at pleasure, according to draught, in from two to six fathoms.

Coming from the southward, off shore: Bring **Boon Island Light** to bear N E. by E. ¾ E., four miles off, and the eastern extremity of **Cape Neddick** N. ¾ W. **White Island Light** will then bear S W. ½ S., and in thirty fathoms; when steer N. by W. ½ W. This course will lead safely to the anchorage.

Or, bring the eastern extremity of the **Cape** to bear N W. by N. ¼ N. and **Boon Island Light** N E. by E. ¾ E., two miles distant, in thirty fathoms water, and steer N W. ½ N., carrying not less than twelve fathoms, until the **Knubble** bears N E. ½ E., in about eight fathoms. Then haul up toward the south shore of the **Cape**, and anchor according to draught.

Coming from the southward, inside of York Ledge: Steer N E. ½ N., midway between *York Ledge* and *Stone Rock*, passing between them in about eight fathoms, and keep about a mile and a half from shore, in from nine to thirteen fathoms, until the **Knubble** bears N. by E. and **Boon Island Light** bears E S E. Then steer N. by W. ½ W. to the anchorage.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Boon Island Light	43° 07′ 16″	70° 28′ 36″	4ʰ 41ᵐ 54.4ˢ	Fixed.	133 ft.	18

VARIATION OF THE COMPASS.

In 1867, the variation of the needle was 12° 08′ W. Approximate annual increase about 2¾′ gives, for 1875, 12° 30′ W.

FROM CAPE NEDDICK TO YORK RIVER ENTRANCE.

From the eastern extremity of **Cape Neddick** to **East Point**, the northern point of the entrance to *York River*, the course is S W. ½ W. The general course of the shoreline is, however, S S W. for a little over two miles. For a mile and three-quarters of this distance there stretches along the shore a beach known as the **Long Sand**, which runs from **Cape Neddick** to **Roaring Point**. The whole of the land back of the beach is of moderate height, and slopes gently back from the water. It is mostly cleared, settled, and under cultivation; but here and there the cleared lands are interspersed with groves of trees.

YORK RIVER.

This river, which affords an excellent harbor of refuge for light-draught vessels,

empties into the sea between **East Point** on the north and **Sweat Point** on the south. It is in

Latitude - - - - - - - - 43° 07′ 11″ N.
Longitude - - - - - - - - 70° 38′ 00″ W.

Is two miles and a half S W. ½ W. from **Cape Neddick Knubble**; six miles and a half W. by N. ½ N. from **Boon Island Light**; five miles and a half N E. from *Portsmouth Entrance;* and twenty-nine miles N. ¾ E. from **Thatcher Island Lights.**

EAST POINT

is low, and partly cleared and under cultivation. There are some trees on the higher slopes. Half a mile W S W. from it lies

SWEAT POINT,

which is forty feet high, cleared, and partly cultivated. Between the two points the river is half a mile wide.

Seven-eighths of a mile above the river mouth is **York Village,** built upon the north bank.

DESCRIPTION OF THE SHORES

OF YORK RIVER, FROM THE ENTRANCE TO SEWALL BRIDGE.

Three-quarters of a mile WEST from **East Point** a narrow island, about thirty feet high, and bare of trees, appears to occupy the middle of the river. It is not in reality an island, but a neck of land connected with the northern shore by a strip of beach about fifty yards wide, and called

STAGE NECK.

It lies EAST and WEST; is one-third of a mile (six hundred and fifty yards) long, and contracts the entrance to a width of one hundred and seventy-five yards, causing an abrupt turn in the course of the channel which, after running nearly WEST for two-thirds of a mile, on its reaching the western end of **Stage Neck** turns abruptly about N E., which course it keeps for a third of a mile, and then takes its general direction W N W. to **Sewall Bridge.**

On the western side of the **Neck** the north shore of the river is occupied by the village. The lands are low close to the shore, but behind the settlement rise to a height of one hundred feet. They are all cleared and mostly cultivated. Low and cleared lands occupy the north side of the river from the village to **Old York Village,** which comes down to the bank at **Sewall Bridge.**

On the south side the shore-line takes a nearly west course from **Sweat Point** for nearly a mile, when it turns abruptly and runs N. by E. for two-thirds of a mile, and then W N W. to **Sewall Bridge.** But the wide bay thus formed is entirely bare at low water, and is moreover occupied by several islands which, connected with each other by salt meadow, form the true shore of the river. The first of these met with by a vessel bound in lies WEST from **Stage Neck** about one hundred and fifty yards, and is called

HARRIS ISLAND.

It is low, grassy, triangular in shape, and three hundred and fifty yards long. At low water dry flats connect it with the shore. Between this island and **Stage Neck** runs the channel, which is here only seventy-five yards wide. Its course is NORTH and SOUTH for a quarter of a mile nearly, for the lowest two wharves in the village.

Two hundred and fifty yards north of **Harris Island** lies another low islet, also bare of trees, and surrounded by flats. West of it, one hundred yards distant, and connected

with it by salt meadow, is an island forty feet high, with one or two houses near its southern end and a grove of trees on its northern extremity.

Another small islet, thirty feet high and wooded, lies on the south side of the channel, opposite the mill-dam at the northern end of the village. The main shores and some of the islands are under cultivation. Where the lands are not planted they are devoted to cattle and sheep raising.

DANGERS
IN APPROACHING AND ENTERING YORK RIVER HARBOR.

I. *Coming from the eastward.*—There are no dangers in the approaches to this harbor from the northward and eastward until past **East Point**, when there will be seen near the northern shore of the river, between **East Point** and **Fort Point**, a long line of ledges and bare rocks. The bare ledge nearest to the shore and nearest to **East Point** is called

MILBURY LEDGE.

It is six hundred yards WEST from **East Point** and one hundred and fifty yards from shore. The dry part is surrounded by shoals and sunken rocks. One hundred yards WEST from it lie

THE BLACK ROCKS,

also bare at high water. These form a line or reef, which at low water is nearly three hundred yards long in an EAST and WEST direction, and are also surrounded by shoal water.

THE ROCK'S NOSE

is a ledge or reef of rocks which makes off in a northeasterly direction from the south shore of the river a third of a mile to the westward of **Sweat Point**. It extends off two hundred yards from shore, is bare at low water, *and not buoyed.* The channel between it and **Stage Neck** is one hundred and fifty yards wide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING YORK RIVER HARBOR.

I. *Coming from the eastward.*—Bring **Boon Island Light** to bear SE., **Cape Neddick** NW. by W., and **East Point** WEST, in fourteen fathoms water, and steer W. ½ S., carrying five fathoms water, until **East Point** bears NE. by N. ½ N., six hundred yards distant; when there will be five fathoms; then steer W. by N. ½ N., carrying eighteen feet water, and leaving the **Black Rocks** to the northward and **Sweat Point** to the southward. On this course, when **Fort Point** is nearly abeam and about one hundred and fifty yards off, and in about sixteen feet, soft bottom, steer W. by S. ½ S., leaving the *Rock's Nose* nearly fifty yards to the southward. After passing it, keep as nearly as possible midway between the two shores of the river, by which means passing the narrowest part of the channel in the best water, and the soundings will soon deepen to four fathoms. When the western point of **Stage Neck** bears N. ½ W., one hundred yards distant, steer nearly for the southern end of **Harris Island** until the southwestern end of **Stage Neck** bears NE. by N. ½ N., when anchor in three and a half fathoms, soft bottom; or, if bound up to the village, continue the course for the southern end of **Harris Island** until the hillock on the west end of **Stage Neck** bears NE. ½ E., and in twenty-one feet, soft bottom, when steer N. by E. until abreast of the eastern point of **Harris Island** and almost exactly midway between it and the western point of **Stage Neck**, bearing W. ½ S. and E. ½ N., respectively; then steer NE. ½ N. until the easternmost pier in the village wharf-line bears E. by N. ½ N., and haul up for it, anchoring within fifty or one hundred yards of the wharf,

in twenty feet water. Strangers must not attempt to go above this without a pilot. The chart is the best guide thus far. The channel is narrow, crooked, and has only eight feet at low water.

DANGERS
IN APPROACHING AND ENTERING YORK RIVER HARBOR.

II. *Coming from the southward, off shore.*—Vessels approaching this harbor from the southward, off shore, will first meet with

YORK LEDGE.

This dangerous ledge lies four miles and a half S. by W. from **Cape Neddick** and three miles S E. by S. from **Sweat Point.** It lies nearly EAST and WEST, and is three-quarters of a mile long; is bare at three-quarters ebb, and marked by an **iron spindle twenty-eight feet high, with an iron cage on top.** From the spindle the sunken portion of the ledge extends N E. nearly half a mile. In coming from the eastward, therefore, care should be taken to give it a good berth—not less than a mile. But vessels may pass to the southward of it, between the *Triangles* and *York Ledge.* In such a case, look out for

MURRAY ROCK,

which lies a mile and a half S W. from *York Ledge*, and has six feet at low water. This rock is a part of the *Triangles.* A *nun-buoy of the second class, painted red and black in horizontal stripes,* is placed on the northern side of the ledge in good water. The channel between *York Ledge* and *Murray Rock* is over a mile wide and perfectly unobstructed. The deepest water is midway between the two, but the **spindle** on *York Ledge* may be passed within a quarter of a mile in ten fathoms.

STONE ROCK.

After passing between the *Triangles* and *York Ledge*, the course for the mouth of *York River* leads near *Stone Rock*, a bad ledge, lying S. by W. ½ W. from **Sweat Point** one mile and a quarter, and half a mile from shore. It is dry at low water, and is marked by a *black spar-buoy* placed on the eastern end of the rock, which must be left to the westward going in.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING YORK RIVER HARBOR.

II. *Coming from the southward, off shore.*—Bring **Boon Island Light** to bear N E. by E. ½ E., distant three miles, and **Cape Neddick** to bear N. by W. ½ W., five miles, in about thirty fathoms of water, and steer N W. ½ N. for **East Point,** carrying ten fathoms water. When within twelve hundred yards of the point, in eleven fathoms, and **Cape Neddick Knubble** bears N E. by N., steer W. by N. ½ N., carrying not less than eighteen feet, and leaving the **Black Rocks** to the northward and **Sweat Point** to the southward. When the eastern point of **Stage Neck (Fort Point)** bears N. by E. ½ E., one hundred and fifty yards off, and in about sixteen feet, soft bottom, steer W. by S. ½ S., and follow the directions given above.

These courses pass a mile and an eighth to the northward of **York Ledge spindle.**

To pass between York Ledge and the Triangles: Bring **Boon Island Light** to bear N E. by N. ½ N., and **White Island Light** to bear W. by S. ½ S., in forty-three fathoms, soft blue mud, and steer N N W. for **Sweat Point.** This course leads between the two ledges with not less than six fathoms. Continue it until **Cape Neddick Knubble** bears N E. by N., with eleven fathoms water, when steer N. ½ W., carrying not less than five fathoms, until **East Point** bears N E. by N. ½ N., six hundred yards distant, and in five fathoms

water. Then steer W. by N. ½ N., with not less than eighteen feet, until **Fort Point** bears N. by E. ½ E., when there will be sixteen feet; steer W. by S. ½ S., and follow the previous directions.

These courses pass three-eighths of a mile to the southward of **York Ledge spindle** and a mile to the northward of *Murray Rock*. *Stone Rock* is left three-quarters of a mile to the westward.

DANGERS
IN APPROACHING AND ENTERING YORK RIVER HARBOR.

III. *Coming from the southward, along shore.*—Coming along shore, the first danger met with is

MURRAY ROCK,

(described on page 684,) which must be left on the eastward. It has six feet at mean low water, and is marked by an *iron nun-buoy of the second class, painted red and black in horizontal stripes*, placed on the northern side of the rock in ten fathoms water. Passing this, the channel leads between *York Ledge* and *Stone Rock*.

YORK LEDGE,

a mile and a half N E. from *Murray Rock*, is bare at low water, and is marked by a *spindle with a cage on top*. It is on the eastern side of this channel, and is not in the way except for a vessel beating to windward. It is to be left to the eastward.

STONE ROCK

lies one mile and a quarter S. by W. ½ W. from **Sweat Point** and half a mile from shore. It is bare at low water, and is marked by a *black spar-buoy* placed on the eastern end of the rock, which must be left to the westward going in.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING YORK RIVER HARBOR.

III. *Coming from the southward, along shore.*—Steer N E. by N. ½ N. for the eastern end of **Cape Neddick** until **Sweat Point** bears N N W., one mile and a quarter distant, and in eleven fathoms water, when steer N. ½ W., carrying not less than five fathoms, until **East Point** bears N E. by N. ½ N., six hundred yards distant, and there is five fathoms water; then steer W. by N. ½ N., with eighteen feet, leaving the **Black Rocks** to the northward and **Sweat Point** to the southward. Continue this course until **Fort Point** is abeam; then steer W. by S. ½ S., and proceed as before directed.

These courses pass one mile to the westward of *Murray Rock;* three-quarters of a mile to the eastward of *Stone Rock;* and a mile and a quarter to the westward of *York Ledge.*

General remarks on the channel.—Between *Stone Rock* and **Sweat Point** the shore is bold, and may be approached to within a quarter of a mile. Vessels using this harbor must remember that not over eight feet at mean low water can be taken up to the anchorage, and that only through a very narrow channel. It is important to get in with the flood-tide, as in case of getting ashore there will be a probability of early release by the rising of the tide, and the ebb sets strongly upon **Stage Neck**, causing some difficulty in rounding the western point. Care should be taken to give this point a berth of one hundred and fifty yards.

The most critical point in the channel for a vessel drawing all the water there is, is between *Rock's Nose* and the southwestern point of **Stage Neck**. Here the channel is extremely narrow, being not over thirty yards wide. The best water is in the middle of the passage.

After passing **Harris Island** the river is full of flats on both sides, and the chart will be the best guide to enable vessels to avoid them. It is not likely that a stranger will undertake to pass above the anchorage off the lower wharves without a pilot.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s		m s	Feet.	
Boon Island Light	43 07 16	70 28 36	4 41 54.4	Fixed.	.....	133	18
White Island Light	42 58 00	70 37 25	4 42 29.7	Revol.,* red and white.	0 30	87	15

* Every alternate flash red.

TIDES.

Corrected Establishment	$11^h\ 28^m$
Mean Rise and Fall of Tides	8 feet.
Mean Rise and Fall of Spring Tides	9 "
Mean Rise and Fall of Neap Tides	7 "
Mean Duration of Rise	$6^h\ 10^m$
Mean Duration of Fall	$6^h\ 18^m$
Mean Duration of Stand	$0^h\ 38^m$

Variation of magnetic needle in 1875, 12° 15′ W.

COAST FROM YORK RIVER TO PORTSMOUTH.

From *York River Entrance* to **Portsmouth** the distance is four miles and a half, and the general course of the shore is S W. ½ S.

Twelve hundred yards below **Sweat Point** is *GODFREY COVE*, a semicircular curve in the shore, which affords anchorage in fine weather for the mackerel fishermen. The shores are of the same character as those of **Sweat Point**, being of moderate height, partly cleared, and under cultivation. From *Godfrey Cove* it is one mile and three-eighths to *BRAVE BOAT HARBOR*, another small and very shallow cove. The shores between *Godfrey Cove* and this harbor are quite low, cleared, and under cultivation. The cove is of no importance, being quite shallow, as are all of the indentations between *Godfrey Cove* and the entrance to **Portsmouth**.

The land on the south side of *Brave Boat Harbor* is **Cutts Island**, composed mostly of grass-lands, although there are a few trees here and there on the surface. It is low, being in no place over forty feet high, and generally not over twenty. **Cutts Island** is separated by a shallow creek, called *Chauncey Creek*, from

GERRISH ISLAND,

which forms the eastern shores of the entrance to *Portsmouth Harbor*, lies N E. and S W., and is a mile and three-quarters long. It is of moderate height, with an undulating surface, much of which (1870) is covered with woods. Its eastern shores, viewed from seaward, show houses scattered at intervals along the coast, and here and there groups of oak, pine, and other trees. The sea-face of the island presents in two or three places a steep cliff-like formation, and rocks face the shore-line near the entrance to **Portsmouth**.

Several small rocky islets lie along the south shore of **Gerrish Island**, most of them surrounded by ledges and rocks, making the approach to the island dangerous. Indeed, vessels should give the south shore of **Gerrish Island** a berth of a mile.

PORTSMOUTH HARBOR.

The entrance to this harbor lies in latitude 43° 03′ N., longitude 70° 41′ 30″ W. It is fifty-six miles S W. by W. ½ W. from **Seguin Island**; fifty-four miles S W. by W. from **Cape Small Point**; thirty-seven miles S W. ½ W. from **Cape Elizabeth**; and twenty-five miles NORTH from **Cape Ann**, (**Thatcher Island.**)

The harbor of **Portsmouth** is formed by the lower reaches of the *PISCATAQUA RIVER*, which empties into the ocean between **Gerrish Island** on the east and **Great Island** on the west. At this point it is a mile and a quarter wide, but the width of this channel is somewhat diminished by two islets lying off the southwestern point of **Gerrish Island** at a distance of half a mile from shore. The actual channel is thus contracted to a width of five-eighths of a mile.

The course of the river from its mouth to the city of **Portsmouth** is first N. ½ E. for one mile, between **Gerrish** and **Great Islands**; then WEST for one mile and a quarter, to **Peirce Island**; and then N W. for three-quarters of a mile, to the anchorage off the town. The current is very strong and there are many eddies, owing to the abrupt turns made by the stream in its course and the numerous islands which diminish the width of its channel. There are few good anchorages except off the town or near the navy-yard, as the shores are bold-to and the bottom in mid-channel mostly rocky.

DESCRIPTION OF SHORES OF PORTSMOUTH HARBOR.

Gerrish Island has been already described. One mile and three-quarters S W. from it is a bare point of moderate height, called **Odiorne Point**, on the main land, and three-quarters of a mile SOUTH from the southern end of **Great Island**. It is tolerably bold-to, and may be approached within three hundred yards with four fathoms water.

From this point the course of the main land is N. by W. for nearly three-quarters of a mile to **Frost Point**, a steep grassy point of moderate height, with several houses on its summit. The land between **Odiorne Point** and **Frost Point** is entirely bare of trees and grassy, and the shores rise with a very gentle inclination, and are of moderate height.

Frost Point is the south point of the entrance to

LITTLE HARBOR,

an irregularly-shaped cove contained between the south shores of **Great Island** and the main land. It lies nearly EAST and WEST, and is nearly three-quarters of a mile long, with an average width of a quarter of a mile. From its western end a narrow passage leads, with many turnings among the islands, into the main channel of the river. *Little Harbor* affords a safe and convenient anchorage for light-draught vessels that may wish to make a harbor during heavy weather. Should the tide be unfavorable for reaching **Portsmouth** or the wind light, a comfortable berth may be found near the western end of the cove, about five hundred yards to the westward of **Frost Point**, in nine or ten feet at low water; the anchorage is, however, not available for vessels drawing five feet after half-ebb or before half-flood, as there is a bar with two feet at mean low water stretching from shore to shore. Vessels drawing eight feet must wait for three-quarters flood before entering. Those drawing nine feet cannot enter until high water.

On a bare rocky islet, one hundred yards SOUTH from the southeastern point of **Great Island**, is built an iron tripod beacon with lozenge-shaped top. This rock is connected at low water with the point of the island, which is called **Jerry Point**, and the beacon

is called **Jerry Point Beacon.** It is **painted red**, and the letters L. H. are marked on its top to designate the entrance to *Little Harbor*, which lies between this beacon and **Frost Point**, and is a quarter of a mile wide.

WHALE BACK.

Nearly half a mile S W. by W. from **Gerrish Island**, and three-quarters of a mile **EAST** from **Jerry Point**, is a long ledge or bare rock about an eighth of a mile long, called the *Whale Back.* It lies nearly **EAST** and **WEST**, and near its western end is built

WHALE BACK LIGHT-HOUSE,

a granite tower sixty-nine feet high, which shows a fixed light varied by white flashes from a height of sixty-five feet above sea-level. The light is of the fourth order of Fresnel, and is in

Latitude - - - - - - - -	43° 03′ 30″ N.
Longitude - - - - - - - -	70° 41′ 48″ W.

FOG-SIGNAL ON WHALE BACK.

A very little to the westward of the **Light-House** stands the **old Light-Tower upon a circular stone pier.** On top of this tower is a *fog-bell* operated by machinery. It strikes four times in a minute.

There is no passage between the **Whale Back** and the shore of **Gerrish Island.**

HORN ISLAND.

Near the southwestern end of **Gerrish Island**, and a quarter of a mile S E. by E. from it, lies a small, bare, rocky islet, called **Horn Island.** A ledge, dry at low water, connects it with the shore, and the islet is surrounded by shoals.

WHITE ISLANDS.

Five hundred yards **SOUTH** from the southwestern end of **Gerrish Island** lies a small bare islet about two hundred yards long. One hundred and fifty yards south of it is another and smaller islet. Ledges and rocks surround them to a considerable distance. These islets are called **White Islands.** The northernmost and largest lies one-third of a mile **EAST** from **Whale Back Light.** A passage with five feet at mean low water leads between these islets and **Horn Island** into the main channel, and another with the same amount leads between the **White Islands** and **Whale Back.**

WOOD ISLAND.

A quarter of a mile **NORTH** from the **Whale Back** is a low, grassy islet, lying **NORTH** and **SOUTH**, about two hundred yards long, and called **Wood Island.** It is the site of the **Quarantine Station,** (1869,) and is easily distinguished by the hospital buildings upon it. It is surrounded by shoals and ledges.

GREAT ISLAND,

which forms the western shore of the river from *Little Harbor* to **Fort Point**, is a large irregularly-shaped island, lying nearly **NORTH** and **SOUTH**, and about a mile long. Its shores are of moderate height and almost entirely bare of trees, being mostly grass-lands. **Jerry Point**, the southeastern end, is a round bare bluff of moderate height. Back of it, and to the northward, are several houses and some fruit-bearing trees.

The northeastern point is called **Fort Point** because upon it is built a rectangular fortification, called **Fort Constitution.** Seen from the entrance to the outer harbor or roads this fort and its surrounding buildings and the **Light-House** are very promi-

nent objects. On the southeastern extremity of **Fort Point**, about one hundred yards south of the fort, is built

PORTSMOUTH LIGHT-HOUSE.

The site is low and rocky, and the **Light-House** is a wooden tower, sixty feet high, and painted white. The keeper's dwelling stands about three hundred yards **WEST** from the tower, and is also white. This **Light-House** shows a fixed white light of the fourth order of Fresnel from a height of seventy feet above sea-level, and marks the entrance to the *Inner Harbor*. The river here takes an abrupt turn to the westward and the real harbor begins.

The north shore of **Great Island** is occupied by the village of **Newcastle.** Vessels may anchor close in along the front of this village, clear of the strength of the tide; but the anchorage is not nearly so good as that on the opposite shore of the river.

On the east side of the river **Gerrish Island** is separated by a wide but shallow cove from

KITTERY POINT,

a long peninsula of the main land, running in an **EAST** and **WEST** direction. Its western end, which is settled and shows wharves and warehouses along its water-front, is half a mile **N.** by **W.** ½ **W.** from **Fort Constitution** and three-quarters of a mile **N W.** from the western end of **Gerrish Island**. Five hundred yards **EAST** from the extremity of **Kittery Point**, and close to its south shore, **Fort McClary** is built, on a somewhat steep hillock. It is a little over half a mile **N E.** from **Fort Constitution.**

PEPPERELL COVE.

The wide cove separating **Kittery Point** and **Gerrish Island** terminates in *Chauncey Creek*, which, as before mentioned, separates **Gerrish Island** from the main land. This cove, which is called *Pepperell Cove*, affords a good anchorage in from six feet to four fathoms water for vessels not desiring to go up to the town. There are several islands off the western end of **Gerrish Island**, with which they are connected at low water. The westernmost of these are two small low islands, called the **Fishing Islands,** which lie **NORTH** and **SOUTH** from each other, a third of a mile from the west side of **Gerrish Island,** and are joined to it at low water by a dry flat.

One-quarter of a mile **E N E.** from the **Fishing Islands** are the **Gooseberry Islands,** a group of one small, grassy islet, and three very small, round, rocky ones a hundred yards **EAST** from it. They are all connected with the shore at low water.

One hundred and fifty yards **NORTH** from the largest **Gooseberry Island** is a bare island, two hundred and fifty yards long, with several houses upon it. At low water it forms part of **Kittery Point.** Between this and **Gooseberry Island** is the entrance to *Chauncey Creek.*

On the western side of **Kittery Point**, and separating it from the main land, called **Kittery Foreside,** is *Spruce Creek,* which empties into the river through a channel three hundred yards wide, with from four to five fathoms at mean low water. The creek widens after passing to the northward of **Kittery Point**, but the channel becomes narrower and very much shallower. A draw-bridge unites **Kittery Point** and **Kittery Foreside**, crossing the creek two hundred yards above its mouth.

Anchorage with from three to five fathoms water is found between the southwestern shore of **Kittery Foreside** and the islands which lie between it and the town of **Portsmouth**; and there are good anchorages between and among the islands themselves. Of these islands, on proceeding to the westward from **Fort Point,** first see a small round islet, called

CLARKE ISLAND,

nearly three-quarters of a mile N W. by W. from **Fort Constitution** and three-eighths of a mile WEST from **Kittery Point**. This island is bare of trees and of moderate height. On its south side it is extremely bold-to, and it is situated exactly on the edge of the main channel of the harbor, which is here only three hundred and fifty yards wide between **Clarke Island** and the north shore of **Great Island**.

Four hundred and fifty yards NORTH from **Clarke Island** lies

JAMAICA ISLAND,

sometimes called **Trefethen Island.** It is grassy, of an irregular shape, and about two hundred and fifty yards long in a NORTH and SOUTH direction. The land is low and bare of trees, and has two or three houses near its southern end. A channel one hundred yards wide separates it from the main land of **Kittery**. Here is good anchorage with three or four fathoms at low water, hard clay bottom. There is also good anchorage in the passage between **Jamaica** and **Clarke Islands**, and between the latter and the large island west of it, which is called

SEAVEY ISLAND.

This island is between seven and eight hundred yards square and of irregular shape. It is separated from **Clarke Island** by a passage three hundred and fifty yards wide, through which four fathoms of water can be taken. Its surface is hilly and undulating, grassy, but bare of trees; its southern face steep, somewhat precipitous, and very bold-to, ten fathoms being found within forty yards of the rocks. On its south side, about midway between its southeastern and southwestern points, is built **Fort Sullivan,** a small earth-work, nearly circular in form. The river here is only three hundred and fifty, and the channel only two hundred, yards wide, and the current runs with considerable velocity.

On its north side **Seavey Island** is separated from the main land of **Kittery** by a passage three hundred and fifty yards wide, through which thirteen feet at low water may be carried up to the eastern end of **Navy Island** and the back of the **Navy-yard.** This channel, which begins at **Jamaica Island**, runs along the south shore of **Kittery Foreside**, and behind **Jamaica, Seavey, Navy, Squash**, and **Badger Islands**, and joins the main channel at the west end of the last-named island, a little over a quarter of a mile east of the **Portsmouth, Saco & Portland Railroad Bridge.**

Seavey Island is separated on the west from

NAVY ISLAND

by a passage from fifty to eighty yards wide, and quite shallow. Four hundred yards above the western end of this passage it is crossed by a bridge which connects **Navy** and **Seavey Islands.** Ten feet and a half at high water may be carried from the main channel up to the bridge, and light-draught vessels are sometimes brought into this passage.

On **Navy Island** is situated the naval dock-yard of the United States, known as **Kittery Navy-yard.** It occupies the whole island, which is seven hundred yards long EAST and WEST, and nearly six hundred wide. The docks and ways are mostly on the western face of the island, while the ship-houses, &c., occupy the south and east faces. There is from four to eight fathoms water close up to the shore on the south point of this island, but all of the other sides are shoal. A bridge connects **Navy Island** with the town of **Kittery**, on its north side.

The southern banks of the river, westward from **Great Island**, are formed by a number of islands, connected with **Great Island**, with each other, and with the city of **Portsmouth** by bridges. Of these, the first to the westward of **Great Island** is

GOAT ISLAND,

small, low, and bare of trees, with several houses upon it, and two or three wharves on its north shore. It is an eighth of a mile WEST from **Great Island**, with which it is connected by a bridge. The river is three hundred yards wide between **Seavey** and **Goat Islands**. On the west, **Goat Island** is joined by another bridge to

SHAPLEY ISLAND,

small and bare, lying nearly NORTH and SOUTH, and two hundred yards to the westward. There are several houses on this island, and at low water it is joined by a dry reef to

PEIRCE ISLAND,

which is one hundred yards to the northward, and lies W N W. and E S E., off the lower portion of the town of **Portsmouth**. On its eastern end, which is a steep bluff, is built an earthwork of irregular shape, called **Fort Washington.** The main channel passes between the eastern point of **Peirce Island** and the southwestern point of **Seavey Island**, called **Pull-and-be-damned Point.** Both shores are bold-to, and the channel is deep, with a width of only two hundred and fifty yards and a strong current.

The western end of **Peirce Island** is low, bare of trees, and has one or two houses upon it. It is separated from the city of **Portsmouth** by a shallow passage one hundred yards wide. This island is also known as **Oliver** and **Amazeen Island,** these names having been given to it by those who have at different times owned it.

A small islet, surrounded by rocks and ledges, and called **One Tree Island,** lies two hundred yards NORTH from the western end of **Peirce Island.**

PUMPKIN ISLAND

lies on the north side of the channel, nearly four hundred yards WEST from **Navy Island,** and in line between it and **Badger Island.** It is nearly opposite to **One Tree Island,** and the channel between them is a quarter of a mile wide. It is surrounded by shoals and ledges.

One-eighth of a mile (two hundred and fifty yards) to the westward of **Pumpkin Island** is the eastern end of

BADGER ISLAND.

It lies EAST and WEST, about a hundred and fifty yards off the **Kittery** shore, and nearly six hundred yards WEST from **Navy Island.** It is a long and narrow island, of moderate height, a quarter of a mile long, bare of trees, and has several houses upon it. The river between **Badger Island** and the city is a little over three hundred yards wide and very deep, with hard and rocky bottom.

A small, low, bare islet, called **Squash Island,** lies one hundred yards EAST from the eastern point of **Badger Island** and the same distance from the **Kittery** shore.

The city of **Portsmouth** occupies the main land on the southern shore of the river, and the eastern shore of a large but shallow cove which makes into the southward for three-quarters of a mile. At its northwestern end a bridge connects the city with a low island, called

NOBLE ISLAND,

which lies one hundred and fifty yards northwest from the city, and on the west bank of the river, which here makes a turn nearly NORTH for about three-quarters of a mile.

Noble Island is thickly settled, and occupied by ship-yards, railway-shops, &c. The **Portsmouth, Saco & Portland Railroad** crosses it from its north to its south end, the railroad bridge connecting it with the main land of **Kittery** at its northern end.

Kittery is a village or small town, situated on the north shore of the river, directly opposite to **Portsmouth**. There is good anchorage under this shore for light-draught vessels either between **Badger Island** and **Kittery**, in from seven to fifteen feet water, or behind **Navy Island**, in from twelve to eighteen feet. The land behind the village is of moderate height, with a surface diversified by hills and valleys, by partly-cleared and partly-wooded lands, and is under cultivation to a considerable extent.

The *PISCATAQUA RIVER* here separates the States of MAINE and NEW HAMPSHIRE, **Kittery** being in the former and **Portsmouth** in the latter State.

APPEARANCE OF SHORES OF PORTSMOUTH HARBOR WHEN APPROACHED FROM THE NORTHWARD.

A vessel approaching **Portsmouth** from the northward will note the shores of **Gerrish Island** as the hilly country, mostly bare of trees, and having a few houses on its south-eastern face, which will be seen on its starboard bow. When abreast of the *red and black nun-buoy* on *Murray Rock* there will appear, just clear of the eastern shore of **Gerrish Island**, a light-house apparently rising from the water. This is **Whale Back Light-House**. On approaching the harbor it will come in range with a low islet lying to the eastward of it. This is **White Island**. The land seen behind the **Light-House** is the shore of *Little Harbor*.

Continuing the course to the southward, **Whale Back Light** will open to the eastward of **White Island**, and just clear of the western point of **Gerrish Island** will appear a **white Light-Tower** in range with a large stone fortification bearing N W. ½ W. and about two miles off. **Whale Back Light** will bear W N W., a mile and a quarter off. The fortification is **Fort Constitution**, and the light-tower **Portsmouth Light-House**. The buildings in **Newcastle** are seen just to the left of the fort and light-house, and at intervals on the course the spires in **Portsmouth** will appear still farther to the left. The low land, bare of trees, visible between **Whale Back** and the west end of **Gerrish Island**, is **Wood Island**.

Steering to the westward to open the harbor there will be seen, just clear of the west end of **Gerrish Island**, a fortification and buildings bearing nearly N N W. and over two miles distant. The land on which it is built, and that just to the westward of it, is **Kittery Point**.

When the entrance is fully open, the deep cove or bay seen on the eastern side of the river just east of the light-house is *PEPPERELL COVE*. The **red spindle** just south of the shore of **Great Island** is on the rock off **Jerry Point**, and the opening between it and the steep point to the southward is the entrance to *Little Harbor*. The course in leads directly for **Fort Point**, and after rounding that point leads to the westward directly for an irregular earth-work on a steep bluff in range with the city. The fort is **Fort Washington**, the bluff is the eastern end of **Peirce Island**, and the circular earth-work on the north bank of the river is **Fort Sullivan** on **Seavey Island**. The navy-yard is not opened from behind **Seavey Island** until abreast of **Pull-and-be-damned Point**.

DANGERS IN APPROACHING AND ENTERING PORTSMOUTH HARBOR.

I. *Coming from the northward and from the eastward.*—1. *Along shore from the northward:* A vessel coming along shore and bound into *Portsmouth Harbor* will first encounter

YORK LEDGE,

(see page 684,) which lies four miles and a half S. by W. from **Cape Neddick** and a little over five miles E N E. from the entrance to **Portsmouth.** It lies nearly EAST and WEST, is three-quarters of a mile long, bare at three-quarters ebb, and marked by an **iron spindle twenty-eight feet high, with an iron cage on top.** From this spindle the sunken portion of the ledge extends N E. nearly half a mile.

Two miles N W. from *York Ledge* is

STONE ROCK,

bare at low water, and half a mile from shore. It is three miles and a half above the southwestern point of **Gerrish Island.** A *black spar-buoy* is placed on its eastern end, and must be left to the westward by vessels bound to the southward.

THE TRIANGLES

is an extensive piece of shoal ground lying N W. and S E., two miles from the shore, and a mile and a half S W. from *York Ledge Spindle.* It runs N N W. and S S E., and is a mile and a half long. From four to six fathoms water is found upon this ledge except near its southeastern edge, where

MURRAY ROCK,

with six feet at low water, is marked by a *second-class nun-buoy, painted red and black in horizontal stripes*, and placed on the northern side of the ledge. This buoy must receive a good berth to the eastward from vessels bound to **Portsmouth** along shore.

EAST SISTER.

Two miles and a half due WEST from the *buoy on Murray Rock*, and a mile and a half E. by N. ½ N. from **Whale Back Light-House**, is the **East Sister,** a small bare rock surrounded by sunken ledges, with from three to six feet at low water. It is one-third of a mile from the shore of **Gerrish Island**, and there is a good channel one hundred and fifty yards wide between the island and the rock. Give the rock a berth of a quarter of a mile, as the shoal water extends nearly two hundred yards north and south of it.

Strangers must not attempt to use the channel between this ledge and **Gerrish Island.**

When past the **East Sister** a *red spar-buoy* will be seen on the southwest, about three-quarters of a mile distant. This is on

WEST SISTER, OR BRANSCOMB ROCK,

also bare at low water, and surrounded by sunken ledges. It is half a mile S W. ½ S. from **East Sister** and nearly half a mile from the shore. Between the lines of three fathoms it is very nearly two hundred yards square. A *red spar-buoy* (No. 2) is placed in twenty feet water south of the ledge. It must be left to the northwestward by vessels bound in.

There is a wide channel with five fathoms water between *West Sister* and **Horn Island.** It is a quarter of a mile wide; but strangers should not attempt it.

PHILIP ROCKS

are sunken rocks arranged in a reef or line running in a N W. and S E. direction, and about three hundred yards long. They are nearly a mile E. ½ S. from **Whale Back Light**; a quarter of a mile S W. from the *Western Sister;* and half a mile E. by S. ½ S. from the southernmost of the **White Islands.** These are bad rocks, as they are always under water, (having about nine feet at low water,) and *are not buoyed.*

Five hundred yards W. by N. from *Philip Rocks* is the eastern end of a bad ledge, called

WHITE ISLAND REEF,

which extends off from the **White Islands** in an E S E. direction for four hundred yards. It is a sunken ledge with four feet at mean low water, and the shoal of the reef bears E. by S. ¾ S. from **Whale Back Light-House**, distant half a mile.

KITTS ROCKS.

Three sunken ledges, extending over a space of a little more than a quarter of a mile, with good water between them, are called *Kitts Rocks*. The *easternmost*, a small round rock, has *eleven feet* at mean low water, and lies one quarter of a mile S. ½ W. from the southernmost **White Island**, three-quarters of a mile W. by S. ¾ S. from the *buoy on Western Sister*, and half a mile S E. ¾ S. from **Whale Back Light-House.** The *middle* rock, with *fourteen feet*, lies four hundred yards W. ¾ S. from the eastern one, and a quarter of a mile S S E. from **Whale Back Light-House.** The *westernmost rock* lies one hundred and fifty yards N N W. from the middle one, and has *sixteen feet* at mean low water. An *iron can-buoy of the second class, painted red*, and marked No. 4, is placed in twenty feet water on the western end of the middle rock.

There is a wide and good channel with from four to six fathoms water on the northern side of these rocks, between **White Islands** and **Whale Back** on the north and *Kitts Rocks* on the south. But it is not safe for strangers, who, of course, cannot be acquainted with the extent of the ledges.

When past *Kitts Rocks* the channel turns to the northward and there are no channel obstructions. But vessels beating in or out must not stand over toward **Frost Point** too far, but must give that point a berth of at least six hundred yards, to clear

FROST POINT LEDGE,

a long ledge, bare at low water, which makes off from the shore just to the southward of the point, and has two or three bare rocks on its eastern end, three hundred and fifty yards from shore. It is marked by a *black spar-buoy* (No. 1) placed in three fathoms on the eastern point of the shoal. Vessels bound into *Little Harbor* leave this buoy on the south, passing midway between it and the red beacon on

JERRY POINT.

Jerry Point is the southeastern point of **Great Island**, and is a round bare headland of moderate height, and steep on its eastern face, (see page 687.) One hundred yards S. by W. from it is a bare rocky islet, upon which is built **an iron beacon composed of centre shaft and six inclined braces. The top is lozenge-shaped** and has the letters L. H. in front. It is known as **Jerry Point Beacon.**

Vessels bound into *Little Harbor* leave this beacon to the northward about one hundred and fifty yards off. Those bound to **Portsmouth** do not come near it unless they are beating up or are close-hauled on the western side of the channel. In such cases do not approach the beacon nearer than three hundred yards.

The eastern shore of **Great Island** must not be approached more closely than three hundred and fifty yards until up with

STIELMAN ROCKS,

which extend off from the shore of **Great Island** three hundred yards. The eastern point of the ledge is S. ½ W. from **Portsmouth Light-House** exactly a quarter of a mile. An *iron nun-buoy of the second class, painted black*, and marked No. 3, is placed in two and a half fathoms on the eastern end of the ledge. There is no passage inside of this buoy.

On the eastern side of the channel **Wood Island** must receive a berth to the eastward of three hundred yards, and vessels in beating must not, after passing above **Wood Island**, approach the shore of **Gerrish Island** nearer than a quarter of a mile until near the **Fishing Islands**. A good rule is, *for the eastern side of the channel*, not to go to the eastward of **Whale Back Light**, bearing SOUTH, or not to bring that light in range with **Wood Island**, but to go about as soon as the **Light-House** is nearly on with the western point of that island. *For the western side of the channel*, do not stand to the westward of **Portsmouth Light-House**, bearing N. by E. ½ E., until nearly up with *Stielman Rocks*.

Fort Point may be passed close-to, as it is quite bold-to. When abreast of it there will be seen to the northward, and off the mouth of *Pepperell Cove*, a *red buoy* near the **Fishing Islands**. This buoy is on

FISHING ISLAND LEDGE,

which extends off from the upper of the two islets in a westerly direction; is bare at low water, and marked by a *red spar-buoy* placed in twenty feet on its western end. This buoy is also a guide to the anchorage in *Pepperell Cove*, and may be passed close-to.

COD ROCK.

Bearing about W N W., and about a mile and a quarter off when abreast of **Fort Point**, a *black spar-buoy* will be seen. This is on *Cod Rock*, a sunken ledge, with sixteen feet at mean low water, which lies two hundred and fifty yards N W. from the extreme north-eastern angle of **Fort Constitution** and about two hundred yards from shore. The buoy is on the northeast point of the ledge in three fathoms water.

Vessels bound to **Portsmouth** leave this buoy an eighth of a mile (two hundred and fifty yards) to the southwestward. Those intending to anchor in the cove on the western side of the fort pass to the northward and westward of it and close to it; round it and steer in about S S W., anchoring according to draught. If bound up to the wharves at the **Fort Landing**, gradually haul up toward them, using the lead as a guide. Four feet at low water only can be carried up to the longest pier.

After passing *Cod Rock* there are no obstructions until past **Clarke Island**, when there will be seen, on the south side of the channel, a *black spar-buoy* off **Goat Island**. This buoy is placed on the northern point of a ledge which makes off from the western end of **Goat Island** in a northerly direction. Give it a berth to the southward of not less than thirty feet.

This ledge is called, in the buoy list of the Light-House Board, *Oliver Island Ledge*, a name evidently erroneous.

After passing **Fort Washington**, the first obstruction met with is

SOUTH BEACON SHOAL,

extending off to the eastward in the vicinity of **One Tree Island**. Its eastern extremity is a quarter of a mile from the wharf-line of the town of **Portsmouth**. On its dry part, four hundred yards from the shore, is built a **beacon of gray stone**, eighteen feet square and twenty feet high, surmounted by a **mast painted black, with a lozenge-shaped figure on top**. This is called **South Beacon**, and is to receive a good berth to the westward. The western edge of the channel is marked by a *black spar-buoy*, (No. 11,) which is placed on the eastern extremity of *South Beacon Shoal* in seventeen feet at mean low water.

South Beacon bears from **One Tree Island** E. ½ N., nearly three hundred yards distant; from the northeastern angle of **Fort Washington** (on **Peirce Island**) N W. by N., between five and six hundred yards; and W. by S. ½ S. from the southernmost **Ship-house** in the **Navy-yard** five hundred yards. The *buoy* is one hundred yards EAST from the **beacon**.

GANGWAY ROCK.

When abreast of the buoy on *South Beacon Shoal*, a *spar-buoy, painted red and black in horizontal stripes*, will be seen ahead and two hundred yards distant. This buoy is placed on the north side of *Gangway Rock*, which has fifteen feet at mean low water and thirteen at low spring tides, lies almost exactly in the middle of the channel, with deep water on all sides.

Gangway Rock bears N E. by N. ¾ N. from **South Beacon**, distant one hundred and seventy-five yards. Vessels of heavy draught must give this buoy a berth of fifty yards on either hand. Others may pass close to it without danger. There is never less than thirteen feet on this rock.

NORTH BEACON SHOAL.

This shoal surrounds **Pumpkin Island**. On the islet is erected a **wooden mast twenty-five feet high, with four diagonal braces, and a lozenge-shaped figure on top,** *the whole painted red.* This is called **North Beacon,** and is to be left to the northward. It bears N. ¼ W. from **South Beacon**, distant four hundred yards.

SEWARD ROCKS.

This small ledge lies one hundred yards N W. from **One Tree Island** and about one hundred and thirty yards off the wharf-line of the town. It has seven feet at mean low water, and is marked by a *black spar-buoy* (No. 13) placed in thirteen feet of water north of the ledge. This buoy is approached only by vessels going alongside the wharves.

WILLEY LEDGE.

This ledge extends off due south from the eastern end of **Badger Island,** (formerly called **Willey Island,**) and has upon its dry summit **an iron spindle painted red, and surmounted by a copper cylinder and gilt ball.** It is one hundred yards south from **Badger Island** and three hundred W. by N. from **North Beacon.** The passage between the two beacons to the anchorage south of **Squash Island** leads close along the eastern end of this ledge in a N E. direction. This anchorage is, however, never used by strangers. The bottom is hard clay.

WHARF ROCK

lies southeast of the **Ship-yard** on **Noble Island** and about fifty yards from shore; is bare at low water, and marked by a *black spar-buoy* placed on its eastern end. This buoy bears from the long wharf on the south side of **Noble Island** N E. by N. ¾ N., distant one hundred and fifty yards.

DANGERS IN PEPPERELL COVE.

Pepperell Cove is a very commonly used anchorage for light-draught vessels. *Fishing Island Ledge* (already described, page 695) lies on the eastern side of the entrance, and is marked by *a red buoy*, No. 6. Three hundred yards **NORTH** from this buoy, and nearly in the middle of the cove, lies

LOGEY LEDGE,

bare at low water. It is three hundred and fifty yards S S E. from **Fort McClary** and half a mile N E. by N. ¾ N. from **Portsmouth Light-House.** There was formerly a **spindle here,** but that having been carried away the ledge is now marked by a *spar-buoy* placed on the rock. This buoy is *painted red and black in horizontal stripes,* and may be left on either hand. Vessels may anchor on the northern or southern side of this ledge. The buoy is S W. from it.

DANGERS IN SPRUCE CREEK HARBOR.

This harbor affords excellent anchorage, but the entrance is narrow and somewhat obstructed. *A black and a red buoy*, nearly opposite to each other, mark the limits of the channel. The *red buoy*, the first met with, is on

HICKS ROCKS,

two large ledges, bare at low water, which extend off to the southwestward four hundred yards from the western end of **Kittery Point.** The *buoy is red*, and is marked No. 8. It is placed southwest of the ledge in sixteen feet of water.

The *black buoy* is on the western side of the entrance, and marks the eastern extremity of

TREFETHEN LEDGE,

which is nothing but an extension of the southeastern point of **Jamaica Island**, (formerly called **Trefethen Island.**) The *buoy is black*, (No. 7,) and is placed in two fathoms and a half one hundred yards from the shore. It must be left to the westward by vessels wishing to enter this harbor.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PORTSMOUTH HARBOR.

I. *Coming from the northward, along shore.*—1. *To pass inside of York Ledge:* Pass **Cape Neddick** half a mile off, in fifteen fathoms, and steer S W. ½ S. eight miles, carrying not less than eight fathoms of water, until **Whale Back Light** bears W N W., a mile and three-quarters distant, and **Portsmouth Light** N W. ¾ W., just open to the southward of the south end of **Gerrish Island**, two miles and a half distant; then, in twelve fathoms, rocky bottom, steer WEST, carrying not less than seven fathoms of water, until **Portsmouth Light** bears N. ¾ W., and in eight fathoms, sandy bottom; when steer N. ¾ W. to enter the river. If bound into *Little Harbor*, when, on the west course, **Portsmouth Light** bears N. ¾ W. steer N W. ½ W., which will lead straight in midway between **Jerry Point Beacon** and *Frost Point Buoy*, taking nothing less than four fathoms to the mouth of the harbor. Anchor according to draught, in from six to ten feet at low water. If bound up the harbor, steer N. ¾ W., with not less than seven fathoms, until **Whale Back Light** bears S E. by E., in ten fathoms, and abreast of the southern end of **Wood Island.** Then steer N. ½ E., carrying seven fathoms water, until past **Fort Point** and **Portsmouth Light-House** bears W. by S. ½ S., with eight fathoms water. Then steer N W., carrying nine fathoms, until the **Light-House** bears S. by E., where anchor in from eight to nine fathoms, hard bottom. This is only good as a temporary anchorage, as the current runs with considerable velocity and the bottom is not of the best.

Or, continue the course N. ½ E. toward **Kittery Point** until abreast of the *red buoy* off **Fishing Islands.** Then haul up N E. and enter *Pepperell Cove*, passing nearly midway between the buoy and the *red and black horizontal-striped buoy* on *Logey Ledge.* Anchor according to draught, in from two to four fathoms.

Or, when **Portsmouth Light-House** bears S. by E., in eight and a half fathoms, steer S W. ¾ S., and anchor close in-shore, in the cove west of **Fort Constitution**, in from three to seven fathoms.

Or, if bound up to town from the above bearing, steer W. ½ N. for **Fort Washington**, carrying not less than nine fathoms water, until off **Pull-and-be-damned Point** and the two **South Ship-houses** in the **Navy-yard** open from behind **Seavey Island**, the westernmost house bearing N. ½ W., now in twelve fathoms, rocky bottom. Then steer N W. by N. ½ N. until **South Beacon** bears S W. by S. ¾ S. and the western end of **Badger Island** is in range

with the inner end of the wharf on **Noble Island.** On this course there will be not less than ten fathoms, and at the bearing eleven fathoms. Then steer W. by N. for the upper end of the city, and anchor abreast of the wharves in from two to eleven fathoms.

Wishing to anchor in *Spruce Creek Harbor*, on the course W. ¼ N. for **Fort Washington,** when the eastern angle of **Fort Constitution** bears S E. ¾ E., and the western extremity of **Kittery Point** bears N. by E. and is in range with the draw in **Spruce Creek Bridge,** and there is nine fathoms water, steer N. by W. ½ W., carrying not less than eight fathoms, until past the *buoy on Hicks Rocks* and about a hundred yards from the *buoy on Trefethen Ledge.* The draw in the **Spruce Creek Bridge** will now bear N E. by N., and steer for it if bound through. This course has nothing less than five fathoms nearly to the **Draw-bridge.** But if intending to anchor between **Jamaica Island** and the main, steer N E. by N. for the **Draw** for about two hundred and fifty yards, or until the northernmost point of **Jamaica Island** bears N W. by W.; then steer N W. ½ W., carrying not less than four and a quarter fathoms, and anchor when fairly between the island and the eastern point of **Kittery Foreside.** The depth is four fathoms and the bottom a stiff hard clay.

Intending to anchor between **Clarke** and **Jamaica Islands,** when the eastern angle of **Fort Constitution** bears S E. ¾ E., with nine fathoms water, (as before,) steer N W. by N. for the houses on the south shore of **Jamaica Island.** On this course there will be four fathoms. It gives **Clarke Island** (which is bold-to) a berth of one hundred and fifty yards. Keep this distance, and as soon as the island is abaft the beam gradually haul to the westward between the two islands, and anchor in four fathoms, when the summit of **Clarke Island** bears SOUTH, or when the wharf on the south shore of **Jamaica** bears NORTH. This is a good anchorage.

The above courses pass to the westward of **York Ledge spindle** one mile and a half; to the westward of *Murray Rock* one mile and a half; to the southward of *West Sister* a little over half a mile; to the westward of *Kitts Rocks* three-eighths of a mile; to the eastward of *Stielman Rocks* three hundred yards; to the westward of *Fishing Rocks* a quarter of a mile; to the eastward of *Cod Rock* nearly three hundred yards; to the northward of *Goat Island Ledge* seventy-five yards; to the eastward of *South Beacon Shoal* one hundred and fifty yards; to the eastward of *Gangway Rock* seventy-five yards; and to the northward of *Seward Rocks* nearly three hundred yards.

2. *Coming from the northward, along shore, outside of York Ledge:* Bring **Boon Island Light** to bear EAST, distant a mile and a half, in nineteen fathoms water, and steer S W. by W., carrying nothing less than twelve fathoms, until **Portsmouth Light** bears N W. ¾ W. and **Whale Back Light** N W. by W. ½ W., when there will be twenty fathoms. Then steer WEST, with not less than seven fathoms water, until **Portsmouth Light** bears N. ¾ W., when steer for it, and follow the directions given above.

These courses pass a mile and a half to the eastward of *York Ledge;* a mile and a quarter to the eastward of *Murray Rock;* and three-eighths of a mile to the westward of *Kitts Rocks.*

DANGERS
IN APPROACHING AND ENTERING PORTSMOUTH HARBOR.

II. *Coming from seaward, outside of Boon Island.*—Five miles and three-quarters S E. ½ E. from **Cape Neddick** lies a small low island, called

BOON ISLAND,

which is but a mass of rock, destitute of all vegetation except grass; is the site of one of the most important primary sea-coast lights in the United States.

BOON ISLAND LIGHT-HOUSE

is a granite tower one hundred and twenty-three feet high, and shows a fixed white

light of the second order of Fresnel from a height of one hundred and thirty-three feet above sea-level. The light is visible eighteen miles at sea. The tower is connected with the keeper's dwelling, which is also of granite.

Boon Island Light bears from

	Miles distant.
Seguin Island, S W. ⅞ W.	47¼
Cape Small Point, S W. ½ W.	45
Half-Way Rock Light-House, S W.	37½
Cape Elizabeth, S W. ¾ S.	29¼
Cape Porpoise, S S W.	14½
Whale Back Light-House, E. ¾ N.	10½
Hog Island, (**Isles of Shoals**,) N E. ½ E.	10
Cape Ann, (**Thatcher Island**,) N N E. NORTHERLY	29½

Three-quarters of a mile W S W. from this **Light-House** lies

POLLOCK ROCK,

which has seventeen feet at mean low water and fifteen at low spring tides. There is a depth of ten fathoms water between it and **Boon Island**, but strangers should always give the island a wide berth, and should never attempt to pass between this rock and the **Light-House**. *Pollock Rock is not buoyed.* It breaks heavily in heavy weather, and is a most dangerous obstruction.

BOON ISLAND LEDGE.

Two miles and three-quarters E. ½ S. from **Boon Island Light-House** is a ledge with three feet at mean low water and awash at low spring tides. It is of small extent, bold-to all around, and is called *Boon Island Ledge.* It is marked by an *iron nun-buoy of the first class, painted red and black in horizontal stripes*, and placed in seven fathoms water on the southeastern side of the ledge.

From this buoy **White Island Light** (**Isles of Shoals**) bears S W. by W. thirteen miles and a quarter, and **Thatcher Island Light** bears S W. by S. ¾ S., thirty miles distant. The bottom between **Boon Island** and this ledge is very much broken, the soundings varying from four and a half to thirty fathoms. It is best, therefore, to pass outside of this ledge.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING PORTSMOUTH HARBOR.

II. *Coming from seaward, outside of Boon Island.*—1. With **Boon Island Light** bearing N W. by W. ½ W., distant six miles, in fifty-eight fathoms, **White Island Light** will bear W. by S. ¾ S., fourteen and a half miles distant, and if the night be clear it will be visible. Then steer WEST nearly sixteen miles, carrying not less than eight fathoms water, until **Portsmouth Light-House** bears N. ¾ W., with eight fathoms, sandy bottom. Then steer for that light, and follow the directions previously given. These courses avoid both *Boon Island Ledge* and *Pollock Rock.*

2. *At night.*—Bring **Portsmouth Light** to bear N W. ¾ W. and run for it until **White Island Light** bears S. by W. ¾ W., with twenty fathoms water. Then steer W. by N. ½ N., carrying not less than eight fathoms, until **Portsmouth Light** bears N. ¾ W., when run for it, and follow the directions given for the harbor.

During the day give **Duck Island**, the northernmost of the **Isles of Shoals**, a berth to the southward of one mile, passing it in from eighteen to twenty fathoms, and steer W N W., carrying nothing less than ten fathoms, until **Portsmouth Light-House** bears N. ¾ W. Then run for it as before.

APPEARANCE OF THE APPROACHES TO PORTSMOUTH HARBOR, AS SEEN FROM THE SOUTHWARD.

A vessel bound to **Portsmouth** from **Cape Ann** steers to the northward about fifteen miles, when the **Isles of Shoals** will be seen to the northeastward and about five miles distant. These islands will appear as a group of small rocky islets, bare of trees, and of various heights, between ten and seventy feet above sea-level. Here and there will be seen houses crowded somewhat thickly together, and on approaching the islands more closely a glimpse of the large hotel on **Hog Island** may be obtained if the day be clear.

The most prominent object, advancing to the northward, will be

WHITE ISLAND LIGHT-HOUSE,

which is often called **Isle of Shoals Light-House.** It is built on the southeastern end of **White Island,** (which is the southernmost islet of the group,) and will show as a white tower, with a covered wooden way, also white, extending in a northerly direction nearly to the keeper's dwelling, built fifty yards **NORTH** from the **Light-House.** The island is about forty feet high at the site of the tower, and entirely bare of vegetation. The **Light-House** is forty feet high, and shows a revolving red and white light from a height of eighty-seven feet above sea-level. The lens is of the second order of Fresnel, and shows every alternate flash red. It is visible fifteen miles at sea, around the entire horizon.

Passing the **Isles of Shoals,** the undulating land of **Gerrish Island** will soon appear, and on a nearer approach there will be seen a **white stone tower,** whose base will appear as a circular pier rising out of the water. This is **Whale Back Fog-Signal,** and the gray tower to the eastward of it is the light. The bushy-looking hills behind it are the southern shores of **Kittery Point,** and at the entrance to the harbor **Fort McClary** will appear, occupying the westernmost hillock. Well to the right the houses on the south shore of **Gerrish Island** will appear. Just to the left will be seen the white tower of **Portsmouth Light-House,** and the granite walls of **Fort Constitution** in range with it. The group of houses extending to the westward from the light-tower is the small village of **Newcastle;** and sometimes, over the lower lands of **Great Island,** the steeples of **Portsmouth** and the upper masts and yards of the shipping at the **Navy-yard** may be seen.

The low rocky points, broad on the west side of the channel, nearly abreast when within a mile of **Whale Back,** are **Jerry** and **Frost Points,** respectively; and the opening between them is the entrance to *Little Harbor.* The **red spindle on the rock off Jerry Point** should be visible from this point.

For description of the shores of the harbor after passing **Fort Point,** see page 692.

DANGERS IN APPROACHING AND ENTERING PORTSMOUTH HARBOR.

III. *Coming from the southward, and from seaward south of the* **Isles of Shoals.**

THE ISLES OF SHOALS

are a group of rocky islets, bare of trees, which lie five miles off the coast of New Hampshire and six miles from *Portsmouth Entrance.* The southernmost of them, **White Island,** is nineteen miles **N. ½ E.** from **Thatcher Island** and a little over six miles **S. by E. ½ E.** from **Whale Back Light-House.** It has been described above. Nearly half a mile due **NORTH** from **White Island** is

For lines 20 and 21 substitute the following:

It is visible fifteen miles at sea, around the entire horizon, except on a bearing of about NE., where it is eclipsed by the Oceanic House on **Star Island.**

Isles of Shoals, White I. Light bearing N.W. by W. distant 5 Miles

Add after last line :

There is no safe passage between **Star** and **Cedar Islands**, the channel being closed by a bar with six feet at low water.

LUNGING ISLAND,

which is nothing but a mass of bare rock destitute of all vegetation; lies nearly NORTH and SOUTH, and is about three hundred yards long. A bare islet a hundred yards square lies two hundred and fifty yards WEST from this island, and is called **Square Rock.**

Southwest from **White Island** four hundred yards is *White Island Ledge,* bare at low water, and surrounded by sunken rocks. There is good water between it and the island.

Nearly four hundred yards WEST from the centre of **White Island** extends a bad ledge, which terminates in a bare rock. This is *West Ledge,* and is half a mile due SOUTH from **Square Rock.**

STAR ISLAND.

Half a mile N E. from **White Island Light** is the southern end of a high rocky island, called **Star Island.** The southern end is a bluff forty or fifty feet high, and the land rises behind it to a height of nearly seventy feet. The surface is bare of all vegetation except grass. On the north side of **Star Island** is situated the settlement of the **Isles of Shoals.** It consists of a group of dwelling-houses, a hotel, and a church. This island lies N. by E. and S. by W., is of irregular shape and six hundred yards long. From **Lunging Island** it bears E. by S. one-third of a mile.

There is a wide and unobstructed passage between **Star** and **White Islands,** and also between **White** and **Lunging Islands.** The passage between **Star** and **Lunging Islands** is a quarter of a mile wide, but is obstructed by a group of sunken rocks, called *Half-Way Rocks,* which have five feet at low water, and *are not buoyed.* These rocks lie at the north end of the passage, exactly midway between the two islands. There is another very dangerous sunken rock obstructing this passage, with only six feet at mean low water. It lies about one hundred and fifty yards N W. by W. ½ W. from the northwestern point of **Star Island,** and exactly half-way between it and *Half-Way Rocks.* It has deep water all around it, and *is not buoyed.*

ANDERSON LEDGE.

Three-quarters of a mile S E. by S. ¾ S. from the southern end of **Star Island,** and a mile S E. by E. ½ E. from **White Island Light,** is *Anderson Ledge,* bare at low water, and surrounded by sunken rocks. It always shows itself by breakers. Vessels coming from the eastward and intending to pass south of **White Island Light** must take special care, if at night, not to get to the northward of the **Light-House,** bearing N W. by N., so as to avoid this ledge.

One-eighth of a mile E N E. from **Star Island** is

CEDAR ISLAND,

a low rocky islet, bare of all vegetation except near its western end, where there is some grass and a few bushes. It is about three hundred yards long. A ledge of rocks, dry at low water, connects it with **Smuttynose Island,** two hundred and fifty yards to the northward.

Seven hundred yards S E. by E. from **Cedar Island** is a ledge, bare at low water, with deep water all around it. It is called *Cedar Island Ledge.* In day-time vessels may safely pass inside of this shoal, as there is a deep and unobstructed channel, with ten fathoms water, between it and the islands.

SMUTTYNOSE ISLAND

is an eighth of a mile **NORTH** from **Cedar Island** and four hundred yards **NORTH** from **Star Island.** It is a long narrow island, lying EAST and WEST, and half a mile long. A small hillock on its eastern end is twenty feet high, but the rest of the island is low and bare of trees. At its western extremity the land is cleared and occupied by a group of houses, and here is a small shallow cove, called *Haley Cove,* forming a harbor for very light-draught vessels, and there is a good and deep anchorage, affording shelter in winds from N N E. to S E., contained between **Smuttynose, Cedar, and Star Islands.** There is also shelter in N W. winds under the south shore of **Smuttynose Island,** on the eastern side of the ledge which connects it with **Cedar Island.** But vessels must anchor close in to the shore.

Three hundred yards NORTH from the western end of **Smuttynose Island** is the largest of the **Isles of Shoals,** called

HOG ISLAND.

It is a large high island, lying nearly NORTH and SOUTH, and half a mile in length. It is sixty feet high, quite steep on its southern shore, and entirely bare of trees. Near the centre of the island, but on the western shore, in the valley, is built the **Isle of Shoals Hotel,** a summer resort, much patronized during the season. The shores of **Hog Island** are quite bold except on the southern side, where a ledge, bare at low water, makes off in a southerly direction nearly two hundred yards. The channel between it and **Smuttynose Island** is thus contracted to a width of less than a hundred yards. The best water is nearest to the latter island.

The northernmost islet of this group, called

DUCK ISLAND,

lies a little over three quarters of a mile N N E. from **Hog Island,** and is low and bare of trees. It is about two hundred and fifty yards long, and surrounded by bare ledges, which extend five hundred yards in every direction from it. This islet should never be approached more closely than half a mile, unless a vessel be bound through between it and **Hog Island,** where there is a passage half a mile wide, with thirteen fathoms water, and entirely unobstructed. The best water is about in the middle of this passage.

Duck Island is five miles S E. ½ S. from **Whale Back** and nine miles S W. ½ W. from **Boon Island.**

The ledges on its eastern side are known as **Shag Rock, Eastern Rocks,** and **Mingo Rock,** the last-named being the southernmost. On the western side is the **South-West Ledge.** All of these are bare at high water, but are surrounded by sunken rocks.

GUNBOAT SHOAL.

This ledge is the first danger met with in approaching *Portsmouth Harbor* from the southward after passing the **Isles of Shoals.** It is nearly three miles S. ½ W. from **Portsmouth Light-House,** one mile and a quarter S. by E. from **Odiorne Point,** and the same distance from the nearest shore. From **White Island Light** it bears N W. by N., four miles and three-quarters distant. Three and a half fathoms are found on this ledge.

KITTS ROCKS.

These dangerous sunken ledges (already described on page 694) are common to all the channels into *Portsmouth Harbor.* The middle and westernmost rocks are, how-

ever, the only ones which obstruct the entrance from the southward. They are marked by an *iron can-buoy of the second class, painted red,* and marked No. 4, which is placed in twenty feet water on the western end of the middle rock. This buoy bears S S E. from **Whale Back Light-House,** distant a quarter of a mile. The westernmost rock lies two hundred yards N N W. from it.

Here all the channels unite in one, and the dangers common to all are described on pages 694 to 697.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING PORTSMOUTH HARBOR.

III. *Coming from the eastward, south of the* **Isles of Shoals.**—Bring **White Island Light** to bear N W. by N. ½ N., five miles distant, when, in about forty fathoms, **Boon Island Light** will bear N N E., thirteen and a half miles distant, and will be visible on a clear night. Then steer N W. ¾ W., carrying not less than twenty-five fathoms, until **White Island Light** bears N E. by N.; **Portsmouth Light** will then bear N. ¾ W., in twenty-five fathoms, *green mud and fine sand;* then steer for the light, which will lead safely in.

In the day-time give **White Island** a berth of two miles to the northward, passing it in twenty-five fathoms, and when the **Light-House** bears N E. by N. steer N. ¾ W., as before.

These courses pass two miles and a quarter to the southward of *Anderson Ledge;* a little over a mile to the westward of *White Island Ledge;* half a mile to the eastward of *Gunboat Shoal;* and three-eighths of a mile to the westward of *Kitts Rocks.*

IV. *Coming from the vicinity of* **Cape Ann.**—From two and three-quarters miles east of **Thatcher Island,** in thirty-eight fathoms, *gray mud,* steer N. ½ W. nearly twenty miles, with not less than twenty fathoms, until **White Island Light** bears EAST a mile and a quarter off, and in twenty-three fathoms, *soft sand.* Then steer N. ¾ W. for **Portsmouth Light,** carrying not less than eight fathoms, and following the directions given on pages 697 and 698.

V. *Coming from the vicinity of* **Newburyport.**—With **Newburyport Light-House** bearing W. by N. ½ N., a mile and a half distant, in nine fathoms, steer N E. ¾ N., carrying not less than eight fathoms, until **Portsmouth Light** bears N. ¾ W., in fourteen fathoms water. Then steer for the light, and follow the directions for the harbor. The course from off **Newburyport Light** leads along shore at an average distance of three miles from it.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s		m s	Feet.	
Boon Island Light	43 07 16	70 28 36	4 41 54.4	Fixed.	.....	133	18
Portsmouth Light	43 04 14	70 42 32	4 42 50.1	Fixed.	.....	70	14
Whale Back Light	43 03 30	70 41 48	4 42 47.2	F. V. F.	1 30	58	13
White Island Light, (Isles of Shoals.)	42 58 00	70 37 25	4 42 29.7	Rev., red & white.	0 30	87	15

TIDES.

Corrected Establishment	$11^h\ 23^m$
Mean Rise and Fall of Tides	8.6 ft.
Mean Rise and Fall of Spring Tides	9.9 "
Mean Rise and Fall of Neap Tides	7.2 "
Mean Duration of Rise, reckoning from the middle of one Stand to the middle of the next	$6^h\ 22^m$
Mean Duration of Fall, reckoning from the middle of one Stand to the middle of the next	$6^h\ 07^m$
Mean Duration of Stand	$0^h\ 21^m$

The tidal-current is very strong in *Portsmouth Harbor*, and vessels must, when possible, anchor on the shallows to avoid its strength. The current of both flood and ebb sets strongly upon **Fort Point** owing to the abrupt turn in the channel of the river at that point. Vessels must beware accordingly.

No detailed observations of currents have been made in this harbor.

VARIATION OF THE COMPASS.

In September, 1850, the magnetic variation was 10° 30′ W. at **Kittery Point.** The approximate annual increase was 3.5′, which would make the variation in 1875, 12° 00′ W.

COAST

FROM PORTSMOUTH ENTRANCE TO NEWBURYPORT HARBOR.

From **Odiorne Point** the general course of the coast is S W. ½ S. ten miles, to the entrance to *Hampton Harbor*, and then S. by W. five miles, to *Newburyport Entrance.* The coast-line is much indented, but there are no harbors of any importance between **Portsmouth** and **Newburyport.** The approaches are very gradual, and, as a general rule, a vessel may approach within a mile of the shore anywhere between *Gunboat Shoal* and **Great Boar Head**, near **Hampton.**

RAGGED NECK POINT.

Three miles S W. ½ S. from **Odiorne Point** is a low, grassy point with a couple of houses near its eastern end, bare of trees, and backed by marsh or salt-meadow lands. This is **Ragged Neck Point,** the northern point of the entrance to *RYE HARBOR.*

The shore between **Portsmouth** and **Ragged Neck Point** presents the appearance of a succession of sand beaches, separated by outcropping ledges of rocks jutting out into the sea. The beach is backed by salt meadow, behind which the land rises very slowly and regularly; well-cultivated and thickly-settled strips of woodland intersect the cleared lands here and there. On approaching **Ragged Neck Point** the village of **Rye** will appear about a mile back from the shore.

RYE HARBOR

is an indentation in the shore-line a little over three miles S W. ½ S. from *Portsmouth Entrance.* It is an arm of the sea running in a N W. and S E. direction for a third of a mile. It is a quarter of a mile wide at its mouth, and gradually decreases in width to its western end, where it terminates in a crooked and narrow slue running into the salt meadow.

This harbor is almost entirely bare at low water, and is of no importance. Its southern point of entrance, called **Verrill Point,** is a low sandy point with a number of houses on it, and a line of bathing-houses stretched along the beach. This point is separated by salt meadow from

At the **Isles of Shoals** the variation for 1875 is 11° 35′ W. Annual increase, 3 .2.

LOCKE POINT,

which is entirely cleared and under fine cultivation. On its summit, which is twenty feet high, a group of houses will be seen, and its point is entirely bare of trees except a few fruit trees.

Just to the southward of **Locke Point** will be seen a large building, with cupola, surrounded by many smaller houses. The beach in front, white and broad, is dotted with bathing-houses. The large building is the **Ocean House**, the principal sea-side hotel of **Rye Beach.** The country on both sides and back of it will appear as partly wooded but mostly cleared and cultivated lands, thickly dotted with houses.

From **Locke Point** to **Little Boar Head** the course of the shore is S W. ¼ S., and the distance two miles and a half. The shore presents the same general features—low lands, mostly cleared, well cultivated, and thickly settled. One mile and a quarter S W. from **Locke Point** is a low point, partly wooded and partly under cultivation, called **Jenness Point.** It has quite a number of houses upon it, and a long ledge, bare at low water, called *Rye Ledge*, makes out from it in an E S E. direction for a third of a mile. On this point are situated the "**Farragut**" and "**Sea View**," two sea-side hotels. They show very prominently from any point of view south of *Rye Ledge.*

LITTLE BOAR HEAD,

six miles below the entrance to **Portsmouth**, is a grassy headland forty feet high, with a precipitous face, bare of trees, dotted with houses, and mostly under cultivation. Just to the northwestward will be seen the houses in the village of **North Hampton.**

From **Little Boar Head** the coast-line runs S S W., for a little over two miles and a half, to a high headland, called

GREAT BOAR HEAD.

This bluff is bare of trees and covered with houses. Its eastern face is precipitous, forming a cliff forty feet high. This point is also a great summer resort, and there are several hotels on and near the **Head.** The village of **Hampton** is situated a mile and a half northwestward from **Great Boar Head.**

The shore between the **Little Boar Head** and **Great Boar Head** presents the appearance of a fine white beach, dotted here and there with bathing-houses, and backed by marsh or salt meadow. The lands back of the meadow-land are partly cleared, and in some places thickly wooded, until near the **Great Head,** and the village of **Hampton** is seen. From the entrance to **Portsmouth** this head is eight miles and three-quarters distant.

From the eastern extremity of **Great Boar Head** the shore-line takes a turn about **W. by N.** for half a mile, forming the southern side of the **Head,** and then turning abruptly runs **S W. by S. ¼ S.** for a mile and a quarter, to the entrance to

HAMPTON RIVER.

This river empties into the sea about a mile and a half to the northward of the boundary-line between New Hampshire and Massachusetts. Its shores are entirely salt meadow, which in summer will be seen dotted with haycocks in every direction. It is almost entirely bare at low water, the channel being then a mere thread with one or two feet in it.

From the mouth of *Hampton River* an almost unbroken line of beach extends **S. by W.** for four miles and three-eighths to the entrance to *NEWBURYPORT HARBOR*, which is situated near the mouth of the *MERRIMAC RIVER.*

DANGERS
LYING ALONG THE COAST BETWEEN PORTSMOUTH AND NEWBURYPORT.

GUNBOAT SHOAL.

This ledge is nearly three miles S. ¼ W. from **Portsmouth Light-House**, a mile and a quarter S. by E. from **Odiorne Point**, and the same distance from the nearest shore. It has three and a half fathoms at mean low water.

SEAL ROCKS.

A little over half a mile below **Odiorne Point**, and three hundred and fifty yards from the shore, is a ledge dry at low water; and a quarter of a mile to the southward is another, also bare at low water. These are called *Seal Rocks*. Shoal water extends from the bare rocks to a distance of a quarter of a mile from the shore.

These ledges always show by breakers.

Nearly one mile N E. by E. from **Ragged Neck Point** is a ledge or reef of rocks, known as

FOSS LEDGES.

These rocks are seven-eighths of a mile S S W. from the southernmost of the *Seal Ledges* and a third of a mile from shore; are bare at half-tide, and surrounded by sunken ledges. They extend, with the shoals around them, seven hundred yards in a N E. and S W. direction. Vessels should not approach the shore at this point nearer than a mile.

As a general rule the coast hereabout should always receive a berth of a mile. This will lead clear of all of these ledges. At **Rye Beach** the approach is gradual, and the lead may be relied on. But at **Jenness Point** makes out the long bare ledge known as

RYE LEDGE,

bare at low water, and seven hundred yards long. The shore should here receive a berth of a mile at least, as there is a depth of only four fathoms two-thirds of a mile from the point. The approach is gradual, however. Vessels should use the lead, and go about in six fathoms.

BARE LEDGE.

One-third of a mile from the shore, and abreast of **Little Boar Head**, lies a ledge bare at high water, and surrounded by shoals. It is called **Bare Ledge**, and always breaks. There is no passage in-shore of it.

Seven hundred and fifty yards S S W. from **Little Boar Head**, and a quarter of a mile from shore, is

GODFREY LEDGE,

bare at low water. There is no passage in-shore of it. These ledges are not in the way of vessels bound up or down this coast unless beating to the windward, when the usual rule is, as stated above, to go about when about a mile from shore. This will avoid all dangers until past **Great Boar Head**.

GREAT BOAR HEAD LEDGE,

which has five feet of water, lies a third of a mile N E. from **Great Boar Head** and about five hundred yards from shore. *It is not buoyed.* Vessels approaching the **Head** should not come inside of nine fathoms.

The approaches to *Hampton River* are obstructed by many ledges, the most easterly of which are called

HAMPTON LEDGES.

These ledges are two, lying N E. and S W. from each other, at a distance of a quarter of a mile. The northernmost ledge is bare in some places at half-tide and in other parts awash at low water. It is a mile from shore; lies due EAST from the mouth of *Hampton River;* is nearly seven hundred yards long and a quarter of a mile wide.

A quarter of a mile southwest from this ledge is the southernmost rock, which lies half a mile from the south point of the entrance to the river, and is also bare at half-tide in several places. It forms a reef or ledge five hundred yards long, and in many places bare at low water. *Neither of these ledges is buoyed.* The channel into *Hampton River* leads north of them, toward a group of islets lying in the middle of the entrance, and called **Town Rocks.**

OLD CELLAR ROCK.

One-quarter of a mile west from the northernmost of the *Hampton Ledges* lies a small ledge called the *Old Cellar Rock.* It is awash at low water and bare at low spring tides, and is nearly half a mile due EAST from **Town Rocks.** There is good water all around it and between it and *Hampton Ledges*, but *it is not buoyed.*

Two miles SOUTH from the entrance to *Hampton River* and two-thirds of a mile from the beach is *a ledge with nine feet at mean low water and about seven at lowest tides.* To avoid this, and also the *Hampton Ledges*, vessels must not approach the shore nearer than a mile and a quarter. Or, in the night, they should go about as soon as they strike eleven fathoms.

NEWBURYPORT HARBOR.

This harbor lies near the mouth of the *MERRIMAC RIVER*, near the northern boundary of Massachusetts. The entrance is in

Latitude - - - - - - - - 42° 49′ 30″ N.
Longitude - - - - - - - - 70° 48′ 00″ W.

It bears from	Miles distant.
Cape Elizabeth, S W. ¼ S.	51
Portsmouth Entrance, S W. by S. ¼ S.	14
Isles of Shoals Light, S W. ¾ W.	11½
Cape Ann, (Halibut Point,) N W. by N.	10½
Annisquam Light, N. by W. ¼ W.	11
Ipswich Entrance, N. ¼ W.	8

The mouth of *Merrimac River* is a quarter of a mile wide, and is contained between **Salisbury Point** (the southern end of **Salisbury Beach**) on the north and **Plum Island Point** on the south.

The entrance is a shifting sand-bar, upon which there is only four feet at low water. The town of **Newburyport** is built upon the southern bank of the river, a mile and three-quarters above its mouth.

PLUM ISLAND POINT

is the northern extremity of **Plum Island,** which is a long low island, composed almost entirely of sand and salt meadow, and extending from *Newburyport Entrance* to *Ipswich Entrance*, seven miles to the southward. The beach is covered with innumerable sand hillocks, some of which have a scrub growth, but the majority have only thin wiry grass. Here and there a few trees will show over the hillocks. **Plum Island** is separated from the main land by *PLUM ISLAND RIVER*, which empties into *PLUM ISLAND SOUND*, forming the harbor of **Ipswich.** On the extremity of **Plum Island Point** is built a **Light-House**, called

NEWBURYPORT LIGHT,

an octagonal wooden tower, thirty-five feet high, which shows a fixed white light of the fifth order of Fresnel from a height of fifty feet above sea-level. It is in

Latitude - - - - - - - - - - 42° 48′ 25″ N.
Longitude - - - - - - - - - 70° 49′ 06″ W.

In front of it, three hundred feet distant, is placed, on the sand-spit, a **small square beacon or house for a range light.** It is twenty feet high, and shows a fixed white light from a height of twenty-five feet above sea-level. *This beacon is movable*, and is moved as the channel changes, so as always to give a range over the bar. The town light is visible twelve nautical miles and the beacon light eight miles.

Two beacon lights were built in the *Upper Harbor* in 1873, as a range for the course up to town. They are a little over a hundred yards apart in an E. ¾ N. and W. ¾ S. direction, the easternmost being on the extremity of one of the wharves near the lower end of the town. The course for them leads in the best water between the north and south piers.

On **Plum Island**, a little over a mile south of the lights, is the hotel, built on the summit of the beach, and quite a prominent object. A turnpike, which crosses *Plum River* on a bridge of piling, connects this hotel with the town.

West of the entrance the river spreads out to the southward, forming a large bay or cove, altogether dry at low water. The flats, which occupy nearly all of this bay, are covered with grass, which extends nearly to the edge of the channel. They are called *Joppa Flats*. Two marsh islands lie in these flats near to the southern bank of the river. The largest of these is called **Woodbridge Island.** The smaller, two hundred yards southwest from **Woodbridge Island**, is called **Seal Island,** and lies in the northern mouth of *Plum Island River*. At high water there is a shallow channel between these two islands and into *Plum Island Sound*. **Woodbridge Island** was formerly connected with **Plum Island** by a breakwater, the ruins of which may yet be seen.

The general course of the *Merrimac River* from its mouth to **Newburyport** is **WEST** between low marshy banks. On the northern or **Salisbury** side cultivated and thickly-settled land will appear back of the salt meadows, the cleared lands intersected by narrow strips of woodland comprising a variety of trees. On the southern or **Newburyport** shore low cleared lands, thickly settled and highly cultivated, extend from the western edge of the salt meadows to the town. A thick grove of oak, birch, and other trees separates the firm land from the marsh. Orchards dot the surface of the cultivated grounds to the very edge of the town.

At the eastern end of **Newburyport** the course of the river gradually changes to **NW.**, which it continues past the town and its western suburb of **Belleville** to **Eagle Island**, a mile and a quarter above the town.

Near the western end of **Newburyport** the river is crossed by a bridge, over which passes the **Eastern Railroad**. The draw is near the southern end of the bridge, close to the wharf-line. Half a mile above, and near the northeastern bank, is a small island, mostly marshy, but wooded on its western end, called **Ram Island;** and one hundred yards west of it is a larger island, part of which is cleared and cultivated, and called **Carr Island.** It occupies the middle of the river, opposite to **Belleville**, and is half a mile long. There are a few trees on the edge of the cultivated ground.

Three-eighths of a mile above **Carr Island** is **Eagle Island,** low, and thinly wooded. Two hundred yards **WEST** from it is another, called **Deer Island,** lying **EAST** and **WEST**, and nearly a quarter of a mile long. It is thinly wooded, and has a group of houses on the western end. A bridge connects it with both shores of the river.

From **Deer Island** to the mouth of the *Merrimac River* the distance is four miles and a quarter.

APPEARANCE OF SHORES AND APPROACHES TO NEWBURYPORT HARBOR, SEEN FROM THE EASTWARD.

When about four miles off, and **Newburyport Lights** bear WEST, the town will show behind and on both sides of the fixed **Light-House.** The low sand-spit on the north side of the entrance is **Salisbury Point,** and just to the northward of that the cultivated grounds and thickly-settled country appearing over the low sand is **East Salisbury.** A little to the southward of the **Light-House** will appear the thick grove of woodland which separates the town from the salt meadow to the eastward of it, and against this piece of woods the hotel will be seen. The long range of sand hillocks which stretches away to the southward is **Plum Island,** and if the day be clear **Ipswich Light** will be seen bearing S S W., and about eight miles distant. On approaching the entrance there will be seen to the northwestward *a large wooden nun-buoy, painted black and white in horizontal stripes.* This is the *bar buoy*, or *fairway buoy* as it is often called. It is in five fathoms at low water, and vessels must run for it in coming up with the entrance. The other buoys which mark the dangers in the approaches are not marked upon any of the published charts, for they are moved as the channel shifts.

DANGERS IN APPROACHING AND ENTERING NEWBURYPORT HARBOR.

This harbor is not fit for strangers. It cannot be crossed without a pilot, and in easterly gales cannot be crossed at all. The first dangers met with are the *North and South Breakers,* which are formed by long sand-shoals making out from **Salisbury Beach** and **Plum Island.** The north breaker was, in 1871, found to be cut away by the action of the current in the shifting of the channel, so that the best water was about one hundred and fifty yards from **Salisbury Point,** while the south shoals had advanced across the old channel, completely blocking it up. But this state of things may at any time change entirely, and a new channel open either in the old place or in some entirely different direction.

Four feet at the lowest tides may, however, be counted upon over the bar, wherever the channel may be. The buoys are shifted by the pilots whenever it is necessary, and thus the site of the channel is made known. The **beacon** in front of the **Light-House** is also moved so as to be in range with the light and the *bar buoys.*

After passing the bar a *black spar-buoy* will be seen ahead. This is *Inner Bar Buoy,* and when up with it the bar is crossed. It is the first buoy met with after passing the entrance buoy, and is placed in nine feet at extreme low tides. It must be left close-to on the port hand. When up with this buoy *another black spar-buoy* will be seen bearing **W. by N. ½ N.** and about three hundred and fifty yards off. This is on the northeastern end of

PLUM ISLAND SAND-SPIT,

which makes off from **Plum Island Point** to the northward and eastward one-eighth of a mile, (or two hundred and fifty yards.) The larger portion of the spit is bare at low water. The buoy, which is marked No. 3, is placed in ten feet of water on the northeastern point of the shoal. Leave it to the southward.

When abreast of this buoy *another black spar-buoy* will be seen about four hundred yards ahead. This is on the northern end of a long sand-spit making out to the north-

ward from the eastern end of *Joppa Flats*, and is in nine feet, sandy bottom, on the extreme northern end of the spit. It must be left to the southward and close-to.

BADGER ROCK.

On the S W. extremity of **Salisbury Point** is a pier jutting out, and off the end of it is a small bare rock, about twenty yards from shore, called **Badger Rock**, and bearing from **Newburyport Light** N. by E. ½ E., distant a quarter of a mile, and N E. by E. ½ E. from *Sand-Spit Buoy*.

BLACK ROCKS.

Nearly four hundred yards N W. by W. ½ W. from **Badger Rock** is a group of rocks, bare at half-tide, lying on the edge of the flats, and called *Black Rocks*. A **pyramidal beacon, painted red**, marks the southernmost of the group, and must be left well to the northward. This beacon is erected on a square stone pier fifteen feet high, and the pyramidal structure is thirty-five feet high.

LUNT ROCK

is a small rock, lying close to the edge of the flats on the northern side of the channel, and three-eighths of a mile to the westward of the *Black Rocks*. It is marked by a *red spar-buoy* (No. 2) placed in ten feet at mean low water on the south side of the rock, which is bare at three-quarters ebb. Leave it to the northward. When abreast of it a *black spar-buoy* will be seen on the southern hand. This is on

JOPPA FLATS.

The buoy is placed on the northern end of a sand-shoal making off from the flats on the south side of the channel. It is in sixteen feet at mean low water, and is marked No. 7. From the *Black Rocks* it bears W. by S., half a mile distant.

When up with this buoy the course is W. ½ S. for the *upper mid-channel buoy*, passing a *red spar-buoy* just before coming to it. This buoy is on

JOE NOYES POINT,

which is the southernmost point of the flats making off from the northern bank of the river, three-quarters of a mile W. by S. from *Lunt Rock*, and one-third of a mile E. by N. ½ N. from **South Pier**. The buoy, which is marked No. 4, is placed in six feet on the southern point of the flats.

After passing this buoy, come to a *spar-buoy* in mid-channel, *painted in white and black perpendicular stripes*. This is *Upper Mid-channel Buoy*, and is in the best water. It is thus placed to guide vessels clear of

GANGWAY ROCK,

a sunken rock, with four feet at mean low water and two feet at extreme low tides. It is nearly in the middle of the channel, and is not marked otherwise than by this buoy. It is one hundred yards S E. ½ S. from **North Pier** and two hundred and fifty yards EAST from **South Pier**. To avoid this rock it is customary to bring the two upper harbor lights in range and run for them. This course leads nearly midway between the **North** and **South Piers**, and about fifty yards to the northward of the *Gangway Rock*.

NORTH PIER.

A little over two hundred yards west of the *Upper Middle Buoy* is a lozenge-shaped pier, built of hewn timber, and filled in with stone. It is about four feet above high water, and marks the northern limits of the channel. The southern limits are marked by

SOUTH PIER,

also of lozenge form, built of hewn timber, filled in with stone, and about four feet above high water. It stands on a sand-spit making off from the western end of *Joppa Flats*. The channel leads directly between the two piers.

HALF-TIDE ROCK.

About a hundred yards S W. ½ S. from **South Pier** is a large rock, bare at half-tide, lying on the western edge of the sand-spit which makes off from the western end of *Joppa Flats*. There are several smaller rocks near it, also bare at low water.

THE BOILERS

are two sunken rocks close to the end of the **Custom-house wharf.**

THE SOW AND PIGS

is the name given to a large rock with a number of smaller ones near it, lying on the edge of the flats off **Coffin Point**, on the north side of the river. The large rock, which is bare at low water, is five hundred yards N W. by W. from **South Pier**, and a little over a hundred yards S E. from the **Ferry Ways** at **Ferry Village**.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING NEWBURYPORT HARBOR.

Vessels must not attempt to make this harbor except in case of great necessity. In easterly gales the bar cannot be crossed, and an offing or another harbor must be made. To approach the entrance from the northward, steer S W. by S. ½ S. from near **Portsmouth**, or S W. ½ W. from **Isles of Shoals**, until making the *black and white perpendicular-striped buoy* off the entrance to **Newburyport**. Then bring this buoy to range with the permanent light on **Plum Island Point** and steer for it. When at the buoy, bring the two lights in range and steer for them, which course will bring up with the *black spar-buoy*, called *Inner Bar Buoy*, and with not less than four feet of water. Leave this to the southward and steer for the *black buoy* on *Plum Island Spit;* thence midway between *Badger Rock* and the *black spar-buoy* off the *Long Sand-Spit;* thence for the *black buoy* on *Joppa Flats;* and thence for *Upper Mid-channel Buoy*. When up with this buoy steer, with the two upper beacons in range, midway between the two piers for the anchorage off the town.

It must be borne in mind that the above directions are not to be depended upon for courses. The directions given were correct in 1871; but as the bar is liable to change after every heavy gale, especially easterly storms, mariners must not expect to find the courses given above to be correct. But the outer buoy will always be nearly in range with the permanent **Light-House** and the channel over the bar, and the range of the two lights will always lead over the bar in the best water. Six feet at mean low water, or four feet at lowest tides, is the best water found on this bar. The mean rise of tide is 7 feet 8 inches, which would give at top of high water (mean tides) a little over thirteen feet on the bar.

Coming from the eastward in day-time, vessels must bring the permanent light to bear **WEST** and run for it until they see the entrance buoy, when run for that, and when up with it the two **Light-Houses** will be in range. Cross the bar on this range, and proceed as before.

At night bring the two **Light-Houses** in range when in not less than twelve fathoms, and run for them until up with *Inner Bar Buoy*.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
	° ′ ″	° ′ ″	h m s		Feet.	
Newburyport Light	42 48 25	70 49 06	4 43 16.4	Fixed.	50	12
Newburyport Beacon *	.....	.....	.....	Fixed.	25½	8
Upper Harbor E. Beacon†	.....	.....	.....	Fixed, red.	25	10
Upper Harbor W. Beacon†	.....	.....	.....	F., green.	47	12

* Movable. † On piers near east end of town.

TIDES.

Corrected Establishment of Newburyport	$11^h\ 22^m$
Rise of Highest Tide observed above Mean Low Water	10.38 ft.
Fall of Lowest Tide observed below Mean Low Water	1.92 "
Fall of Mean Low Water of Spring Tides below Mean Low Water	0.42 "
Height of Mean Low Water of Neap Tides above Mean Low Water	0.54 "
Mean Rise and Fall of Tides	7.85 "
Mean Rise and Fall of Spring Tides	9.13 "
Mean Rise and Fall of Neap Tides	6.61 "
Mean Duration of Rise, Reckoning from the Middle of one Stand to the Middle of the next	$5^h\ 16^m$
Mean Duration of Fall, Reckoning from the Middle of one Stand to the Middle of the next	$7^h\ 09^m$
Mean Duration of Stand	$0^h\ 24^m$

VARIATION OF THE COMPASS.

The variation of the magnetic needle at **Plum Island** in 1850 was 10° 06′ W. In 1875 it will be nearly 11° 36′ W.

IPSWICH BAY.

Plum Island (before described) lies between *Newburyport Entrance* and the entrance to *Plum Island Sound*, which is an arm of *Ipswich Bay*. This bay is embraced between the western shores of **Cape Ann** and the main land of Massachusetts, extending from the **Cape to Plum Island.** Between the boundaries it is six miles wide, and makes in three miles to the southward.

Several small harbors of refuge for light-draught vessels are formed by shallow rivers emptying into this bay. Of these, the most westerly is *PLUM ISLAND SOUND* and *IPSWICH RIVER*, which have a common mouth. Nearly three miles to the eastward is *ESSEX RIVER;* and two miles to the eastward of this is *SQUAM RIVER* or *ANNISQUAM HARBOR*, which empties into the bay where the west shore of **Cape Ann** joins the main land.

Of these harbors, the first to be described is

PLUM ISLAND SOUND, OR IPSWICH HARBOR.

Plum Island Sound **separates Plum Island from the main land. Its entrance is between the south point of Plum Island and a high, grassy hill on Castle Neck, which shows a steep face eighty feet high to the northward. This hill is called Castle Hill. The entrance is five-eighths of a mile wide between these two points. The course of**

Plum Island Sound is nearly **NORTH**, between **Plum Island** and the main land, until it is joined by *Plum Island River*, which connects it with *Newburyport Harbor*.

On the southern end of **Plum Island**, just at the entrance to this *Sound*, is a steep hillock between forty and fifty feet high, but bare of trees. The rest of the southern and western shores of this island partake of the general character of the features of the eastern shore, viz: low, sandy, and marshy land, with many small sand hillocks near the beach.

The main land on the southern side of the entrance is marked with a range of sand-hills and hillocks covering the whole surface of **Castle Neck**. A fine beach extends along the whole of the sea-face of the **Neck** from *Plum Island Entrance* to the entrance to *Essex River*, a distance of nearly three miles. A few trees show on the higher lands of the **Neck**, nearly south of the **Light-House**.

IPSWICH LIGHT AND BEACON.

On **Castle Neck**, eight hundred yards east from **Castle Hill**, are situated the light-towers of *Ipswich Entrance*. Only the eastern tower is lighted, the western light having long been discontinued. They are nearly two hundred yards apart, and are placed **EAST** and **WEST** from each other.

The eastern tower is thirty feet high, and shows a fixed white light, varied by flashes once in a minute and a half, from a height of forty-five feet above high-water mark. This light is of the fourth order of Fresnel, and is visible in clear weather eleven nautical miles.

In front of this **Light-House** is a **movable beacon, a small square house, painted black,** and showing a fixed white light, visible eight miles, from a height of twenty feet. The position of the eastern light-tower is

Latitude - - - - - - - - -	42° 41′ 06″ N.
Longitude - - - - - - - - -	70° 45′ 59″ W.

Castle Hill is mostly grass-land, and is about one hundred and twenty-five feet high. Three-eighths of a mile to the westward of it is the mouth of *Ipswich River*, which may be known by the high, round, grassy hill, with a steep face on the eastern side, which forms the north point of the entrance. The southern side of the entrance is a low sandy point covered with sand hillocks.

Ipswich River is very crooked, and not navigable until after half-flood. Its general course is **W. by S. and E. by N.**, between low marshy banks. The town of **Ipswich** is situated on its north bank, two miles in a straight line above the mouth of the river, but by the river the distance is two miles and three-quarters.

Ipswich River is an eighth of a mile wide (two hundred and fifty yards) at its mouth, and gradually diminishes in width until, opposite the town, it is only fifty yards wide. The channel is a mere thread at low water.

GREAT NECK.

The high, grassy land on the western side of *Plum Island Sound*, north of the entrance to *Ipswich River*, is called **Great Neck**. It is formed by two hills, one a hundred and twenty and the other a hundred and thirty feet high, covered with grass. The hill at the northern end of the **Neck** shows a precipitous face toward the *Sound*. Marsh land separates the eastern ends of the two hills.

Great Neck separates *Ipswich River* from

GREEN CREEK,

a shallow stream, which takes its rise in the salt meadow half a mile to the northward

of the town of **Ipswich** and flows through a very crooked channel (washing the north face of **Great Neck**) into *Plum Island Sound.* It is of no importance.

Immediately opposite to the mouth of *Green Creek*, and nearly in the middle of the *Sound*, is a long, narrow, marshy island, called **Grape Island.** There is a narrow passage between it and **Plum Island**, which is, however, closed at low water. The channel leads between **Grape Island** and the main land.

Five-eighths of a mile (twelve hundred yards) above the mouth of *Green Creek* is the entrance to

ROWLEY RIVER,

a shallow stream, which, like all of the streams on the western shore of *Plum Island Sound*, flows between marshy banks and through a crooked channel, nearly dry at low water. It is of no importance except for its aid, by means of its numerous arms and branches, in irrigating part of the immense tract of salt meadow which spreads along the sea-coast from **Newburyport** to **Cape Ann.**

One mile and three-quarters above the mouth of *Rowley River*, and three miles and a half above the entrance to the *Sound*, the mouths of *Plum Island River* and *Parker River* come together and form the head of *Plum Island Sound. Plum Island River* separates **Plum Island** from the main land. Its shores are all salt marsh. It joins *Newburyport Harbor* with *Plum Island Sound*, and is nearly dry at low water.

PARKER RIVER,

upon which is built the old town of **Newbury**, is wider and deeper than any other of the streams on the west shore of the *Sound.* At its mouth it is seven hundred yards wide, but the available channel for entrance is much diminished in width by a marsh island, surrounded by flats, lying exactly in the middle of the passage. The channel is between it and the north bank of the river. Both shores of this stream are marshy for a mile above the entrance until near the village, when both banks show cleared and cultivated lands. The village is situated on the north bank, and is surrounded by cultivated grounds. A bridge here crosses the river to the hard ground on the south bank. Over it passes the county road to **Ipswich** and **Cape Ann.** One mile above the county bridge the **Eastern Railroad** crosses the river over a second bridge, which closes the navigation. The banks above the town are mostly salt meadows, with some low sand islands scattered over their surface.

DANGERS
IN APPROACHING AND ENTERING PLUM ISLAND SOUND.

The bar at the entrance to *Ipswich Harbor* is of shifting sand, and changes its position with every heavy gale. The beacon in front of the **Light-House** is moved to correspond with these changes, as are also the buoys on the different sand-spits. The bar should not be crossed without a pilot.

On approaching the entrance *a red spar-buoy* will be seen bearing **N E. ½ E.** from the **Light-Houses.** This is the outer buoy, and is placed on the southeastern point of the

NORTH BREAKER,

a long sand-bar which makes off from the southern end of **Plum Island** to the edge of the channel, and is dry in many places at low water. The tail of the spit is constantly shifting its position, and the buoy is shifted accordingly.

Three hundred yards **S E. by S.** from the buoy on the north breaker will be seen a *black spar-buoy.* This is on the northwestern point of the

SOUTH BREAKER,

a sand-bar connected with the shoals making off from **Castle Neck.** In some places it is bare, and the breakers are almost constant upon it. The buoy in 1871 was in twelve feet of water three hundred yards S E. by S. from the buoy on the *North Breaker.* The channel leads directly between these two buoys. Six feet at mean low water may be taken over this bar. When past them a *red spar-buoy* will be seen ahead. This is on the southern point of

INNER SPIT,

a point of the shoal of the *North Breaker,* which extends off to the southward and causes the channel to bend to the westward. The buoy is marked No. 4, and is the last buoy met with in entering the *Sound.* When up with it the course leads for **Castle Hill.**

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING IPSWICH HARBOR OR PLUM ISLAND SOUND.

The best direction for entering this harbor is, when off the bar, in five or six fathoms, heave to and make signal for a pilot, or stand off and on if heaving to is unsafe. The channel shifts so often that no detailed sailing directions are good for a month. As, however, the beacon is shifted so as to be always in range with the main light and the line of best water over the bar, vessels may, if necessity compels, run in on this range. In 1871 the courses over the bar were as follows:

When in eight fathoms, bring the **beacon light** in range with the main light, bearing S W. ¾ W., and steer in on that range, passing between the *red buoy* on the *North Breaker* and the *black buoy* on the *South Breaker.* Then steer S W. by W. ¾ W. for the *buoy on Inner Spit,* round it, and steer S W. for the **Light-House** until within about one hundred and fifty yards of the beach, which follow at that distance until to the bend in the river. Or when round *Inner Spit Buoy,* steer for the south point of **Castle Hill.** On this course, when the summit of the round hill on the south point of **Great Neck** bears W N W., steer for it until within three hundred and fifty yards and off the mouth of *Ipswich River.* Then steer NORTH, and anchor inside of **Plum Island,** in from three to five fathoms water. Not less than five feet may be taken over the bar at low water. If bound up to **Ipswich,** take a pilot.

The anchorage in *Plum Island Sound* is not of the best in easterly gales; the holding-ground is not good, and a heavy sea heaves in which often starts the anchors. Vessels have been known to drag as far up as **Grape Island** from the anchorage off **Great Neck.**

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s		m s	Feet.	
Ipswich Light-House.	42 41 06	70 45 59	4 43 02.6	F. F. V.	1 30	45	11
Ipswich Beacon	42 41 08	. . . . .	. . . . .	Fixed.	. . . . .	20	8

TIDES.

Corrected Establishment	$11^h\ 26^m$
Rise of Highest Tide observed above Mean Low Water	11.0 ft.
Fall of Lowest Tide observed below Mean Low Water	2.1 ft.
Fall of Mean Low Water, Spring Tides, below Mean Low Water	0.9 ft.
Height of Mean Low Water, Neap Tides, above Mean Low Water	0.8 ft.
Mean Rise and Fall of Tides	8.6 ft.
Mean Rise and Fall of Spring Tides	10.2 ft.
Mean Rise and Fall of Neap Tides	7.0 ft.
Mean Duration of Rise	$6^h\ 07^m$
Mean Duration of Fall	$6^h\ 11^m$
Mean Duration of Stand	$0^h\ 30^m$

CURRENTS.

Locality.	First Quarter.		Maximum.		Third Quarter.		Flood or Ebb.
	Set.	Drift.	Set.	Drift.	Set.	Drift.	
Off Plum Island, SW. end.	N. by E.	1.8	N. by E. ½ E.	2.1	NE. ¾ N.	2.0	Flood.
	S. ¾ E.	1.2	SE. by S.	1.6	SE. ½ S.	1.0	Ebb.
Ipswich Harbor, near Inner Spit Buoy.	N. by W. ¾ W.	1.4	NORTH.	2.9	NORTH.	2.1	Flood.
	ESE.	2.3	ENE.	4.2	E. ½ S.	2.0	Ebb.

The bearings are magnetic. The drift is in nautical miles. Vessels crossing *Ipswich Bar* must be careful of their courses, as the tidal-current is strong, especially near *Inner Spit Buoy*. Here the flood-tide, at its full strength, sets right on to the spit with a velocity of three knots, and great care must be taken not to fall off the range of the lights. The ebb-tide sets fairly out of the harbor, about ENE., with a maximum velocity of four and a quarter knots.

VARIATION OF THE COMPASS.

The variation of the magnetic needle was, in 1859, 11° 14′ W. The annual increase being about 3′ gives, for 1875, 12° 2′ W.

LIFE-BOAT STATIONS.

At **Diamond Stage**, one mile and a half from the bar in *Ipswich River*, there is a life-boat under care. There is also a small life-boat and life-carriage at **Ipswich Light-House**, under charge of the light-keeper.

ESSEX RIVER AND HARBOR.

Three miles southeast of the entrance to *Ipswich Harbor* is the mouth of *Essex River*, which also forms a harbor of refuge for light-draught vessels. The entrance is in

Latitude - - - - - - - - - 42° 40′ N.
Longitude - - - - - - - - 70° 43′ W.

and is eight hundred yards wide between the southwestern end of **Castle Neck**, called **Point Neck**, on the west, and a group of sand-hills, called **Twopenny Loaf**, on the western end of **Squam Beach**. The channel is very crooked, and the river winds between marshy banks for three miles and a half to the village of **Essex**. Six feet at low water may be carried over this bar; but the channel is constantly shifting, and no stranger should attempt it without a pilot.

DESCRIPTION OF THE SHORES
OF ESSEX RIVER, FROM ITS MOUTH TO THE VILLAGE.

The entrance is between **Twopenny Loaf** on the east and the eastern end of **Castle Neck** on the west. This point is called

POINT NECK,

a long, narrow, and bare spit of sand, running in a southwesterly direction at right angles to the course of **Castle Neck.** From the southeastern end of the **Neck** and the southern point of this spit a long flat, bare at low water, makes off in a S. by W. direction toward the south shore of the river. This spit is nearly three-quarters of a mile long, and extends to within two hundred and fifty yards of the south shore. An iron **spindle, painted red and with a ball on top,** is placed on a rock, dry at half-tide, off the upper end of **Point Neck.** It is called **Point Neck Rock Beacon.**

Passing **Point Neck,** the course leads nearly SOUTH, the land ahead being composed of grassy hills about sixty feet high, backed by higher wooded lands. The eastern bank is entirely salt meadow, while on the western side is passed the long bare sand-spit called *The Middle Ground.* This course continues until within a quarter of a mile of the south shore, when it turns abruptly to the westward and skirts this shore, which is now mostly salt meadow, while ahead is a bare hill sixty-five feet high, the only high land on the shore. On the north side of the channel is the sand-spit known as the *Middle Ground.* The bare hill ahead is on the southern end of a marshy island on the north bank of the river, nearly a mile above the turn. After passing *Channel Rock* the channel divides and sends a large branch to the northward, directly toward **Castle Neck,** and then along the south shore of that peninsula, and into the meadow land. The river itself keeps to the westward, past the bare hill above mentioned, and then to the southward, winding in many curves, between marshy banks, to the village of **Essex.**

Vessels approaching this entrance cannot fail to recognize the **Twopenny Loaf,** which marks the eastern side of the entrance; and they will also be enabled to discover the mouth of the river by the high grassy hill on **Hog Island,** which will appear over the lower end of **Castle Neck** when viewed from the outside of the bar. This hill is one hundred and fifty feet high, and is partly cultivated. Several orchards upon its slopes will show over the sand-hills of **Castle Neck.**

DANGERS
IN APPROACHING AND ENTERING ESSEX RIVER.

The bar off this river, like those off the other rivers in *Ipswich Bay,* is of shifting sand, and therefore no detailed directions can be given for avoiding the dangers. Buoys are placed to mark the entrance, and also the channel up as far as *Channel Rock.* These buoys are shifted as the bar changes.

The first danger met with on approaching *Essex River* is called

NORTHERN SPIT,

a sand-bar making off from the north shore of **Castle Neck** (on the western side of the entrance) to a distance of six hundred yards. It is bare at extreme low tides, and a *red spar-buoy* (No. 2) is placed in ten feet water on the extreme eastern point of the spit. Leave it to the westward.

A little over two hundred yards southeast of this buoy is a *black spar-buoy,* (No. 1,) which marks the northwestern end of

SOUTH SPIT,

a long, narrow, dry spit, lying nearly in the middle of the river. This spit extends

N. by E. and S. by W., and is six hundred yards long. The buoy is placed in ten feet water off its northern point, and the channel leads directly between it and the *red buoy* on *Northern Spit.* When between the two, another buoy, *a red spar*, will be seen ahead and close to the shore of **Castle Neck.** This is off

POINT NECK.

Shoal water makes off nearly to this buoy, which must be left on the starboard hand. When up with it, **a red iron spindle with a ball on top** will be seen ahead and about two hundred yards distant. This is **Point Neck Rock Beacon,** and is built on

POINT NECK ROCK.

Point Neck Rock is dry at half-tide, and is fifty yards off the north end of the spit. It is to be left to the westward, and must be passed close-to to be in the deepest water. When past it, a *red spar-buoy* will be seen about half a mile ahead bearing about S. by W. This is on the northeastern end of the

MIDDLE GROUND,

a long sand-spit, dry at low water, which makes off from the eastern end of **Castle Neck** in a S. by W. direction for three-quarters of a mile. Off the northeastern point of the shoal is placed a *red spar-buoy* (No. 6) in ten feet water, which should be passed close-to, leaving it to the westward.

UPPER MIDDLE GROUND.

Six hundred yards south of this buoy is a shoal, bare at low water, which lies over three hundred yards southeast from the southeastern end of the *Middle Ground Spit.* At extreme low tides this shoal is bare to the buoy, which is a quarter of a mile from the southeast point of the *Middle Ground;* is a *red spar*, marked No. 8, and placed in ten feet on the edge of the shoal. At this buoy the channel takes an abrupt turn to the westward, skirting the southern side of the *Middle Ground*, and there will be seen, between six and seven hundred yards due WEST, a *red spar-buoy*, (No. 10.) This on the north side of the channel, and is placed on the south side of

CHANNEL ROCK,

which lies off the southern point of the *Middle Ground,* two hundred yards SOUTH from the *Black Rocks.* Several sand-shoals, dry at low water, lie between this rock and the *Black Rocks.* This buoy is to be left to the westward close-to.

Beyond *Channel Rock* the channel is so narrow and crooked as to be entirely unsafe for strangers. A pilot should always be taken by vessels bound up to the village.

In coming in vessels must endeavor to keep close to the line of the buoys, and at the *red buoy* off the northeastern end of the *Middle Ground* should steer so as to have the *red buoy* off the *Upper Middle Ground* a little open to the westward until nearly up with it, when they should round it close-to to avoid *a long spit making off from the eastern shore* of the river, which has four feet at mean low water and comes within one hundred yards of the buoy.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ESSEX RIVER.

First. When up with the bar, take a pilot.

Second. If desiring to make a harbor of refuge, and necessity compels to attempt this bar in the day-time, take the following courses, which were sailed in 1871:

Bring **Ipswich Light** to bear **W N W.** and **Annisquam Light** to bear **S E.**, and steer **S W. ½ S.** for **Point Neck Rock Beacon**, which course leads between the *red buoy* on *North Spit* and the *black buoy* off *South Spit*. Then steer **S W.** until up with *Point Neck Buoy*, when steer **S.** by **W. ½ W.**, passing to the eastward of **Point Neck Rock Beacon**. This course continue until the buoy on the northeast end of the *Middle Ground* bears **SOUTH**, when steer for it, passing to the eastward close-to, and follow the port shore at the same distance until up with the *red buoy* on the *Upper Middle Ground;* round it close-to, leaving it to the westward, and steer **W.** by **S.** until up with *Channel Rock Buoy*, when anchor in five fathoms, sandy bottom. Above this a pilot is necessary.

The buoys are shifted as the channel over the bar shifts. Six feet at low water may be carried over the bar.

ANNISQUAM HARBOR.

This, the most easterly of the harbors of refuge in *Ipswich Bay*, is situated on the western side of **Cape Ann**, and is formed by *SQUAM RIVER*, which empties into the *Bay* at the point where the **Cape** joins the main shore. The entrance is in

Latitude - - - - - - - - - 42° 39′ 30″ N.
Longitude - - - - - - - - 70° 40′ 40″ W.

The mouth of *Squam River* is a mile and a half east of the entrance to *Essex River*. The shore between the two entrances is a sand-beach backed by sand hillocks, and these again by hills from sixty to one hundred feet high, some grassy and some wooded. The entrance to *Squam River* is between **Babson Point** on the east and **Barn Point** on the west, and is eight hundred yards wide. Thence its course is first **S S E.** for half a mile, thence **S W.** by **S.** for one mile, and then nearly **SOUTH** for a little over half a mile to the *Divide*, where one branch runs to the westward and then to the southward, and is called *LITTLE RIVER*, while the other runs to the eastward half a mile and then to the southeastward half a mile, terminating on the back side of the town of **Gloucester.**

Two small streams empty into *Squam River* during its course—one, *Mill River*, which empties into the river on its east side three-quarters of a mile above the mouth, and the other, *Jones River*, which flows in through the west banks seven-eighths of a mile above the entrance. They are both shallow and crooked, and of but little importance.

The village of **Annisquam** is situated on the east bank of *Squam River*, just behind **Babson Point**, where a long narrow cove shoots up into the land between high hills. This cove is called *Lobster Cove*, and upon its west bank is the principal wharf-line of the village. The cove is nearly all bare at low water, and is crossed by a draw-bridge four hundred yards above its mouth.

DESCRIPTION OF SHORES
OF SQUAM RIVER AND ANNISQUAM HARBOR.

On the western shore of **Cape Ann**, eight hundred and fifty yards north from **Babson Point**, is a low cleared point, backed by hills about sixty feet high, also bare. This is

WIGWAM POINT,

and on it is built the **Light-House** which is the guide to *Annisquam River*.

ANNISQUAM LIGHT-HOUSE

is an octagonal wooden tower thirty-four feet high, with a black lantern, which shows

a fixed white light of the fifth order of Fresnel from a height of fifty feet above sea-level. This light is visible thirteen miles at sea. Its position is

Latitude - - - - - - - - - 42° 39′ 41″ N.
Longitude - - - - - - - - 70° 40′ 54″ W.

There is a small cove on the south side of **Wigwam Point**, which is bare at low water.

The shore between **Wigwam Point** and **Babson Point** (nearly half a mile to the southward) is composed of grassy hills, varying in height from sixty to one hundred feet. The village is not visible, being built on the eastern slopes of the hills.

BABSON POINT

is the eastern point of the entrance to *Squam River;* is cleared, grassy, and gently sloping, tolerably bold-to, and settled on its south side. A small cove, bare at low water, makes in along the southern shore to the back of the town. The southern point of the entrance to this cove, called **Lane Point,** is covered with houses, and has a square wooden beacon off its southern end. On the western side of **Lane Point** is the entrance to

LOBSTER COVE,

which forms the *Inner Harbor. Lobster Cove* is long and narrow, and runs into the land in a N E. by N. direction for five-eighths of a mile. It is crossed by a draw-bridge a quarter of a mile above its mouth, and above this bridge it is dry at low water. The village is built upon its western bank.

BARN POINT

is the western point of the entrance to *Squam River.* It is bare and rocky, about twenty feet high, and rising to a height of eighty feet a few hundred yards back of the shore. A quarter of a mile to the southward of **Barn Point** the shore is low and grassy, faced by a sand-beach, with several outlying rocks extending off in a northeasterly direction to the edge of the channel. These rocks are called *Barn Rocks.*

The western shores of *Squam River* below this grassy land are mostly salt meadow and marsh nearly to the mouth of *Little River.* On the eastern side the shores are mostly cleared and cultivated lands, presenting an undulating surface, and tolerably well settled. Seven hundred yards to the southward of **Lane Point** is the entrance to

MILL RIVER,

which empties into *Squam River* between a small marsh island on the north and a cleared and cultivated point fifty feet high on the south. This point has several houses upon it, and an orchard upon its summit. *Mill River* is only two hundred yards wide at its mouth, and diminishes to a width of fifty yards an eighth of a mile to the southward; then it widens out into a broad shallow bay, three hundred yards wide, on the eastern bank of which is built the village of **Dogtown.**

Both shores of this river are composed of hills of various heights, mostly grassy, and in many places under cultivation. At the southern end of the village, three-quarters of a mile above the mouth, the river is crossed by a mill-dam upon which are built several saw-mills. Six and a half feet at mean low water can be safely taken over *Annisquam Bar.*

DANGERS
IN APPROACHING AND ENTERING ANNISQUAM RIVER.

I. *Coming from the northward and northwestward.*—In approaching this harbor from the northward or westward it is necessary to bring the light to bear SOUTH and run for it. On this course, the first danger met with is

HARRIDAN ROCK,

on the eastern side of the entrance, with seven feet at mean low water. It is a detached rock, lying four hundred yards from shore and three-eighths of a mile (seven hundred and fifty yards) N. by E. ½ E. from **Squam Light-House.** At low spring tides it has only five feet upon it. A *black spar-buoy* (marked No. 3) is placed in seventeen feet water on the western side of the rock. This buoy may be left quite close-to to the eastward in day-time, but at night the bearing of the light must be kept.

A little over three hundred yards W. by S. ½ S. from this buoy will be seen a *red spar-buoy*, (No. 2,) which is called the *Bar Buoy.* It is in seventeen feet and marks the western side of the channel, which passes between it and *Harridan Rock Buoy.*

LOBSTER ROCK.

After passing the *bar buoy* there are no dangers met with until past the **Light-House**, when **a square granite beacon of open work, with its top painted black,** will be seen on the port bow about four hundred yards to the southward of the light. This is on *Lobster Rock;* a dry rock, lying four hundred yards S W. by S. ½ S. from the **Light-House** and one hundred and fifty yards from shore. It is to be left to the eastward.

Care must be taken to keep pretty close to the **beacon** to avoid a long sand-spit, dry at low water, which extends in a N. by E. direction from the grassy point on the western bank of the river just below **Barn Point** to a distance of seven hundred yards. This brings its northern point directly opposite to **Lobster Rock Beacon,** from which it is distant two hundred and fifty yards in a W. by N. ½ N. direction.

BARN ROCKS

are a group of detached rocks, bare at half-tide, which extend off in a N E. by N. direction from the eastern end of the sand-beach southeast of **Barn Point** to a distance of an eighth of a mile from the western shore of the river. The northernmost rock is directly opposite to the northern extremity of **Babson Point** and close to the edge of the channel. *These rocks are not buoyed,* as they always show themselves.

After passing *Barn Rocks* the channel is clear to the anchorage in the outer harbor, and it is only necessary to keep off the flats on the west bank. But *if proposing to enter Lobster Cove, or the Inner Harbor,* steer to the eastward nearly for a **square, black, wooden beacon,** which is built close to high-water mark on the southern extremity of **Lane Point.** There is a flat, dry at low water, which makes off in a northerly direction from the marsh island south of the mouth of the cove to within fifty yards of the **beacon.** Vessels must, therefore, hug **Lane Point,** passing the **beacon** close-to, and leaving it to the northward. Two feet at mean low water may be taken into the cove. No strangers ever enter it for shelter, the anchorage in the river being sufficiently well protected.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ANNISQUAM HARBOR.

1. *Coming from the northward and westward.*—Bring **Annisquam Light-House** to bear **SOUTH** and steer for it. This course will carry over the bar about midway between *Harridan Rock Buoy* and the *Bar Buoy* with not less than six and a half feet water. Continue the course until within three hundred and fifty yards of the **Light-House,** and have the beacon on **Lobster Rock** bearing S. by W. ½ W. Then steer S. by W. ½ W., leaving that beacon close-to to the eastward, and continue the course until abreast of the northernmost of the *Barn Rocks.* **Lane Point Beacon** will then be just touching the

southern face of **Babson Point** on a bearing of SE. Then steer SE. by S. until *Lobster Cove* is completely open and **Lane Point Beacon** bears N. ½ E., when anchor in from three to five fathoms, sandy bottom. Above this it is not safe to go without a pilot.

If bound into the Inner Harbor: On the course SE. by S. continue until almost abreast of **Lane Point Beacon**, having it bear E. by N. ½ N. Then steer E. by N., leaving the beacon close-to to the northward. After passing the beacon keep about seventy-five yards from the wharf-line of the town, and anchor or run alongside the wharves.

The above directions were good for the year 1873.

DANGERS
IN APPROACHING AND ENTERING ANNISQUAM HARBOR.

II. *Coming from the eastward.*—The first obstruction met with in approaching this harbor from the eastward or northeastward is

PLUM COVE LEDGE.

It is not in the way except of vessels beating to windward or of those who hug the shore of **Cape Ann** bound in to **Annisquam**. It is a rocky ledge, bare at low water, which lies off *Plum Cove Entrance*, on the west shore of the **Cape**, an eighth of a mile from shore and nearly a mile and a quarter NE. ½ E. from **Annisquam Light-House**. From **Davis Neck** it is distant a little over half a mile NE.

A *black spar-buoy* (No. 1) is placed in three and a half fathoms, rocky bottom, off this ledge. Pass to the northward of it and give it a berth.

Plum Cove is often called *Lane Cove*, from the small village of **Lanesville**, which is situated on the western shore of **Cape Ann**, just back of the *Cove*.

HARRIDAN ROCK

is the next obstruction met with after passing *Plum Cove Buoy*. It has been already described, on page 721, as a sunken rock with seven feet of water at mean low tides and five feet at low springs. It lies four hundred yards from shore and three-eighths of a mile (seven hundred and fifty yards) N. by E. ½ E. from **Squam Light-House**, and is marked by a *black spar-buoy* (No. 3) placed in seventeen feet at mean low water on the western side of the rock. This buoy must be left to the eastward pretty close-to.

After passing *Harridan Rock* and the *red bar buoy*, there are no obstructions until past the **Light-House** and up with

LOBSTER ROCK,

a dry rock, lying four hundred yards SW. by S. ½ S. from the **Light-House** and one hundred and fifty yards from shore. On its top is built a **square granite beacon of open work with a black top**. It must be left to the eastward going in. (See page 721.)

The dangers and obstructions in the river, after passing its mouth, are fully described on page 721.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ANNISQUAM RIVER.

II. *Coming from the eastward.*—1. *Along the west shore of Cape Ann:* The course along shore to the southwestward is SW. by W. ½ W. until up with the *black buoy* off *Plum Cove Ledge*. Pass to the northward of this buoy, giving it a berth of an eighth of a mile, (two hundred and fifty yards,) and steer SW. ½ W. for the *black buoy* on *Harridan Rock*. Leave this buoy to the eastward close-to, round it, and steer S. by W. ½ W. past the **Light-House**, past **Lobster Rock Beacon**, and continue the course until abreast of the northernmost of the *Barn Rocks* and **Lane Point Beacon** just touches the southern ex-

tremity of **Babson Point** on a bearing of S E.; then steer S E. by S. ½ S. until *Lobster Cove* is completely open and **Lane Point Beacon** bears N. ¾ E., where there will be anchorage in from three to five fathoms, sandy bottom. There will not be less than six and a half feet on the above course in crossing the bar.

2. *Coming from the northeastward, from sea:* Bring **Squam Light** to bear S. by W. and run for it until up with *Harridan Rock Buoy.* Leave this close-to to the eastward, and steer S. by W. ¾ W., following the directions given above.

Six and a half feet at mean low water may be taken over this bar.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Annisquam Light . . .	42° 39′ 41″	70° 40′ 54″	4ʰ 42ᵐ 43.6ˢ	Fixed.	50 ft.	12

TIDES.

Corrected Establishment	11ʰ 00ᵐ
Mean Rise and Fall of Tides	9.0 feet.
Mean Rise and Fall of Spring Tides	10.8 "
Mean Rise and Fall of Neap Tides	7.1 "
Mean Duration of Rise	6ʰ 06ᵐ
Mean Duration of Fall	6ʰ 18ᵐ
Mean Duration of Stand	0ʰ 23ᵐ
Highest Tide observed	11.8 feet.

CURRENTS.

Locality.	First Quarter.		Maximum.		Third Quarter.		Flood or Ebb.
	Set.	Drift.	Set.	Drift.	Set.	Drift.	
Near Bar-Buoy	N N E. N W.	1.0 0.5	N. by E. N W.	2.0 1.1	N. by E. W. by S. ½ S.	0.2 0.5	Ebb. Flood.

The above bearings are magnetic, and are correct to the nearest quarter of a point. The drift is in nautical miles.

After passing the **beacon on Lobster Rock** the set of the flood is in the direction of the course of the river. The above merely shows the direction and velocity of current on the bar.

The observations were made, as far as practicable, when the influence of the wind was small.

There were no current observations made at *Essex Bar.*

VARIATION OF THE COMPASS.

Near Annisquam, the variation of the magnetic needle was, in 1859, 11° 30′ W. The annual increase being about 3′, makes the variation, in 1875, 12° 13′ W.

LIFE-BOAT STATIONS.

There is a life-boat at the **Light-House** on **Wigwam Point** under the charge of the keeper of the light. There is also a life-boat at *Lane Cove*, under care.

CAPE ANN.

The eastern boundary of *Ipswich Bay* is formed by the western shores of **Cape Ann,** the northernmost of the two great capes of Massachusetts. It separates *Ipswich Bay* from *Massachusetts Bay*, which is embraced between **Cape Ann** and **Cape Cod.**

Cape Ann is a large peninsula of irregular shape, lying in a N N E. and S S W. direction, between five and six miles long, and with an average breadth of three and a half miles. Its northernmost point, called **Halibut Point,** is in

Latitude - - - - - - - -	42° 41′ 30″ N.
Longitude - - - - - - - -	70° 37′ 40″ W.

Its easternmost point, called **Emerson Point,** is in

Latitude - - - - - - - - -	42° 38′ 12″ N.
Longitude - - - - - - - -	70° 35′ 25″ W.

Its southernmost point, called **Eastern Point,** is in

Latitude - - - - - - - - -	42° 34′ 47″ N.
Longitude - - - - - - - -	70° 39′ 33″ W.

The **Cape** presents a hilly surface, undulating, and diversified with woods and grassy summits, cleared lands and settlements. On its western side are situated **Annisquam** (already described) and the small village of **Lanesville.** On its north shore is built the town of **Rockport,** situated at the bottom of a deep bight, called *Sandy Bay.* On its southern shore is the town of **Gloucester,** one of the most important fishing-ports on the coast.

HALIBUT POINT,

the most northerly point of **Cape Ann,** is composed of cleared lands, sloping gradually to the sea. Its summit is eighty-five feet above tide-water, and is bare of trees. Half a mile to the eastward of it is **Andrews Point,** which is only forty feet high and bare of trees, but somewhat steeper than **Halibut Point.** Behind **Andrews Point** the hills rise to a height of one hundred and fifty feet, and are dotted with trees and houses.

The shores of the **Cape** are much indented by coves and bays. On the northern shore, west of **Halibut Point,** is a small but deep cove, called *Folly Cove.* Its shores are cleared and thickly settled. The second indentation on the north shore is called *Pigeon Cove,* and is situated on the western shore of *Sandy Bay,* three-quarters of a mile below **Andrews Point,** which is the first point to the eastward of **Halibut Point.** It is a small oval cove, and forms a good harbor for vessels of light draught. Its shores are occupied by a small village, called **Pigeon Cove Village,** which is the north-western suburb of **Rockport.**

SANDY BAY is a large indentation on the north face of the **Cape,** embraced between **Straitsmouth Island** on the east and **Andrews Point** on the west. It is two miles wide between these two points, and a mile and a half long to *ROCKPORT HARBOR,* a small shallow cove in the shore of this bay. *Sandy Bay* has excellent water, and is but little obstructed. At its eastern point of entrance is a small island, called

STRAITSMOUTH ISLAND,

which lies off **Gap Head,** the easternmost point of *Sandy Bay.* A shallow strait, one hundred and fifty yards wide, separates the head from the island.

Straitsmouth Island is six hundred yards long and four hundred wide, lies N E. and S W.; is irregular in shape, high and steep at its western end, and gradually diminishes to its northeastern point, where it is but little elevated above high-water mark. It is bare of trees, and occupied only by the light-tower and keeper's dwelling. On its northeastern end is built

STRAITSMOUTH ISLAND LIGHT-HOUSE,

an octagonal wooden tower, twenty-four feet high, and painted white. It shows a fixed white light of the sixth order of Fresnel from a height of thirty-three feet above high-water mark, and visible eleven miles at sea.

The geographical position of **Straitsmouth Island Light-House** is

Latitude - - - - - - - - 42° 39′ 43″ N.
Longitude - - - - - - - - 70° 35′ 18″ W.

Between **Gap Head** and **Emerson Point** there are two coves, the northernmost called *Whale Cove*, and the other *Loblolly Cove.*

Whale Cove lies half a mile south of **Gap Head**; is three-eighths of a mile (seven hundred and fifty yards) wide and a little over three hundred yards long. It is of no importance. A low bare point, called **Flat Point,** separates it from *Loblolly Cove* to the southward.

Loblolly Cove is contained between **Flat Point** and **Emerson Point**; is irregular in shape, and quite shallow. Its shores are quite steep, and mostly composed of cleared lands.

EMERSON POINT,

the eastern extremity of **Cape Ann**, is low and thinly wooded, about twenty or twenty-five feet high, and fringed with bare rocks on its seaward face. On its south side, where the shore-line turns to the westward toward **Cape Hedge**, there is a hill between forty and fifty feet high, bare of trees.

From **Emerson Point** the shore-line of the cape turns abruptly to the westward, and three-quarters of a mile below is a rocky headland, low and bare, called **Cape Hedge.** Between this headland and the point the shores are low and occasionally marshy, with high, wooded lands rising behind them. There are, however, no rocks between the two points, **Cape Hedge** itself being the only rocky outcrop from **Emerson Point** to **Brier Neck,** a mile to the southward.

From **Cape Hedge** the shores run in a S W. direction (continuing low and sandy, with wooded hills behind) for half a mile to a bare hill, with rocky face, called

BRIER NECK,

which is sixty feet high, and forms a sort of promontory or headland, separating the sandy shores north and south of it. A small islet, called **Salt Island,** lies an eighth of a mile S S W. from this point and the same distance off the shore. It is within the curve of three fathoms and is of no importance.

The next indentation on the eastern face of **Cape Ann** is called

BRACE COVE.

It is three miles and a quarter to the southward of **Emerson Point** and nearly circular in form, but quite shallow. The shores of the **Cape** from **Salt Island** to this cove are from twenty to forty feet high, and mostly fringed with bare rocks. The cove has a diameter of one-third of a mile, (six hundred and fifty yards,) and both sides of the entrance are guarded by bare rocks. It is separated from *Gloucester Harbor* by

EASTERN POINT,

the southernmost point of the **Cape**. This is an oval peninsula about three quarters of a mile long in an **ENE.** and **WSW.** direction, and a little over half a mile wide at its widest part. At its northeastern end it is joined to the **Cape** by a narrow neck twenty feet high and between three and four hundred yards wide, which separates *Brace Cove* and the outer harbor of **Gloucester**. The surface of the point is hilly and undulating. Its southern end, where the **Light-House** and keeper's dwelling are situated, is between twenty and thirty feet high, and its summit sixty feet high and bare. Near the northeastern end, where the low land begins, is a thin growth of trees. Bare ledges crop out here and there on the southeastern slopes, and an earth-work will appear over the northern hill, near *Brace Cove*.

On the extreme southern end of **Eastern Point** is built

EASTERN POINT LIGHT-HOUSE,

the guide to *Gloucester Harbor*. This **Light-House** is a white tower thirty-three feet high, which shows a fixed white light of the fourth order of Fresnel from a height of sixty feet above sea-level, and visible thirteen miles. It is in

Latitude - - - - - - - -	42° 34′ 47″ N.
Longitude - - - - - - - -	70° 39′ 53″ W.

The **Light-House** is connected by a covered way with the keeper's dwelling, and there is a fog-bell in a high wooden tower between the two.

GLOUCESTER HARBOR.

This is the largest and most important of the many coves and bays which indent the shores of **Cape Ann**. It is a long and deep cove, very little obstructed, which makes in in a **NNE.** direction on the western side of **Eastern Point**. It is two and a half miles long and from half a mile to a mile and a half wide. The town of **Gloucester** occupies the head of this cove, on both shores.

ISLANDS FORMING PART OF THE SHORES OF CAPE ANN.

Straitsmouth Island, which lies close to **Gap Head**, has been already described on page 724. It carries the **Light-House**, which is a guide to *Rockport Harbor*, and is low and bare. Half a mile **EAST** from **Emerson Point** lies another bare islet, called

THATCHER ISLAND.

This island is only important as being the site of **Cape Ann Light-Houses**. It is of an irregular shape, lies **NE.** and **SW.**, and is nearly half a mile long and three hundred and fifty yards wide. The land is fifty feet above high-water mark at its highest part, and is destitute of trees. Upon its summit stand two granite towers, eight hundred and ninety-five feet apart and one hundred and twelve feet high, which show fixed white lights of the first order of Fresnel from a height of one hundred and sixty-five feet above sea-level.

THATCHER ISLAND LIGHTS.

These lights are called **Cape Ann, or Thatcher Island Lights**. They are visible twenty miles at sea, and the towers present so peculiar an appearance that they can never be mistaken for any other light-houses. A covered way, painted stone color, connects the **Light-Houses** and the keepers' dwellings. The house belonging to the northernmost light is a frame building, painted white; the other is a brick house.

The geographical position of the north light is

Latitude - - - - - - - -	42° 38′ 19″ N.
Longitude - - - - - - - -	70° 34′ 30″ W.

The south light is S. by W. ½ W. from the north light, and its geographical position is

Latitude - - - - - - - - - 42° 38′ 11″ N.
Longitude - - - - - - - - 70° 34′ 30″ W.

Thatcher Island bears from—

	Miles distant.
Seguin Island, S W. ½ S.	73
Cape Small Point, S W. ½ S.	71
Cape Elizabeth, S W. by S. ½ S.	58
Wood Island, S W. by S. ½ S.	49
Cape Porpoise, S. by W. ½ W.	43
Portsmouth Entrance, SOUTH	25
Boon Island, S. by W. ½ W.	28½
White Island Light, (Isles of Shoals,) S. ½ W.	19½
Newburyport Entrance	14
Eastern Point, (Gloucester,) N E. by E. ½ E.	5
Baker Island, (Salem,)	11
Nahant Head, N E. by E. ½ E.	19
Long Island Light, (Boston,) N E. ½ E.	25
Boston Light-House, N E. ½ E.	23
Race Point Light-House, (Cape Cod,) N. by W.	37
Highland Light-House, (Cape Cod,) N N W.	43½

FOG-SIGNAL ON THATCHER ISLAND.

The fog-signal at **Cape Ann**, situated on **Thatcher Island**, is a twelve-inch steam whistle, giving each minute a blast of eight and one of four seconds, with an interval of four seconds between the two.

Half a mile W S W. from **Thatcher Island** is a small low island, called

MILK ISLAND,

eight hundred yards S S E. from **Emerson Point**, irregular in shape, and about three hundred and fifty yards in diameter. Its shores are about ten feet above sea-level, and perfectly bare of trees. Ledges and shoals surround it.

Milk Island has one solitary house upon it, near its western end.

There is an excellent and much-used passage between **Thatcher Island** and the main shore of the **Cape**. It is about half a mile wide, and is obstructed by a sunken rock, near the middle of the passage, called *Oak Rock*. There is from four to seven fathoms water on both sides of this rock, but the best channel is between it and **Thatcher Island**. *Oak Rock* has four feet at lowest tides, and is marked by a *red spar-buoy* placed in twenty feet water on the eastern side of the ledge.

There are also two shoal spots with from fifteen to eighteen feet between **Milk Island** and the southwestern point of **Thatcher Island**. Strangers do not use this passage.

There is also a narrow and shoal passage between **Milk Island** and the main, not fit for strangers.

Salt Island, near **Brier Neck**, has already been described.

APPEARANCE OF SHORES OF CAPE ANN AND VICINITY, AS SEEN FROM THE NORTHWARD.

When off the entrance to **Ipswich**, with **Isles of Shoals Light-House** bearing **NORTH**, **Thatcher Island** should bear S. ½ W., distant six miles. It will appear as a low islet, with two very tall granite light-towers on its northeastern face. The keepers' houses will also show. A little to the eastward of **Thatcher Island** will be seen two low, bare, rocky

islets, upon one of which is a tall tripod, covered about a third of the way from the top, and painted red. These are the **Dry** and **Little Salvages**, dangerous obstructions in the approaches to the harbors on the **Cape**, and especially to *Rockport Harbor*. The tripod is on the **Dry Salvages**, and its top is sixty-five feet above high-water mark.

The open space between the **Cape** and **Thatcher Island** is the passage above described, used by coasters and fishermen of light draught. It leads between **Thatcher** and **Milk Islands**, but is not safe for strangers.

The light-tower which appears to the westward of **Thatcher Island**, apparently on the eastern point of the main land, is **Straitsmouth Island Light-House**, the guide to *Rockport Harbor*. To the westward of this light the land gradually rises, the hills being thinly wooded in places to the town of **Rockport**, which will show at the bottom of a deep bight on the northeast shore of the cape, called *Sandy Bay*.

To the northward of **Rockport**, **Andrews Point** will show as a wooded point of moderate height, with a high, round, grassy hill, with one or two trees on its summit, rising behind it. The round grassy point to the westward of **Andrews Point** is **Halibut Point**, the northern extremity of **Cape Ann**. It will appear as a smooth, gently-sloping hill, backed by thinly-wooded lands.

Well to the right of **Halibut Point** a settlement will appear, with a white church-tower rising above the group of houses. This is **Lanesville**, the small village on the west shore of the **Cape**, to the northward of **Annisquam**. Still farther to the westward will appear the light-tower on **Wigwam Point**, the guide to *Annisquam Harbor;* and west of this the high lands on **Castle Neck** and back of it will show.

GENERAL COURSES

LEADING FROM THE PRINCIPAL PORTS BETWEEN PENOBSCOT BAY AND BOSTON HARBOR TO CAPE ANN.

Vessels bound from *Penobscot Bay* to **Cape Ann** take their departure from **Monhegan Light** and steer S W. ½ W. The distance is eighty-four miles, and in ordinary weather the lights on **Seguin**, **Boon Island**, and the **Isles of Shoals** will be seen. This course leads clear of all dangers, and should make **Thatcher Island Lights** nearly ahead. In passing them they must receive a berth of a mile, to avoid the *Londoner*, a bad rock, dry at low water, which lies half a mile from the island. This rock is marked by an **iron spindle and cage**. There is plenty of water between it and the island, but strangers had better pass outside of it.

Vessels bound from the Kennebec and vicinity bring **Seguin Light** to bear N E. ¼ N. and steer S W. ¾ S. The distance is seventy-three miles, and **Thatcher Island Lights** should be made a little on the starboard bow. The lights on **Half-Way Rock**, (*Casco Bay*,) **Cape Elizabeth**, **Boon Island**, and the **Isles of Shoals** will be made and passed in their regular order. This course leads clear of all dangers.

Vessels bound from **Portland** *to* **Cape Ann** bring **Cape Elizabeth Lights** to bear N E. by N. ½ N. and steer S W. by S. ½ S. The distance is fifty-eight miles. This course leads two miles outside of *Boon Island Ledge*, the only danger. The lights on **Wood Island**, (*Saco Bay*,) **Goat Island**, (**Cape Porpoise**,) **Boon Island**, and **Isles of Shoals** will be seen and passed in their regular order. In very clear weather the light on **Whale Back**, at the entrance to **Portsmouth**, may be seen. This rarely happens, however.

Boon Island Light will be passed about five miles off. Be careful not to pass too close to this light, for fear of the ledge.

Vessels bound from **Saco** *to* **Cape Ann** take their departure with **Wood Island Light** bearing N W. by N., four miles distant, and **Cape Elizabeth Lights** bearing N E. by N. ½ N.,

ten miles distant, with forty-six fathoms water, rocky bottom, and steer S W. by S. ½ S. The distance is forty-seven miles from the point of departure. This course leads two miles outside of *Boon Island Ledge.*

Or wishing to hug the shore more closely, bring **Wood Island Light** to bear N W. by N., a mile and a half distant, and **Cape Elizabeth Lights** to bear N E. ½ N., and steer S W. ½ S. On this course **Cape Porpoise Light** will be passed two miles and three-quarters off in about thirty fathoms water, and **Boon Island Light** will be made on the eastern side of the passage, and **Isles of Shoals Light** directly ahead. When **Boon Island Light** bears S E. ¾ E., (that is, exactly abreast of it,) with twenty-five fathoms, steer S. by W. ½ W., which will lead safely to the **Cape.** This course will pass a mile and a half to the westward of **Boon Island Light** and four miles and a half to the eastward of **White Island Light.**

Vessels bound from **Portsmouth** *to* **Cape Ann** bring **Portsmouth Light** to bear N. ¾ W. and steer S. ¾ E. until abreast of **White Island Light,** (**Isles of Shoals Light,**) bearing EAST, distant nearly one mile and a half, and in 20 fathoms water; then steer S ½ E. The distance is twenty-five miles.

Vessels bound from **Salem** *to* **Cape Ann** steer E. by S. from **Baker Island Lights** until **Thatcher Island Lights** bear N E. ½ N., when steer N E. by E. until abreast of the **Cape Lights.** The distance by these courses is fourteen miles.

Vessels bound from **Boston** *to* **Cape Ann,** if coming out by *Broad Sound Channel,* steer N E. by E. for **Thatcher Island.** The distance is twenty-three miles, and the course leads clear of all dangers and a mile and a half outside of **Thatcher Island.**

The lights on **Egg Rock,** (*Nahant Bay,*) **Marblehead Neck,** (*Marblehead Harbor,*) **Baker Island,** and **Eastern Point** are made and passed in the above regular order on this course.

A vessel leaving **Boston** *by the Main Ship-Channel and bound to* **Cape Ann** must bring **Boston Light** to bear WEST, one mile and a half distant, and **Point Allerton** S W. ½ W., one mile and three-quarters distant, with eight fathoms water, and steer N E. ½ E., keeping **Point Allerton** to bear S W. ½ W., which course will lead clear of everything a mile and a half outside of **Thatcher Island.** The distance is twenty-three miles from the point of departure and twenty-four and a half from **Boston Light.**

JEFFREY LEDGE.

This extensive bank, well known to coasters and fishermen, has from twenty to forty fathoms upon it, and extends in a N E. direction from near **Cape Ann** a distance of forty miles. Its northern end, where the bank is very narrow, is in

Latitude - - - - - - - - -	43° 11′ 00″ N.
Longitude - - - - - - - - -	70° 00′ 00″ W.

Its southwestern end, off **Cape Ann,** is in

Latitude - - - - - - - - -	42° 37′ 45″ N.

and extends from

Longitude - - - - - - - - -	70° 23′ 20″ W. to
Longitude - - - - - - - - -	70° 28′ 30″ W.

showing the bank to be over five miles wide at this point. The southwesternmost point of the bank is four miles and a half E. by S. ½ S. f m **Thatcher Island Lights.**

From the northernmost point of this ledge **Cape Elizabeth Lights** bear N. ¾ W., twenty-five miles distant; *Portsmouth Entrance* WEST, thirty-two miles; and **Thatcher Island Lights** S W. ¾ W., forty-two miles distant.

A vessel bound from **Seguin** to **Cape Ann** will cross the tail of *Jeffrey Ledge* close to its southwestern end, meeting the bank in latitude 42° 42′ N., and crossing it in lati-

tude 42° 40′ 30″ N. Falling in with the bank, if the course has been made good from **Seguin**, she will be five miles N E. by E. ½ E. from **Thatcher Island Lights** and in from twenty-eight to thirty fathoms. The bottom, on coming on to the bank, will change from a *gray mud* to *stones and broken shells*, and when on the bank will be *fine gray and black sand*. Should such a vessel be to the eastward of her course she will find from thirty-four to forty-five fathoms, *blue clay*, near the edge of the bank, changing, on striking the ledge, to *mud and fine gray and red sand*. The soundings will be in from twenty to forty fathoms, and she will cross the bank, if she continues her course, in from twenty-three to twenty-six fathoms, *gray sand* and *gray and black sand*.

Such a vessel bound from **Seguin** to **Cape Ann** in thick weather, getting soundings in forty to forty-five fathoms, *blue clay*, on the northwestern edge of *Jeffrey Ledge*, and then changing to from thirty to thirty-seven fathoms, *mud, fine gray and red sand*, will know that she is to the eastward, and **Cape Ann Lights** bear W. by S. ½ S., from seven to ten miles distant.

If she is to the westward of her course she will not hit the bank at all.

A vessel bound from **Eastport** *to* **Cape Ann**, if steering a straight course W S W. will meet the ledge in latitude 42° 49′ N., longitude 70° 14′ W., and will have forty-two fathoms, *fine gray and black sand*. In crossing the ledge in a W S W. direction there will be from twenty-eight to thirty fathoms. The bottom will vary from *coarse and fine gray and red sand with black specks* to *coarse white and yellow sand with black pebbles*. She will then drop off into forty-five fathoms, *blue clay*, and then shoal again to thirty fathoms, *fine gray and red sand mixed with mud*. This shows that she is crossing the southwestern end of the ledge; and will leave it in twenty-nine fathoms four miles E N E. from **Thatcher Island Lights**.

Should such a vessel in thick weather get soundings on the edge of the ledge in fifty-three fathoms, *fine gray and black sand*, and change to *fine gray sand and red gravel*, she is to the southward of her course, and should steer W. by S. ½ S. for **Thatcher Island Lights**.

A vessel bound from the Bay of Fundy to **Cape Ann** crosses *Jeffrey Ledge* in latitude 42° 46′ N., longitude 70° 16′ W., and in a W. by S. ½ S. direction. The soundings on the *Eastern Ledge* will be fifty-three fathoms, *fine gray and black sand*, and will change to thirty-two fathoms, *fine gray sand and red gravel*. The soundings on the ledge will vary from twenty-four to thirty fathoms, and when the bank is crossed **Cape Ann Lights** will bear W. by S. ½ S., four miles distant.

A vessel bound from **Cape Sable** *to* **Cape Ann** will cross the bank in latitude 42° 39′ N., meeting it in longitude 70° 22′ W., and leaving it in longitude 70° 28′ 30″ W. When the bottom changes to *gray or dark mud* she is over the bank, and **Thatcher Island Lights** bear W. ½ N., distant four miles.

CASHE LEDGE.

This dangerous ledge lies in the middle of the *GULF OF MAINE*, seventy-nine miles E. ½ S. from **Cape Ann** and one hundred and forty miles **W. ½ N.** from **Cape Sable.** From **Monhegan** it bears S. ½ E., fifty-six miles, and from **Cape Cod (Highland Light)** N E. by E. ½ E., seventy-four miles. It lies **NORTH** and **SOUTH**, and has from four to seven fathoms upon it. A vessel leaving **Cape Sable** and steering **W. ½ N.** for **Cape Ann** would cross the tail of the ledge in ten or twelve fathoms. To avoid it, steer **WEST** from **Cape Sable** until in latitude 42° 41′ N., longitude 69° W., when steer **W. by N. ½ N.** for **Cape Ann.**

This ledge is seventeen miles long in a NORTH and SOUTH direction between the lines of twenty-five fathoms.

Cape Ann from the Eastward, Rockport Light bearing S.W. by W.½ W. distant 6 Miles

Cape Ann from the Northward, Thatcher's I. Lights bearing S. ¾ W. distant 6½ Miles.

APPEARANCE OF SHORES OF CAPE ANN AND VICINITY AS SEEN FROM THE SOUTHWARD.

When three miles SOUTH from **Eastern Point** the whole of the southern face of **Cape Ann** from **Emerson Point** to the entrance to **Gloucester** may be seen. The most prominent object will be, of course, **Eastern Point Light.** This will appear as a white tower on the extremity of a precipitous point about thirty feet high, bare of trees, and occupied only by the light-tower, the keepers' dwellings, and the covered way connecting them. There is also a bell-tower, which will appear between the light-tower and the dwellings.

West of **Eastern Point** the entrance to **Gloucester** will appear; the western shores of the harbor showing as high wooded hills, with low cliff-like faces toward the entrance. Groups of white houses will be discerned here and there on the lower slopes.

To the eastward of **Eastern Point Light** the land is low for a short distance, and then rises gradually to a height of sixty feet, the highest land on the point. A few houses appear on this higher land. To the eastward of this hill the land descends toward the entrance to *Brace Cove*, and over it appears the earth-work on **Fort Point.** The shore is lined with a fringe of high white rocks. Just to the left of the fort the steeples and some of the houses in **Gloucester** will appear. Over the western side of the entrance to *Brace Cove* will be seen a high bare hill. This is **Rocky Neck**, at the entrance to the *Inner Harbor*. Houses and cultivated lands will appear between **Rocky Neck** and the shore-line. The group of houses on the bare hill to the right of **Rocky Neck** is the settlement at *Smith Cove*, on the eastern side of *Inner Harbor*. To the eastward of *Brace Cove* the land, partly wooded and partly cleared, extends, gradually diminishing in height to **Emerson Point**, which here shows as a low thinly-wooded point, the easternmost extremity of the main land.

The small low islet, barely discernible, which appears in the middle of the passage between **Emerson Point** and **Thatcher Island**, is **Milk Island.** **Thatcher Island** shows to the eastward of it, its two granite light-towers making it a conspicuous and easily recognized object.

LIGHT-HOUSES.

Names.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
	° ′ ″	° ′ ″	h m s		Feet.	
Straitsmouth Island Light	42 39 43	70 35 18	4 42 21.2	Fixed.	33	11
Thatcher Island North Light ..	42 38 19	70 34 30	4 42 18.0	Fixed.	165½	20
Thatcher Island South Light ..	42 38 11	70 34 30	4 42 18.0	Fixed.	165½	20

HARBORS ON THE NORTH FACE OF CAPE ANN.

Of these there are three, all good harbors of refuge for vessels of light draught. The first of these met with, in coming along the shore of the **Cape** from the northward, is

PIGEON COVE,

a small oval cove, lying three-quarters of a mile to the southward of **Andrews Point**, and an excellent harbor for light-draught vessels. By private enterprise this cove has been formed into a secure harbor, and a small charge is made to vessels using the shelter thus afforded. It is three-quarters of a mile long and nearly two hundred

yards wide, and runs N N W. and S S E. On the northeast it is protected by a breakwater, and from the eastern side of the entrance a pier is built out, which makes the harbor nearly land-locked.

To enter Pigeon Cove, coming from the northward: Pass **Andrews Point** on a S W. by S. ½ S. course, about six hundred yards from shore, and in about twelve fathoms water, and continue this course until the cove is opened and the large pier and warehouse in the centre of the bight slightly open to the westward of the pier at the entrance on a bearing of N W. by N. ½ N. There will be at this point nine fathoms water. Now steer for the pier, and anchor at pleasure, in from six to twelve feet water.

Coming from the eastward: When off the entrance to **Rockport**, with **Straitsmouth Island Light-House** bearing S E. by E. ½ E. and the **stone factory** in **Rockport** W S W., with eleven fathoms water, steer N W. ½ W., carrying not less than ten fathoms, until the two piers are nearly in range as before, on a bearing of N W. by N. ½ N. Then steer that course, as before directed.

This harbor is shoal, but is a secure anchorage for small vessels. There is quite a settlement on its shores.

SANDY BAY

is the largest indentation on the shores of **Cape Ann** except *Gloucester Harbor* on the southern side of the **Cape.** It extends from *Gap Head* on the east to the entrance to *Pigeon Cove* on the west, is nearly two miles wide at its entrance, and a mile long to *Rockport Harbor*, which lies at the bottom of the curve.

From **Andrews Point** to the suburbs of **Rockport** the shores are thickly settled. Between *Pigeon Cove* and the town the shore-line shows low and rather bold shores, faced with rocks, and backed by high, steep, wooded hills, separated by lower lands, which are cleared, cultivated, and thickly settled. The highest land is about one hundred and twenty feet.

Rockport occupies nearly all of the southern shore of *Sandy Bay.*

ROCKPORT HARBOR.

This is the best harbor of refuge on the north shore of the **Cape.** It is situated at the bottom of that curve in the shore-line which forms *Sandy Bay*, and has, properly speaking, two harbors. The waters of the western harbor wash the north face of the town, and those of the harbor proper lie along its east face. The two coves are separated by a narrow neck of land covered with buildings, and having a wharf-line in each harbor. This neck of land runs N E. by E. for nearly four hundred yards, and from its extremity a stone breakwater extends E. by S. for nearly two hundred yards and forms the protection to the inner harbor.

The *western harbor* is a cove three-eighths of a mile wide at its entrance and a quarter of a mile long. There are few obstructions in the approaches to it, and the water shoals very gradually as the shore is approached. It is, however, no harbor at all in northerly and easterly winds, as there is no shelter whatever. With a southerly or westerly gale it affords a good harbor of refuge.

The *harbor proper* is a narrow cove extending into the land in a S W. direction, a quarter of a mile long and an eighth of a mile wide. The **breakwater** at the entrance narrows the available passage to a width of about one hundred yards. Neither of these harbors is much used, even as a harbor of refuge, (vessels preferring to make a better harbor or an offing,) unless when *Gloucester Harbor* is not accessible. Vessels of light draught will find the *harbor proper*, however, a good shelter in all winds, and easy of access. Eleven feet at mean low water may be carried into the anchorage. **The large granite factory** in **Rockport** is a conspicuous object, and is used as a guide to enter the harbor. It is built on the low land at the bottom of the cove which forms the harbor proper, and viewed from the entrance appears in range with a large pier.

DANGERS
IN APPROACHING AND ENTERING ROCKPORT HARBOR.

I. *Coming from the northward and northeastward.*—Vessels coming from the northward along shore and bound into *Sandy Bay* or **Rockport** will find the approaches unobstructed; but those coming from sea will encounter several dangers and obstructions, which must be safely passed before the entrance is clear. Of these, the first met with is called

THE FLAT GROUND.

It is an extensive ledge, lying nearly NORTH and SOUTH, and half a mile long—in reality a group of three ledges, separated by two narrow passages with over three fathoms at mean low water. The northernmost ledge has ten feet, the middle one thirteen, and the southernmost rock has only two feet, and is bare at low spring tides. The general bearing of the ledge is S E. by E. ¾ E., two and a quarter miles from **Halibut Point.**

A large *red spar-buoy* (No. 2) is placed in four fathoms off the southern rock. It should be left to the northward by vessels bound into **Rockport** from seaward or beating up toward **Halibut Point.** Vessels coming from the northward, however, leave it to the eastward and give it a berth, thus passing between the main shore and the *Flat Ground.* This buoy bears N E. by E. ¾ E. from **Rockport Breakwater,** a mile and a half distant, and N E. by N. ¾ N. from **Straitsmouth Island Light-House,** seven-eighths of a mile distant. From **Thatcher Island North Light-House** it bears N. ¼ E., two miles and a quarter distant.

There is a good channel with nine fathoms water, and a third of a mile wide, between the *Flat Ground* and

THE SALVAGES,

which are a most dangerous group of bare and sunken ledges, lying between the bearings of E N E. and N E. by E. from **Straitsmouth Island Light-House,** and E. by N. from **Rockport Breakwater.** They are in reality two groups, lying EAST and WEST from each other, about three hundred and fifty yards apart. The eastern group is called the **Dry Salvages** and the other the **Little Salvages.**

The **Dry Salvages** are so called because the summit of the northernmost rock in the group is always dry, forming a bare islet, surrounded by ledges dry at low water, and about ten feet high. To the northward of it extends a long reef, dry at low water, and to the southward a group of ledges, also bare at low water, stretches to a distance of two hundred and fifty yards, or an eighth of a mile. The whole ledge, including the islet and the reefs north and south of it, is about a quarter of a mile long, in a NORTH and SOUTH direction, between the lines of three fathoms. The islet bears from

	Miles distant.
Straitsmouth Island Light-House, E N E.	1⅛
Thatcher Island North Light-House, N. by E. ¾ E.	2
Rockport Breakwater, E. ¾ N. a little over	2

On the highest part of the **Dry Salvages,** about ten feet above high-water mark, is a wooden tripod fifty-five feet high. The upper third of the tripod is covered in so as to present the appearance of a pyramid, and is *painted red.*

The **Little Salvages** lie three hundred and fifty yards WEST from the **Dry Salvages,** are bare at low water, and extend in a NORTH and SOUTH direction four hundred and fifty yards. The centre of the reef bears from

	Miles distant.
Straitsmouth Island Light-House, N E. by E. nearly	1
Thatcher Island North Light-House, N E. by E. ¼ E.	2
Rockport Breakwater, E. by N.	1¾

Between the **Dry** and the **Little Salvages** is a passage three hundred yards wide; but it is unsafe, being obstructed by a rock with one foot at mean low water and bare at spring tides. This rock lies one hundred and fifty yards EAST from the **Little Salvages** and nearly four hundred yards N W. from the bare rock on the **Dry Salvages.** Fishermen acquainted with the locality sometimes pass through the channel, and avoid this rock by hugging either the west side of the **Dry Salvages** or the eastern side of the **Little Salvages.**

After passing the *red buoy* on the *Flat Ground*, the next danger met with is called

AVERY LEDGE.

Vessels coming from the northward and northeastward leave this ledge to the eastward whether passing along shore inside the *Flat Ground* or between that ledge and the **Salvages.**

Avery Ledge is a mass of sunken rock two hundred yards square, lying one-third of a mile (six hundred and fifty yards) N. by E. ½ E. from **Straitsmouth Island Light-House.** It has four feet at mean low water, and is marked by a *red spar-buoy* (No. 2) placed in three and a half fathoms off the southwestern side of the ledge. This buoy is intended as a guide alike to vessels approaching **Rockport** from the northward and from the southward, although those approaching from the northward give it a wide berth if following the courses, and leave it to the southward as if it were painted black. It bears from *Flat Ground Buoy* S W. by S. ½ S., eleven hundred yards; from **Dry Salvages** W. ½ S., nearly one mile; from **Rockport Breakwater** E. ½ N., one mile and an eighth. Between *Avery Ledge* and **Straitsmouth Island** is the entrance to *Rockport Harbor* from the southward.

TWELVE-FEET ROCK

lies N W. from **Gap Head** and three hundred and fifty yards from shore; has twelve feet at mean low water and ten at low spring tides, and *is not buoyed.* It is not dangerous except in heavy weather.

BREAKWATER LEDGE

lies on the northern side of the entrance to *Rockport Harbor* proper, and extends off from the end of the **Breakwater** in an E N E. direction. Nearly a hundred yards from the eastern end of this breakwater is a single rock, awash at lowest tides, and with two feet at mean low water. *It is not buoyed*, but always shows itself by breakers.

DANGERS
IN THE APPROACHES TO THE WESTERN HARBOR, OR SANDY BAY ANCHORAGE.

I. Vessels using this anchorage come along shore from the northward. The approaches are unobstructed except by a few ledges lying close to the western shore of *Sandy Bay*, between *Pigeon Cove* and the *Western Harbor.* The most northerly of these obstructions is formed by a group of sunken rocks, some of which are nearly bare at low water, and lie about three hundred and fifty yards from shore. The most northerly of these, called

MITCHELL ROCK,

lies seven hundred yards south from the entrance to *Pigeon Cove* and three hundred and fifty yards from shore, has four feet at mean low water, and *is not buoyed.* The shore is bold to, and there is four fathoms water between it and the rock.

BARTLETT ROCK

lies nearly two hundred yards S. by W. ½ W. from *Mitchell Rock*, and has two and a half

feet at low water. It is three hundred and fifty yards from shore and is surrounded by shoal water, but there is a depth of from three to four fathoms water between it and the west shore of the bay.

DODGE ROCK.

One hundred yards S. ½ W. from *Bartlett Rock* (with which a sunken ledge connects it) is a small bare rock known as **Dodge Rock**. It is three hundred and seventy-five yards (one-fifth of a mile) from shore and nearly three hundred yards S. by W. from *Mitchell Rock*. Shoal ground extends in every direction from it.

To avoid all of these rocks the rule is not to go inside of **Andrews Point**, bearing **N. ½ W.**, and **Rockport Breakwater** S. ½ E.

SANDY BAY LEDGE.

A rocky islet, bare of all vegetation, and about a hundred yards square, which lies two hundred yards from the western shore of *Sandy Bay* and half a mile S. ¾ W. from the south point of *Pigeon Cove*, is known as **Sandy Bay Ledge**. It is surrounded by shoal water, and there is no passage between this rock and the shore.

From this ledge the eastern end of **Rockport Breakwater** bears S E. nearly half a mile.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING ROCKPORT HARBOR.

I. *Coming from the northward and northeastward.*—1. *Along shore:* Pass **Andrews Point** half a mile (eight hundred yards) off, in twelve fathoms. Steer SOUTH, carrying not less than ten fathoms, until off the mouth of the cove, in eleven fathoms, hard bottom, with the **stone factory** in **Rockport** bearing W S W. in range with the **large pier**. Steer that course, passing midway between the points of entrance, and anchor in eleven feet; or pass between the buoys to the pier-heads.

Or, steer S. by E. for **Straitsmouth Island Light**, in range with **Thatcher Island North Light-House**, carrying not less than nine fathoms, until the **large stone factory** in **Rockport** bears W S W., and in nine fathoms, hard bottom, when steer for the **factory** and follow the directions given above. This course passes nearly three hundred yards to the northward of *Twelve-Feet Rock*.

2. *From the northeastward, inside of the Flat Ground:* Bring **Straitsmouth Island Light** to bear S W. by S. ¾ S., two miles and three-quarters distant, with about thirty-three fathoms, muddy bottom, and the extreme end of **Halibut Point** to bear W. ½ S., two miles and a half distant, and steer S W. ½ S., carrying not less than ten fathoms water, until off the mouth of the harbor and the **stone factory and pier-head** bear W S W., and in eleven fathoms water. Then steer for the **factory** and proceed as before directed.

This course leads a quarter of a mile to the westward of the *Flat Ground;* three hundred yards west of *Twelve-Feet Rock;* and passes half a mile west of *Avery Ledge*.

3. *From the northeastward and eastward, between the Flat Ground and the* **Salvages**: When about a mile and a third N E. ½ E. from the **Dry Salvages**, bring **Thatcher Island North Light** to bear S W. by S., and **Straitsmouth Island Light** to bear S W. by W. ½ W., with forty fathoms, gray mud, and steer W. by S. ¾ S. for the entrance, passing about midway between the **Little Salvages** and the *Flat Ground*, and carrying not less than nine fathoms. On this course, when just past **Gap Head**, and in eleven fathoms water, there will be seen the **large stone factory** in **Rockport** bearing W S W. Steer that course and enter the harbor, following the directions previously given.

These courses pass three hundred and fifty yards to the northward of the **Little Salvages**; three hundred yards to the southward of *Flat Ground Buoy;* four hundred

yards to the northward of *Avery Ledge;* and one-eighth of a mile to the northeastward of *Twelve-Feet Rock.*

4. *From the eastward, south of the* **Salvages:** Bring **Straitsmouth Island Light** to bear W. ½ S., two miles distant, and **Thatcher Island North Light** to bear S W., and steer W. ½ N., carrying not less than six fathoms, until the **stone factory** before mentioned bears W S W. and there is eleven fathoms water, when steer for the **factory** and follow the directions previously given.

These courses pass an eighth of a mile to the southward of the shoal of the **Dry Salvages**; one hundred yards to the southward of the buoy on *Avery Ledge;* and an eighth of a mile to the northward of *Twelve-Feet Rock.*

Or, if fearing to go so close to these ledges at night, bring **Straitsmouth Island Light** to bear W. ½ N., and **Thatcher Island North Light** to bear S W. by W. ½ W., and steer W. by N., carrying not less than six fathoms, until **Straitsmouth Island Light** bears S E. by E. ½ E. and the easternmost summit on **Gap Head** S E. ½ S. Now, in eleven fathoms water, steer W S W. until the opening between the breakwater and the southern point of the entrance can be seen, when steer exactly between them to the anchorage.

These courses pass six hundred yards to the southward of the **Dry Salvages**; nearly eight hundred yards to the southward of the **Little Salvages**; an eighth of a mile to the south of *Avery Ledge;* and within three hundred yards of *Twelve-Feet Rock.* Strangers must never attempt this harbor by night through this passage, but must make **Gloucester** or **Salem** to the southward.

II. *Coming from the northward, to enter the Western Harbor or Sandy Bay Anchorage.*—Leave **Andrews Point** eight hundred yards to the westward, with twelve fathoms water, and steer S. ½ W. until fairly off the mouth of *Western Harbor*, and have **Straitsmouth Island Light** bearing S E. by E. ½ E., with ten fathoms water. The centre of the bay will then bear W S W., which course steer, carrying not less than five fathoms into the bay, and anchor according to draught, or run alongside the wharves.

This is a good temporary anchorage in southerly winds, but untenable with any wind from N N W. around to E S E. A sort of basin is formed on the western side of the **Neck** by two large piers, one running NORTH and SOUTH and the other EAST and WEST, leaving a narrow opening between them. This basin is dry at low water, and vessels lying at any of the piers in it are safe enough in all weathers.

The above courses for *Western Harbor* pass a quarter of a mile to the eastward of *Mitchell, Bartlett,* and **Dodge Rocks**, and three hundred and fifty yards to the southeastward of **Sandy Bay Ledge.**

DANGERS
IN APPROACHING AND ENTERING ROCKPORT HARBOR.

II. *Coming from the southward.*—Vessels approaching from the southward, and bound into *Rockport Harbor*, will, on nearing **Thatcher Island**, see ahead a **black beacon** or **iron spindle** about half a mile to the eastward of the island. This is on

THE LONDONER,

a dangerous ledge, dry at low water, which lies eight hundred yards S E. by E. ½ E. (bearing of **spindle**) from **Thatcher Island South Light-House.** It extends in a N N E. and S S W. direction, and is six hundred yards long between the lines of three fathoms. On its southern end, which is the dry part, is placed an **iron spindle** forty-five feet high, with an **octagonal cage on top.** This **spindle** bears from

Straitsmouth Island Light-House, S. by E. ½ E.	2 miles.
Thatcher Island North Light-House, S E.	900 yards.

To clear the *Londoner*, passing to the northward of it, give the **spindle** a berth of half a mile.

There is an excellent channel with nothing less than six fathoms between the *Londoner* and **Thatcher Island**, which is the commonly-used passage for coasters and fishermen passing the **Cape**.

OAK ROCK.

After passing the *Londoner*, there are no dangers in the way of vessels bound to **Rockport** with a fair wind until up with *Avery Ledge*. But those using the passage between **Thatcher Island** and **Milk Island** will find in the middle of the channel a dangerous ledge, called *Oak Rock*. It has six feet at mean low water, lies half a mile **W N W.** from **Thatcher Island North Light-House**, and is marked by a *black spar-buoy* placed on the eastern side of the rock in twenty feet water. It may be left on either hand, but the usual course for vessels leads on its eastern side. (See page 727.)

AVERY LEDGE

(already described, page 734,) is a mass of sunken rock two hundred yards square, lying a third of a mile **N.** by **E. ½ E.** from **Straitsmouth Island Light-House**. It has four feet at mean low water, and is marked by a *red spar-buoy* (No. 2) placed in three and a half fathoms off the southwestern end of the ledge. This buoy bears from **Rockport Breakwater E. ¾ N.** one mile and an eighth, and must be left to the eastward by vessels bound to the northward.

TWELVE-FEET ROCK

lies **N W.** from **Gap Head** and three hundred and fifty yards from shore; has twelve feet at mean low water, *and is not buoyed.* But it is not dangerous except in heavy weather.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING ROCKPORT HARBOR.

III. *Coming from the southward, Outside Channel.*—Bring **Thatcher Island North Light-House** to bear **W.** by **N.** and **Straitsmouth Island Light-House N W.** by **N.**, when, in fourteen fathoms, the *Londoner* is well cleared. Then steer **N W.** by **N. ½ N.** nearly for *Avery Ledge Buoy*, carrying not less than six fathoms, and passing about two cables' length to the northward and eastward of **Straitsmouth Island Light-House**. On this course continue until this **light-house** bears **S W.** by **S.**, and in six fathoms, hard bottom; when steer **W.** by **N.**, with not less than six fathoms, until the **granite factory** in **Rockport** bears **W S W.**, in eleven fathoms water, when steer for it, as before.

Inside Channel, between the Londoner and **Thatcher Island**: With the **light-houses** on **Thatcher Island** bearing **N.** by **E.**, steer for them until the **spindle** of the *Londoner* is visible, when shape the course so as to pass about midway between it and **Thatcher Island**, in not less than five fathoms. There is three fathoms water close to the island. When past its northern point, and **Straitsmouth Island Light** bears **N W.** by **N. ¾ N.**, and in seven fathoms water, steer **N.** by **W. ½ W.**, carrying not less than six fathoms water. On this course, when past the light, and it bears **S W.** by **S.**, with six fathoms water, steer **W.** by **N.**, and proceed as before directed.

These courses pass nearly two hundred yards to the southward of *Avery Ledge.*

Vessels beating to the northward, along the eastern shore of **Cape Ann**, may, when past **Thatcher Island**, come within a quarter of a mile of the shore. A good rule is not to go inside of the southwestern end of **Straitsmouth Island**, bearing **N. ½ W.**

Vessels standing in-shore, north of **Straitsmouth Island**, may approach within an eighth of a mile (two hundred and fifty yards) except in the vicinity of *Mitchell* and

Dodge Rocks. These rocks will always show themselves by breakers, except **Dodge Rock,** which is always bare. These rocks should receive a berth of an eighth of a mile.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
	° ′ ″	° ′ ″	h m s		Feet.	
Straitsmouth Island Light	42 39 43	70 35 18	4 42 21.2	Fixed.	33	11
Thatcher Island, or Cape Ann Lights .. **N.**	42 38 19	70 34 30	4 42 18.0	Fixed.	165½	20
Thatcher Island, or Cape Ann Lights .. **S.**	42 38 11	70 34 30	4 42 18.0	Fixed.	165½	20

TIDES.

Corrected Establishment	$10^h\ 57^m$
Mean Rise and Fall of Tides	8.6 ft.
Mean Rise and Fall of Spring Tides	10.2 "
Mean Rise and Fall of Neap Tides	7.1 "
Rise of Highest Tide observed	10.0 "
Mean duration of Rise	$6^h\ 17^m$
Mean duration of Fall	$6^h\ 09^m$
Mean duration of Stand	$0^h\ 30^m$

VARIATION OF THE COMPASS.

The variation of the magnetic needle was, in July, 1859, 11° 30′ W. The present annual increase is 3′, which gives the variation in July, 1875, 12° 18′ W.

No observations for direction and force of tidal-currents have as yet been made in *Rockport Harbor* or its vicinity.

LIFE-BOAT STATIONS.

There is a life-boat near the centre of the village of **Rockport,** under care. There is here also a **Mortar Station.**

At **Milk Island** there is a hut of refuge, with supplies, under care.

At **Emerson Point,** near **Thatcher Island Lights,** is a boat, under care.

MASSACHUSETTS BAY.

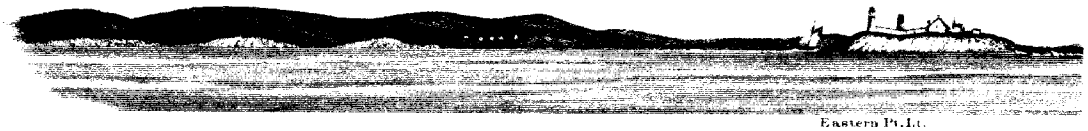
This extensive bay is contained between the two great headlands of MASSACHUSETTS, **Cape Ann,** and **Cape Cod.** On a line joining these two capes it is thirty-eight miles wide, and its greatest length from this line to the main shore is twenty-two miles. Within its limits are contained the important harbors of **Gloucester, Salem, Boston, Plymouth,** and **Provincetown.**

The geographical position of the most northerly point of *Massachusetts Bay* is

Latitude - - - - - - - - 42° 38′ 19″ N.
Longitude - - - - - - - - 70° 34′ 30″ W. } **Thatcher Island Light.**

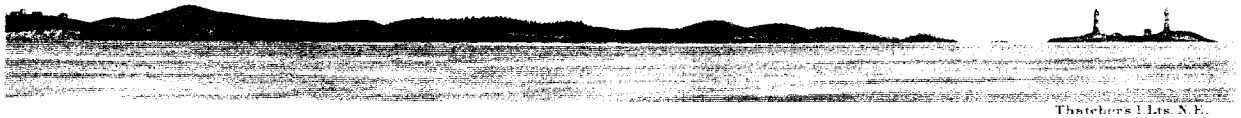
The position of the most southerly point is

Latitude - - - - - - - - 42° 03′ 42″ N.
Longitude - - - - - - - - 70° 14′ 36″ W. } **Race Point Light.**



Eastern Pt. Lt.

Eastern Pt. Lt.



Thatchers I. Lts. N. E.

Entrance to Gloucester, Eastern Pt. Lt. bearing North distant 3 Miles.

Two subdivisions of this bay are *BOSTON BAY* and *CAPE COD BAY.* The former is embraced between **Nahant Head** and **Strawberry Point**; is eleven miles wide, making four miles into the land. The principal harbor within its limits is *BOSTON HARBOR*, which includes the subordinate ports of **Neponset, Weymouth, Hingham, Cambridge**, and **Charlestown**.

CAPE COD BAY is contained between **Race Point**, the northernmost end of **Cape Cod**, on the east, and the entrance to *PLYMOUTH HARBOR* on the west. It is semicircular in shape and about twenty-one miles in diameter. Within its limits are included the harbors of **Provincetown, Truro, Wellfleet, Barnstable, Sandwich**, and **Plymouth**.

The shores of **Cape Ann**, the northernmost headland of *Massachusetts Bay*, have already been described, (see pages 724 to 726,) as have also those harbors which, being situated on the north face of **Cape Ann**, do not belong to *Massachusetts Bay*. The first harbor met with south of **Thatcher Island** is about five miles to the southwestward of **Emerson Point**, which may be considered the most easterly point of **Cape Ann**. This harbor is called

GLOUCESTER HARBOR.

It is the headquarters of the fishing interests of Massachusetts, and is formed by an arm of the sea indenting the southern shore of **Cape Ann**. The entrance to it is in

Latitude - - - - - - - -	42° 34′ 47″ N.
Longitude - - - - - - - -	70° 40′ 30″ W.

It is contained between **Eastern Point** on the east, and a bluff rocky head, over one hundred feet high, called **Norman's Woe**, on the west. Between these two points it is a mile and a half wide. Beyond the entrance the cove continues of about the same width for a mile and a half to **Ten-Pound Island**, after passing which the harbor is much narrower, the width between **Fort Point** and **Rocky Neck** being only four hundred yards.

The whole length of *Gloucester Harbor* is two miles and a half. It lies in a **N N E.** and **S S W.** direction. Both shores of the harbor are much cut up by coves and indentations. Of these the most southerly is

NORMAN'S WOE COVE,

on the western side of the entrance, contained between **Norman's Woe** and **Muscle Point**, three-quarters of a mile above the entrance. The cove is shallow and has but little water in it. A large bare rock, called **Norman's Woe Rock**, lies in the middle of the mouth of the cove.

Muscle Point is of moderate height, bare of trees, and sloping gradually to the water's edge. **Norman's Woe** is bluff and rocky, its eastern face thinly wooded with oak and pine and its southern face bare.

From **Muscle Point** the western shore of the harbor has a general course **N E. ½ N.** for nearly three-quarters of a mile, to the southern point of entrance to a wide but shallow cove, called

FRESH-WATER COVE.

It is irregular in shape, half a mile wide, and makes in no place over three hundred yards into the land. It is of little importance except for the fresh-water creek which empties into the southern basin. The anchorage is poor, and the cove obstructed by ledges and sunken rocks. Its north point is called **Stage Head**, and is sixty feet high, bare and rocky.

North of **Stage Head** the shore-line curves away first to the northward and then gradually to the eastward and southeastward, the curve terminating at **Fort Point**. Thus

a wide cove of semicircular shape is formed, in which good anchorage may be found in from two to four fathoms. It is sometimes known as *WESTERN HARBOR*, as part of the town is built on its northern shore. From **Stage Head** to the northward the shore of this cove diminishes in height, and marsh land begins about midway between the **Head** and **Fort Point**. Through this marsh land a canal has been cut connecting the head waters of *Squam River* with *Gloucester Harbor*.

FORT POINT,

the easternmost point of *Western Harbor*, is also the western point of entrance to *Inner Harbor*. It is bare, somewhat steep, of moderate height, and forms the southeastern end of a low sandy peninsula which juts out from the main shore at the western end of the town. An earth-work with flag-staff and barracks occupies the summit of the point, and is visible from the approaches outside of **Eastern Point**. The shores of **Fort Point** are tolerably bold-to.

Beyond **Fort Point** lies the narrow and shoal cove called *INNER HARBOR*, extending NE. and SW., and a little over half a mile long. Its western shore is occupied entirely by the town of **Gloucester.**

On the eastern shore of *Gloucester Harbor* the point of entrance is called

EASTERN POINT,

(see page 726.) It is the southernmost point of **Cape Ann**, and is an oval peninsula about three-quarters of a mile long in an ENE. and WSW. direction. Its surface is hilly and undulating, but its southeastern point is low, and backed by a thick growth of oak, pine, and other trees. On the very extremity, where a small hill with a steep face terminates **Eastern Point**, is built the **Light-House**, which is called

EASTERN POINT LIGHT,

and is the guide to *Gloucester Harbor*. This **Light-House** is a white tower, thirty-three feet high, and shows a fixed white light of the fourth order of Fresnel from a height of sixty feet above sea-level, and visible thirteen miles. Its geographical position is

Latitude - - - - - - - -	42° 34′ 47″ N.
Longitude - - - - - - - -	70° 39′ 53″ W.

A covered way connects the tower with the keeper's dwelling, and there is a fog-bell in a wooden tower between the two, which strikes once in every eight seconds.

North of **Eastern Point** the shore-line forms a *small shallow cove* just back of the **Light-House**, on the north shore of which is a low wooded point, separating it from

LIGHT-HOUSE COVE,

a semicircular cove, quite shoal, on the southern side of which is the wharf belonging to the **Light-House Department**, where supplies for the light-house are landed. This cove is unobstructed. Vessels may come in anywhere between its north and south points. It is a quarter of a mile wide, and makes into the land three hundred yards. Its northern point is called

BLACK BESS POINT,

and is thirty feet high, bare and rocky. A long reef, bare at low water, extends from it to the westward one hundred and fifty yards. At the western end of this reef is a rocky islet, called **Black Bess.** At this point begins *South East Harbor*, which is contained between **Black Bess Point** on the south and **Rocky Neck** and **Ten-Pound Island** on the north.

SOUTH EAST HARBOR

is formed by a large cove indenting the eastern shore of *Gloucester Harbor* north of

Black Bess Point. Its northern boundaries are **Ten-Pound Island** and **Rocky Neck**; and between these and **Black Bess** good anchorage is found in from three to five fathoms at low water. *South East Harbor* is three-eighths of a mile wide, and makes into the land three hundred yards, with a smooth sandy beach. Its shores are bare of trees, undulating, and thinly settled. This is the common anchorage for vessels not designing to go alongside the wharves.

TEN-POUND ISLAND,

which separates *South East Harbor* from *Inner Harbor*, lies four hundred yards from the eastern shore of *Gilbert Cove* and the same distance W S W. from **Rocky Neck.** It is bare, lies nearly **EAST** and **WEST**, is an eighth of a mile long and about thirty feet high. Near the western end is built a light-house known as

TEN-POUND ISLAND LIGHT-HOUSE,

a white tower, twenty-five feet high, which shows a fixed white light of the sixth order of Fresnel from a height of fifty feet above sea-level, and visible thirteen miles at sea.

This **Light-House** bears from—

	Miles distant.
Fort Point, S. by W. ¼ W.	$\frac{3}{8}$
Eastern Point Light, S. by W.	$1\frac{1}{8}$
Norman's Woe, N E. by E.	$2\frac{1}{8}$
Stage Head, S W. ¾ W.	$\frac{1}{2}$

Passing **Ten-Pound Island**, come to the entrance to *Inner Harbor*, which is between **Fort Point** on the west and

ROCKY NECK ISLAND

on the east. This is an irregularly-shaped island, lying off the eastern shore at a distance of two hundred yards, and separates *South East Harbor* from a large shallow cove in *Inner Harbor*, called *Smith Cove.* Its southern point is a quarter of a mile E. ¼ N. from **Ten-Pound Island Light**, and there is a shallow passage between the two islands, available only for light-draught vessels.

The southern portion of **Rocky Neck Island** is low and bare of trees, but thickly settled, and a causeway connects it with the main land, which is also thickly settled. The northern half of the island lies at right angles to the southern half, and is called **Rocky Neck.** It lies N E. by E. and S W. by W.; is sixty feet high, bare, and in some places precipitous. On the eastern side is *Smith Cove*, contained between **Rocky Neck** and the main land of **Cape Ann.** On the western side is the narrow channel between **Rocky Neck** and **Fort Point**, leading into *Inner Harbor.*

SMITH COVE

is an eighth of a mile (two hundred and fifty yards) wide and a third of a mile long, (six hundred yards.) At low water it is bare for half of this distance. A settlement occupies the eastern shore of the cove, its wharf-line forming the eastern point of entrance.

INNER HARBOR

has many small coves, of which no detailed mention need be made. It is irregularly shaped, eleven hundred yards long and six hundred yards wide. The passage between **Rocky Neck** and **Fort Point** is, however, only three hundred and fifty yards wide. Its general direction is N E. and S W.

The town of **Gloucester,** the headquarters of the fishermen of Massachusetts, occupies the western shore of the *Inner Harbor.* Fishing is almost the only support of the town. A small island, called

FIVE-POUND ISLAND,

lies nearly in the middle of *Inner Harbor*, a quarter of a mile **N E. by N.** from the northeast end of **Rocky Neck**. It is nearly a hundred yards square, bare of trees, and about fifteen feet high. Its western shore is occupied by warehouses, but the rest of the island is unoccupied. Above **Five-Pound Island** there is no passage at low water, but there is a shallow channel between the island and the town through which six feet at low water may be carried.

APPEARANCE OF THE SHORES OF GLOUCESTER HARBOR, VIEWED FROM THE SOUTHWARD, OFF EASTERN POINT.

Approaching this harbor from the southward, **Eastern Point**, with the light-house, bell-tower, keeper's dwelling, and covered-way, will be first recognized. When the **Light-House** bears **N E.**, and is distant from a mile and three-quarters to two miles, the high bare summit of the point will show behind it as a green gently-sloping hill. Just to the westward of the light the woods on the south side of *Light-House Cove* will appear, and **Black Bess Point** will be nearly in range with it, but a little to the westward.

To the westward of **Black Bess Point**, and well up in the harbor, will be seen a bare rocky islet in range with the middle of the town, and having a white tower on its western end. This is **Ten-Pound Island**, and the tower is **Ten-Pound Island Light**. It will bear from this point of view about **N E. by N. ½ N.**

Ten-Pound Island will be in range with the northeastern end of **Fort Point**, on which are the houses, but the high land with the earth-work on its summit will show just to the westward of **Ten-Pound Island Light-House.**

The city will show on both sides of **Fort Point**, over **Ten-Pound Island**, and the eastern side of it between it and **Rocky Neck**. The curve in the eastern shores which will show between **Ten-Pound Island** and **Black Bess Point** is *South East Harbor.*

Stage Head will show on the western side of the harbor just clear of the western end of **Gloucester**, and the space between the **Head** and **Fort Point** marks *Western Harbor*, which has good anchorage except in southerly winds.

The wooded lands of *Fresh-Water Cove* and the western shores of the harbor stretch along on the port hand to **Norman's Woe**, which will appear as a rocky head, thinly wooded, and about one hundred feet high, and bearing about **N W.** The lands behind the hill are covered with a growth of oak, spruce, and fir trees. At low water a bare rock, called **Norman's Woe Rock**, will appear a little to the northward of the head. It is about three hundred yards from the shore of *Norman's Woe Cove.*

DANGERS IN APPROACHING AND ENTERING GLOUCESTER HARBOR.

Vessels approaching this harbor either from the eastward or southward will first encounter the long ledge off **Eastern Point**, called

EASTERN POINT LEDGE,

which extends off from the **Light-House** in a **S W.** direction a quarter of a mile. The shoalest water upon it is on *Webber Rock*, which has seven feet at mean low water, and bears from the **Light-House S W. by S.**, three hundred and fifty yards distant. This rock is sometimes called *Eastern Point Rock*, and is marked by a *red spar-buoy* (No. 2) placed in three fathoms, rocky bottom, on the southern end of the rock.

NORMAN'S WOE ROCK

is not in the way of vessels standing in or out with a fair wind; but those beating to windward must not stand nearer to the western shore, between **Norman's Woe** and **Muscle Point**, than a quarter of a mile. This will avoid **Norman's Woe Rock**, which lies three hundred yards from the shore of the cove and three-eighths of a mile ENE. from **Norman's Woe.** It is a bare rock, about a hundred yards square, surrounded by shoal water. From its south side the ledge makes off in a SSE. direction for an eighth of a mile, (two hundred and fifty yards.)

DOG BAR.

This is the first obstruction met with on the eastern side of the harbor after passing *Eastern Point Ledge.* It makes off from **Eastern Point** a little north of the **Light-House,** first in a westerly direction nearly four hundred yards, and then throws off a long spit about NNW. for three hundred yards farther. The least water on this spit is about sixteen feet at mean low water, but the inner shoal, or *Dog Bar* proper, is bare in some places at low water. *A red spar-buoy* (No. 4) is placed in seventeen feet off the end of the inner shoal, three hundred yards NW. by W. ½ W. from **Eastern Point Light.** Vessels may cross *Dog Bar* in from sixteen to eighteen feet at low water by giving this buoy a berth to the eastward of two hundred yards.

The northern end of the NNW. spit bears from the **Light-House** N W. ½ W., distant seven hundred and fifty yards, and is six hundred yards from the nearest shore.

On approaching *Dog Bar* there will be seen on the port hand, nearly abreast of *Dog Bar Buoy, a black spar-buoy.* This is on

ROUND ROCK SHOAL,

which lies almost in the middle of the entrance, in line between **Eastern Point Light-House** and **Muscle Point.** It is a ledge with eleven feet at lowest tides, lying in a NORTH and SOUTH direction, and nearly three hundred yards long. *A black spar-buoy* (No. 1) is placed on the southern end of the shoal in three and a half fathoms. This buoy bears NW. by W. ½ W. from **Eastern Point Light-House,** from which it is distant nearly two-thirds of a mile. When at the buoy the **Light-House** and *Dog Bar Buoy* are in range, and the easternmost church-steeple in **Gloucester** is just open to the westward of **Ten-Pound Island Light-House.**

The channel between this buoy and the NNW. spit of *Dog Bar* is a quarter of a mile wide, and has from five to seven fathoms at mean low water.

TEN-POUND ISLAND LEDGE.

After passing *Round Rock* there are no dangers in the channel until past **Black Bess Point** and approaching **Ten-Pound Island.** A *red spar-buoy* will then be seen lying SW. from the island, nearly in the middle of the passage. It is on *Ten-Pound Island Ledge,* which has nine feet at low water, and lies one-third of a mile SW. ½ W. from **Ten-Pound Island Light-House.** It is a detached rock of small extent, and there is good water on both sides of it. The best water is, however, to the westward of the buoy, although from three to five fathoms may safely be taken between the ledge and **Ten-Pound Island** through a wide channel.

A *red spar-buoy* (No. 6) is placed in three fathoms on the western side of the ledge. It is usually left to the eastward.

FIELD ROCKS,

sometimes called *Fresh-Water Cove Ledge,* are a group of rocks on the western

side of the channel, lying off the middle of the entrance to *Fresh-Water Cove* and nearly abreast of *Ten-Pound Island Ledge.* They run NORTH and SOUTH, and the southern end of the reef is five hundred yards from shore. Several of the rocks are bare at low water, and others have five and six feet upon them. This group divides the cove into two parts, there being from twelve to fifteen feet water on either side of the rocks.

A *black spar-buoy*, marked No. 3, is placed in eighteen feet off the southern end of the rocks. It bears from

	Miles distant.
Stage Head, S S W.	½
Fort Point, S W. by W.	¾
Ten-Pound Island Light-House, W. by S., nearly	⅔
Ten-Pound Island Ledge, W. by N. ½ N.	⅓

The channel between *Field Rocks Buoy* and *Ten-Pound Island Ledge Buoy* is nearly six hundred yards wide.

After passing **Ten-Pound Island Light** come to

BABSON LEDGE,

which lies S W. by S. from **Fort Point**, three hundred yards distant. It has ten feet at mean low water, and obstructs the entrance to *Inner Harbor* and also *Western Harbor Entrance.* From **Ten-Pound Island Light-House** it bears N. ½ E., a quarter of a mile distant.

A black spar-buoy (No. 5) is placed in seventeen feet on the eastern side of the ledge. Nineteen feet of water is found between it and **Fort Point**, but the channel is narrow and unsafe.

BLACK ROCK.

When up with *Babson Ledge*, an **iron spindle with a cage on top, the whole painted red,** will be seen on the eastern side of the channel, off the western point of **Rocky Neck.** This is on *Black Rock*, dry at half-tide, and one hundred and fifty yards from shore. The channel leads directly between this **beacon** and *Babson Ledge Buoy*, and is nearly four hundred yards wide. The **beacon** must receive a berth of one hundred and fifty yards to the eastward.

The current of ebb is quite strong through the narrow passage leading between **Fort Point** and **Rocky Neck** into *Inner Harbor*, and sets strongly on to *Black Rock.* Mariners must govern themselves accordingly.

PINNACLE ROCK,

sometimes called *Nine-Feet Rock*, lies in the *Inner Harbor*, nearly three hundred yards EAST from **Fort Point Wharf**, and three hundred and fifty yards N W. by W. ½ W. from the northeastern end of **Rocky Neck.** It is a sunken rock, with nine feet at mean low water and seven feet at lowest tides. The shoalest part of the rock is only about six feet square, and there is from two to three fathoms all around it. *A black spar-buoy*, marked No. 7, is placed in eighteen feet south from the rock, and close to it.

On the southeastern side of the harbor, about a hundred yards north from the shore of **Rocky Neck**, is

ELISHA LEDGE,

dry at low water. It is nearly opposite to *Pinnacle Rock*, and on its northwestern side is placed *a red spar-buoy* (No. 8) in three fathoms at low water. This buoy is three hundred yards S E. by S. ½ S. from *Pinnacle Rock Buoy*, the channel passing directly between them.

HARBOR ROCK.

After passing between *Pinnacle Rock* and *Elisha Ledge*, there will be seen an **iron spindle with an open-work ball on top**, the whole being **black**. This is on *Harbor Rock*, bare at half-tide, and one hundred yards N E. from *Pinnacle Rock Buoy*. From the long wharf E N E. from **Fort Point** it bears S. by E. ½ E., fifty yards distant. It is a detached rock, four and five feet at mean low water being found in-shore of it.

Harbor Rock is sometimes called *Spindle Rock*.

LITTLE HARBOR ROCK.

One hundred yards N E. by E. from the **beacon** on *Harbor Rock* is a sunken rock, with six feet at low water, called *Little Harbor Rock*. A *black spar-buoy*, marked No. 9, is placed in ten feet on the south side of this rock and close to it. It is to be left to the westward. After passing it there are no dangers until near **Five-Pound Island**, when there will be seen off the southwestern end of the island **a granite beacon with an iron spindle and ball painted red on top.** This is on

FIVE-POUND ISLAND LEDGE,

which lies eighty yards WEST from the island, is bare at half-tide, and is to be left to the eastward with a berth of one hundred yards. The channel is here narrow and shoal. Only vessels of light draught can pass at low water as high up as **Five-Pound Island.**

There is a shallow passage between **Ten-Pound Island** and **Rocky Neck**, the guide to which is *a red spar-buoy*, (No. 12,) which is placed off

BLACK LEDGE.

This ledge, sometimes called *Black Rock*, lies between **Ten-Pound Island** and the southern end of **Rocky Neck Island**, a little over two hundred yards from the latter. It is bare at low water, and the *red buoy* is placed in nine feet on its southwestern end. The best water is close to this buoy, between it and **Ten-Pound Island.** Vessels of light draught frequently use this channel after half-flood. Eight feet at mean low water can be taken through. This *Black Ledge* must not be confounded with *Black Rock*, near the western point of **Rocky Neck**, and marked by a **spindle.**

CLAM ROCK

is a detached rock, dry at low water, situated in the mouth of *Gilbert Cove*, on the eastern side of **Fort Point.** It is marked by *a red spar-buoy* (No. 10) placed on its south side and close to it, which must be left to the northeastward by vessels going alongside the wharves in the cove.

Clam Rock Buoy is an eighth of a mile WEST from **Harbor Rock Beacon** and nearly two hundred yards N W. by W. ½ W. from *Pinnacle Rock Buoy*.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING GLOUCESTER HARBOR.

I. *Coming from the northward.*—The course from **Thatcher Island**, when clear of the *Londoner*, is S W. by W. ½ W. five miles, until **Eastern Point Light-House** bears **NORTH** nearly, with seventeen fathoms water; then haul up N W. by W. ½ W., keeping about half a mile from shore to avoid *Eastern Point Ledge* and *Webber Rock*, and carrying not less than twelve fathoms. On this course, when **Ten-Pound Island Light-House** bears N E. by N. ½ N., carrying not less than five fathoms, steer for it until within half a mile of it, when, if bound into *South East Harbor*, steer E. by N. ½ N., and anchor in five or six fathoms, muddy bottom.

But if bound up to town, continue the course for **Ten-Pound Island Light** until within a quarter of a mile, and in five and a quarter fathoms. *Ten-Pound Island Ledge* will then be past, which leave to the westward and steer N. by W., with not less than five fathoms, until the **Light-House** bears E S E., four hundred yards distant, and in five and a half fathoms, when steer N E. by E. ½ E., carrying not less than four fathoms water through the *Narrows* between **Fort Point** and **Rocky Neck**, and anchor abreast of the town in from three to four fathoms, sticky bottom.

Or, if intending to anchor in *Western Harbor*, when within a quarter of a mile of **Ten-Pound Island Light**, (as before,) continue the course N. by W. past the island and up into the cove, where anchor, according to draught, in from two to four fathoms. The above courses pass six hundred yards to the southward of *Webber Rock;* a quarter of a mile to the westward of *Dog Bar Buoy;* one hundred and fifty yards to the westward of the north point of the N N W. spit of *Dog Bar;* three hundred yards to the eastward of *Round Rock Shoal;* two hundred and fifty yards to the eastward of *Ten-Pound Island Ledge;* one hundred and fifty yards to the southeastward of *Babson Ledge;* one hundred yards to the northward of **Black Rock Beacon**; fifty yards to the northward of *Elisha Ledge;* and one hundred and fifty yards to the southward of *Pinnacle Rock.*

If desiring to pass on the western side of *Ten-Pound Island Ledge*, steer the following courses: On the course N W. by W. ½ W., when **Ten-Pound Island Light** bears N E. by N. ½ N., steer N. by E. ½ E., carrying nothing less than five fathoms water. This course leads straight into *Western Harbor.* But if bound into *Inner Harbor*, when **Ten-Pound Island Light** bears EAST, with five and a quarter fathoms, steer N E. by E. ½ E. through the *Narrows*, with not less than four fathoms, and anchor off the town, as before.

II. *Coming from the southward, to enter South East Harbor.*—When **Eastern Point Light** bears N E. ½ E., one mile distant, and **Norman's Woe** N W., **Ten-Pound Island Light** will bear N E. by N. ½ N., and there will be fifteen fathoms water. Steer for **Ten-Pound Island Light** until within half a mile of it, in five and a half fathoms, when steer E. by N. ½ N. for the **Long Beach**, and anchor in five or six fathoms, sand, mud, and broken shells.

III. *To enter Inner Harbor from the westward.*—Bring **Ten-Pound Island Light-House** to bear N E., with nine fathoms water, and steer N E. ½ N., passing between *Round Rock* and **Muscle Point**, and about midway between *Ten-Pound Island Ledge* and the *Field Rocks*, and carrying not less than five and a half fathoms. On this course, when **Ten-Pound Island Light** bears E S E., four hundred yards distant, steer N E. by E. ½ E. through the *Narrows*, as before.

The above courses pass a quarter of a mile to the eastward of *Norman's Woe Rock;* a quarter of a mile to the westward of *Round Rock Shoal;* three hundred and fifty yards to the eastward of *Field Rocks Buoy;* an eighth of a mile (two hundred and fifty yards) to the westward of *Ten-Pound Island Ledge;* a hundred and fifty yards to the southeastward of *Babson Ledge;* one hundred yards to the northward of **Black Rock Beacon**; fifty yards to the northward of *Elisha Ledge;* one hundred and fifty yards to the southward of *Pinnacle Rock.*

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
	° ′ ″	° ′ ″	h m s		Feet.	
Eastern Point Light	42 34 47	70 39 53	4 42 39.5	Fixed.	60	13
Ten-Pound Island Light	42 36 05	70 39 56	4 42 39.7	Fixed.	50	13

TIDES.

Corrected Establishment	$11^h\ 04^m$
Mean Rise and Fall of Tides	8.9 ft.
Mean Rise and Fall of Spring Tides	10.7 ft.
Mean Rise and Fall of Neap Tides	7.0 ft.
Mean Duration of Rise	$6^h\ 22^m$
Mean Duration of Stand	$0^h\ 15^m$
Mean Duration of Fall	$5^h\ 58^m$

CURRENTS.

No complete set of current observations has been made at this port. The tidal-current will not to any great degree interfere with the movements of vessels, as it sets directly in and out of the harbor, and its velocity is comparatively small. In the *Narrows*, however, between **Fort Point** and **Rocky Neck**, the current is strong, especially at half-ebb, and the current of ebb sets on to *Black Rock*. Vessels coming out on the ebb hug the northwestern side of the channel until past the **beacon** on this ledge. The ebb current also sets on to **Ten-Pound Island**, but the courses given in the sailing directions allow a sufficient berth, and, if made good, will lead safely by.

VARIATION OF THE COMPASS.

The variation of the magnetic needle was found, in 1859, to be 11° 30′ W., with an annual increase of 3′. This would make the variation in 1875, 12° 18′ W.

LIFE-BOAT STATION.

At **Gloucester**, near the centre of the town, there is a metallic life-boat, under care.

DESCRIPTION OF SHORES
OF MASSACHUSETTS BAY, FROM GLOUCESTER TO SALEM ENTRANCE.

From **Norman's Woe** the coast runs about W. by S. a little over a mile to *Kettle Cove*, off which lies a small island, called **Kettle Island.** This islet is about three hundred yards from **Goldsmith Point,** about thirty feet high, and bare of trees.

Between **Norman's Woe** and **Goldsmith Point** the land is composed of high and well-wooded hills. These, in most cases, come down to the shore, but on the eastern side of *Kettle Cove* they retreat back from the shore-line, leaving a very gently-sloping surface, cleared and under cultivation. There is a small settlement on the eastern shore of *Kettle Cove.*

West from **Kettle Island** three-quarters of a mile lies a small, bare, rocky islet, called **Great Egg Rock.**

Goldsmith Point is bare, sixty feet high, and somewhat steep. Westward from it the shore runs W. ½ S. for two miles and a quarter to **Gales Point,** the southeastern point of the entrance to *MANCHESTER HARBOR.* The shore-line between these two points is very much cut up by small coves and indentations, some of which are available for light-draught vessels. The land is diversified with hills and low lands—sometimes low and marshy, sometimes high and wooded; in some places carefully cultivated, and in others rocky and bare. The coves uniformly have smooth sandy or shingly beaches. The points and small headlands have a rocky and steep sea-front.

About one-third of the way from **Goldsmith Point** to **Gales Point,** and a hundred and fifty yards from the shore, lies a small wooded island, called **Graves Island.** At low water it is connected with the shore.

GALES POINT

is the western end of a peninsula making off in a southwesterly direction from the main land two miles and a quarter W. ½ S. from **Goldsmith Point** and a little over four and a half miles from **Eastern Point.** It is hilly and undulating, its highest point being about one hundred feet above sea-level. This high summit is, however, some distance back from the shore-line, that part of the point near the water being much lower, from twenty to forty feet high, bare of trees, and covered with grass. Long shoals extend from this point to the southwestward, embracing within their limits three islets, called **Ram Islands** and **House Island.**

Ram Islands are small and lie close to the shore. The larger is wooded, about one hundred yards in diameter, and lies one hundred yards WEST from **Gales Point,** with which it is connected at low water. The other islet is bare of trees and grassy.

House Island lies four hundred yards S S W. from **Gales Point,** is a little over two hundred yards long, and quite low. There are a few trees on the summit.

ISLANDS LYING OFF THE ENTRANCE TO SALEM AND MANCHESTER HARBORS.

Nearly half a mile W. ¾ S. from **House Island** lies a high bare island, called

GREAT MISERY ISLAND.

The entrance to *Manchester Harbor* lies on its eastern side, between it and **House Island,** while the main channel into *Salem Harbor* leads between **Great Misery** and an island three-quarters of a mile S S E. from it, called **Baker Island.**

Great Misery is irregular in shape, high and bare. It lies E S E. and W N W., and is about a third of a mile long and a quarter of a mile wide. Its surface is somewhat undulating, being sixty feet above sea-level at the eastern and western ends and only twenty feet high in the middle.

LITTLE MISERY ISLAND.

This bare rocky islet lies south of **Great Misery,** from which it is separated by a passage fifty yards wide. It lies EAST and WEST; is two hundred and fifty yards long and about twenty feet high.

BAKER ISLAND

lies on the south side of the main entrance to *Salem Harbor.* It is three-quarters of a mile S S E. from **Great Misery,** irregular in shape, and bare of trees. Its surface is grassy and the sea-face somewhat precipitous. The highest land is about forty feet above sea-level. On the northern end of the island stand two light-towers, called

BAKER ISLAND LIGHTS,

the guides to *Salem* and *Manchester Harbors.* These towers are white, and stand N W. and S E. from each other, forty feet apart. The northwestern tower is octagonal, fifty-two feet high, and shows a fixed white light of the fourth order of Fresnel from a height of eighty-seven feet above sea-level, and visible fifteen miles. The southeastern tower is round, twenty-nine feet high, and shows a fixed white light of the fourth order of Fresnel from a height of sixty-four feet above the sea, and visible fourteen miles. **A bell-frame with fog-bell stands north of the eastern Light-House. It is painted red,** as are also the lanterns of the light-towers. The geographical position of these **Light-Houses** is

Latitude - - - - - - - -	42° 32′ 10″ N.
Longitude - - - - - - - -	70° 47′ 10″ W.

The houses and offices of the keepers' dwellings are the only buildings on the island.

MANCHESTER HARBOR.

This small harbor is formed by an arm of the bay extending behind **Gales Point** in a northeasterly direction for a mile to the village of **Manchester**. The western point of the entrance is a high precipitous head, called **Glass Head.** Between this head and **Gales Point** the entrance to the harbor is six hundred yards wide.

Behind **Glass Head** a wooded hill rises to the height of one hundred and fifteen feet.

PROCTOR POINT

is on the eastern shore of *Manchester Harbor*, a third of a mile above **Gales Point**, and directly opposite to **Glass Head.** It is low and sandy, and forms the northern end of a shallow cove contained between it and **Gales Point.** The harbor here is not quite two hundred yards wide. The land behind this point rises to a height of eighty feet, and has a few trees upon it. Above it the shores are mostly low, cleared, cultivated, and settled, and the shore-line is formed by a fringe of salt meadow.

On the western bank, above **Glass Head**, the shores near the water are mostly low, the hills lying some distance inland. The high grounds are well wooded. The village occupies the low land lying between the hills and the water.

The main course of the arm of the bay which forms *Manchester Harbor* is N E. above **Proctor Point**; but the shore-line is much cut up by coves and small streams. The harbor is almost entirely bare at low water, and is of little importance. There are, however, very good roads for anchorage off the entrance, between **Great Misery** and **House Islands** and the main shore west of **Glass Head.** Mariners desiring to anchor for the night or in head-winds may here find fair holding-ground and good shelter except in southerly gales. The anchorage is two-thirds of a mile wide, and has from three to six fathoms at mean low water, soft bottom.

DANGERS
IN APPROACHING AND ENTERING MANCHESTER HARBOR.

I. *Coming from the eastward.*—Coming along shore, as from **Gloucester**, when past **Kettle Island**, there will be seen ahead

GREAT EGG ROCK,

a bare rocky islet, nearly two-thirds of a mile **WEST** from **Kettle Island** and three-quarters of a mile from shore. On its south side it is quite bold-to, but shoal water extends from its northern end three hundred and fifty yards in a N. by W. direction. At this distance from the rock is a reef, dry at low water, *and not buoyed.*

Vessels should not attempt to pass between **Great Egg Rock** and the shore.

SALT ROCK.

Vessels beating to windward in this vicinity sometimes find it convenient to make short tacks close in-shore. In such case, when to the westward of **Great Egg Rock** look out for **Salt Rock**, which lies three-quarters of a mile W. by N. from **Great Egg Rock** and six hundred yards from shore; is bare, *and not buoyed.*

A quarter of a mile N W. by W. from **Salt Rock** and an eighth of a mile from shore is a bare rocky islet, called **Little Egg Rock.**

Vessels bound from the eastward either for *Manchester* or *Salem Harbor* will see, on approaching the entrance to the *Main Ship-Channel, a red spar-buoy* bearing about W. by N. This is on

GALES LEDGE,

an obstruction common to *Salem* and *Manchester Harbors.* It is a very dangerous ledge,

with four feet at mean low water and only two feet at low spring tides. From **Baker Island Lights** it bears N E. by E. ½ E., one mile and a quarter distant. The buoy is marked No. 2, and is placed in three and a half fathoms on the southern side of the ledge.

PILGRIM LEDGE.

Only one quarter of a mile to the westward of *Gales Ledge* another *red spar-buoy* will be seen; this is on *Pilgrim Ledge*, which has nineteen feet at low water. From **Baker Island Lights** it bears N E. ¾ E., a little over one mile distant. The *red buoy* (No. 4) *has a triangle on top*, and is placed in four fathoms off the south side of the ledge.

THE WHALE BACK.

After passing *Pilgrim Ledge Buoy*, and heading up for the entrance to **Manchester**, *two red spar-buoys* will appear about half a mile to the westward. These are on the *Whale Back*, a dangerous ledge, dry at three-quarters ebb, which lies directly in the passage into *Manchester Harbor*, being a quarter of a mile S S W. from **House Island** and three-eighths of a mile EAST from **Great Misery**. It extends in a N N E. and S S W. direction, is three hundred yards long, and bare at low water near the middle and at the northern end. A *red buoy* (No. 6) is placed in good water off the eastern side of the dry ledge. From this buoy the southwestern point of **Little Misery** is in range with **Bowditch Ledge Beacon.**

Another *red spar-buoy* (No. 8) is placed in four fathoms, rocky bottom, off the southwestern side of the ledge. From this buoy the southwestern point of **Little Misery** is open a little to the northward of **Bowditch Beacon.**

Vessels bound into *Manchester Harbor* may pass close to this buoy, leaving it to the northward. But those of light draught may go across the tail of the ledge by leaving this buoy to the southward and westward and keeping close to it. No stranger must ever attempt this, however.

This *southern buoy* bears N. by E. ½ E. from **Baker Island Lights**, and about EAST from **Little Misery.**

After passing *Whale Back*, a *black spar-buoy* will be seen to the northward, off the eastern shore of **Great Misery.** This is on

SAULI ROCK;

a small bare rock, surrounded by a ledge dry at low water, and lying three hundred yards E. by N. from the northeast point of **Great Misery**; W. ½ N. from the summit of **House Island**; and NORTH from **Baker Island Lights**, one mile distant. There is from three to five fathoms water on all sides of this ledge, which is a little over one hundred yards square. A *black spar-buoy* (No. 1) *with a pronged top* is placed in three and a half fathoms off the south end of the ledge, and about seventy-five yards from the dry rock.

WHITE LEDGE.

On the eastern side of the channel, about N E. by E. from **Sauli Rock** and two hundred and fifty yards (an eighth of a mile) S W. by W. from **Ram Islands**, lies a small rock, dry at low water, called *White Ledge.* It is in reality the southwestern extremity of a mass of ledges and rocks, bare at low water, extending off from the **Ram Islands**, and nearly closing the passage between them and **House Island.** There is, however, a narrow passage at high water, but it is unsafe.

A *red spar-buoy* (No. 4) is placed in fifteen feet on the western side of *White Ledge.* The channel passes between the *black buoy* on **Sauli Rock** and this *red buoy*, and is a quarter of a mile wide.

Beyond *White Ledge* the water shoals gradually, and the lead will be the best guide,

Entrance to Salem by Main Channel. Baker's I. Lights bearing W. ¼ N. distant 1 Mile

Entrance to Salem by Cat I. Channel, Marblehead Light bearing N.W. by W. ¾ W. distant 3¾ Miles

A bare rocky islet, called **Chubb Island,** lies off the main shore in the outer roads, and three-quarters of a mile to the westward of **Glass Head.** It is surrounded by ledges bare at low water. There is a single hut upon this islet, which bears **N.** by **W.** ½ **W.** from **Sauli Rock,** about five-eighths of a mile distant.

PRIDE ROCK,

or *Ober Ledge,* is a small ledge, bare at low spring tides, which lies in the passage between the main land (here called **West Beach**) and **Great Misery Island,** and is about an eighth of a mile from shore. It is only in the way of vessels standing to the westward through this passage, or bound into **Manchester** from **Salem** or **Beverly.** Thirteen feet at low water may be carried through by passing about midway between this rock and the northwestern end of **Great Misery.**

A *red spar-buoy* (No. 2) is placed on the southern side of *Pride Rock,* and must receive a berth to the northward of about one hundred yards.

SAILING DIRECTIONS
FOR ENTERING MANCHESTER HARBOR.

Coming from the eastward.—Bring **Little Misery Island** to bear W N W. and steer for it, carrying nothing less than ten fathoms water, until **Baker Island Lights** bear S. by E. and are about half a mile distant, when there will be ten fathoms, hard bottom. Then steer **N.** by **E.** ½ **E.** for the high wooded hill a little to the westward of **Glass Head.** On this course there is nothing less than five fathoms, and when past **Sauli Rock** *buoy,* if intending to anchor in the *Roads,* steer for **Chubb Island,** (about N N W.,) and anchor at pleasure, in from three to six fathoms, hard sand.

If bound up to the village, continue to steer **N.** by **E.** ½ **E.** until the northernmost of the two **Ram Islands** (which is wooded) bears **E.** by **S.** ½ **S.** There will then be eighteen feet at low water, and no attempt must be made to go farther without a pilot. The channel is a mere thread at low water, and is quite crooked. The best water is close to **Proctor Point,** after passing which it takes nearly the middle of the passage until up with the next point above **Proctor Point,** on the eastern shore. An inspection of the chart will give the best idea of its windings. None but those thoroughly acquainted with the channel ever attempt to enter the inner harbor.

The above courses pass five-eighths of a mile (twelve hundred yards) to the southward of *Gales* and *Pilgrim Ledges;* an eighth of a mile (two hundred and fifty yards) to the westward of *Whale Back;* two hundred yards to the eastward of **Sauli Rock**; an eighth of a mile to the westward of *White Ledge.*

SALEM HARBOR.

This harbor is at the western end of a large irregular and deep indentation in the shores of *Massachusetts Bay,* and is situated eleven miles to the southwestward of **Cape Ann (Thatcher Island)** and twelve miles to the northward of *Boston Entrance.* The entrance by the *Main Channel* is in

Latitude - - - - - - -	42° 32′ 20″ N.
Longitude - - - - - - -	70° 47′ 00″ W.

and is five miles and a quarter **W.** by **S.** from *Gloucester Entrance.*

Gales Point on the northeast, and **Marblehead Neck** on the southwest, respectively, form the northern and southern points of the entrance to this large cove or indentation, which includes within its limits the harbors of **Manchester, Beverly, Salem,** and **Marblehead.** The distance between the two points is four miles. This wide space is studded with islands, bare rocks, and sunken ledges, through and among which lead the several channels into the harbors.

Three channels lead into *Salem Harbor*, and all are equally good, and either may be taken, according to the position when falling in with **Baker Island Lights.** The most northerly is called the *MAIN SHIP-CHANNEL*, and the entrance to it is between **Great Misery** and **Baker Island.**

Southwest of **Baker Island** lie two bare rocky islets, called the **Gooseberries,** and a mile and a quarter southwest of these is a long narrow island, with a large hotel with cupola upon it. This is **Cat Island** or **Lowell Island.** The entrance to the *second channel* into *Salem Harbor* is contained between **Cat Island** and the **Gooseberries,** and is called *CAT ISLAND CHANNEL.*

The third channel into this harbor is called the *MARBLEHEAD CHANNEL*, or *WESTERN CHANNEL.* It is contained between **Marblehead Neck** and **Cat Island.**

DESCRIPTION OF SHORES OF MAIN SHIP-CHANNEL, INCLUDING THE NORTH SHORES OF SALEM HARBOR.

The north shore-line of the bay which forms *Salem Outer Harbor* has a general course EAST and WEST, but is much cut up by small coves, some of which afford anchorage. The small settlement called **Beverly Farms,** or **West Beach Village,** lies on this shore just to the westward of *Manchester Harbor*, and three-quarters of a mile **N N W.** from **Great Misery.** The lands in the vicinity of the village are all cleared and cultivated.

West of the **Farms,** wooded land and cultivated fields appear alternately. Houses dot the slopes of the hills, which are here very gradual in their rise. Nearly all the projecting points of land on this shore are low and cleared, with woodland behind them.

ALLEN HEAD,

a mile and a half west from **Glass Head,** is occupied by an orchard. Behind it the land is wooded, and rises to heights varying from ninety to one hundred and twenty-five feet above sea-level.

Half a mile west from **Allen Head** is

SMITH POINT,

low cleared land, with a rocky face on the harbor side. It is mostly grass-land with wooded hills behind it, and a few houses a little back from the shore.

CURTIS POINT

lies half a mile west from **Smith Point,** and is the eastern point of the entrance to a shallow cove, called *Beverly Cove.* The general features of the land are the same as those to the eastward—low, cleared, and cultivated shores, with wooded hills behind them. **Curtis Point** is thirty feet high, and composed of grass-land.

BEVERLY COVE

is contained between **Curtis Point** on the east and **Hospital Point** on the west. Its shores are under fine cultivation, bare of all trees except fruit-trees, and varying in height from twenty to forty feet.

HOSPITAL POINT,

the western point of *Beverly Cove,* is about forty-five feet high, grassy, and bare of trees.

HOSPITAL POINT LIGHT-HOUSE.

On this point is placed a **Light-House** as a range for the *Main Ship-Channel.* It is a temporary wooden structure, and shows a fixed white light (order of Fresnel three-

and-a-half) from a height of forty feet above sea-level. A lens-panel is placed in the line of the centre of the *Main Channel*, making a more brilliant fixed light on that line than on either side of it, and serves to guide vessels in mid-channel clear of dangers on either side. Its approximate geographical position is

Latitude - - - - - - - - 42° 32′ 48″ N.
Longitude - - - - - - - - 70° 51′ 01″ W.

A quarter of a mile to the westward of this point is

WOODBERRY POINT;

long and low, with a few scattered trees and houses upon it. Here the shore turns away to the northward and westward, forming a long shallow cove, called

MACKEREL COVE.

This cove washes the eastern side of the town of **Beverly**; is bare at low water, and its shores are low, cultivated, and well settled up to the outskirts of the town.

TUCK POINT,

a low sandy point, with groups of houses upon it, is the western point of *Mackerel Cove*, and also the northern point of the entrance to

BEVERLY HARBOR.

This harbor is formed by the confluence of *Essex Branch*, *Beverly Creek*, and *North River*—three small streams which unite at this point and form a basin of irregular shape, on the north shore of which is built the town of **Beverly.**

Essex Branch has a general course S E. from **Danvers New Mills**, nearly a mile and a half above its mouth. *Beverly Creek* has a general course S S W., and washes the western shore of the peninsula of **Beverly**. *North River* has a N E. course, and separates **Salem** and **North Salem.**

SALEM NECK.

On the south side of *Beverly Harbor*, and separating it from *Salem Inner Harbor*, is a peninsula of irregular shape, which lies N E. by E. and S W. by W., and is nearly a mile long. This is called **Salem Neck.** The northern point of this neck is called

HOSPITAL POINT,

and is the southern point of the entrance to *Beverly Harbor*. It must not be confounded with the point of the same name in *Beverly Cove.*

A narrow isthmus connects **Salem Neck** with the town, and over this isthmus the houses are extending. There are many fine elms and other ornamental trees planted on this narrow strip, but **Salem Neck** itself is rocky and bare, except that here and there over its south face a few elms and maples appear. On its summit is built **Fort Lee,** an earth-work with two or three barrack buildings attached to it. The city **Almshouse** occupies the southwest point of **Salem Neck**, and is readily recognized, being of **brick, which is painted a very ugly red color.** It presents the appearance of a block of houses, and is surrounded by ornamental trees.

Between **Salem Neck** and *North River* is another peninsula, now covered by the town-houses. On the eastern side of this peninsula, between it and **Salem Neck**, is a large cove, called

COLLINS COVE,

which washes the north side of the town of **Salem.** It is nearly all dry at low water, and forms the southern part of *Beverly Harbor.* The Almshouse landing is on the east shore of this cove.

JUNIPER POINT

is the northeast point of **Salem Neck**; is wooded, of moderate height, and easily recognized by its trees, as the rest of the **Neck** is nearly bare of them.

WINTER ISLAND

lies at the entrance to *Salem Harbor*, and is three-eighths of a mile long in a N N E. and S S W. direction. It lies along the southeast face of **Salem Neck**, with which a narrow strip of salt meadow connects its northern end. This strip is crossed by a causeway about a hundred yards long. **Winter Island** is grassy and bare of trees. On its southeastern point is built **Fort Pickering**, which defends the *Inner Harbor*. Barracks are attached to the fort, but there are no other buildings on the island.

On the north side of **Winter Island**, between it and **Salem Neck**, is a small cove, called *Juniper Cove*, of little importance. On its western side another cove is formed between the island and **Salem Neck**, called *Cat Cove*, also of little importance.

FORT PICKERING LIGHT-HOUSE.

On a bare rock on the eastern extremity of **Fort Point** is built a light-tower called **Fort Pickering Light-House**. It is twenty-three feet high, and shows a fixed white light of the fifth order of Fresnel from a height of thirty-two feet above the sea, and visible ten miles. It is a guide to *Inner Harbor*. Its geographical position is

Latitude - - - - - - - -	42° 32′ N.
Longitude - - - - - - - -	70° 51′ W.

INNER HARBOR,

or *Salem Harbor* proper, is a large cove contained between **Marblehead Peninsula** on the east and **Salem Neck** and the neck of land south of it (on which the city is built) on the west. Within these limits the direction of the harbor is N E. by N. and S W. by S., and it is a mile and a half long. The entrance is between **Fort Point** on the northwest and **Naugus Head**, the northwest point of **Marblehead Peninsula**, on the southeast. Between these two points it is seven hundred yards wide, but the cove rapidly widens, after passing **Naugus Head**, to a width of nearly a mile. The deep-water channel is, however, quite narrow, and lies nearest to the eastern shore, extensive flats making off from the western or town side.

Into the southern end of this harbor flows a small shallow stream, called *Forest River*. A dam is built across its mouth and extensive mills are erected upon it.

The town of **Salem** is separated from **South Salem** by a shallow stream, fifty yards wide between the wharf-lines of the two towns, but which widens into a broad lagoon, separating the **South Salem Peninsula** from the main land. Across the mouth of this stream stretches a very long wharf covered with warehouses. This wharf runs about S E., is nearly six hundred yards long, and is called **Derby Wharf**.

DERBY WHARF LIGHT-HOUSE.

On the southeastern end of **Derby Wharf** is built a light-house seventeen feet high, and showing a fixed red light of the fifth order of Fresnel from a height of twenty-two feet above sea-level, and visible eight miles. The tower is red. This, with **Fort Pickering Light**, forms the *Inner Harbor* range. About one hundred and seventy-five yards to the southward of it is a long low point, with a number of buildings on it, called **Long Point**.

A quarter of a mile to the southward of **Long Point** is **Palmer Point**. The cove between them is called *Palmer Cove*. **Palmer Point** is twenty feet high, its summit covered with houses and ornamental trees, and slopes gently to the water.

Three-eighths of a mile (seven hundred and fifty yards) to the southward of **Palmer Point** is **Pickering Point,** forty feet high, with a steep slope toward the water. It is the western point of the mouth of *Forest River.* The shores are here all cultivated, the land sloping easily to the water's edge. The crest of the rising ground is covered with low trees and many handsome houses.

At **Pickering Point** the mouth of *Forest River* is nearly six hundred, but at the mill-dam it is only about one hundred yards wide.

A small rocky island, called **Jeggles Island,** lies off the western shore of the harbor, a quarter of a mile S W. from **Pickering Point.** Abreast of this island, and a hundred and fifty yards from it, are two small bare rocks, the channel to the mills passing between them and **Jeggles Island.**

The eastern shore of *Salem Inner Harbor* is formed by

MARBLEHEAD PENINSULA.

This peninsula is a mile and three-quarters long and a little over a mile wide. It lies N E. and S W.; its surface is undulating, and all available land cultivated. On the **Salem** side it is hilly; in some places (as near **Forest River Mills**) it is thickly covered with spruce and fir; in others, (as abreast of **Pickering Point,**) dotted here and there with stunted spruce and fir; in others, the hills are high, regular in outline, and perfectly smooth and bare. Near the northwest end of the peninsula the surface is undulating, gently sloping on the west toward *Salem Harbor,* and dotted with clumps of fine forest trees. The eastern shore of this peninsula is occupied by the town of **Marblehead.**

Naugus Head, the northwestern point of **Marblehead Peninsula,** is also the south-eastern point of the entrance to *Salem Harbor.* It is bare of trees, and slopes precipitously toward the water. A large earth-work occupies the western side of the head.

ISLANDS
IN THE APPROACHES TO SALEM HARBOR BY MAIN SHIP-CHANNEL.

The approach by this channel is between **Great Misery Island** on the north and **Baker Island** on the south.

GREAT MISERY ISLAND

has been already described on page 748. It is irregular in shape, high, and bare; about a third of a mile long in an E S E. and W N W. direction, with an undulating surface. Its eastern and western heads are sixty feet high, but the centre of the island is only twenty feet above sea-level. There is a single dwelling upon it.

Baker Island is three-quarters of a mile S S E. from **Great Misery.**

LITTLE MISERY ISLAND

lies fifty yards south from **Great Misery.** It is a bare rocky islet, lying EAST and WEST, an eighth of a mile long, and twenty feet high.

BAKER ISLAND AND BAKER ISLAND LIGHTS.

This island lies on the south side of the *Main Ship-Channel,* three-quarters of a mile S S E. from **Great Misery.** Its surface is grassy and the sea-face somewhat precipitous. The highest point is about forty feet above the sea. On the northern end of the island stand two **Light-Houses,** the guides to *Salem* and *Manchester Harbors.* They are white, and stand N W. and S E. from each other, forty feet apart. The northwestern tower is octagonal, fifty-two feet high, and shows a fixed white light of the fourth order of Fresnel from a height of eighty-seven feet above the sea, and visible fifteen miles.

The southeastern tower is round, twenty-nine feet high, and shows a fixed light of the same order from a height of sixty-four feet above the sea, and visible fourteen miles.

A bell-frame, with fog-bell, stands north of the eastern **Light-House.** It is painted red, as are also the lanterns on the towers. The geographical position of **Baker Island Lights** is

Latitude - - - - - - - -	42° 32′ 10″ N.
Longitude - - - - - - - -	70° 47′ 10″ W.

The houses and offices of the keepers' dwellings are the only buildings on the island, (see page 748.)

APPEARANCE OF SHORES
OF SALEM HARBOR WHEN APPROACHED BY MAIN SHIP-CHANNEL.

The first prominent objects which will appear to a vessel approaching *Salem Harbor* from seaward will be **Baker Island** and its two **Light-Houses.** The island will appear grassy and of moderate height, having on its northern end two **white Light-Houses** and **a red bell-tower.** The houses of the light-keepers will be seen a little to the southward of the towers.

When these lights bear W. by N. ½ N., a little over two miles distant, there will be fourteen fathoms, with the *Main Ship-Channel* open on a bearing of W N W.

Just clear of the island, to the northward, will appear a low pyramid surmounted by a black cap. This is **Bowditch Ledge Beacon,** nearly in the middle of the channel; and a little to the northward of this beacon, on the distant land, on a clear day the **Light-House on Hospital Point** may be seen. On the north side of the entrance **Great Misery** will be seen as a barren rocky island, with the roof of a solitary house just visible above the northern end. What appears to be its southern point is, in reality, **Little Misery**; the passage between them not being visible from this direction.

House Island appears to the eastward of **Great Misery,** the entrance to **Manchester** open between them. It shows as a small rocky islet, with its summit covered with a grove of fir and spruce. Behind it will be seen the settlement of **Beverly Farms.**

A bare rocky islet, bearing S W. by W., about two miles and a half off, is **Half-Way Rock.** The remains of its former beacon will show as a white speck on top of the rock.

Clear of the south end of **Baker Island** will appear two bare islets, known as the **Gooseberries.** A little to the southward of them **Lowell** or **Cat Island** will be seen, a bare island, occupied by a large white building with cupola. This is the **Lowell House,** a summer resort. On the southern end of **Cat Island** is a **beacon composed of a spar and cask,** but it will not be visible at this distance.

DANGERS
IN APPROACHING AND ENTERING SALEM HARBOR
BY MAIN SHIP-CHANNEL.

I. *Coming from the northward and eastward.*—In coming in for *Salem Entrance* from the northeastward, the first danger met with will be seen on the north side of the passage just after passing **Great Egg Rock.** *Two spar-buoys* will be seen close together. The easternmost buoy is on

GALES LEDGE,

(already described on page 749) which has two feet at low spring tides. From **Baker Island Lights** it bears N E. by E. ½ E., a mile and a quarter distant. A *red spar-buoy* (No. 2) is placed in three and a half fathoms south of the rock. This ledge is an obstruction common to *Salem* and *Manchester Harbors.*

PILGRIM LEDGE.

The *westernmost buoy has a triangle on top*, and is on *Pilgrim Ledge*, which is a quarter of a mile to the westward of *Gales Ledge*, and has nineteen feet at low water. The buoy is on its south side in four fathoms. From **Baker Island Lights** it bears N E. ½ E., a little over one mile distant.

After passing *Gales* and *Pilgrim Ledges*, there will be seen on the starboard bow, off the entrance to *Manchester Harbor*, *two red spar-buoys*, lying N E. and S W. from each other, and about two hundred yards apart. A dry ledge will appear between them. This is

WHALE BACK,

dry at three-quarters ebb, and lies directly in the mouth of *Manchester Harbor* and on the north side of the main entrance to **Salem.** From **House Island** it bears S S W., one-quarter of a mile; and from **Great Misery** E. by S., three-eighths of a mile.

The northernmost buoy is a red spar, (No. 6;) is placed in three and a half fathoms off the eastern point of the ledge, and is called *East Whale Back Buoy.*

The southernmost buoy is also a red spar, (No. 8,) and is placed in four fathoms off the southwestern end of the ledge. From this buoy the southern point of **Little Misery** is open a little to the northward of **Bowditch Beacon.**

BAKER ISLAND SHOAL.

From the northern end of **Baker Island** a bar of rocks, sand, and pebbles extends to the northward and northwestward two hundred yards. It is known as *Baker Island Shoal*, and is marked by *a black spar-buoy* (No. 1) placed in three fathoms off the north end of the shoal. The course in for **Hospital Point Light** leads within a hundred and fifty yards of this buoy.

POWERS ROCK.

This rock is on the northeastern point of *Baker Island Shoal.* Its existence was not known until the summer of 1869, when Captain Powers, the custom-house pilot, while sounding north of **Baker Island**, struck shoal water, and made a cursory examination of it. Not being able to examine the rock thoroughly, he left it for a more favorable opportunity. Meantime, a three-masted schooner struck upon it, but was gotten off without serious damage.

This rock has nine feet at ordinary low water. It lies N W. by N. ½ N. from the eastern **Light-House**, and is about one hundred yards from low-water mark.

The buoy on *Baker Island Shoal* has been recommended to be moved to the northward so as to enable vessels to clear this rock.

After passing *Powers Rock*, the next danger met with is also on the south side of the channel, and is called

HARDY ROCK SHOAL.

It has two feet at low water, and extends off from *Hardy Rocks* in a N E. direction nearly two hundred yards. *A black spar-buoy* (No. 3) is placed off its northeast end in three fathoms, and bears W. by N. ½ N. from **Baker Island Lights**, half a mile distant, and S. by W. from **Little Misery**, a third of a mile. To the southwestward of it will be seen a spindle composed of a spar with two triangles on top. This beacon is on

HARDY ROCKS,

and is called **Hardy Rock Beacon.** The rocks are dry at half-tide. The beacon bears W. by N. from **Baker Island Lights**, five-eighths of a mile distant, and S S W. from **Little Misery**, three-eighths of a mile distant.

A little to the westward of **Hardy Rock Beacon** will be seen *another black spar-buoy.* This is on

RISING STATES LEDGE,

which is but the western end of the mass of shoal water surrounding *Hardy Rocks.* It has ten feet at mean low water and eight at low springs, and bears **W.** by **N.** from **Hardy Rock Beacon,** a little over two hundred yards distant. The *black spar-buoy* (No. 7) is placed in four fathoms off the northwest point of this ledge.

Rising States Ledge is not in the way except for vessels which intend to pass to the southward of *House* and *Bowditch Ledges.*

HOUSE LEDGE.

When up with the *black buoy* (No. 3) on *Hardy Rock Shoal, a spar-buoy with black and red horizontal stripes* will be seen on the south side of the channel. This is on *House Ledge,* which lies near the middle of the channel, and has eight feet at lowest tides. It is a small detached rock, with deep water on all sides of it, and the buoy may be passed on either hand by giving it a berth.

House Ledge bears **N W.** by **N.** ½ **N.** from **Hardy Rock Beacon,** nearly four hundred yards distant, and **S W.** ¼ **W.** from the western end of **Little Misery,** nearly six hundred yards, (one-third of a mile.) *Rising States Ledge* is nearly four hundred yards **S W.** by **S.** from this ledge.

BOWDITCH LEDGE.

After passing *House Ledge,* (still steering for **Hospital Point Light,**) three *spar-buoys with black and red horizontal stripes* will be seen on the north side of the channel, and **a granite beacon** and *spar-buoy with horizontal stripes* on the south side of the channel. The beacon is called **Bowditch Ledge Beacon,** and is **a triangular or pyramidal structure of granite with a wooden staff and cage on top, painted black.** It is built upon the dry part of the shoal, and bears **W N W.** from **Baker Island Lights,** a mile and one-eighth distant, nearly in the middle of the channel. The course for **Hospital Point Light** passes nearly two hundred yards **NORTH** from this beacon.

On the eastern edge of *Bowditch Ledge* a *spar-buoy, painted red and black in horizontal stripes,* is placed as a guide to vessels using the channel between this ledge and *House Ledge.* There is good water on all sides of *Bowditch Ledge.*

On the north side of the channel, after passing **Little Misery,** the first danger met with is opposite to *Bowditch Ledge.* It is called

MISERY LEDGE,

and is marked by a *spar-buoy with red and black horizontal stripes.* It is a detached rock, with eight feet at lowest tides and four fathoms of water all around it. It lies **W.** by **N.** from **Little Misery,** over half a mile distant, and the channel passes midway between it and **Bowditch Beacon.**

An eighth of a mile **W.** by **N.** from *Misery Ledge* is another *spar-buoy with horizontal stripes.* This is on

JOHN LEDGE,

sometimes called *West End of Great Misery,* a small detached rock, with eight feet at lowest tides and four fathoms of water all around it. The buoy is placed on the southern point of the rock in three fathoms and a half of water. The *Main Channel* courses lead south of it, but vessels using the *Inner Channel,* between **Great Misery** and the main land, pass to the northward of it.

One-eighth of a mile **NORTH** from *Misery Ledge,* and about two hundred and fifty yards **N E.** by **E.** from *John Ledge,* will be seen a third *spar-buoy,* also *painted red and black in horizontal stripes,* and placed on the southern point of

MISERY SHOAL,

a ledge two hundred yards long, lying N W. and S E., and with seven feet at mean low water on its shoalest part, just north of the buoy. There is from three to four fathoms water on all sides of this ledge. When up with **Bowditch Beacon**, the *three spar-buoys* on *Misery Ledge*, *John Ledge*, and *Misery Shoal* will appear on the north side of the channel in the form of a triangle.

A *red spar* will be seen to the eastward of the buoy on *Misery Shoal*, lying off the western point of **Great Misery Island.** This is on

MISERY ROCK,

sometimes called *John Ledge.* It has six feet at mean low water, lies off the western shore of **Great Misery Island** at a distance of three hundred yards, and forms the western end of a long shoal or bar called *Misery Bar,* which extends to the westward from the island. A *red spar-buoy* (No. 10) is placed in seventeen feet off the southwest side of the rock as a guide to vessels bound through the passage between **Great Misery** and **West Beach.**

After passing between *John Ledge* and **Bowditch Beacon**, there are no obstructions in the channel and no dangers except that, on the north side of the channel, off **Allen Head,** where there is a detached rock with seven feet at lowest tides, called

JOHN ROCK.

It lies nearly three hundred and fifty yards SOUTH from **Allen Head,** *is not buoyed,* and is not in the way of vessels unless standing to the northward on a wind. There is a narrow passage between the rock and shore, but it is not safe.

THE HASTE.

Off the northern end of **Marblehead Peninsula** lie a great number of ledges, bare and sunken rocks, and shoals, obstructing alike all the channels into *Salem Inner Harbor.* Of these, the most northerly is the **Haste,** which consists of a rocky islet surrounded by ledges, called the *Great Haste;* a small rock, bare at low water, lying to the northward of **Great Haste,** called *Little Haste;* and a sunken rock, with eight feet of water, lying to the eastward of **Great Haste,** called *Haste Rock.*

A vessel bound in by the main channel will not approach the **Haste** unless the wind is ahead and she is standing toward the south side of the channel. In this case care must be taken to avoid, first,

HASTE ROCK,

which forms the eastern end of the *Haste Shoals;* has eight feet at mean low water, and lies at the junction of the *Main* with the *Cat Island Channel.* It is a third of a mile **NORTH** from **Coney Island** and an eighth of a mile S E. by E. ½ E. from **Great Haste.** *A black spar-buoy* (No. 7) is placed in three fathoms on the eastern side of the rock, as a guide to vessels bound into *Cat Island Channel.*

GREAT HASTE

is a bare rocky islet about one hundred yards long, and surrounded by shoal water. It is a mile and a quarter N E. by E. from **Naugus Head,** the eastern point of entrance to *Salem Inner Harbor.* It bears from—

	Miles distant.
Bowditch Beacon, W. ½ S.	1⅝
Fort Pickering Light, E. by N.	1¼

In passing **Great Haste** give it a berth to the southward of a quarter of a mile, unless perfectly familiar with the extent and direction of the shoals which make off from it to the northward. There is no passage to the southward of it.

LITTLE HASTE.

When nearing the **Great Haste a large spar with a cask on top** will be seen to the northward of it. This is on the *Little Haste*, a ledge, bare at two-thirds ebb, lying one hundred yards **N W. ¾ N.** from the **Great Haste.** The spar, which is on the middle of the rock, is **painted black,** and must receive a good berth to the southward from all but very light-draught vessels. Still farther to the northwest of **Great Haste** extends

HASTE SHOAL,

in a **N N W.** and **S S E.** direction, and from **Little Haste Beacon** an eighth of a mile. A *black spar-buoy* (No. 9) is placed in sixteen feet on the northern point of this shoal. Vessels of light draught may, however, pass between this buoy and the beacon. *Haste Shoal* marks the turning-point in the *Main Ship-Channel* and the boundary between *Inner* and *Outer Harbors.* Here the channel makes a sharp turn to the southwestward and vessels make a straight course for the town.

The channel now leads between **Salem Neck** on the west and the dry ledges and flats which make off from **Naugus Head** to the northeastward. **A granite monument** will be seen on the west side of the channel and a *black spar-buoy* on the east side. This buoy is on the

MIDDLE GROUND,

a long flat which makes to the southwest from **Great Haste** a distance of three-quarters of a mile. It is in several places awash at low water, and there are many spots with four and five feet at lowest tides. The *black buoy* (No. 11) is placed in fourteen feet on the western edge of the flat, bears **S W.** by **W. ¾ W.** from *Haste Shoal Buoy*, and is five-eighths of a mile from it. It may be left to the eastward, and approached quite closely, but the sailing-lines give it a good berth.

The **granite beacon surmounted by staff and cage,** which is seen on the west side of the channel, off the north end of **Winter Island,** is on

ABBOTT ROCK,

and is called **Abbott Monument.** The ledge lies **W. ¾ N.** from the *Middle Ground*, three hundred yards from the north end of **Winter Island,** and is dry at low water. The beacon is built on the summit of the rock, **a square granite monument, surmounted by a wooden staff with an open-work cage on top. The staff and cage are painted red.** Vessels approaching this rock at night will find it almost impossible to see this monument, as it is low and shows against the land. But the erection of the lights on **Fort Point** and **Derby Wharf** enables vessels to avoid this danger. So long as **Derby Wharf Light** is kept open to the eastward of **Fort Pickering Light** this ledge cannot be struck, and the range of the two lights will carry safely past the **Haste** and up to the *Middle Ground Buoy.*

GREAT AQUA VITÆ.

After passing **Abbott Monument another granite beacon** will be seen on the east side of the channel, and a *red spar-buoy* a little to the westward of it. The beacon is on *Great Aqua Vitæ Ledge,* a mass of rocks, dry at half-tide, which lie on the southwestern end of the *Middle Ground.* **The monument is a pyramidal granite structure surmounted by a wooden staff and cage, the latter painted black.** This monument marks the

point of junction of the *South* and *Main Ship-Channels*, and is to be left to the eastward by vessels using the latter and to the northward by those bound in or out by the former.

Great Aqua Vitæ Monument bears from—

	Miles distant.
Fort Pickering Light-House, E. by S. ½ S. ..... a little over	⅓
Naugus Head, N E. ½ E.	⅓
Great Haste, S W. by W. ¾ W.	⅞

The *red spar-buoy* is on

KNAPP ROCK,

in the *South Channel*, which has eight feet at low water. It obstructs both channels, lies nearly WEST from **Great Aqua Vitæ Beacon**, nearly two hundred yards off, and is exactly abreast of **Fort Pickering Light**. A *red spar-buoy* (No. 10) is placed in good water on the south side of the rock.

HALF-TIDE ROCK.

Passing **Fort Pickering Light**, there will be seen a *red spar-buoy* (No. 12) on the west side of the channel. This is on *Half-Tide Rock*, which lies off the southern end of **Winter Island**, one hundred and fifty yards from it; is awash at low water and bare at extreme low tide. *The buoy is painted red*, marked No. 12, and placed in fourteen feet off the southern end of the ledge.

In the upper part of *Inner Harbor* the flats make off a long distance from shore, but the approach is gradual, and the lead will be the best guide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SALEM HARBOR
BY THE MAIN SHIP-CHANNEL.

I. *Coming from the northward and northeastward, outside of everything.*—When abreast of **Eastern Point**, with the **Light-House** bearing N. ½ W., three-quarters of a mile distant, and in twenty fathoms water, steer W. by S. ½ S. until **Baker Island Lights** bear W. by N.; then steer for them, carrying nothing less than fifteen fathoms water, until within a mile and an eighth, in fourteen fathoms, hard bottom, and **Hospital Point Light** bears W. by N. ¾ N. Now steer that course for the light, which will carry safely up the middle of the channel in not less than five and a half fathoms water. At night continue this course, with not less than five and a half fathoms, until **Fort Pickering Light** and **Derby Wharf Light** are in range on a bearing of S W. by W. ¾ W., when there will be five and a half fathoms; steer that course, keeping the range, and carrying not less than four and a half fathoms, until **Hospital Point Light** bears N. ¾ E. Then steer S W. ¾ W. into the harbor, carrying four and a half fathoms, and anchor when **Derby Wharf Light** bears WEST, in three and a half fathoms, soft bottom.

These courses pass three-quarters of a mile to the southward of *Gales* and *Pilgrim Ledges;* half a mile to the southward of *Whale Back;* one hundred and fifty yards to the northward of *Powers Rock;* a quarter of a mile to the northward of **Hardy Rock Beacon**; nearly two hundred yards to the northward of *House Ledge;* an eighth of a mile to the southward of *Misery Ledge;* the same distance to the northward of **Bowditch Ledge Beacon**; a quarter of a mile to the westward of **Little Haste Beacon**; nearly two hundred yards to the westward of *Haste Shoal Buoy;* one hundred and fifty yards to the westward of *Middle Ground Buoy;* an eighth of a mile to the eastward of **Abbott Monument**; about three hundred and fifty yards to the westward of **Great Aqua Vitæ Beacon**; an eighth of a mile to the westward of *Knapp Rock;* and the same distance to the eastward of *Half-Tide Rock.*

In the day-time, when abreast of **Bowditch Beacon**, in seven fathoms, steer **W. by N.** about for the southern part of **Beverly**, and continue this course, carrying six fathoms, until the two lights are in range as before, when steer for them, keeping the range, and follow the directions given above.

II. *Coming from the northward, along shore.*—Coming from **Gloucester** to **Salem**, when **Eastern Point Light** bears EAST, steer **W. by S. ½ S.** for **Baker Island Lights**, carrying not less than eight fathoms. Continue this course until within a quarter of a mile of the lights, in eight and a half fathoms, rocky bottom, and **Hospital Point Light** bears **W. by N. ¾ N.**; then steer that course, with not less than seven fathoms water, and follow the directions given above.

On this course pass three-eighths of a mile to the eastward of **Great Egg Rock**; three-quarters of a mile to the eastward of **Salt Rock**; a quarter of a mile to the southward of *Gales Ledge;* three-eighths of a mile to the southward of *Pilgrim Ledge;* and half a mile to the southward of *Whale Back.*

III. *Coming from the eastward or from sea.*—Bring **Eastern Point Light** to bear **N E. by E. ½ E.** and **Baker Island Lights W. by N. ¾ N.**, in about sixteen fathoms water, and steer **W. by N. ¾ N.** for **Hospital Point Light**, carrying not less than seven fathoms.

IV. *Coming from the southward.*—When **Egg Rock Light** bears **W. ½ N.**, three miles distant, and **Baker Island Lights** bear **N E. by N. ½ N.**, six miles and a quarter distant, there will be twenty fathoms. Bring **Eastern Point Light** to bear **N E. ½ E.** and steer for it until **Baker Island Lights** bear **W. by N. ½ N.** and **Hospital Point Light W. by N. ¾ N.** There will then be twenty-two fathoms, *fine gray sand.* Now steer for **Hospital Point**, and proceed as directed for this channel.

On the course for **Eastern Point Light**, pass **Half-Way Rock** about three-quarters of a mile to the westward, and after passing it, as *soon as the low light on* **Baker Island** *is opened to the northward of the high light*, steer **NORTH** until the **Lights** bear **W. by N. ¾ N.**, as before. *But be careful not to shut the low light in behind the high one, as there is danger of being set ashore* on the *Outer* or *Middle Breakers.* So long as the low light is kept thus open all danger is cleared. A stranger, however, had better keep his distance, and steer for **Eastern Point Light** until he gets on the bearing of **Hospital Point Light.** This is safe and reliable, leading clear of *Outer Breakers*, leaving them an eighth of a mile to the westward.

Vessels coming from the southward seldom use the *Main Channel*, as the others, though not so plain, are equally good passages into the harbor. Since the erection of **Hospital Point** and **Fort Pickering Light-Houses** the *Cat Island Channel* can be as easily and safely entered by night as by day, and strangers need not fear to follow the directions.

Vessels beating up for Main Ship-Channel must not, when north of **Half-Way Rock**, stand to the southward and westward so as to bring **Baker Island Lights** in range, *to avoid the Middle and Outer Breakers.* Nor must they stand to the northward farther than to bring **Baker Island Lights** to bear **W. by S.**, *to avoid Gales Ledge.*

V. *On the above courses, to enter Manchester Harbor, or the anchorage between the main land and* **Great Misery** *and* **House Islands.**—On the course in, steer **W. by N. ¾ N.** for **Hospital Point Light**; when **Baker Island Lights** bear **S E. by S. ½ S.**, and in eight fathoms, hard bottom, steer **N. by E. ½ E.** one mile, or until **Ram Island** bears **EAST**, when anchor in from three to four fathoms, *hard sand.* This course passes an eighth of a mile to the westward of *Whale Back;* the same distance to the eastward of **Great Misery Island**; two hundred yards to the westward of *White Ledge;* and a little over one hundred and fifty yards to the eastward of *Sauli Rock.*

VI. *On the above courses, to enter Beverly Harbor.*—When between **Bowditch Ledge Beacon** and *Misery Ledge Buoy*, in seven and a half fathoms, with **Hospital Point Light** bearing W. by N. ½ N., steer W. ½ N. for the northeastern end of **Salem Neck**, carrying not less than four and a half fathoms. Continue this course until **Fort Pickering Light** bears S W. and **Hospital Point Light** bears N. by E., when there will be five and a half fathoms. Then steer N W. by W., with nothing less than seventeen feet, until **Fort Pickering Light** is shut well in behind **Juniper Point** and that point is in range with the fort on **Naugus Head.** Then anchor in three and a half fathoms and wait for a pilot.

The dangers in *Beverly Harbor*, and detailed sailing directions for entering, will be given, so far as is possible, under the head of *BEVERLY HARBOR.*

CAT ISLAND CHANNEL.

This channel leads between **Baker Island** on the north and **Lowell** or **Cat Island** on the south; is wide and deep, but obstructed by many ledges and rocks. Its general course is N W. and S E.

On the north side of the entrance lie two small, bare, rocky islets, called

THE GOOSEBERRIES,

NORTH and SOUTH from each other, a quarter of a mile apart, and from six hundred yards to half a mile from the south end of **Baker Island.** They are surrounded by dry and sunken ledges, some of which are among the most dangerous in the approaches to *Salem Harbor.* They are named, respectively, the **North** and **South Gooseberries.** A little over a mile WEST from **South Gooseberry** is

LOWELL OR CAT ISLAND,

formerly known as **Cat Island,** but since the erection of the **Lowell House** commonly called **Lowell Island.** It is low and bare, lying N N W. and S S E., and nearly half a mile long. The only noticeable features are **the hotel** near its southern end and the **beacon, formed by a spar with a cask on top,** which is erected on the rocks at the extreme southern point of the island.

This island separates the entrance to *Cat Island Channel* from the entrance to the *Southwest* or *Marblehead Channel.*

EAGLE ISLAND.

Three-quarters of a mile N. by E. ½ E. from **Cat Island (Lowell Hotel Cupola)** lies a small bare island, called **Eagle Island,** extending N E. and S W., and nearly two hundred yards long. It is a mile and three-eighths W. by S. ½ S. from **Baker Island Lights,** and surrounded by dangerous shoals, *but they are all marked by buoys.*

CONEY ISLAND.

After passing **Eagle Island, Coney Island** is reached on the western side of the channel. It is a low barren islet of irregular shape, surrounded by bare ledges and sunken rocks. From **Fort Pickering Light** it bears E. ½ S., a mile and a quarter distant; from **Eagle Island** W N W., one mile; and from **Lowell House Cupola** N W., a mile and a half.

The *Cat Island Channel* joins the *Main Ship-Channel* at **Great Haste Rock.**

APPEARANCE OF SHORES AND APPROACHES TO CAT ISLAND CHANNEL, SEEN FROM THE SOUTHEASTWARD.

A vessel approaching *Salem Entrance* and designing to enter by this channel will notice **Baker Island** bearing about N. by W. It will appear as a grassy island of moder-

ate height, with two **Light-towers** (a low and a high one) on its eastern end, which is also the highest part of the island.

A little to the westward will be seen two bare rocky islets nearly in range with each other. These are the **Gooseberries.** A little farther to the westward, but less distant, will be seen a high bare rock, surmounted by the remains of a stone beacon which shows as a white boulder on top of the rock. This is **Half-Way Rock,** a small but very bold rocky islet, lying one mile and three-quarters E S E. from **Cat Island** and a little over two miles S. ¼ E. from **Baker Island Lights.** This rock is an excellent landmark for the approach by *Cat Island Channel.* The low green islet, seen just clear of **Half-Way Rock,** to the westward, is **Eagle Island.** **Hospital Point Light-House** will be nearly in range with it, but will not be visible without a glass. On a clear day **Coney Island** will appear some distance west of **Eagle Island,** and the low, bare, rocky islet just to the westward of it, and two miles off, is **Satan Rock.** Just to the westward of **Satan, Lowell** or **Cat Island** will appear as an island with rocky shores, and having a large white hotel upon it surmounted by a cupola. On the southern end of the island, on a pile of rocks, will show a **spar with cask on top.** This is **Cat Island Beacon.** Part of the town of **Marblehead** will appear still farther to the westward, and the light-tower in range with the houses is **Marblehead Light-House.**

DANGERS
IN APPROACHING AND ENTERING SALEM HARBOR BY CAT ISLAND CHANNEL.

There are many ledges and shoals between **Baker Island** and **Cat Island,** which will be in the way of a vessel standing to the northward on a wind. Three-eighths of a mile to the eastward of **Baker Island** (southern end) is

SEARLE ROCK,

which has six feet at lowest tides. It is a detached rock, with good water all around it; lies a little over half a mile S E. from **Baker Island Lights,** and is marked by a *black spar-buoy* (No. 3) placed in three fathoms on the northeast side of the rock. Vessels bound in by the *Main Ship-Channel* leave this buoy a long way to the southward, and take no account of it unless they are standing in-shore on a wind.

INNER BREAKERS.

From the **Gooseberries** great shoals, with many bare ledges, extend to the eastward and southeastward and form dangerous obstructions to *Cat Island Channel.* The eastern extremity of this mass of shoal ground is dry at low water, and is one mile E. by S. from the **South Gooseberry** and one mile S S E. from **Baker Island Lights.** It is known as *Inner Breakers,* and is a most dangerous ledge. Eight feet at mean low water may be taken across the shoal ground between *Inner Breakers* and the **Gooseberries** on a N. by W. course for **Baker Island Lights.** None, however, but the fishermen who live in the vicinity ever use this passage. *Inner Breakers are not buoyed.*

MIDDLE BREAKERS.

Three-eighths of a mile S E. from *Inner Breakers,* and a mile and three-eighths S E. by S. from **Baker Island Lights,** lies another bad ledge, known as *Middle Breakers.* It is a detached rock about two hundred yards in extent, and lies EAST and WEST. There are dry spots upon it at low tides. A *black spar-buoy* (No. 1) is placed in four fathoms on the eastern side of the ledge.

There is from four to five fathoms water between *Middle* and *Inner Breaker,* but strangers must not attempt the passage.

OUTER OR SOUTHEAST BREAKER.

Five hundred yards SOUTH from *Middle Breakers*, and a mile and three-quarters S E. by S. ½ S. from **Baker Island Lights**, lie two ledges close together, called *Outer Breakers* or *Southeast Breakers*. The northern ledge lies N E. and S W., and has four feet at mean low water; the other lies nearly NORTH and SOUTH, and has nine feet. They are the first obstructions met with by a vessel bound in from the southward or eastward with a fair wind by this channel; and are marked by a *red spar-buoy* (No. 2) *with a keg on top*, and placed in five and a half fathoms on the eastern side of the ledge. Coming in toward **Half-Way Rock** from the eastward it will be seen well to the northward.

There is deep water between *Middle* and *Outer Breakers*, and those well acquainted with the dangers sometimes use it, but strangers should never attempt it.

After passing *Outer Breakers*, the course in leads almost exactly for

HALF-WAY ROCK,

which lies off the middle of the entrance. It is only dangerous on very dark nights or in thick fogs, as it is thirty feet above sea-level and bold on all sides. On its summit there was formerly a monument, but this has disappeared, leaving only the foundation, which shows from a distance as a white spot on top of the rock.

It was formerly the custom among the **Marblehead** fishermen, bound out on a fishing cruise, to run alongside of this rock and throw "luck-pennies," as they called them, upon it, wishing for a good fare.

Half-Way Rock bears from—		Miles distant.
Baker Island Lights, S. ½ E.	a little over	2
Marblehead Light, E. by S. ½ S.		2⅝
South Gooseberry, S S E.		1⅜

When up with **Half-Way Rock**, a mass of breakers and dry ledges will be seen to the northward in range with **Baker Island**. These are the shoals southeast of the **Gooseberries**, and are known as

DRY BREAKERS.

They are not in the way except for vessels beating to windward, or those that attempt the passage between *Inner* and *Middle Breakers*. They form the southern extremity of the mass of shoal ground extending east and southeast from the **Gooseberries**, and are dry at high water. They lie about a third of a mile (six hundred yards) S E. by E. ½ E. from the **South Gooseberry** and five-eighths of a mile (eleven hundred yards) SOUTH from the south point of **Baker Island**, and *are not buoyed*, as they always show themselves.

After passing **Half-Way Rock** the channel leads to the northwestward, and *a spar-buoy with horizontal black and red stripes* will be seen on either side of the channel. That to the northward is on

GOOSEBERRY LEDGE,

which has fourteen feet at mean low water, bears N W. ½ N. from **Half-Way Rock**, a little over a mile distant, and S S W. from the **South Gooseberry**, three-eighths of a mile distant. *Gooseberry Ledge* is a small detached ledge with from four to five fathoms water all around it. The buoy is placed in three and a half fathoms on the south side of the rock.

The *spar-buoy with black and red horizontal stripes* which appears to the southward is on

SATAN ROCK,

a bare ledge lying nearly in the middle of the channel. It bears N W. by W. from **Half-Way Rock**, a mile and a quarter distant, and S W. by W. ½ W. from *Gooseberry Ledge*,

nearly half a mile. The *spar-buoy with black and red horizontal stripes* is placed on the south side of the rock in four fathoms, and may be passed on either hand, but should receive a good berth.

After passing between *Gooseberry Ledge* and **Satan Rock** *two black spar-buoys will be seen to the northwestward.* The nearest, which will appear on the west side of the channel and off the eastern shore of **Cat Island**, is on

MARTIN ROCK,

a sunken ledge, with twelve feet at mean low water, which lies a quarter of a mile from the **Cat Island** shore, and bears from **Satan Rock** N W. ¼ W., five-eighths of a mile, and from **Lowell Hotel** N E. by N. ½ N., one-quarter of a mile. The *buoy is a black spar*, (No. 1,) and is placed in three and a half fathoms on the eastern side of the rock. There are from three to four fathoms water in-shore of it, but vessels must not attempt that passage.

The *black spar-buoy* on the starboard bow is on

THE BRIMBLES,

and does not properly belong to this channel, as it is intended to mark the passage into **Marblehead** between the **Gooseberries** and **Eagle Island.** The number of buoys which appear, and their color, is, however, apt to confuse a stranger coming in this channel, and it is deemed best to mention each one as it is passed.

The Brimbles is a dangerous ledge, awash at low water, which lies about midway between the **North Gooseberry** and **Cat Island.** It bears W. by S. ½ S. from the former, nearly three-quarters of a mile distant, and from **Lowell House Cupola** N E. ½ N., a little over half a mile. From **Baker Island Lights** it bears S W. by W. ¼ W., one mile and three-eighths distant. The shoal is about two hundred yards in extent, and *a black spar-buoy* (No. 3) is placed in three and a half fathoms off the northwest side.

Vessels using *Cat Island Channel* leave this buoy nearly six hundred yards to the eastward.

When by *Martin Rock*, the channel leads between a *red spar-buoy* on the east side and a *buoy with horizontal stripes* on the west side of the channel. The *red buoy* is on

MID-CHANNEL ROCK,

a sunken rock, with sixteen feet at mean low water, which bears N. ¼ W. from the **Lowell House Cupola,** eleven hundred yards distant, and W. by S. ½ S. from **Eagle Island,** distant three hundred and fifty yards. The buoy is placed in three and a half fathoms on the western side of the rock, is numbered 4, and is to be left to the eastward.

The *buoy with horizontal stripes* is on

CHAPPEL LEDGE,

on the western side of the channel, which has fifteen feet at mean low water. It bears N W. ½ N. from the **Lowell House Cupola,** eleven hundred yards distant, and the same distance E. ½ S. from **Peach Point,** (the northeastern point of **Marblehead Peninsula.**) The buoy is in four fathoms on the eastern side of the rock, and is left to the westward.

EAGLE ISLAND BAR.

After having passed between *Mid-Channel Rock* and *Chappel Ledge*, a *red spar-buoy* will be seen on the east side of the channel. This is on the northwestern end of *Eagle Bar*, a long shoal making out in a northerly direction from **Eagle Island** a distance of a third of a mile. The bar has one foot at mean low water and is dry at low spring tides. A *red spar-buoy* (No. 6) is placed in three fathoms off its northwest end, and bears from **Peach Point** N E. by E. ½ E., distant a mile and a quarter, and from **Baker Island Lights** W. by S. ½ S., a mile and a half distant.

On the west side of the channel, as approaching **Coney Island**, a *black spar-buoy* will be seen. This is on

CONEY LEDGE,

a very extensive mass of rocks, a number of which are out at low water, and others have from one to ten feet upon them. They lie off **Coney Island**, between the bearings of S E. ¼ S. and S W. by S. ¾ S. From the bare rocks **Fort Pickering Light** and **Great** and **Little Aqua Vitæ Beacons** are in range. The other shoals lie between S E. by S. and S W. by S. from the island, extending a third of a mile off.

The *black spar-buoy* is marked No. 3, and is placed in three and a half fathoms off the northeast point of the dry ledge. When up with it *another black buoy* will be seen ahead. This is on

CONEY ISLAND ROCK,

a sunken ledge, with from three to five fathoms water all around it, and thirteen feet at mean low water. It lies on the western side of the channel, a quarter of a mile N W. by N. from *Coney Ledge Buoy*, and the same distance N E. by E. from **Coney Island.** The buoy is marked No. 5, and is placed in three fathoms on the eastern side of the rock.

HASTE ROCK.

When up with *Coney Island Rock* the course leads into the main channel, and **Great Haste** and **Little Haste Beacon** will be seen to the westward, while a *black spar-buoy* will be seen a quarter of a mile ahead. This is on *Haste Rock*, which forms the eastern end of *Haste Shoals*, and has eight feet at mean low water. It is a third of a mile NORTH from **Coney Island** and an eighth of a mile S E. by E. ¼ E. from **Great Haste.** A *black spar-buoy* (No. 7) is placed in three fathoms on its eastern side.

Passing *Haste Rock*, *Cat Island Channel* joins the *Main Ship-Channel*, and

GREAT HASTE

is first passed, a bare rocky islet, surrounded by shoals, a mile and a quarter N E. by E. from **Naugus Head** and the same distance E. by N. from **Fort Pickering Light.** It should receive a berth of a quarter of a mile to the westward and southward.

LITTLE HASTE.

One hundred yards to the northward of **Great Haste** will be seen a large spar with a cask on top. This is the beacon on *Little Haste*, bare at two-thirds ebb. The **beacon** is on the middle of the dry part, and is painted *black.* It must receive a good berth to the westward.

Still farther to the northward will be seen a *black spar-buoy.* This is on

HASTE SHOAL,

and marks the turning-point in the channel where it turns to the southwestward, leading into *Inner Harbor.* *Haste Shoal* lies N N W. and S S E., and extends from **Little Haste Beacon** an eighth of a mile. The buoy is marked No. 9, and is placed in three fathoms on the northwest end of the shoal. Vessels of light draught may pass between this buoy and **Little Haste Beacon.**

After rounding the buoy on *Haste Shoal* the course leads to the southwest for **Fort Pickering Light**, and between **a granite monument** to the westward and *a black spar-buoy* to the eastward. The buoy is on the western point of

THE MIDDLE GROUND,

a long flat, extending S W. from **Great Haste** three-quarters of a mile. It is, in several

places, awash at low water. The buoy is marked No. 11, is placed in fourteen feet, and may be approached quite closely.

ABBOTT ROCK.

The **granite monument** on the western side of the channel is on *Abbott Rock*. This ledge lies **W. ½ N.** from *Middle Ground Buoy* and three hundred yards from the north end of **Winter Island**, and is dry at low water. The beacon is built on the summit of the rock, and is **a square granite monument surmounted by a wooden staff with an open-work cage on top. Staff and cage are painted red.** (See page 760.)

GREAT AQUA VITÆ ROCK.

After passing **Abbott Monument another granite beacon** will be seen on the east side of the channel, and a *red spar-buoy* a little to the westward of it. The beacon is on *Great Aqua Vitæ Rock*, dry at half-tide, which lies on the southwestern edge of the *Middle Ground*. **The monument is a pyramidal granite structure surmounted by a wooden staff and cage, painted black.** This monument marks the point of junction of the *South* and *Main Ship-Channels*, and is left to the northward by vessels using the former and to the eastward by those using the latter.

Great Aqua Vitæ Monument bears E. by S. ½ S. from **Fort Pickering Light**, a little more than a third of a mile distant, and W S W. from **Great Haste**, seven-eighths of a mile.

The *red spar-buoy* near it is on *Knapp Rock*, in the *South Channel*, (see page 760,) and must be left to the eastward by vessels using this channel. Vessels using *South Channel* leave it to the northward.

HALF-TIDE ROCKS.

When nearly up with **Fort Pickering Light** there will be seen a *red spar-buoy* on the starboard bow. This is on *Half-Tide Rock*, which lies one-hundred and fifty yards SOUTH from the south end of **Winter Island**; is awash at low water and bare at extreme low tides. The buoy is marked No. 12, and placed in fourteen feet off the southern end of the ledge.

In the upper part of *Inner Harbor* the flats make off a long distance from shore, but the approach is gradual, and the lead will be the best guide in seeking an anchorage. (See page 761.)

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SALEM HARBOR
BY CAT ISLAND CHANNEL.

I. *Coming from the eastward.*—Bring **Baker Island Lights** to bear **N W. ½ N.**, two miles and a half distant, and **Half-Way Rock** to bear **WEST**, a mile and a half distant, when there will be twenty fathoms water; now steer for the **Rock**, and when up with it leave it on either hand, having about seven fathoms water, and steer **N W. ½ W.**, with nothing less than five and a half fathoms water, until between the *red buoy* on *Mid-Channel Rock* and the *black and red buoy* on *Chappel Ledge*. In day-time the south end of **Eagle Island** will be in range with **Baker Island Lights** on a bearing of **E. by N. ½ N.** At night, **Hospital Point Light** will bear **N W. by N.**; **Fort Pickering Light W N W.**; and **Marblehead Light S W. ½ S.** The depth will be eight fathoms. Now steer **N. by W. ½ W.**, carrying not less than six and a half fathoms water, until **Fort Pickering Light** bears **W. ½ S.** and the **East Light on Baker Island E. ½ S.** The depth will be six fathoms. Then steer **N W. NORTHERLY** for **Hospital Point Light**, carrying not less than four and a half fathoms, until **Fort Pickering Light and the Light on Derby Wharf are in range on a bearing of S W. by W. ½ W.**, with five fathoms water, soft bottom. Steer that course until **Hospital**

Point Light bears N. ¾ E., with four and a half fathoms water; then steer S W. ¾ W. into the harbor, and anchor at pleasure. Or, when between *Mid-Channel Rock* and *Chappel Ledge*, (as above,) steer N. by W. ¾ W. until **Fort Pickering Light** and the **Light on Derby Wharf** are in range; then steer for them, and proceed as above directed.

The above courses pass nearly half a mile to the southward of *Outer Breakers;* a quarter of a mile to the westward of *Gooseberry Ledge;* three hundred yards to the eastward of **Satan Rock**; an eighth of a mile (two hundred and fifty yards) to the eastward of *Martin Rock;* a quarter of a mile to the westward of the *Brimbles;* three hundred yards to the westward of *Mid-Channel Rock;* four hundred yards to the eastward of *Chappel Ledge;* six hundred yards to the westward of *Eagle Island Bar;* four hundred yards to the eastward of *Coney Ledge*, *Coney Island Rock*, and *Haste Rock;* and about a hundred and fifty yards to the northward of *Haste Shoal.*

WESTERN OR MARBLEHEAD CHANNEL.

The entrance to this channel lies between **Lowell** or **Cat Island** on the east and **Marblehead Neck** on the west. It is often used by vessels coming from the southward along shore, and sometimes by those falling in with the entrance to the southward of **Baker Island.** A good day channel exists along the north shore of **Marblehead Peninsula** among the numerous ledges lying off that shore, but it is narrow and not fit for strangers. It is sometimes called the *South Channel.*

The *Western Channel* runs nearly NORTH and SOUTH, leaving **Cat Island** to the eastward and **Marblehead Neck** to the westward; passes to the westward of **Eagle Island** and to the eastward of **Coney Island**, and joins the *Cat Island Channel* abreast of *Haste Rock.* It is much obstructed by ledges and shoals, which at night render this channel more unsafe than either of the others. But in the day-time, as the ledges in mid-channel can be seen and may be passed on either hand, it is a safe and good channel by which to enter.

DESCRIPTION OF SHORES
OF WESTERN OR MARBLEHEAD CHANNEL INTO SALEM HARBOR.

Lowell or **Cat Island** has already been described on page 763. It is easily recognized by the hotel near its southern end. On the western side of the entrance is

MARBLEHEAD NECK,

which separates *Marblehead Harbor* from the *Bay.* This peninsula is composed of bare hills and hillocks and is nearly an island, its only connection with the main land being by the narrow strip of beach, only fifty yards wide (at high water) and six hundred long, called **Marblehead Beach.** This beach commences about half a mile below the town of **Marblehead** and runs to the southwest corner of the **Neck**, thus forming the south side of *Marblehead Harbor.*

The **Neck** is half a mile wide at its southern end and gradually contracts toward its northern extremity, where it is not over an eighth of a mile in width. Here, on the extreme point, is built

MARBLEHEAD LIGHT-HOUSE;

a white tower, twenty-three feet high, showing a fixed white light of the sixth order of Fresnel from a height of forty-three feet above the sea. This light is visible eleven miles, and is in

Latitude - - - - - - - - -	42° 30′ 18″ N.
Longitude - - - - - - - -	70° 50′ 02″ W.

MARBLEHEAD ROCK.

A couple of rocky islets lie S E. by E. from the **Light-House** and a quarter of a mile from shore. At low water they are joined and go by the common name of **Marblehead Rock.** **A beacon** crowns the summit of the larger islet. It is **built of granite, is round and tapering at top, and is surmounted by a spar five feet long, painted black. The body of the beacon is painted black and white in horizontal stripes.** There is a good unobstructed passage between this rock and the **Neck** through which five fathoms may be taken.

The southern extremity of **Marblehead Neck** is called **Flying Point;** is low, and covered with short grass. Six hundred yards southeast from it lies

TINKER ISLAND.

This is, in reality, **two islands,** connected by a very narrow strip of sand, bare at low water. They lie **NORTH** and **SOUTH** from each other, are bare and rocky, and their eastern and southern shores are bold-to. There is no passage between **Tinker Island** and **Flying Point.**

MARBLEHEAD PENINSULA

is that large projection of the main land which separates *Salem Inner Harbor* from *Marblehead Harbor.* It extends N E. and S W., and the town of **Marblehead** occupies its southeastern shores. The surface is undulating, and all available land is cultivated. **Naugus Head** forms its northwestern point, and also the southeastern point of the entrance to *Salem Inner Harbor.* From **Naugus Head** the north shores of the peninsula run about E S E. for one mile to **Peach Point.** This is quite a prominent headland, although of only moderate height. It is bare of trees, and somewhat undulating. The course of the land from **Peach Point** is S. ½ W. for half a mile to **Fort Sewall,** built upon a rocky bluff which forms the western point of the entrance to *Marblehead Harbor.* The fort is a regular work, and guards the western channel into **Salem** as well as *Marblehead Entrance.*

The eastern shore of **Marblehead Peninsula,** between **Peach Point** and **Fort Sewall,** is much cut up by coves. On the south side of the point is *Dolliber Cove,* shallow, and of no importance. **Orne Island,** bare, rocky, forty feet high, and lying **NORTH** and **SOUTH,** separates *Dolliber Cove* from *Little Harbor,* another small cove to the southward of it. A little over one hundred yards **SOUTH** from **Orne Island** is a low, grassy islet, called **Gerry Island.** One hundred yards **SOUTH** from this is **Fort Sewall.**

After passing between **Cat Island** and **Marblehead Neck,** the channel, continuing to the northward, leaves **Eagle Island** well to the eastward, and a small bare rock, called **Gray Rock,** to the westward, and passes along the eastern side of **Coney Island** and the shoals surrounding it, after which it joins the *Main Ship-Channel.* (For description of the shores of that channel see pages 752 to 755.)

APPEARANCE OF SHORES OF SALEM HARBOR, AS SEEN BY A VESSEL COMING IN WESTERN CHANNEL.

When off the entrance to *Western Channel,* **Baker Island** will appear as a round grassy islet, with two **Light-towers** nearly in the centre. These should be brought to bear about **N.** by **E.** ½ **E.** or **N N E.,** when a solitary **white Light-tower** will appear on the end of a low gently-sloping point, bearing **N N W.,** and about three miles distant. This is **Marblehead Light** on **Marblehead Point.** The shores to the southwestward, which

appear as grassy hills and hillocks of moderate height, with an occasional house or two appearing above the summit, is **Marblehead Neck.**

The low gently-sloping point projecting beyond the **Light-House** is **Peach Point.** Just clear to the eastward of it will be seen the **beacon** on **Marblehead Rock.**

About N. ½ W. is the low bare island, with a large hotel upon it, called **Lowell Island. Great Misery** will show in the distance, between **Lowell Island** and **Baker Island.**

Well to the eastward of **Baker Island**, and bearing N E. by N., the bare rock with a white spot upon it is **Half-Way Rock.**

DANGERS

IN APPROACHING AND ENTERING SALEM HARBOR BY THE WESTERN OR MARBLEHEAD CHANNEL.

In approaching from the southward, along shore, the first danger met with will be found on the course in for **Marblehead Light**, and is on the west side of the channel. It is called

ROARING BULL,

and lies a little more than three hundred yards S W. by S. from **Tinker Island** and S. ¾ E. from **Flying Point**, half a mile distant. It is awash at low water, and is marked by a *red spar-buoy* (No. 2) placed in four fathoms on its southeastern side. This buoy is painted *red* as a guide to **Swampscott** for vessels coming from the eastward. It is not in the way of vessels bound into **Salem** or **Marblehead** unless beating in and standing to the westward. To avoid it they should not go to the westward of **Marblehead Light** bearing NORTH.

TOM MOORE ROCKS.

This, the next danger met with, is also on the west side of the channel. It is a group of rocks, bare at one-third ebb, which lies off the east shore of **Marblehead Neck** a little over half a mile to the northward of **Tinker Island**, and nearly three-quarters of a mile SOUTH from **Marblehead Light.** The rocks are one-fifth of a mile (nearly four hundred yards) from the shore, and are marked by a *black spar-buoy* (No. 1) placed in three and a half fathoms on the eastern end of the ledge. This buoy is left well to the westward going in.

After passing *Tom Moore Rocks* there are no dangers until past **Marblehead Rock**, after which, in stretching to the westward on a wind, beware of

LASQUE LEDGE,

sometimes, but incorrectly, called *Half-Tide Rocks.* This ledge is the rocky shoal which makes off in an E. ½ N. direction from **Marblehead Point** three hundred and fifty yards. Its eastern end bears N W. by N. ½ N. from **Marblehead Rock Beacon**, four hundred yards distant, and has a *black spar-buoy* (No. 3) in three and a half fathoms upon it. This ledge can be crossed in sixteen feet close to the buoy, but no stranger should attempt it. The western half of *Lasque Ledge* is dry at low water, and is called *Half-Tide Rocks.* It extends from **Marblehead Point** to the eastward one hundred and sixty yards. The buoy is over a hundred and fifty yards to the eastward of *Half-Tide Rocks.*

ARCHER ROCK

lies in the middle of the channel, five hundred yards to the westward of **Cat Island**, and has ten feet at low water upon it. There is four fathoms water all around it, and it is marked by a *spar-buoy painted red and black in horizontal stripes*, placed in three fathoms and a half on the southwestern side of the rock. It is usually left to the eastward.

When past *Archer Rock*, a *black spar-buoy* will be seen on the port bow about half a mile off. This is on

SELMAN BERTH,

a sunken ledge, with six feet at mean low water, which lies five-eighths of a mile N. ½ E. from **Marblehead Light** and the same distance N W. from *Archer Rock Buoy*. It obstructs the entrance to the *South Channel*, but is not in the way of vessels using the *Western Channel* unless standing to the westward on a wind. Then, to avoid it, go about as soon as **Marblehead Light** bears S. by W. ½ W. A *black spar-buoy* (No. 3) is placed in three and a half fathoms on the eastern point of this ledge as a guide to the *South Channel*.

GRAY ROCK.

When abreast of *Archer Rock* a bare rocky islet will be seen nearly ahead and about half a mile off, and a *spar-buoy with horizontal stripes* will appear a little to the esatward. The islet is **Gray Rock**, and the buoy is on *Chappel Ledge*. The channel passes directly between them.

Gray Rock bears E. ½ N. from **Peach Point**, one-third of a mile, and from **Marblehead Light** N. by E. ¾ E., nearly one mile. It should receive a berth of a hundred and fifty yards. There is from four to six fathoms of water on both sides of it.

CHAPPEL LEDGE

is four hundred yards E. by S. from **Gray Rock**, and may be said to lie in the middle of this channel, as it may be passed on either hand. It is usual, however, to pass to the westward of it. If the wind be scant, however, while on the port tack bound in, edge to the eastward and go to the eastward of the ledge, entering *Cat Island Channel*. Fifteen feet at mean low water is found on this shoal. It bears N W. ¾ N. from **Lowell House cupola**, eleven hundred yards distant. A *spar-buoy with black and red horizontal stripes* is placed on the eastern side of the rock in four fathoms water.

When past *Chappel Ledge*, the *red buoy* on *Mid-Channel Rock* will appear still farther to the eastward, nearly abreast, and half a mile off. *A red buoy will be seen to the westward*, one-third of a mile off, and *a black spar-buoy* will be seen nearly ahead, half a mile distant. The *red buoy* to the westward is on *Williams Rock*, in the *South Channel*, and the *black spar* nearly ahead is on the eastern point of

CONEY LEDGE,

an obstruction common to the *Cat Island* and *Western Channels*. It is a mass of rocks, many of them out at low water and others with from one to ten feet upon them. They lie off **Coney Island**, between the bearings of S E. ½ S. and S W. by S. ¾ S.

From the bare rocks **Fort Pickering Light** and **Great** and **Little Aqua Vitæ Beacons** are in range. The other shoals lie between the bearings of S E. by S. and S W. by S. from the island, and extend a third of a mile off.

The *black spar-buoy* (No. 3) is on the northeast point of the dry ledge, in three and a half fathoms. When up with it, *the red spar-buoy on Eagle Island Bar* will be seen on the east side of the channel, nearly half a mile off, and *another black spar-buoy* will appear to the westward, a quarter of a mile off. This is on

CONEY ISLAND ROCK,

a sunken ledge, with from three to five fathoms water all around it and thirteen feet at mean low water. It lies on the western side of the channel, a quarter of a mile N W. by N. from *Coney Ledge* and the same distance N E. by E. from **Coney Island**.

The *black buoy* is marked No. 5, and is placed in three fathoms on the eastern side of the rock.

Passing this buoy, *another black buoy* will be seen to the eastward and a quarter of a mile ahead. This is on

HASTE ROCK,

the easternmost point of the extensive shoals surrounding the **Great Haste.** It has eight feet at mean low water, and bears **NORTH** from **Coney Island,** a third of a mile distant, and is an eighth of a mile S E. by E. ½ E. from the **Great Haste.** The *black spar-buoy* is marked No. 7, and is placed in three fathoms on its eastern side. When up with this buoy and in the *Main Ship-Channel,* pass, first,

GREAT HASTE,

a bare rocky islet, surrounded by shoals, a mile and a quarter N E. by E. from **Naugus Head** and the same distance E. by N. from **Fort Pickering Light.** It should receive a berth of a quarter of a mile to the westward and southward.

LITTLE HASTE

is a ledge bare at two-thirds ebb, lying one hundred yards N W. ¾ N. from the **Great Haste.** It is easily recognized by its **beacon, a large spar with a cask on top, painted black,** placed on the middle of the rock. This beacon must receive a good berth to the westward and southward from all except vessels of very light draught.

Still farther to the northwestward of **Great Haste** extends

HASTE SHOAL.

It lies in a N N W. and S S E. direction, and extends from **Little Haste Beacon** an eighth of a mile. It is the turning-point in the main channel, and marks the boundary between *Outer* and *Inner Harbors.* A *black spar-buoy* (No. 9) is placed in sixteen feet of water on the northern end of this shoal. Vessels of light draught may, however pass between this buoy and the beacon.

Being now in *Inner Harbor,* the channel leads between **Salem Neck** on the west, and the ledges and flats which make off from **Naugus Head** in a northeasterly direction. A *black spar-buoy* will be seen on the east side and a **granite monument** on the west side of the channel. The *black buoy* is on the

MIDDLE GROUND,

a long flat running to the southwestward from **Great Haste** three-quarters of a mile. It is awash at low water in several places, and there are many spots upon it with four and five feet at lowest tides. The *black buoy* (No. 11) is placed in fourteen feet on the western edge of the flat. It bears S W. by W. ¾ W. from *Haste Shoal Buoy,* and is five-eighths of a mile from it. It may be left to the eastward and approached quite closely; but the sailing-lines give it a good berth.

ABBOTT ROCK.

The **granite beacon** on the west side of the channel, off the northeast point of **Winter Island,** is on *Abbott Rock,* and is called **Abbott Monument.** This ledge is dry at low water, bears **W. ¾ N.** from *Middle Ground Buoy,* and is three hundred yards from the north end of **Winter Island.** The **monument** is on the highest part of the rock, is of **granite, square, and surmounted by a wooden staff with an open-work cage on top; staff and cage are painted red.** Vessels approaching at night will find it almost impossible to see this **monument, as it is low and is projected against the land. But the erection of the Lights on Fort Point and Derby Wharf** enables one to avoid this danger. **So long as Derby Wharf Light is kept open to the eastward of Fort Pickering Light this ledge cannot be struck, and the range of the two lights will carry safely past the *Haste* and up to the *Middle Ground Buoy.***

GREAT AQUA VITÆ.

After passing **Abbott Monument, another granite beacon** will be seen on the east side of the channel, and a *red spar-buoy* a little to the westward of it. This beacon is on *Great Aqua Vitæ Ledge,* a mass of rocks, dry at half-tide, lying on the south-western end of the *Middle Ground.* **The Monument is a pyramidal granite structure, surmounted by a wooden staff and cage, the latter being painted black.** This monument marks the point of junction between the *South* and *Main Ship-Channels;* is to be left to the eastward by vessels using the latter, and to the northward by those using the *South Channel.*

Great Aqua Vitæ Monument bears from—		Mile distant.
Fort Pickering Light-House, E. by S. ½ S.	a little more than	⅓
Naugus Head, N E. ½ E.		⅓
Great Haste, S W. by W. ½ W.		⅞

The *red spar-buoy* seen to the southward and westward of this monument is on

KNAPP ROCK,

which has eight feet at low water. It is in the *South Channel,* but obstructs both channels, and lies nearly WEST from **Great Aqua Vitæ Beacon**, nearly two hundred yards off, and is exactly abreast of **Fort Pickering Light.** A *red spar-buoy* (No. 10) is placed in good water on the south side of the rock.

HALF-TIDE ROCK.

When abreast of **Fort Pickering Light**, a *red spar-buoy* will be seen on the starboard bow. This is on *Half-Tide Rock,* which lies off the southern end of **Winter Island,** one hundred and fifty yards from it. It is awash at low water and bare at extreme low tide. The buoy is *painted red,* marked No. 12, and placed in fourteen feet off the southern end of the ledge.

In the upper part of *Inner Harbor* the flats make off from the shore a long distance, but the approach is gradual and the lead will be the best guide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SALEM HARBOR BY THE WESTERN OR MARBLEHEAD CHANNEL.

I. *Coming along shore from Broad Sound.*—The course along shore from about a mile off **Nahant Head** is N E. ½ E. until **Marblehead Light** bears N N W. Then steer for it until **Baker Island Lights** bear N E. ½ N., with seven fathoms, hard bottom. Then steer **NORTH.** *This course made good leads,* with not less than four and a half fathoms, clear of all dangers in this passage, but runs pretty close to many of them. They are *all buoyed,* however, and in day-time, with a fair wind, no difficulty will be found. Continue this course until **Fort Pickering Light** bears W. ½ S., with six fathoms water, when the *black buoy* on **Haste Rock** will be abeam. Then steer N W. **NORTHERLY** until the **Lights** on **Fort Pickering** and **Derby Wharf** are in range on a bearing of S W. by W. ½ W. On this course there will be nothing less than four fathoms. Then steer for the **Lights,** keeping the range and carrying not less than four and a half fathoms, until **Hospital Point Light** bears N. ½ E. Then steer S W. ½ W. into *Inner Harbor.*

Or, on the **NORTH** course, when **Fort Pickering Light** bears W. ½ S. steer N. by W. ½ W. (instead of N W. **NORTHERLY**) until the **Lights** on **Derby Wharf** and **Fort Pickering** are in range. On this course there will be five fathoms. Then steer for the **Lights** as before, and proceed to the anchorage. This answers better than the former course in case the flood sets strongly on to the **Haste.**

The above courses pass three-eighths of a mile to the eastward of *Tom Moore Rock;* an eighth of a mile to the eastward of **Marblehead Rock**; a quarter of a mile to the eastward of *Lasque Ledge;* a hundred and fifty yards to the westward of *Archer Rock;* an eighth of a mile to the eastward of **Gray Rock**; a hundred and fifty yards to the westward of *Chappel Ledge;* an eighth of a mile to the eastward of *Coney Island Ledge;* nearly half a mile to the westward of *Eagle Bar Buoy;* an eighth of a mile to the eastward of *Coney Island Rock;* one-sixth of a mile (three hundred yards) to the eastward of *Haste Rock Buoy;* a quarter of a mile to the eastward of **Great** and *Little Haste;* a quarter of a mile to the eastward, and then nearly two hundred yards to the northward and westward, of *Haste Shoal Buoy;* one hundred and fifty yards to the westward of *Middle Ground Buoy;* an eighth of a mile to the eastward of **Abbott Monument**; three hundred and fifty yards to the westward of **Great Aqua Vitæ Beacon**; an eighth of a mile to the westward of *Knapp Rock;* and the same distance to the eastward of *Half-Tide Rock.*

II. *Coming from the southward, off-shore.*—Bring **Baker Island Lights** to bear NORTH, six miles off, and **Marblehead Light** N W. by N. ¾ N., five miles and a half off, when there will be twenty-two fathoms, *dark gray sand and gravel*, and steer for **Marblehead Light** until **Baker Island Lights** bear N E. ¼ N., with seven fathoms water. Then steer NORTH, and proceed as before directed.

III. *Coming from the eastward, or from sea.*—Bring **Baker Island Lights** to bear N W. by N. ¾ N. and **Marblehead Light** to bear N W. by W., in about twenty-six fathoms, *green mud and gravel.* Now steer for **Marblehead Light** until **Baker Island Lights** bear N E. ¼ N. and **Lowell Hotel** on **Cat Island** N. by E. On this course not less than eight fathoms water can be carried. When on this bearing **Marblehead Rock** will be half a mile distant, in about nine fathoms; now steer N W. ¼ N., with not less than eight fathoms water, until **Marblehead Light** bears W. by N. ¼ N. and **Baker Island Lights** N E. ¾ E., and in five fathoms. Then steer NORTH, and proceed as above directed.

Strangers are not advised to use this channel at night past **Marblehead Point.** It is best in such a case to continue the course N W. ¼ N. until **Marblehead Light** bears S. by W. ¾ W., in six fathoms water; when S W. ¼ W. will lead safely into *Marblehead Harbor*, where anchor until daylight; or N E. ¼ E. will lead, with not less than four fathoms, into *Cat Island Channel.* In this latter case, continue the course until **Hospital Point Light** bears N W. by N., in seven fathoms water, when steer N. by W. ¾ W., and proceed as directed for *Cat Island Channel.*

SOUTH CHANNEL.

This channel leaves the *Western Channel* abreast of *Marblehead Entrance* and leads along the north shores of **Marblehead Peninsula** into *Inner Harbor.* It is narrow, crooked, and entirely unfit for strangers, but is much used by coasters and fishermen familiar with its many obstructions, as it avoids the long detour which they would otherwise have to make in rounding the **Haste.** *The channel is well buoyed*, and has usually smooth water.

DANGERS
IN THE SOUTH CHANNEL, INTO SALEM HARBOR.

The first danger met with in this channel, after passing *Archer Rock Buoy*, will be found on the western side of the channel. It is called

SELLMAN BERTH,

and is marked by a *black spar-buoy* (No. 3) placed in three and a half fathoms off the eastern point of the ledge. It has six feet at mean low water and five at low spring

tides. *Sellman Berth* is a long ledge lying off the mouth of *Dolliber Cove.* It extends nearly EAST and WEST, and its eastern point is a quarter of a mile from **Peach Point** and five-eighths of a mile N W. from *Archer Rock Buoy.* From **Marblehead Light** the shoal of the ledge bears N. ½ E., five-eighths of a mile (eleven hundred yards) distant.

GRAY ROCK

lies on the eastern side of the channel, nearly abreast of *Sellman Berth.* It is a bare rocky islet, one-quarter of a mile N E. from the buoy off *Sellman Berth;* one-third of a mile E. ¼ N. from **Peach Point**; and one mile N. by E. ½ E. from **Marblehead Rock**, and should receive a berth of at least one hundred and fifty yards.

Passing between **Gray Rock** and *Sellman Berth three buoys* will be seen ahead. The *easternmost buoy is red and the other two are black, and all are spars.* The *red buoy* is on

WILLIAMS ROCK,

which lies on the eastern side of the channel. It is a sunken rock, with twelve feet at mean low water, which lies three hundred and fifty yards N W. from **Gray Rock**; three-eighths of a mile SOUTH from **Coney Island**; and five hundred yards E N E. from **Peach Point**. *A red spar-buoy* (No. 2) is placed in three fathoms on the western point of the ledge. A rock with fourteen feet will be found about two hundred yards W N W. from this buoy.

The *easternmost of the two black buoys* is on the

KETTLEBOTTOM,

which lies exactly in the middle of the channel, and is bare at extreme low tides. It is a small rock, and should be marked by a *red and black striped buoy.* It is four hundred yards W. by N. from **Gray Rock** and about one hundred and fifty yards from the *red buoy* on *Williams Rock*, and a *black spar-buoy* (No. 5) is placed in five fathoms on its northeast point. It is usually left to the westward, but may be left to the eastward by giving it a berth of a little over a hundred yards.

The western black buoy is on

OUTER POINT ROCK,

which is part of a ledge making off from **Peach Point** in an E N E. direction about an eighth of a mile, with three feet at mean low water. On its northeastern point is placed a *black-spar buoy* (No. 7) in fourteen feet at low water. Vessels passing through between this ledge and the *Kettlebottom* have a channel nearly one hundred and fifty yards wide, with not less than three fathoms at low water. The usual course is, however, between the *Kettlebottom* and *Williams Rock.*

After passing the *Kettlebottom* the channel runs nearly N W., and a *red and black spar-buoy* will be seen marking the eastern and western boundaries. The *red buoy* is on

THE TRIANGLES,

a sunken rock on the northeast side of the channel, with four feet at low water. From *Williams Rock Buoy* it bears N W. ¼ W., three-eighths of a mile distant; from **Peach Point** N. ¼ E., one third of a mile; and from **Coney Island** S W. ¼ W., six hundred yards. There is from eighteen to twenty feet of water to the northward of this rock, but strangers must never attempt this passage.

A red spar-buoy (No. 4) is placed in seventeen feet on the southwest side of the ledge, and may be passed close-to.

Abreast of this buoy, on the southwest side of the channel, is the *black buoy* on

OUTER ENDEAVORS,

or *Endeavor Rock* as it is sometimes called. It is the northern point of a ledge

running nearly NORTH from **Peach Point**, which has several outcropping rocks with from two to nine feet water upon them. *Outer Endeavors* has four feet upon it at lowest tides, and is a quarter of a mile N. by W. from the eastern extremity of **Peach Point**. From the *Triangles* it bears S W. by S., about two hundred yards distant. A *black spar-buoy* (No. 9) is placed in seventeen feet on the northeast side of the rock. This channel leads directly between this and the *buoy on the Triangles.*

Not quite a hundred yards in-shore of *Outer Endeavors*, and on the same ledge, is another sunken ledge with eight feet at lowest tides; and an eighth of a mile in-shore of the *buoy* on *Outer Endeavors* is a rock, called *Inner Endeavors*, which is bare at lowest tides and awash at mean low water. One *buoy* serves for all.

WELLMANN LEDGE.

After passing between the *Triangles* and *Outer Endeavors* the channel turns more to the westward, and *a black spar-buoy* (No. 11) on the south side of the channel is met with. This buoy is on the north point of *Wellmann Ledge*, in sixteen feet of water, and must be left to the southward.

Wellmann Ledge lies N E. from **Fluent Point**, three hundred yards distant, and has ten feet at lowest tides. It is a detached rock, and has good water on all sides. The *black spar-buoy* on its northern side bears W. by N. from *Outer Endeavors Buoy*, a third of a mile distant.

Passing this buoy *a red spar-buoy* will be seen ahead, on the northern side of the channel. This is on

STONE ROCK,

which has eight and a half feet at mean low water, and lies W N W. from the *black buoy* on *Wellmann Ledge*, an eighth of a mile distant. From **Fluent Point** it bears N. by E., three hundred and fifty yards distant. The *red spar-buoy* which marks it is No. 6, and is placed in sixteen feet at low water on the southwest side of the rock.

North from *Stone Rock Buoy*, about two hundred yards distant, will be seen **a red spar with two prongs on top.** This is the **beacon** on

LITTLE AQUA VITÆ ROCK,

which is bare at half-tide, and lies E. by S. ½ S. from **Great Aqua Vitæ Monument**, distant three hundred yards. The **beacon** indicates a passage between it and *Stone Rock Buoy.* Such a passage does exist, but should not be attempted by any but those thoroughly familiar with every inch of the way. It is entirely unsafe for ordinary use.

CASWELL ROCK.

When abreast of *Stone Rock*, another *red buoy* will be seen on the north side of the channel and three hundred yards off. This is on a sunken rock, with eight feet at lowest tides, called *Caswell Rock.* It is nearly three hundred yards S W. by W. ½ W. from **Little Aqua Vitæ Beacon.** The buoy is marked No. 8, and is placed in eleven feet on the southwestern side of the ledge. When up with it the *red spar-buoy* on

KNAPP ROCK

will be seen. *Knapp Rock* forms the southwestern extremity of the *Middle Ground Shoals*, and has eight feet at mean low water. It is exactly at the junction of *South Channel* with *Inner Harbor.* From **Great Aqua Vitæ Beacon** it bears WEST, nearly two hundred yards off. The *spar-buoy is red*, marked No. 10, and is placed in good water on the south side of the rock. When past it *Inner Harbor* is fairly entered.

HALF-TIDE ROCK.

When fairly inside the harbor and preparing to anchor, beware of *Half-Tide Rock,*

which lies off the southern end of **Winter Island**, one hundred and fifty yards from it. It is bare at extreme low water, and is marked by a *red spar-buoy* (No. 12) placed in fourteen feet off its southern end.

SAILING DIRECTIONS

FOR ENTERING SALEM HARBOR BY THE SOUTH CHANNEL.

This channel will only do in the day-time. Steer **N N W.** for **Marblehead Light** until **Baker Island Lights** bear **N E. ½ N.**, and in seven fathoms water. Then steer **NORTH** until abreast of the *spar-buoy with horizontal stripes* on *Archer Rock*, and in seven fathoms. Then steer **N W.** by **N. ½ N.**, which course will lead, with not less than five fathoms, directly between *Williams Rock* and the *Kettlebottom*. (On this course, remember that the flood sets directly up the channel, but that the ebb sets almost directly across it, and therefore be careful in going in or out on the ebb not to be set on to **Gray** or *Williams Rock*.) When exactly between the *red buoy* on *Williams Rock* and the *black buoy* on the *Kettlebottom* steer **N W. ½ W.**, which course made good will lead, with not less than fifteen feet, directly between the *red buoy* on the *Triangles* and the *black buoy* on *Outer Endeavors*. Care must here be taken on both flood and ebb tides, as both set diagonally across the channel except at half-flood, when the current runs with the course up. When *between the two buoys* steer **W.** by **N. ½ N.**, which will lead, with not less than three fathoms, safely through into *Inner Harbor*, leaving *Wellmann Ledge Buoy* to the southward close-to; *Stone Rock Buoy* to the northward, about fifty yards off; *Caswell Rock Buoy* to the northward, about eighty yards; and *Knapp Rock Buoy* to the northward, about a hundred yards. When abreast of this last buoy, gradually edge away to the southward and westward, keeping about an eighth of a mile from **Naugus Head**, and anchor, after passing the head, at discretion.

This channel should never be used except by those familiar with the set of the tidal-currents. Fifteen feet at mean low water can be carried safely through it.

MARBLEHEAD HARBOR.

This harbor, formerly of considerable importance, is formed by a long and deep cove making to the southwestward between **Marblehead Neck** and the **Peninsula**; is over a mile long and one-third of a mile wide. At its southern end it is separated from the sea by a narrow strip of beach, called **Marblehead Beach,** which joins **Marblehead Neck** to the main land.

The entrance to this harbor is between **Fort Point** on the northwest and **Marblehead Point** on the southeast.

FORT POINT

is a round bluff point, not high, upon which is built an earth-work of regular shape, called **Fort Sewall.** It is the first point to the southward of **Gerry Island**, (see page 770,) and is half a mile below **Peach Point**.

MARBLEHEAD POINT AND LIGHT-HOUSE.

Marblehead Point is the northeastern end of **Marblehead Neck**, and upon it is built the **Light-House**. The point is about twenty feet high and bare of trees. Shoals extend off **NORTH** and **EAST** from it.

The **Light-House** is a white tower, and shows a fixed white light of the sixth order from a height of forty-three feet above sea-level. This light is visible eleven miles, and is in

Latitude - - - - - - - - -	42° 30′ 18″ N.
Longitude - - - - - - - -	70° 50′ 02″ W.

Between **Fort Point** and **Marblehead Point** the width of the entrance to *Marblehead Harbor* is three-eighths of a mile, or seven hundred yards.

The town of **Marblehead** occupies the western shore of the harbor. It was formerly a town of considerable maritime importance, but now fits out fishing-vessels mainly. It is connected with **Salem** by a railroad.

DANGERS
IN APPROACHING AND ENTERING MARBLEHEAD HARBOR.

I. *By the main channel, coming from the southward and eastward.*—This entrance is by the *Western* or *Marblehead Channel* into **Salem**. The first danger met with coming from seaward is

HALF-WAY ROCK,

(see page 764,) which is a small but very bold rocky islet, lying one mile and three-quarters E S E. from **Cat Island** and a little over two miles S. ¼ E. from **Baker Island Lights.** On its summit there was formerly a beacon, but all of this has now gone except the foundation, which shows as a white boulder on top of the rock.

This rock is the most prominent of the landmarks indicating the entrance to **Marblehead**, and is almost invariably steered for by vessels approaching from the eastward. When up with it they either run up *Cat Island Channel* until they have passed **Cat Island** and open *Marblehead Harbor*, or steer off to the westward toward **Marblehead Light** and enter by the *Western Channel.* Sailing directions for both channels will be given.

Coming from the southward, along shore, vessels must not stand to the northward too far when near **Tinker Island**, to avoid

ROARING BULL,

which lies about three hundred yards S W. by S. from that island, is awash at low water and bare at low spring tides. There is from five to nine fathoms water on all sides of it. A *red spar-buoy* (No. 2) is placed in four fathoms on its southeastern side. This buoy is painted *red* as a guide to **Swampscott**, and vessels do not approach it when bound into **Marblehead** unless standing in-shore on a wind.

TOM MOORE ROCK

lies off the eastern side of **Marblehead Neck**, and is bare at one-third ebb. It is really a group of rocks lying half a mile to the northward of **Tinker Island** and nearly three-quarters of a mile SOUTH from **Marblehead Light.** They are one-fifth of a mile (nearly four hundred yards) from the shore of **Marblehead Neck**, and are marked by a *black spar-buoy* (No. 1) placed in three and a half fathoms on the western end of the ledge.

MARBLEHEAD ROCK

is really two rocky islets connected at low water, lying S E. by E. from the **Light-House**, a quarter of a mile from shore. They are bold on their northern and eastern sides, and there is a good channel with five fathoms water between them and the shore. The summit of the easternmost islet is crowned by a **beacon built of granite, round and tapering at the top, and surmounted by a spar five feet long, painted black. The body of the beacon is painted black and white in horizontal stripes.**

The next danger met with, also on the western side of the channel, is called

LASQUE LEDGE,

and sometimes *Half-Tide Rocks.* It is a long rocky shoal making off in an E. ¼ N. direction from **Marblehead Point** three hundred and fifty yards. Its eastern end bears

N W. by N. ½ N. from **Marblehead Rock Beacon**, four hundred yards distant, and has *a black spar-buoy* (No. 3) in three and a half fathoms upon it. The western half of *Lasque Ledge* is dry at low water, and is properly called *Half-Tide Rocks.* It extends from **Marblehead Point** to the eastward one hundred and sixty yards. The buoy is a hundred and fifty yards to the eastward of the end of these bare rocks.

ARCHER ROCK

lies in the middle of the *Western Channel* into *Salem Harbor*, and is five hundred yards to the westward of **Cat Island** and half a mile N E. by N. from **Marblehead Rock.** It has ten feet at low water and good water all around it. A *spar-buoy painted red and black in horizontal stripes* is placed in three and a half fathoms on the southwestern side of the rock.

Vessels bound into **Marblehead** leave this buoy well to the eastward unless the wind is scant.

GORDON ROCK

is part of the ledge making off in a N. by E. direction from **Marblehead Point**, has seven feet at low water, and is about eighty yards from the point. A *black spar-buoy* (No. 5) is placed in three fathoms off the north point of this ledge. Leave it to the southward and give it a berth.

After passing *Gordon Rock* and steering into the harbor, another *black spar-buoy* will be seen on the port bow. This is on

BODEN ROCK,

which lies off the eastern shore of the harbor, half a mile S W. by W. from **Marblehead Point** and a little over a hundred yards from **Boden Point.** A *black spar-buoy* (No. 7) is placed in three fathoms off the northwestern side of the ledge, which has eight feet at low water.

After passing *Boden Rock* there are no obstructions except the flats making out from the southwestern end of the harbor. The approach to these is gradual, and the lead will be the best guide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MARBLEHEAD HARBOR BY THE MAIN CHANNEL.

I. *Coming from the southward, along shore.*—The course along shore from about a mile off **Nahant Head** is N E. ¼ E. until **Marblehead Light** bears N N W. Then steer for it until **Baker Island Lights** bear N E. ¼ N., with seven fathoms, hard bottom. Then steer **NORTH** until **Marblehead Light** bears W. by N. ½ N. and **Baker Island Lights** N E. ¾ E. On this course there will be four and a half fathoms. Now steer N W. ½ N., carrying not less than six fathoms, until **Marblehead Light** bears S. by W. ¾ W., with six fathoms water. The course into the harbor is now S W. ½ W., and anchorage off the town may be had in from three to four fathoms, soft bottom.

These courses pass three-eighths of a mile to the eastward of *Tom Moore Rock;* an eighth of a mile to the eastward of *Marblehead Rock;* a third of a mile to the westward of *Archer Rock;* two hundred yards to the eastward of *Lasque Ledge;* an eighth of a mile to the westward of *Gordon Rock;* and a hundred yards to the westward of *Boden Rock.*

But vessels may, if necessary, (especially in day-time,) pass *Lasque Ledge* and bring **Marblehead Light** to bear S W. ¼ S., and steer **WEST**, with not less than five fathoms, until the light bears S. ½ E., when S W. ½ W., as before, will lead safely in.

II. *Coming from the southward, off-shore.*—Bring **Baker Island Lights** to bear NORTH, six miles off, and **Marblehead Light** N W. by N. ¾ N., five miles and a half off, when there will be twenty-two fathoms, *sand and gravel.* Now steer for **Marblehead Light** until **Baker Island Lights** bear N E. ¼ N., with seven fathoms water. Then steer NORTH until **Marblehead Light** bears W. by N. ½ N., in five fathoms, when steer N W. ½ N., and proceed as above directed.

III. *Coming from the eastward.*—Bring **Baker Island Lights** to bear N W. by N. ¾ N. and **Marblehead Light** N W. by W., in about twenty-six fathoms, *green mud and gravel.* Now steer for **Marblehead Light** until **Baker Island Lights** bear N E. ⅛ N. and **Lowell Hotel** on **Cat Island** N. by E. On this course not less than eight fathoms may be carried, and *Marblehead Rock* will be half a mile distant when at the bearing. Now steer N W. ¼ N., and proceed as before.

Or steer WEST for **Half-Way Rock**, passing it on either hand in about six fathoms, and then W. by N. ¼ N. for **Marblehead Light**, carrying not less than eight fathoms, until **Baker Island Lights** bear N E. ¾ E., with five fathoms. Now steer N W. ½ N., and proceed as above directed.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MARBLEHEAD HARBOR FROM THE EASTWARD, BY THE CAT ISLAND CHANNEL.

Steer WEST for **Half-Way Rock**, passing it on either hand in about six fathoms, and then N W. ¼ W., through *Cat Island Channel*, carrying not less than five fathoms, until up with the *red buoy* on *Mid-Channel Rock*, which should be about three hundred yards off. **Baker Island Lights** should now bear E. by N. ¾ N., and **Fort Pickering Light** W N W. in about seven fathoms. Now steer S W. ¼ W. into *Marblehead Harbor*, carrying not less than four fathoms water.

These courses pass a quarter of a mile to the westward of *Gooseberry Rock;* three hundred yards to the eastward of **Satan Rock**; an eighth of a mile to the eastward of *Martin Rock;* a quarter of a mile to the westward of the *Brimbles;* a hundred and fifty yards to the southward of *Chappel Ledge;* a quarter of a mile to the northward of *Archer Rock;* and five hundred yards to the southward of *Sellman Berth.*

DANGERS
IN THE CHANNEL LEADING INTO MARBLEHEAD HARBOR FROM THE MAIN SHIP-CHANNEL INTO SALEM, BY PASSING BETWEEN BAKER ISLAND AND EAGLE ISLAND.

This channel is frequently used by vessels coming from the northward bound to **Marblehead.** It is narrow and in some places dangerous to those unacquainted with the set of the tidal-current, but it is well buoyed, and may be used with comparative safety in the day-time. After passing *Powers Rock* the channel leads to the southward between *Hardy Rock Shoal* and **Baker Island.** The first danger met with then, is

HARDY ROCK SHOAL.

(See also page 757.) This shoal has two feet at lowest tides, and extends off from *Hardy Rocks* in a N E. direction nearly two hundred yards. A *black spar-buoy* (No. 3) is placed off its N E. end in three fathoms. It bears W. by N. ¼ N. from **Baker Island Lights,** half a mile distant, and S. by W. from **Little Misery,** a third of a mile, and it must be left to the westward by vessels using this channel, notwithstanding its color.

BAKER ISLAND SHOALS.

In coming into this channel the western shore of **Baker Island** must receive a good

berth—say a third of a mile (six hundred yards)—to avoid the shoal ground making off from that shore to the westward. These shoals extend a quarter of a mile from the island and in some places more than that distance. Vessels must hug the western side of the channel when passing *Hardy Rock Shoal.*

Baker Island Shoals are not buoyed. There is a depth of seven feet at low water two hundred and fifty yards off the northwestern point of **Baker Island.**

HARDY ROCKS.

A little to the southwestward of the *black buoy* on *Hardy Rock Shoal* will be seen a **black spindle** composed of **a spar with two triangles on top.** This is on *Hardy Rocks*, which are dry at half-tide. The **beacon** bears **W.** by **N.** from **Baker Island Lights**, a little over half a mile distant, and is about an eighth of a mile **W.** by **S.** ½ **S.** from the *black buoy* on *Hardy Rock Shoal.* It must be left to the westward, notwithstanding its color.

The *black buoy* that will be seen about four hundred yards **W.** by **N.** from **Hardy Rock Beacon** is not in this channel, but on *Rising States Ledge*, on the south side of the *Main Ship-Channel* into **Salem.** After passing *Hardy Rocks* the channel leads toward **Eagle Island** and *passes midway between two black buoys.* That to the westward is on

CUTTHROAT LEDGE,

which is a sunken rock, with six feet at lowest tides, lying **S W.** by **W.** ½ **W.** from **Hardy Rock Beacon**, distant nearly half a mile; **N E.** by **N.** ½ **N.** from **Eagle Island**, about one-third of a mile; and **W.** ½ **S.** from **Baker Island Lights**, one mile off. A *black spar-buoy* (No. 7) is placed in twenty-two feet on the northeastern end of this ledge. The shoal water extends two hundred yards to the westward from this buoy.

There is a passage between *Rising States Ledge* and *Cutthroat Ledge* with from four to seven fathoms water, but it is rarely used.

POPE'S HEAD SHOAL.

The *black spar-buoy* on the eastern side of the channel and nearly opposite to *Cutthroat Buoy* is on *Pope's Head Shoal.* The **Pope's Head** is a bare rock, lying eleven hundred yards **S W.** by **W.** from **Baker Island Lights** and three-eighths of a mile **W.** ½ **S.** from the south point of **Baker Island.** There is from twelve to eighteen feet water between it and the island.

Pope's Head Shoal is nearly two hundred yards **W.** by **S.** from the **Pope's Head**, and has seven feet at low water. At low spring tides there is but six feet upon it. *A black spar-buoy* (No. 1) is placed in sixteen feet on the western side of the ledge. When up with this buoy, another *black buoy* will be seen half a mile to the southwestward. This is on

THE BRIMBLES,

a dangerous ledge, awash at low water, which lies half a mile **S W.** by **W.** ½ **W.** from *Pope's Head Buoy* and about five hundred yards **S E.** ½ **S.** from **Eagle Island.** There is from four to six fathoms water on all sides of it. From the **Lowell House Cupola** it bears **N E.** ½ **N.**, a little over half a mile distant. This shoal is about two hundred yards in extent, and a *black spar-buoy* (No. 3) is placed in twenty-two feet off the northwestern end.

MID-CHANNEL ROCK.

When past **Eagle Island**, and in the *Cat Island Channel*, the course leads between a *red and a black spar-buoy*, leaving each a quarter of a mile off. The *red buoy* on the north side is on *Mid-Channel Rock*, a sunken ledge with sixteen feet at mean low water. It bears **N.** ½ **W.** from the **Lowell House Cupola**, eleven hundred yards distant, and **W.** by

S. ¾ S. from **Eagle Island**, three hundred and fifty yards distant. The buoy is *a spar* (No. 4) *painted red*, and placed in three and a half fathoms on the southwestern end of the ledge.

The *black spar-buoy* is on

MARTIN ROCK,

also in the *Cat Island Channel.* It is a sunken ledge, with twelve feet at mean low water, and lies a quarter of a mile from the north end of **Cat Island.** From **Lowell Hotel** it bears N E. by N. ¼ N., a quarter of a mile distant. There is from three to five fathoms water all around it, but the sailing-lines of this channel leave it a quarter of a mile to the southward and westward.

When abreast of *Mid-Channel Rock Buoy*, a *buoy with black and red horizontal stripes* will be seen to the westward. This is on

CHAPPEL LEDGE,

a detached rock, with fifteen feet at mean low water, which lies on the north side of this channel. It is eleven hundred yards N W. ¾ N. from the **Lowell House Cupola** and the same distance E. ¼ S. from **Peach Point.** The buoy is in four fathoms on the eastern side of the rock, and is to be left to the northwestward by vessels bound up this channel.

ARCHER ROCK.

Passing *Chappel Ledge* there will be seen, bearing about SOUTH, a *spar-buoy painted red and black in horizontal stripes.* This is on *Archer Rock*, which has ten feet at low water, and lies on the south side of this channel, five hundred yards WEST from **Cat Island.** It is a detached rock, with four and five fathoms water all around it. The buoy is on the southwestern side of the rock.

When past *Archer Rock*, *two black spar-buoys* will be seen to the southward. The easternmost buoy is on

LASQUE LEDGE,

which is not in the way of vessels bound in by this channel unless beating on a wind. It is a rocky shoal, making off in an E. ¼ N. direction from **Marblehead Point** three hundred and fifty yards. Its eastern end bears N W. by N. ¼ N. from **Marblehead Rock Beacon**, four hundred yards distant, and the buoy is placed in three and a half fathoms on this end. The western half of this ledge is dry at low water, and is called *Half-Tide Rocks.*

The westernmost bucy is on

GORDON ROCK,

and is about eighty yards N. by E. from **Marblehead Point.** It is a knubble upon the ledge which makes off in that direction from the point, and has seven feet at low water. The buoy is *black*, marked No. 5, and placed in three fathoms off the north point of the ledge. It is to be left to the southward.

BODEN ROCK.

After passing *Gordon Rock* and steering into the harbor, *another black spar-buoy* will be seen bearing about S W. This is on *Boden Rock*, which lies off the eastern shore of the harbor, half a mile S W. by W. from **Marblehead Point** and a little over a hundred yards from **Boden Point**, and has eight feet at low water. A *black spar-buoy* (No. 7) is placed in three fathoms off the northwestern side of the ledge.

After passing *Boden Rock* there are no obstructions except the flats making out from the southwestern end of the harbor. The approach to these is gradual, and the lead will be the best guide.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING MARBLEHEAD HARBOR.

Coming from the eastward, between **Pope's Head** *and* **Eagle Island.**—Steer in the *Main Ship-Channel* W. by N. ¾ N. for **Hospital Point Light**, and continue this course, carrying not less than eight fathoms, until **Baker Island Lights** bear S E. ¼ S. and **Hardy Rock Beacon** W S W., with nine fathoms water; then steer S W. ½ W., carrying not less than four fathoms, passing between *Hardy Rocks* and **Baker Island**, and between **Eagle Island** and the *Brimbles*. On this course, when **Hospital Point Light** bears N W. ¾ N. and the **Lowell House Cupola** bears SOUTH, and in about six fathoms, steer S W. by W. ¾ W. to *Marblehead Entrance*, carrying not less than six fathoms; and when **Marblehead Light** bears S. ¼ E. steer S W. ½ W. to the anchorage.

The above courses pass one hundred yards to the southeastward of the buoy on *Hardy Rock Shoal;* the same distance to the westward of *Baker Island Shoals;* nearly two hundred yards to the eastward of **Hardy Rock Beacon**; two hundred and fifty yards to the eastward of *Cutthroat Ledge;* a quarter of a mile to the westward of *Pope's Head Shoal;* an eighth of a mile to the eastward of **Eagle Island**; the same distance to the westward of the *Brimbles;* a quarter of a mile to the southward of *Mid-Channel Rock;* a quarter of a mile to the northward of *Martin Rock;* a quarter of a mile to the southward of *Chappel Ledge;* an eighth of a mile to the northward of *Archer Rock;* and the same distance to the westward of *Gordon Rock*.

This channel, depending for its courses on the bearings of the lights, may be used at night, especially by steamers. For sailing vessels it is rather unsafe on account of the flood-current setting nearly across it.

BEVERLY HARBOR.

This small harbor lies at the western end of the *Bay of Salem*, and is formed by the confluence of *Essex Branch*, *Beverly Creek*, and *North River*—three small streams which, uniting at this point, form a basin of irregular shape, on the north shore of which is built the town of **Beverly.** The harbor is about three-eighths of a mile in diameter, full of flats and shoals, but with good water in the channel. It is crossed at its western end by two draw-bridges—the county bridge, known as **Salem Bridge**, and the **bridge of the Eastern Railroad Company.**

DANGERS
IN THE ENTRANCE TO BEVERLY HARBOR.

This harbor is entered from the *Main Ship-Channel of Salem Harbor*. When abreast of **Woodberry Point** the first obstruction will be seen ahead, marked by a *black spar-buoy*. This is

BEVERLY BAR,

a long shoal making out to the northward from **Hospital Point** (on **Salem Neck**) to a distance of three hundred and fifty yards, and obstructing the south side of the entrance to the harbor. A *black buoy* (No. 1) is placed in sixteen feet on the north point of the shoal. Pass close to the northward of it.

When up with this buoy, a *red spar-buoy* will be seen on the north side of the channel, and a **granite beacon with a black top** on the south side. The buoy is on

PORTER ROCK,

sometimes called *Middle Ground Ledge.* The ledge lies on the north side of the entrance, two hundred yards from shore and three hundred and fifty yards N W. by W.

from the *black buoy* on *Beverly Bar*. It is dry at low water, and is marked by a *red spar-buoy* (No. 2) placed in twelve feet on the southeastern side of the bare rock. This buoy must receive a berth of seventy-five yards to the northward. The **granite monument** is on

MONUMENT BAR,

which also makes out from **Salem Neck** to the northward, and is dry at the beacon. It is two hundred yards WEST from the buoy on *Beverly Bar* and an eighth of a mile S. by W. from the *red buoy* on *Porter Rock*.

The **beacon is a square, granite, crib-work monument, with a wooden staff surmounted by a black cage on top.** It is placed on the northern end of the bar, and should not be approached nearer than fifty yards.

After passing this beacon the channel turns to the southward, and two *red spar-buoys* will be seen ahead. The nearest is on the

MIDDLE GROUND,

which is a shoal bar in mid-channel, and is dry at extreme low tides. There is a rock, with ten feet, close to the buoy and a little to the eastward of it. The buoy is placed to the eastward of the ledge in thirteen feet, and is two hundred yards S W. from **Monument Bar Beacon** and three hundred and fifty yards S E. from **Tuck Point**.

Two hundred yards S W. from it is the *red buoy* on

SHOAL GROUND.

This shoal extends off from **Tuck Point** in a southerly direction four hundred yards, and part of it is dry at low water. A *red spar-buoy*, No. 6, is placed in thirteen feet off its southern end and marks the turning-point of the channel, which here turns to the northwestward toward the town.

On the south side of the channel, a hundred and twenty-five yards S E. by S. from this buoy, is a **granite monument.** This is on

RAM'S HORN ROCKS,

dry at low water, and nearly two hundred yards from the north shore of **Salem Neck. The beacon is a square granite monument of crib-work, and is surmounted by a black wooden staff with a top like a sugar-loaf.** It is to be left to the southward, the channel leading directly between it and the *red buoy on Shoal Ground*.

The channel now turns to the northward toward the town, passing along the eastern side of the extensive flats making off from the north end of **Salem Peninsula.** Now a **granite beacon** will be seen on some dry rocks lying W S W. from **Tuck Point.** These are

LOBSTER ROCKS,

a group of rocks which occupy the northeastern end of the flats on the west side of the channel, and are dry at half-tide. The **beacon** is on the eastern end of the rocks, and must be left to the westward. Passing this **beacon**, the channel leads along the wharf-line, where anchor at pleasure, in three and a quarter fathoms at low water.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BEVERLY HARBOR.

On the **W. ¼ N.** course into *Salem Outer Harbor*, when **Hospital Point Light** bears **N. by E.** and **Fort Pickering Light S W.**, with five and a half fathoms, steer **N W. by W.** until **Monument Bar Beacon** bears **WEST.** On this course there is not less than seventeen feet

water. Now steer W. by N. until abreast of the beacon, in six fathoms; leave it to the southward and steer to the southwestward toward *Middle Ground Buoy*. Keep in mid-channel in about three and a half fathoms, leaving this *buoy* and that on *Shoal Ground* to the westward, and the beacon on *Ram's Horn* to the southward. When past these marks, bring Tuck Point to bear N. by W. ½ W. and steer N W. by N. ½ N., passing midway between the point and the beacon on *Lobster Rocks*, in three and a half fathoms. Anchor off the town, in twenty feet at low water.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich. In arc.	Longitude W. from Greenwich. In time.	Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
	° ′ ″	° ′ ″	h m s		Feet.	
Baker Island Light	42 32 10	70 47 10	4 43 08.7	Fixed.	87	15
Baker Island Range Beacon	42 32 10	70 47 10	4 43 08.7	Fixed.	64	14
Hospital Point Light	42 32 48	70 51 01	4 43 24.1	Fixed.	40	13
Fort Pickering Light	42 32 00	70 51 00	.....	Fixed.	32	10
Derby Wharf Light	.....	.....	.....	F'd, red.	22	8
Marblehead Light	42 30 18	70 50 02	4 43 20.1	Fixed.	43	11

TIDES.

Corrected Establishment	$11^h\ 13^m$
Rise of Highest Tide observed above Mean Low Water	11.4 ft.
Fall of Lowest Tide observed below Mean Low Water	2.0 ft.
Fall of Mean Low Water of Spring Tides below Mean Low Water	0.5 ft.
Height of Mean Low Water of Neap Tides above Mean Low Water	0.5 ft.
Mean Rise and Fall of Tides	9.2 ft.
Mean Rise and Fall of Spring Tides	11.0 ft.
Mean Rise and Fall of Neap Tides	7.6 ft.
Mean Duration of Rise, reckoning from the middle of one Stand to the middle of the next	$6^h\ 19^m$
Mean Duration of Fall, reckoning from the middle of one Stand to the middle of the next	$6^h\ 06^m$
Mean Duration of Stand	$0^h\ 05^m$

CURRENTS.

Locality.	First Quarter. Set.	First Quarter. Drift.	Maximum. Set.	Maximum. Drift.	Last Quarter. Set.	Last Quarter. Drift.	Flood or Ebb.
I. Main Ship-Channel off Smith Point	S W. by W. ½ W.	0.30	W. by N.	0.37	N W. ½ W.	0.07	Flood.
	E. ½ S.	0.27	S E. ½ E.	0.63	S E. by S. ½ S.	0.50	Ebb.
II. Between Lowell Id. and Chappel Ledge	N N W.	0.05	N. by E. ½ E.	0.15	N E. ½ N.	0.17	Flood.
	N E. ½ E.	0.15	E. by N. ½ N.	0.21	E. ½ N.	0.02	Ebb.
III. Cat Island Channel between Lowell Isl'd and the Gooseberries	N. by W. ½ W.	0.02	N. by W.	0.10	N. by E. ½ E.	0.08	Flood.
	N E. by E.	0.14	EAST.	0.08	E. ½ S.	0.04	Ebb.

The above observations were made as far as possible when the influence of the wind was small. The set is given in magnetic bearings, and the drift in nautical miles

per hour. As will be seen, there is little velocity to the tidal-current, so that mariners will generally be able to make their courses good without regard to tide.

VARIATION OF THE COMPASS.

The variation of the magnetic needle will be, in 1875, on **Marblehead Peninsula,** 11° 35′ W., and on **Salem Neck** it will be about the same. The present annual increase is about 3′.3.

LIFE-BOAT STATIONS.

There is a life-boat station, under the rules of the Massachusetts Humane Society, at **Manchester.** The boat is under care.

There are also two boats inside the harbor of **Marblehead,** under care.

Salem Harbor is very convenient as a harbor of refuge for vessels bound to the eastward and met by an easterly gale, as the direction of the harbor is such that a foul wind for proceeding is a fair wind into the harbor, and a fair wind for proceeding is also a fair wind out.

The above remark is equally true of *Gloucester Harbor* for vessels bound to the southward.

DESCRIPTION OF SHORES BETWEEN MARBLEHEAD NECK AND NAHANT BAY.

From **Flying Point,** the southwestern extremity of **Marblehead Neck,** to **Phillips Point,** the northeastern point of entrance to *Nahant Bay,* the direction is W S W., and the distance two miles and three-eighths. But the shore-line between these two points curves away to the northward and around to the westward, thus forming a wide cove or bay.

Marblehead Beach extends from **Marblehead Neck** about W ½ N. for five-eighths of a mile. It is a narrow sand-beach, which separates *Marblehead Harbor* from the sea, and the town is visible over it. At the western end of **Marblehead Beach** begin the hills, which come abruptly down to the water's edge, and are from fifty to one hundred feet high. They are bare of all trees except fruit-trees, and are cleared and settled.

The high land continues in a W S W. direction for a mile to the eastern end of **Phillips Beach,** which extends to **Phillips Point.** This beach has a general course of S W. for about seven-eighths of a mile, and for half its length stretches at the foot of a low cliff, (about twenty feet high.) For the rest of the distance to **Phillips Point** the land behind the beach is quite low and flat; but high wooded lands are visible in the distance.

PHILLIPS POINT

is a high rocky point, the eastern half of which is from fifty to sixty feet high, mostly cleared and cultivated, and presenting a somewhat precipitous face. The western half is about eighty feet high, and is thickly wooded. On the southwestern face are many houses, some of which are sea-side hotels.

This point is the northeastern point of the entrance to

NAHANT BAY.

This bay forms one of the smaller subdivisions of *Massachusetts Bay,* and is nearly circular in form. It is contained between **Phillips Point** on the northeast and the island, so-called, of **Nahant** on the southwest. Between these two points the bay is two miles and a half wide, and about two miles long to **Lynn Beach,** which separates it from *Lynn Harbor* in *Boston Bay.*

The village of **Swampscott** is situated on the north shore of this bay, three-quarters of a mile WEST from **Phillips Point.** It is a great summer resort. The eastern part of the town of **Lynn** occupies a portion of its northwestern shores.

FISHING POINT,

the first headland on the north shore west from **Phillips Point**, is a low but prominent rocky point, half a mile W N W. from **Phillips Point**. It is cleared and settled, being occupied by part of the village of **Swampscott**. The village itself presents quite a picturesque appearance, being situated at the foot of steep wooded hills, which rise to a height of from one hundred to one hundred and fifty feet above sea-level. The rocky point upon which the main part of the settlement is built is three-eighths of a mile above **Fishing Point**, and is called **Blaney Point** or **Blaney Rock.**

To the westward of **Blaney Rock** will be seen the town of **Lynn**, with a long low beach, called **King Beach,** extending in front of it. This beach is half a mile long, and is terminated by a low, bluff, rocky point, called **Red Rock.** This point is entirely bare of trees, and presents a somewhat precipitous face, the effect of the washing of the bay.

LYNN BEACH.

A quarter of a mile to the westward of **Red Rock** begins **Lynn Beach**, a narrow strip of sand separating *Nahant Bay* from the *Harbor of Lynn.* It extends in a S. by W. direction for a mile and a quarter to a high, bluff, rocky head, called

LITTLE NAHANT.

The surface of this headland (which would be an island but for the narrow strip of beach connecting it with the main) is covered with grass, and has one or two trees upon it. Its eastern face is bold and steep, and is known as **East Point,** or, to distinguish it from the point of the same name southeast of it, **Little Nahant East Point.**

On the south, **Little Nahant** is connected with **Nahant** by a strip of beach nearly half a mile long, called **Little Nahant Beach.**

NAHANT

lies nearly EAST and WEST, and is very irregular in shape. It is a high rocky peninsula with a precipitous face to the eastward, and a mile and a half long. It is occupied by a settlement which is mainly composed of summer cottages. Its eastern extremity is called **East Point,** and is a bluff headland occupied by a large hotel and out-buildings, surrounded by ornamental grounds. The roads over the peninsula are planted with trees, which in summer present a beautiful appearance as seen from the southward.

This is a great summer resort. Steamers ply regularly between **Boston** and **Nahant** during the season. The landings are on the south side, in the large cove formed by the curve of the south shore. This cove is sometimes called *Nahant Harbor.*

EGG ROCK AND EGG ROCK LIGHT-HOUSE.

Seven-eighths of a mile N N E. from **East Point** is a bold rocky islet sixty feet high, called **Egg Rock.** It is irregular in shape, lies nearly EAST and WEST, is an eighth of a mile long, and on its summit is built the **Light-House** which is a guide to *Swampscott Harbor.* It rises from the keeper's dwelling, a square white cottage twenty-five feet high.

This **Light-House** shows a fixed red light of the fifth order of Fresnel from a height of eighty-seven feet above sea-level, and visible twelve miles. Its geographical position is

Latitude - - - - - - - -	42° 25′ 58″ N.
Longitude - - - - - - - -	70° 53′ 52″ W.

DANGERS
IN APPROACHING AND ENTERING NAHANT BAY, BOUND FOR SWAMPSCOTT HARBOR.

I. *Coming from the eastward, between* **Tinker Island** *and* **Pig Rocks.**—The first danger met with by vessels using this channel lies S W. by S. from **Tinker Island**, and is called

ROARING BULL.

It is a dangerous ledge, awash at low water, and with four to nine fathoms water all around it. It lies half a mile S. ¾ E. from **Flying Point** and a little over three hundred yards S W. by S. from **Tinker Island.** It is marked by a *red spar-buoy* (No. 2) placed in four fathoms on its southeastern side. It is to be left to the northward.

GREAT PIG ROCKS.

On the opposite side of this channel, and a little over a mile off, lies a group of bare rocks surrounded by shoal water, and known as **Great Pig Rocks.** The centre of the group bears S W. from **Tinker Island**, one mile and three-eighths distant; E. by S. ½ S. from **Phillips Point**, a mile and a half distant; and N E. by E. ½ E. from **Egg Rock Light**, two miles and three-quarters distant. The rocky islet lying nearly a mile N N W. from these rocks is called **Ram Island.** It is half a mile from the shore.

The **Great Pig Rocks** are not buoyed for this channel, as they are bold-to on the north side and always show themselves. The *red spar-buoys* that will be seen on passing them are placed on the sunken ledges south of the group, and mark the southern channel into **Swampscott.**

THE MIDDLE GROUND.

Passing along the north side of the **Pig Rocks**, leave on the starboard hand a *red spar-buoy* on the south side of a sunken ledge, called the *Middle Ground,* which has five feet at low water, and lies half a mile N N W. from the **Pig Rocks** and about four hundred yards S S E. from **Ram Island.** The *red spar-buoy* (No. 4) is placed in three fathoms on the southern side of the ledge.

When past the *Middle Ground*, there will be seen *another red spar-buoy* a little over a quarter of a mile WEST from the *Middle Ground Buoy*, on

SAMMY ROCK,

awash at lowest tides. It lies about six hundred yards W. ½ N. from the *Middle Ground Buoy;* a quarter of a mile S W. by S. ½ S. from **Ram Island**; and about eleven hundred yards N W. ½ N. from **Great Pig Rocks.** The buoy is marked No. 6, and is placed in three fathoms on the south side of the rock.

There is good water all around *Sammy Rock.* When up with this buoy *another red spar* will be seen, about half a mile to the westward, on

DOLPHIN ROCK,

another sunken ledge, with seven feet at mean low water, which lies five-eighths of a mile N W. by W ½ W. from the **Great Pig Rocks** and nearly a mile E. by S. from the eastern end of **Phillips Point.** From **Egg Rock Light** it bears N E. ½ E., two miles and a half. This dangerous ledge obstructs both of the eastern channels into **Swampscott**, and is marked by *a red spar-buoy* (No. 10) placed near the rock in eighteen feet water. There is good water all around the ledge, but it is to be left to the northward.

DREAD LEDGE

is a bare rock, which lies about an eighth of a mile off the southwest side of **Phillips Point.** It is dry at low water, and there was formerly a **beacon** upon it consisting of a **granite column surmounted by a staff and barrel, painted red.** This beacon having been destroyed, it has been replaced by **an iron spindle twenty-four feet high with a red cask on top.**

Dread Ledge is often called *Half-Tide Rock.* After passing it there are no dangers.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING SWAMPSCOTT HARBOR.

I. *Coming from the eastward and passing to the northward of the* **Pig Rocks.**—With **Marblehead Light** bearing N N W., a mile and five-eighths off, and **Egg Rock Light** S W. by W. ½ W., four miles and three-quarters distant, with between seven and eight fathoms, steer W. by S. ½ S., leaving the **Great Pig Rocks** to the southward and *Dread Ledge* to the northward, and carrying not less than five fathoms water. When abreast of the latter, with **Egg Rock Light** bearing S. by W. ½ W., and in ten and a half fathoms, steer N W. ½ W. until abreast of the town, when anchor according to draught.

The above courses pass four hundred yards to the southward of *Roaring Bull;* the same distance to the northward of **Great Pig Rocks;** a quarter of a mile to the southward of the *Middle Ground;* three-eighths of a mile to the southward of *Sammy Rock;* four hundred yards to the southward of *Dolphin Rock;* and a quarter of a mile to the southward of *Dread Ledge.*

DANGERS.

II. *Bound into Swampscott from the eastward, by the channel south of the* **Pig Rocks.**—In approaching *Nahant Bay* from the eastward, and intending to pass outside of the **Great Pig Rocks,** the first danger met with is

OUTER BREAKERS,

a dangerous sunken ledge, with eight feet water, which lies about five-eighths of a mile E. by S. ½ S. from the **Dry Pig Rocks.** From the southeast point of **Tinker Island** it bears S. by W. ½ W., one mile and a quarter distant, and from **Egg Rock Light** E N E., three miles and one-eighth. A *red spar-buoy* (No. 4) *with a triangle near the top* is placed off its eastern end in four fathoms of water. It must be left to the northward by vessels using this channel.

When up with this buoy *two more red spar-buoys* will be seen to the northward at the distances, respectively, of five-eighths and seven-eighths of a mile. The nearest is on

SOUTHERN SHOAL ROCK,

another of the outlying sunken ledges lying off the **Great Pig Rocks.** This ledge, which is awash at mean low water, lies about an eighth of a mile southeast from the dry rocks; half a mile W. ½ N. from *Outer Breaker;* and a mile and a half S W. ½ S. from the southern end of **Tinker Island.** A *red spar-buoy* (No. 6) is placed in four fathoms S S E. from the ledge.

SOUTHWEST BREAKER.

The more distant *red spar-buoy* is on *Southwest Breaker,* another detached rock which lies two hundred yards S W. ½ W. from the dry rocks and a quarter of a mile W. ½ N. from *Southern Shoal Rock.* From **Egg Rock Light** this ledge bears N E. by E. ½ E.

two miles and a half, and from the **Beacon** on *Dread Ledge* it bears E. ½ S., one mile and three-quarters distant. It is awash at mean low water, and is marked by a *red spar-buoy* (No. 8) placed in twenty-two feet on the southwestern side of the ledge.

DOLPHIN ROCK

is the next danger met with, but is not in the way of vessels standing in through this channel with a fair wind. It lies N W. by W. ½ W. from the dry **Pig Rocks**, five-eighths of a mile distant, and is nearly a mile E. by S. from the eastern end of **Phillips Point.** It has seven feet at mean low water, and is marked by a *red spar-buoy* (No. 10) placed in eighteen feet on its southwestern edge. (See also page 789.)

DREAD LEDGE,

the last obstruction met with in entering this harbor, is a ledge or rock bare at half-tide, lying about an eighth of a mile off the southwest side of **Phillips Point.** There was formerly a beacon upon it composed of a granite column surmounted by a staff and barrel. The beacon having been destroyed has been replaced by an **iron spindle with staff and barrel on top, painted red.** *Dread Ledge* is often called *Half-Tide Rock.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SWAMPSCOTT HARBOR.

II. *Coming from the eastward and passing to the southward of the* **Pig Rocks.**—With **Marblehead Light** bearing N N W., two miles and three-quarters distant, and **Egg Rock Light** W. by S. ½ S., with twenty-one fathoms water, steer for **Egg Rock Light**, carrying not less than twelve fathoms water, until past the buoys on *Outer Breaker* and *Southern Shoal Rock* and up with the dry **Pig Rocks.** **Tinker Island** will now bear N E. by N. ½ N. and there will be about thirteen fathoms. Then steer W. by N. ½ N. two miles, with not less than ten fathoms, until abreast of *Dread Ledge* and **Egg Rock Light** bears S. by W. ½ W. Then steer N W. ½ W., and anchor off the village.

Or, continue the course W. by S. ½ S. for **Egg Rock Light** until within a quarter of a mile of the rock, when steer N. by W. ½ W. to the anchorage.

Or, coming from seaward, bring **Baker Island Lights** to bear N. ½ E., five miles and a quarter distant; **Marblehead Light** N W. by N. ½ N., four miles and a quarter distant; and **Egg Rock Light** W. ½ N., five miles and a quarter distant; when there will be twenty-two fathoms, *dark gray sand and coarse gravel.* Now steer W. by N. ½ N. This course will lead safely, with not less than ten fathoms, up to *Dread Ledge Buoy.* When abreast of it, with **Egg Rock Light** bearing S. by W. ½ W., with ten and a half fathoms, steer N W. ½ W. to the anchorage off the village.

The above courses pass to the southward of all dangers, leaving *Outer Breaker* half a mile; *Southern Shoal Rock* five-eighths of a mile; *South-West Breaker* a little over half a mile; *Dolphin Rock* seven-eighths of a mile; and *Dread Ledge* a quarter of a mile.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING SWAMPSCOTT HARBOR.

III. *Coming from the southward and westward.*—Bring **Egg Rock Light** to bear N W. by N. ½ N. and **Long Island Light** S W. by W., with sixteen fathoms, *coarse mud,* and steer N. by W. ½ W., which course will lead safely to the anchorage, passing a quarter of a mile to the eastward of **Egg Rock Light** in about ten fathoms water.

Vessels may anchor anywhere under the shore in *Nahant Bay* after passing **Egg Rock.** The depth is from two to five fathoms.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Egg Harbor Light...	42° 25′ 58″	70° 53′ 52″	4^h 43^m 35.5^s	Fix'd, red.	87 ft.	12

TIDES.

The tidal observations are referred to **Boston Light-House.**

Corrected Establishment	11^h 12^m
Mean Rise and Fall of Tides	9.3 ft.
Mean Rise and Fall of Spring Tides	10.9 "
Mean Rise and Fall of Neap Tides	8.1 "
Mean Duration of Rise	6^h 20^m
Mean Duration of Fall	6^h 06^m
Mean Duration of Stand	0^h 11^m

VARIATION OF THE COMPASS.

In August, 1849, the variation of the magnetic needle at **Little Nahant** was 9° 41′ W. In January, 1875, it will be, therefore, 11° 12′ W., the annual increase being 3.5′ nearly.

LIFE-BOAT STATIONS.

Under the auspices of the Massachusetts Humane Society, a life-boat and carriage have been placed at **Phillips Beach**, under care.

At **East Point**, near the hotel on **Nahant**, another boat has been placed in a postion handy to launch on either side of the peninsula.

BOSTON BAY

is the western end of *Massachusetts Bay*, included between **Nahant Head** and *Minot Ledge*, and from it leads the channels into *Lynn* and *Boston Harbors*. The bay is eleven miles wide between *Minot Ledge* and **Nahant**, and makes about four miles into the land; is studded with islands, and full of shoals and ledges.

The northwestern part of this bay is known as *BROAD SOUND*. The entrance to this *Sound* is contained between **Deer Island** and **Nahant.** The rest of the bay forms the approaches to *Boston Harbor* and the smaller harbors in that vicinity.

BROAD SOUND

lies N W. and S E.; is about five miles wide between **Deer Island** and **Nahant Head**, and nearly three miles and a half long. At the head of the *Sound* is *Lynn Harbor*, the entrance to which is contained between **Bass Point** on **Nahant** and **Chelsea Beach.**

On the *East, Broad Sound* is separated from *Nahant Bay* by **Lynn Beach, Little Nahant,** and **Nahant.** Its north shores are occupied by the city of **Lynn,** one of the great manufacturing towns of New England. On the west the boundaries are the famous **Chelsea Beach,** which, beginning at **Pines Point,** three-quarters of a mile southwest from **Lynn,** runs in a S W. direction for nearly three miles, and is not quite a hundred yards wide. The land behind it is salt meadow, into which the firm ground extends like spurs. Here and there over the surface of this marsh appear groves of oak and pine

trees, which will distinguish this part of the *Sound* from other parts of the *Bay* when viewed from seaward.

At **Pines Point** the beach it one hundred yards wide. Back of the shore is a meadow, and behind that a grove of pine trees, which give the name to the point. This point is on the south side of the entrance to *Chelsea Creek* and *Saugus River*. Both are shallow estuaries.

The settlement called **Centre Village** occupies the high land back of the southern end of **Chelsea Beach**, and is of little importance.

DEER ISLAND,

which separates the entrance to *Broad Sound* from *Boston Harbor*, lies N N W. and S S E.; is nearly a mile long, and a third of a mile wide at its widest part. To a vessel approaching from the northeastward it will appear as a long bare island with a gently-sloping green hill, having a flagstaff on its summit toward its eastern end. This hill appears joined to another to the westward, with a precipitous descent to seaward. The **House of Correction**, with its high cupola, appears on the west end of the island.

On the eastern side of the hill, in the centre of the island, is a life-boat station, established by the Massachusetts Humane Society.

Both the northern and southern ends of **Deer Island** are low and covered with grass only. There are no trees except those planted for ornamental purposes. On the north a channel eighty yards wide separates **Deer Island** from a low sandy point of the main land, called **Point Shirley.** This passage is known as *SHIRLEY GUT*, and is commonly used by the steamers plying between **Boston** and **Nahant.**

POINT SHIRLEY

is the southwestern extremity of a very long and narrow peninsula, mostly sand-beach, which extends in a S. ½ W. direction from the main land, SOUTH from **Chelsea Beach.** The point itself forms a sort of flat head to this peninsula, and lies N W. and S E. It is half a mile long and about one-fifth of a mile (three hundred and seventy-five yards) wide. The city **Almshouse** and other public buildings are situated on this point.

WINTHROP HEAD

is a precipitous headland, one hundred feet high and bare of trees, situated half a mile N N E. from **Point Shirley**, and on the west side of the entrance to *Broad Sound.* The road from **Point Shirley** to **Centre Village** leads around the western side of this hill.

North of **Winthrop Head** runs a sand-beach an eighth of a mile wide and half a mile long, to the main land, about a mile south from

GROVER CLIFF.

This headland, the most prominent point between **Point Allerton** and **Nahant Head,** lies one and one-fifth miles N. by E. from **Winthrop Head.** It is backed entirely by marsh, but the point itself is a precipitous headland eighty feet high, and bare of trees.

From **Grover Cliff** the shore-line runs about N. ½ W. for three-quarters of a mile to the southern extremity of **Chelsea Beach.** Midway between this point and **Grover Cliff** is a hill one hundred feet high. The whole shore is bare of trees, but the hills are usually grassy and in some places under cultivation. The summit of the hill on the west end of **Breed Island** appears, when viewed from the eastward, over the sand-beach and marsh which separates **Grover Cliff** from the hills to the northward. The summit of this island is one hundred and fifty feet above the sea. There are some few scattered trees near the base of the hill on the eastern side, but it is for the most part treeless and under cultivation.

To the northward of **Breed Island** will appear **Powderhorn Mountain,** one hundred and eighty feet high, and the houses in the village of **Winnissimmet** will show over the low shore between the two hills.

LYNN HARBOR.

On the north side of *Broad Sound* is situated the *harbor* and city of **Lynn.** The land is low and marshy from the north bank of *Saugus River* nearly across the head of the harbor. It is also much cut up by coves and slues penetrating the marshes in every direction. In the northeastern corner of the head of the harbor the line of marsh is narrow, and the wharves of the town extend over this marsh to the water's edge. In process of time, no doubt, all of the meadow-land will be in like manner reclaimed, and the town will extend to the edge of the shore.

Lynn is chiefly celebrated for its shoe factories. The railroads have, however, all of the transportation, and the harbor is very little used.

The entrance to *Lynn Harbor* is between **Chelsea Beach** on the west and **Bass Point,** the west point of **Nahant,** on the east. It is two miles wide, but is so full of rocks and shoals as to leave only very narrow and shallow channels of approach, available only for very light-draught vessels.

The eastern shores are formed by **Lynn Beach,** (see page 788,) the peninsula of **Little Nahant,** and **Nahant.**

BASS POINT,

the southwestern point of **Nahant Peninsula,** is quite low, but high land is seen behind it. From this point the shore-line runs N. ½ E. for one-third of a mile to the **West Cliffs,** which, as their name implies, show an abrupt and precipitous face to the westward. They are bare of trees.

BLACK ROCK POINT.

A quarter of a mile N. ½ E. from **West Cliffs** is the northwest end of **Nahant,** called **Black Rock Point.** The shore is low at this point, with high land behind it to the eastward. Six hundred yards (one-third of a mile) N.E. ½ N. from this point begins **Little Nahant Beach.**

Little Nahant appears to the northward of the beach. It is half a mile above **Black Rock Point,** and presents, when viewed from the south and west, a regular and gradual slope from the water's edge to a height of from eighty to ninety feet. The road to **Lynn** winds along the beach at its foot.

Lynn Beach (already described, page 788) forms the rest of the eastern shore of the harbor, extending from **Little Nahant** to the main land, a distance of a mile and a quarter.

The City of Lynn, which occupies the north shore of the harbor, is of little commercial importance, shoe manufacturing absorbing all the time and energies of the inhabitants. On the south and southwest the town is bounded by extensive salt marshes which occupy the shore for distances varying from a quarter of a mile to a mile and a quarter back from the shore-line. But the settlements have gradually encroached upon this extensive tract, and would, no doubt, have long ago reclaimed it but for the revenue yielded by the crops of salt hay cut from it and the fact that there is not sufficient commerce or coastwise trade to make it necessary.

On the southwest these marshes extend to

SAUGUS RIVER,

which empties into *Lynn Harbor* between **Tree Point** on the north and **Pines Point** on the

south. The entrance to this river is a quarter of a mile wide, but the channel is very narrow. The best water is close under **Pines Point.** Four feet at mean low water may be carried up to the bridge of the Eastern Railroad.

BAYLEY HILL

is a prominent landmark for *Nahant Harbor.* It is a bluff steep head, about sixty or seventy feet high, situated on the south side of **Nahant,** five hundred yards EAST from **Bass Point,** and is bare of trees. It lies on the western side of *Nahant Harbor,* so called.

DANGERS

IN APPROACHING AND ENTERING NAHANT AND LYNN HARBORS.

I. *Coming from the eastward.*—In approaching from the eastward the first danger met with lies off **Nahant Head,** and is known as the

SHAG ROCKS,

a group of dry rocks, situated about three hundred yards S S W. from **East Point** and about two hundred yards from the nearest shore. There is from three to five fathoms water inside of them, but *they are not buoyed.*

PEA ISLAND.

If bound to **Nahant,** round **Shag Rocks** and steer to the northwestward, passing to the southward and westward of a bare rocky islet, called **Pea Island,** which lies off the southwest end of **Nahant Head.** It is one hundred and fifty yards from shore, and is quite bold-to on its western side.

There is no passage between this rock and the head.

JOE BEACH LEDGE,

When up with **Pea Island** there will be seen ahead *a black spar-buoy,* about three hundred yards from the shore. This is on *Joe Beach Ledge,* a sunken rock, with five feet at mean low water, which lies three hundred and fifty yards W. by N. ½ N. from **Pea Island.** The buoy is placed in three fathoms close to the ledge, and must be left to the westward bound into **Nahant.** It is not in the way of vessels bound to **Lynn.** But such vessels, when past **Shag Rocks,** steer to the westward, and ahead will be seen *a red spar-buoy* nearly in range with **Bass Point.** This is on

BASS ROCK,

or *Old Sunken Rock* as it is sometimes called. This dangerous ledge lies six hundred yards S E. by S. ½ S. from **Bayley Hill;** half a mile S E. by E. ½ E. from **Bass Point;** and two-thirds of a mile W. ½ N. from the **Shag Rocks.** It has only a few feet on it at high water, and is bare at half-tide. A *red spar-buoy* (No. 2) is placed in three fathoms on the southern side of the ledge, and is marked and painted as a guide to *Lynn Harbor.* It is to be left to the northward.

BAYLEY LEDGE.

This ledge is not in the way of vessels standing in with a fair wind. It makes out from **Bayley Hill** in a S. by W. direction for nearly two hundred yards, has only two feet at mean low water, and *is not buoyed.* Vessels beating to windward must, in standing to the northward, give **Bayley Hill** a berth of three hundred and fifty yards to avoid being set on to this ledge.

After passing **Bayley Hill** there are no dangers until **Bass Point** is rounded, when steer to the northwestward toward *Saugus River,* or to the northward toward **Lynn.** Here the first obstruction met with is on the eastern side of the channel, and is known as

OLD HARRY ROCK.

This rock, part of which is dry at low water, makes out from the **West Cliffs** nearly five hundred yards. The buoy is placed on the western end of the ledge in five feet of water, but the channel passes close to this buoy. It bears NNW. from **Bass Point**, distant half a mile. The buoy is a *red spar* (No. 4) and is to be left to the eastward. When abreast of it, leave to the westward another *red buoy*, placed on the southwest side of *Lobster Rocks* as a guide for vessels bound into *Saugus River*. The easternmost of the two *Lynn Channels* leads between these two buoys and along the edge of the flats which make off from **Little Nahant**.

LOBSTER ROCKS,

awash at mean low water and bare at low spring tides, are a number of rocks surrounded by extensive shoals which form a serious obstruction to the channel, confining it within very narrow boundaries indeed. It is not safe for vessels to pass beyond the *red buoy* on *Old Harry* without a pilot, as the channel is narrow, winding, and shoal. A *black spar-buoy* was formerly placed on the eastern side of these rocks as a guide to this channel, but it has been removed, as the western channel is now considered the best.

WHITE ROCKS.

Bound in by the west channel, leave the *red spar-buoy* on the southwest side of *Lobster Rocks* to the northward and round it, steering a little to the northward of *a black spar-buoy* which will be seen about six hundred yards to the northwestward. This is on *White Rocks*, a number of rocks awash at mean low water, which lie nearly in the middle of the entrance, at the junction of the west channel into **Lynn** and the channel leading into *Saugus River*. *The buoy is a black spar, having two prongs*, and marked No. 1. It is placed in two fathoms on the south side of the rocks. Leave it to the westward, and steer to the northward and eastward toward *a red spar-buoy* about half a mile ahead, on

BLACK ROCKS,

which are awash at extreme low tides and lie at the junction of the east and west channels, on the extreme northern point of the middle ground, which extends from *Lobster Rocks* to this point. Vessels entering by the *West Channel* leave this buoy to the eastward. Those entering by the *East Channel* leave it to the westward as though it were painted black. It bears N E. ½ E. from *White Rocks Buoy* and W. by S. ½ S. from **Little Nahant**.

FORKED POINT SHOAL.

Half a mile to the northward of the *Black Rocks Buoy* is a long shoal making off in a southerly direction from the northeast point of the extensive dry flat which separates the *Lynn Channel* from the entrance to *Saugus River*. This shoal is called *Forked Point Shoal*. When up with *Black Rocks Buoy* there will be seen the *black spar-buoy* on the southeast point of this shoal, about half a mile to the northeastward. Steer for it and leave it to the westward, passing close-to; and about four hundred yards N. by E. ½ E. *another black spar-buoy* will be seen close in with **Lynn Beach**. This buoy is on the eastern side of the flats, and marks what is called the

BLACK MARSH CHANNEL.

This channel leads to the wharf-line of the town. It is extremely narrow and very shoal. The buoy is painted *black* to signify that it must be left to the westward, but it is in reality in the best water in the channel, (eleven feet,) and may be passed close-to. The channel sweeps around this buoy to the northward.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING LYNN AND NAHANT HARBORS.

I. *Coming from the eastward.*—Strangers must not attempt to enter *Lynn Harbor* without a pilot, the channels being too narrow and crooked for safe navigation. About six feet at mean low water may be taken through the *West Channel* as far up as *Forked Point.* Vessels of heavy draught must make an anchorage at **Nahant.** In northerly winds it is usual to enter *Boston Harbor* and anchor in *President Roads.* As the mean rise and fall of tide at this place is over nine feet, it is possible at high water for a vessel drawing twelve feet to go up as high as *Forked Point.* But only ten feet at high water can be taken up to the town. An inspection of the chart of *Lynn Harbor* will best show the difficulties to be encountered, but the following directions guide to the best water in both channels.

1. *By the East Channel,* (rarely used:) When up with **Nahant Head** give it a berth to the northward and westward of nearly half a mile to avoid the **Shag Rocks,** and steer **W.** by **S.** ¾ **S.,** carrying not less than thirteen fathoms, until **Bayley Hill** bears **N W.** ¼ **N.,** the **Hotel on Nahant Head N E.** by **N.** ¼ **N.,** or **Boston Light-House SOUTH.** There will be at this point about thirteen fathoms. Then steer **W N W.,** carrying not less than five and a half fathoms, until **Bass Point** bears **N E.** by **E.** ¼ **E.** The *red buoy on Old Harry* will now be seen to the northward, and the course is **N.** ¼ **E.** (if bound up by the *East Channel*) until past the buoy and **Black Rock Point** bears **E.** by **N.** ¼ **N.** On this course there is nine feet. Now steer for the point until within two hundred yards of it, and in thirteen feet at low water. Above this it is not safe to go without a pilot, the channel being extremely narrow and crooked. The course from abreast of **Black Rock Point** (two hundred yards off) is **N.** ¼ **E.** until the *red buoy* on the *Black Rocks* bears **N W.** Steer nearly for the buoy, keeping it open a little to the westward, and when past it, **N E.** by **N.** ¼ **N.** will lead up to *Forked Point Buoy.* (This channel is now seldom used, having become shoaler of late years and remaining quite crooked.)

2. *By the West Channel:* Steer **W.** by **S.** ¾ **S.** past **Nahant Head,** as before, and when **Bayley Hill** bears **N W.** ¼ **N.,** the **Hotel on Nahant Head** bears **N E.** by **N.** ¼ **N.,** and **Boston Light** bears **SOUTH,** in thirteen fathoms water, steer **W N W.** until **Bass Point** bears **N E.** by **E.** ¼ **E.** and **Grover Cliff S W.** ¼ **W.** Five and a half fathoms will be found at this point. Then steer **N.** by **W.** ¼ **W.,** nearly for the *black spar-buoy* on the *White Rocks,* carrying not less than eight feet water, and when within one hundred yards of it steer **N E.** ¼ **E.,** passing one hundred yards to the westward of the *red buoy* on *Black Rocks.* Continue this course until this buoy bears **SOUTH,** when steer **N E.** by **N.** ¼ **N.** until up with *Forked Point Buoy,* and then **N** by **E.** ¼ **E.** for the *black buoy* in *Black-Marsh Channel.* Beyond this no directions can be given.

3. *Bound into Nahant:* Pass **Nahant Head** at the distance of five hundred yards in a **S W.** by **W.** course, in twelve fathoms, and continue this course with no less water until **Shag Rocks** are nearly abeam and the **Ocean House** (on **Nahant Head**) bears **N.** ¼ **E.,** and there is thirteen fathoms. Now steer **N W.** by **W.** ¼ **W.** for **Bayley Hill,** carrying not less than three and a half fathoms, until **Pea Island** and the **Ocean House** are in range on a bearing of **N E.** ¾ **E.** Now steer **N.** ¼ **W.,** passing a little more than one hundred yards to the eastward of *Joe Beach Ledge,* and anchor in from one to two fathoms, between *Bass Rock* and the steamboat pier.

Vessels using the *East Channel* into Lynn pass a quarter of a mile to the southward of Shag Rocks; three hundred yards to the southward of *Bass Rock;* two hundred yards to the westward of *Old Harry Rock;* three hundred yards to the eastward of the *red buoy* on *Lobster Rocks.*

Those using the *Western Channel* pass an eighth of a mile to the westward of the *red buoy* on *Lobster Rocks*, and one hundred yards to the eastward of *White Rocks Buoy;* passing close to *Forked Point Buoy*, and leaving *Black Rocks Buoy* one hundred yards to the eastward.

Vessels bound to **Nahant** pass first about three hundred and fifty yards to the eastward, and then one hundred and fifty yards to the southward, of **Shag Rocks**; about two hundred yards to the southward of **Pea Island**; and a little more than a hundred yards to the eastward of *Joe Beach Ledge.*

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING LYNN AND NAHANT HARBORS.

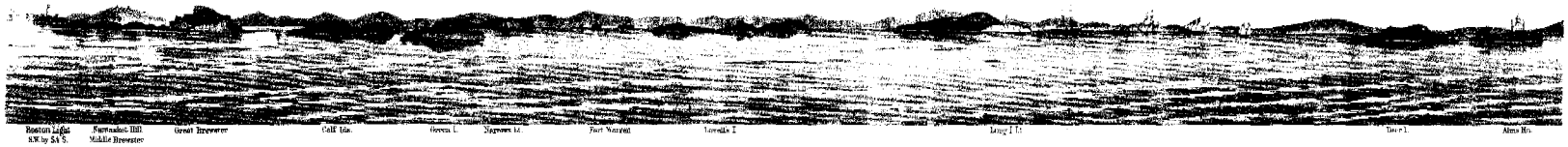
II. *Coming from Boston by Broad Sound Channel.*—When clear of the shoals off the entrance to **Boston**, in four and a half fathoms, *hard bottom*, and **Long Island Light** bears SW. by W. ½ W., two miles and a half off, **Winthrop Head** bears N W. by W. ½ W., and **Narrows Light-House** bears S. by W. ½ W., steer N. by W. ½ W. toward **Pines Point.** On this course there is nothing less than five fathoms water. When the south end of **Bass Point** bears E. ¾ S. and the eastern extremity of **Pines Point** N. ½ W., there will be four fathoms at low water; then steer N. ¾ E. until abreast of the *black buoy* off *White Rocks*, which leave to the westward about eighty yards off. Now steer N E. ½ E., and follow the directions given above for entering the *East Channel.*

III. *Coming from the southward, to enter Saugus River.*—When **Pines Point** bears N. ½ W. and **Bass Point** E. ¾ S., as above, steer for the former, leaving the *White Rocks* to the eastward one hundred and fifty yards. Continue this course, crossing the bar in four feet mean low water, until the **hotel** just to the southward of **Pines Point** bears N W. by W.; *a black spar-buoy* (No. 3) will then be abreast, and another one (No. 5) about three hundred and fifty yards ahead. Pass these buoys to the eastward, and steer N E. by E. ½ E. until **Pines Point** bears N W. ½ N., three hundred yards off; when steer N W. by N. ¾ N. three hundred and fifty yards (one-fifth of a mile) until up with the *black buoy* No. 7, and the extremity of the point is exactly abeam and about one hundred yards off; now in the mouth of the river, steer N W. by W. ½ W. until the southern end of **Tree Point** bears N E. ¾ E., passing to the southward of the *red buoy* on *Round Rock.* From this point the course up is W. by N. ½ N. until abreast of *black buoy* No. 9 and the draw in the railroad bridge bears N N W., when steer for the draw. Above this no directions can be given, nor should strangers attempt to enter this river without a pilot.

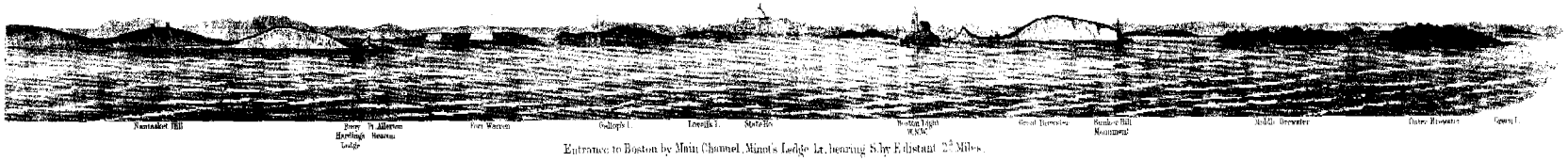
LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
	° ′ ″	° ′ ″	h m s		Feet.	
Egg Rock Lt. (off Nahant)...	42 25 58	70 53 52	4 43 35.5	F'd, red.	87	15

This light is exhibited from the keeper's dwelling, and is visible from a bearing of N E. by E. around by the eastward to S. by W. ½ W. The lens is of the fifth order of Fresnel.



Entrance to Boston by South Channel, Long Island Lt., bearing S.W. by W. ½ W. distant 5¼ Miles.



Entrance to Boston by Main Channel, Minot's Ledge Lt., bearing S. by E. distant 2½ Miles.

TIDES.

Corrected Establishment of Boston Light-House	$11^h\ 12^m$
Mean Rise and Fall of Tides	9.3 ft.
Mean Rise and Fall of Spring Tides	10.9 "
Mean Rise and Fall of Neap Tides	8.1 "
Mean Duration of Rise	$6^h\ 20^m$
Mean Duration of Fall	$6^h\ 06^m$
Mean Duration of Stand	$0^h\ 11^m$

CURRENTS.

The tidal-current in *Broad Sound* and *Lynn Harbor* is very slight, seldom reaching half a knot per hour. A station was occupied half a mile SE. from **Nahant Head**, with the following results:

Locality.	First Quarter.		Maximum.		Third Quarter.		Flood or Ebb.
	Set.	Drift.	Set.	Drift.	Set.	Drift.	
Southeast from Nahant Head.	S W. by W. ½ W.	0.3	W. by S. ½ S.	0.4	W. by N. ½ N.	0.3	Flood.
	N E. by E. ½ E.	0.2	E. ½ N.	0.4	N E. by E.	0.2	Ebb.

LIFE-BOAT STATION.

On the northeastern side of **Nahant**, near the hotel, there is a life-boat belonging to the Massachusetts Humane Society. It can be launched on either side of the peninsula.

VARIATION OF THE COMPASS.

In 1875 the magnetic variation will be 11° 15′ W. Annual increase nearly 2¾′.

BOSTON HARBOR.

This harbor lies at the western end of *Boston Bay*.

The entrance is between **Deer Island** on the north and **Point Allerton** on the south, and is three miles and three-quarters wide. From this entrance to the city of **Boston** the distance is six miles and three-quarters.

The space between **Point Allerton** and **Deer Island** is full of islands, through and among which lead the several channels into *Boston Harbor*. Of these there are six in common use, viz: *THE BROAD SOUND CHANNELS*, called, respectively, the *NORTH* and the *SOUTH CHANNELS; HYPOCRITE CHANNEL; BLACK ROCK CHANNEL; MAIN SHIP-CHANNEL;* and *BACK or WESTERN WAY*, the third and last mentioned being used only by vessels bound out. The *Main Ship-Channel* will be the first described.

MAIN SHIP-CHANNEL.

The entrance to this channel is between **Light-House Island** on the north and **Point Allerton** on the south, and is a mile and an eighth wide; which width it holds for a little over a mile and a quarter, when it contracts at the *Narrows* to a little more than a quarter of a mile. The course is, first, about **WEST** for a mile and an eighth; then **N W.** through the *Narrows*, between **Narrows Light-House** on *Spit Bar* and **George Island**,

(on which **Fort Warren** is built;) then N W. by N., between **Lovell** and **Gallop Islands**, for three-quarters of a mile, until up with **Nix Mate Beacon**; then N W. toward **Deer Island**, joining the *Broad Sound Channels;* then W. ½ N., through *PRESIDENT ROADS*, leaving **Deer Island** on the north, **Long Island** and the **Spectacle Islands** on the south; and then between N W. ½ N. and N W. by W. up to the city, passing between **Governor Island** on the north and **Castle Island** on the south. The whole distance from the entrance to the anchorage off the city is seven and a half nautical miles.

On approaching Boston main entrance from the northward or eastward, the first prominent object met with will be a bare rocky island, the easternmost of the group lying on the north side of the *Main Ship-Channel.* This is called the

OUTER BREWSTER,

and is a mass of black rock, presenting a very rugged appearance, and destitute of all vegetation. It lies EAST and WEST, is about a third of a mile long, sixty feet high at its highest part, and its shores are bold, but there are outlying reefs to the eastward of it. There is a solitary house on the north side.

MIDDLE BREWSTER.

About three hundred yards to the westward of **Outer Brewster** lies **Middle Brewster**, separated from the former by a narrow and dangerous passage, called *Flying Place*, which is full of shoals. This passage must never be attempted by strangers. **Middle Brewster** lies EAST and WEST, is a third of a mile long and about fifty feet high. It is a mass of bare rock, destitute of vegetation, but presenting a somewhat less rugged appearance than that of the **Outer Brewster.** A spit or reef makes out in a S W. direction from its western end, and a similar bar extends in a northeast direction from the **Great Brewster,** nearly meeting the former. A very shallow passage, a hundred and fifty yards wide and full of shoals, leads between the two bars. It is only available at high water, and then only by those well acquainted with the dangers.

SHAG OR EGG ROCKS.

When nearly up with the **Outer Brewster,** and bound in by the *Main Ship-Channel*, there will be seen to the southward of that island, and to the eastward of **Boston Light-House**, a group of bare rocky islets stretching in an east and west direction. These are the **Shag or Egg Rocks.** They lie on the north side of the entrance to the *Main Ship-Channel*, half a mile to the southward of the **Brewsters**, and the same distance east of **Boston Light.** The rocks are from twenty to twenty-five feet above high-water mark, extend in an east and west direction a third of a mile, (six hundred and fifty yards,) and are pretty bold-to.

LIGHT-HOUSE ISLAND.

Three hundred yards west from the western end of the **Egg Rocks** will be seen a low rocky islet of irregular shape, upon which stands a large light-tower with its accompanying dwelling-house and bell-tower. This is **Light-House Island**, and the tower is called **Boston Light-House.** It is on the north side of the entrance.

BOSTON LIGHT-HOUSE

is a circular tower of rough stone, eighty feet high, with a black lantern on top, from which is shown *a revolving white light* of the second order of Fresnel from a height of one hundred and eleven feet above the sea. The flashes are at intervals of half a minute. This light is visible in ordinary weather seventeen miles. Connected with the light-house is an air-trumpet for foggy weather. It gives blasts seven seconds long at intervals of forty-three seconds.

The bearings and distances of this **Light-House** are as follows: From—

		Miles distant.
Great Brewster, highest point, S S E.	nearly	$\frac{1}{2}$
Centre of Middle Brewster, S. by W. $\frac{1}{2}$ W.		$\frac{5}{8}$
Eastern Point of Outer Brewster, S W. $\frac{1}{4}$ W.		$1\frac{1}{8}$
Point Allerton, N. $\frac{3}{4}$ W.		$1\frac{1}{8}$
Martin Ledge, (Red Nun Buoy,) S W. by W. $\frac{3}{4}$ W.		$1\frac{3}{4}$
Bell-Buoy on Northeast Graves, S W. by S.		$2\frac{3}{4}$
Boston Ledge, (Red Nun-Buoy,) W. $\frac{3}{4}$ S.		$1\frac{1}{4}$
Bell-Buoy on Harding's Ledge, N W. $\frac{1}{8}$ W.		$2\frac{3}{8}$
Minot Ledge Light-House, N W. $\frac{1}{4}$ W.		$6\frac{3}{4}$

Its geographical position is—

Latitude - - - - - - - - - 42° 19′ 39″ N.
Longitude - - - - - - - - 70° 53′ 25″ W.

THE GREAT BREWSTER.

About eight hundred yards N N W. from **Light-House Island**, with which it is connected by a long bar or sand-spit, bare at low water, is a very peculiar-looking island, presenting a precipitous face to seaward, and about a hundred feet high. This is the **Great Brewster.** Its very peculiar shape renders it a landmark not to be mistaken, but this shape can be more readily explained by a reference to the view of the *Main Entrance.* This island lies nearly N E. and S W.; is three-eighths of a mile long; its north point is high and steep, and the land gradually rises toward the southward, attaining its greatest height about half-way between the north and south points. It then descends regularly almost to a level with the water, and then rises with an equal regularity to the south point, which is nearly as high as the north end. The whole of this sea-face is a precipitous water-worn cliff. The summit is smooth and grassy, but bare of trees.

Point Allerton, on the south side of the main entrance, presents an appearance exactly similar to the **Great Brewster** except that the north end of the point is the lower, and its highest point is about midway between its north and south ends. They appear as if they had once been joined together and afterward separated by some violent convulsion of nature.

From the southwestern end of the **Great Brewster** a long dry sand-spit or bar extends to the westward for three-quarters of a mile to the *Narrows.* This is called *Spit Bar,* or *Brewster Bar.*

POINT ALLERTON.

This very conspicuous headland is on the south side of the entrance to the *Main Ship-Channel.* It is a bare hill one hundred and fifteen feet high, presenting a steep, water-worn, cliff-like face to the eastward. Its north point being separated from the main hill by low land (as in the case of the **Great Brewster**) gives a very peculiar appearance to the head. (See view of Main Entrance.) The summit of **Point Allerton** is grassy but bare of trees. There is a life-boat station in the valley between the north point and the high cliff to the southward, and a hut of refuge on the beach, three hundred and twenty-five yards from the base of the hill. A road leads from this hut to **Hull** and **Nantasket.**

The sea-surface of this point is protected by a wall of granite.

Point Allerton is the northern end of **Nantasket Beach,** a strip of sand-beach two miles and three-quarters long, extending in a NNW. and SSE. direction, and separates the large shoal bay, called *HINGHAM BAY*, from the ocean. There are several hills on this beach, all of them bare of trees; and another life-boat station three-quarters of a mile below the hut of refuge, at the base of a very prominent hill called **Strawberry Hill.**

At **Point Allerton** the south shores of the *Main Entrance* turn abruptly to the westward. A narrow strip of beach, known as **Stony Beach,** half a mile long and forty yards wide, connects the western end of the hill with the high land of **Hull** and **Nantasket.** This land is formed by two or three regularly sloping hills, from one hundred to one hundred and twenty-five feet high, called **Nantasket Hills.** They are covered only with grass. On the highest there is an ancient earth-work of considerable size, and the remains of a redoubt may be discerned on the summit of the other. The lower hills present perpendicular cliff-like faces on their north sides, and it is proposed to protect these by a granite sea-wall such as that which protects **Point Allerton.**

The villages of **Hull** and **Nantasket** are built on the southwestern sides of these hills. From seaward parts of them are seen, but, after entering the harbor, the hills hide all but one or two of the highest steeples until to the westward of the cliffs and approaching *Nantasket Gut*, when the villages will appear over the low land.

NARROWS LIGHT-HOUSE.

On the north side of the channel, to the westward of **Great Brewster**, lies *Spit* or *Brewster Bar;* and on the western extremity of this bar will be seen **an iron screw-pile Light-House,** called **Narrows Light-House.** It shows *a fixed red light* of the fifth order of Fresnel from a height of forty-six feet above sea-level, and is visible ten miles. The **Light-House** is painted brown.

Its geographical position is

Latitude - - - - - - - - -	42° 19′ 21″ N.
Longitude - - - - - - - -	70° 55′ 10″ W.

FALSE SPIT BEACON.

Spit Bar, about three hundred yards east of the **Narrows Light-House,** sends off an arm in a southeasterly direction for an eighth of a mile, on the end of which is built a **granite beacon surmounted by an iron spindle and cage, all painted red.** This arm is *False Spit*, and the beacon is **False Spit Beacon.** In coming up *Main Ship-Channel*, when abreast of this beacon haul up to the northwestward to pass through the *Narrows.* This course leaves the **Narrows Light-House** to the eastward, and a low island entirely occupied by a granite fort to the westward. This island is

GEORGE ISLAND,

and the fort is **Fort Warren.** The island lies N. by W. and S. by E., is three hundred and fifty yards wide and over six hundred long. It is altogether occupied by the fort, which is a casemated granite work, surmounted by traverses of earth, and faced by earth-work water-batteries. The citadel or central house of the fort, which appears above the parapet when approaching it closely, is a mile and three-eighths SE. ¾ E. from **Long Island Light-House**; a mile and three-quarters W. ¼ S. from **Boston Light-House**; a little over two miles NW. by W. ½ W. from **Point Allerton**; and a mile and three-eighths NW. ¾ N. from **Nantasket Hill. Boston** is six miles (by the channel) above **Fort Warren.**

The *Black Rocks Channel* here opens to the northeastward, between **Narrows Light-House** and

LOVELL ISLAND.

This island lies on the eastern side of the *Narrows*, a quarter of a mile to the northwestward of **Narrows Light-House** and the same distance to the northeastward of **Fort Warren.** It is very irregular in shape, and not over thirty or forty feet high in its highest part, which is near the centre. Its length is a little over half a mile, and its width varies from two hundred and fifty yards (at its southern end) to five hundred, (near the middle.)

Lovell Island lies NW. and SE.; is bold-to on its southwestern side, but its eastern and northern shores are obstructed by long ledges and extensive flats. There are two or three houses on the southwestern shore, near the northern end of the island. The scheme of the Harbor Commissioners contemplates the cutting away of a portion of the western face of **Lovell Island,** where it is widest, for the purpose of widening and straightening the channel at this point.

GALLOP ISLAND.

On the western side of the channel, and directly opposite to **Lovell Island,** is **Gallop Island,** narrow and bare of trees, and with a somewhat precipitous face on its north side. It lies nearly EAST and WEST, is over eight hundred yards long, and not quite three hundred wide near its western end, where it is widest. Its eastern end is a low, narrow sand-point. The cliff and sea-face of this island are protected from the action of the water by a granite sea-wall nearly a mile long, built under the direction of the State Harbor Commissioners. It was completed in 1871. There is a group of houses and a wharf on the south side of the island, but they are not visible from the *Narrows.*

From the western end of **Gallop Island** shoal water extends in a northerly direction for three-eighths of a mile. On this is built **a large black beacon,** which will be seen a little open to the westward when passing between **Lovell** and **Gallop Islands.** This is called **Nix Mate Beacon.** **It is a pyramidal granite beacon, painted black,** having eight sides, and stands upon a large, square, granite base, marking the centre of *Nix Mate Shoal* and the junction of the *Main* with the *Broad Sound Channels.*

When nearly up with **Nix Mate Beacon** the course is NW. for **another square granite pyramid, painted red.** This is on the north side of the *Broad Sound Channels,* and is called **Deer Island Point Beacon.** It is built on the extreme southern point of **Deer Island,** which is covered at one-third flood.

DEER ISLAND.

The large island a little open to the eastward, which shows as a bare, green, smoothly-sloping hill, somewhat broken at its western end by water-worn cliffs, is **Deer Island.** The wharf at **Point Shirley** and some of the houses on that point are just visible to the westward of the cliffs, and part of the city **Almshouse** just over them. **Deer Island** lies NNW. and SSE., is nearly a mile long, and at its widest part one-third of a mile wide. Both ends of the island are low, and there are no trees except a few planted for ornamental purposes. The **Houses of Correction** and **Hospitals** occupy the western slopes of the hill, near the northern end of the island.

A channel eighty yards wide separates the northern end of **Deer Island** from **Point Shirley,** a low sandy point of the main land. This channel is called *SHIRLEY GUT,* and is sometimes used by steamers plying between **Boston** and **Nahant.**

APPLE ISLAND.

On coming abreast of Nix Mate, Deer Island Beacon will come in range with a low island about two miles and a half off, and having several large spreading trees upon it.

This is **Apple Island.** It is circular in shape, of moderate height, and about an *eighth* of a mile in diameter; lies midway between **Point Shirley** and **Governor Island,** and is surrounded by flats. The range of this island and **Deer Island Beacon** is one of the *Main Ship-Channel* marks.

After passing **Nix Mate** the channel turns to the westward between **Deer Island Beacon** on the north and a high precipitous head, with a **Light-House** on it, on the south. This head, which shows a steep water-worn cliff to the northward and eastward, is called **Long Island Point,** or **Long Island Head,** and is the northernmost point of

LONG ISLAND,

which lies on the south side of the *Main Channel,* and is about a mile and a half long and from one hundred and fifty to six hundred yards wide. It extends in a N E. and S W. direction, with an undulating surface, and is bare of trees except some ornamental groups in the neighborhood of the hotel and **Light-House.**

From the middle of the channel, after passing **Nix Mate,** this island will appear as a round hill about eighty feet high, with perpendicular faces—in other words, only **Long Island Head** will show, the rest of the island being hidden by it. On the summit appear the **Light-House** and keeper's dwelling, and the tops of the hotel buildings show over the hill.

The **Light-House** on the **Head** is an **iron tower painted white,** twenty-seven feet high, and shows a fixed white light of the fourth order of Fresnel from a height of one hundred and twenty-one feet above sea-level. It is visible sixteen miles.

The geographical position of **Long Island Light-House** is—

Latitude - - - - - - - -	42° 19′ 46″ N.
Longitude - - - - - - - -	70° 57′ 23″ W.

It bears from—

	Miles distant.
Boston State-House, S E. by E. ½ E.	5
Fort Independence, E S E.	2½
Spectacle Island, (summit of northern island,) E. ½ S.	1⅜
Bunker Hill Monument, S E. ½ E.	5⅜
Deer Island Beacon, S. by W. ½ W. nearly	⅝

Seen from the southward and eastward, **Long Island** presents quite a different appearance from the one just described. Its full length and undulating surface is then seen, and will be described in its proper place.

On passing the **Head,** a granite sea-wall will be seen facing the whole head. It is a granite facing of great strength, twenty-one hundred feet in length.

Passing **Long Island Head,** the channel continues to the westward through what is called *President Roads,* and on the port hand will appear two islands of moderate height with perpendicular faces, and lying **NORTH** and **SOUTH** from each other. These are

SPECTACLE ISLANDS,

or **The Spectacles** as they are commonly called. They lie close together, and at low water are joined by a dry sand bar. The northern island lies nearly **EAST** and **WEST,** is seven hundred yards long and sixty-five feet high, with cliff-like faces, worn by the action of the water. A group of houses is built near the southern end, where there is a low sand-point.

The southern island is nearly square, being four hundred and fifty yards in diameter. It is sixty-five feet high at its highest point, and like the northern island its faces are precipitous except on the south side, where the shore is low and sandy.

The Spectacles lie on the eastern side of the entrance to *Back or Western Way.* There is a passage between these islands and **Long Island,** often used by coasters, but it is unsafe for strangers. The water is shoal except on their north side.

THOMPSON ISLAND.

When past **The Spectacles,** on the way through *President Roads,* a large island, presenting a precipitous face to the northward and having a group of large houses on its summit, will open to the westward of them. This is **Thompson Island,** which lies off the entrance of *Neponset River* and on the western side of the entrance to *Back or Western Way.* The island lies E N E. and W S W., and is a mile long. The group of buildings visible on its highest point, surrounded by ornamental grounds, is formed by the hotel and its out-buildings. They are built near the middle of the island, where the land rises to a height of seventy-five feet. It is this hotel and buildings that are seen from the *Main Channel,* showing between **The Spectacles.** Nearly all the rest of the island is low land. It is surrounded by flats and shoals, and on its south side is nearly joined to the main land by *a long narrow sand-spit of curious shape,* which extends off in a S. by E. ½ E. direction for five hundred yards, its southern end being within seventy-five yards of the peninsula of **Squantum.**

The hotel on **Thompson Island** bears from—

	Miles distant.
Boston State-House, S E. by S. ..... nearly	3½
Dorchester Point, S E. by S. ½ S.	1⅛
Fort Independence, S. ½ W.	1¼
Spectacle Island, (summit of northern island,) W S W.	1

When fairly past **The Spectacles** the channel turns to the northwestward and passes between **Governor Island** on the north and **Castle Island** on the south.

CASTLE ISLAND,

easily recognized by **Fort Independence,** which is built upon it, is a small low island, lying about half a mile to the eastward of **Dorchester Point** and about a mile northwest of **The Spectacles. Fort Independence,** which occupies the whole of the island, is a regular work, built of granite, surmounted by sod traverses. There is a passage between **Castle Island** and **Dorchester Point,** but it is not safe for strangers. The shores of **Castle Island** are protected from the action of the sea by a strong sea-wall.

The centre of Fort Independence bears from—

	Miles distant.
Fort Winthrop, on Governor Island, S. by W. ½ W.	⅞
Deer Island Hospital, W. by S.	2¼
Long Island Light-House, W N W.	2½
Boston State House, S E. ¾ E.	2⅝
Bunker Hill Monument, S E. by S.	3⅛
Dorchester Point, (extreme south point,) E. by N. ½ N.	⅝

GOVERNOR ISLAND

lies on the north side of the channel, a little over half a mile from **Castle Island.** It is of irregular shape, about half a mile long, and about seventy feet high at its highest point, a smooth hill at its western end, surmounted by an earth-work known as **Fort Winthrop.** The southeastern part of the island is much lower, and has a few small water-batteries near the shore. Flats extend from it in an E S E. direction one mile, and are bare at low water. But an excellent channel leads between it and **Apple Island,** in which there is not less than three fathoms at low water.

Fort Winthrop bears from—	Miles distant.
Apple Island, W. by S. ½ S.	$\frac{7}{8}$
South End of Deer Island, W N W.	$2\frac{1}{2}$
Long Island Light, N W. ½ W.	$2\frac{3}{4}$
Spectacles, (north island,) N N W.	$1\frac{7}{8}$
Boston State-House, E. by S. ¾ S.	$2\frac{1}{4}$
Bunker Hill Monument, S E.	$2\frac{5}{8}$

PRESIDENT ROADS.

This wide and good anchorage, forming the *MIDDLE HARBOR OF BOSTON*, as described above, is contained between *Governor Island Flats* and *Apple Island Flats* on the north, **Deer Island** on the east, **Long Island** and **The Spectacles** on the south, and **Castle** and **Governor Islands** on the west. It is, within these limits, a mile and three-quarters long and nearly three-quarters of a mile wide.

To the westward of **Governor** and **Castle Islands** lies the *INNER HARBOR*, which includes all that portion which lies abreast of the town, up to **Charlestown** wharves.

DORCHESTER POINT.

This large, high, and well-settled peninsula forms the southeastern extremity of **Boston.** It lies EAST and WEST, and is nearly a mile long from the eastern end of **South Boston** to the water. Houses thickly cluster over the whole surface of the peninsula, and upon the highest point is a very conspicuous building with a cupola. This is the **Blind Asylum**, and is one of the marks for coming in *Hypocrite Channel.*

On the south side of **Dorchester Point** are the approaches to *Neponset River*—**Thompson Island** forming the eastern side of the entrance. On the west low marsh lands join the peninsula to the main land at **Dorchester.** On the north and northwest **South Boston** is separated from **Boston** proper by a narrow but deep channel, called *Fort Hill Channel*, leading into *South Bay.*

The City of Boston is built upon a peninsula which extends from the main land in a N E. direction, and is two miles and a half long. This peninsula lies between *Fort Point Channel* and *Charles River*—the city being washed on three sides. Immediately opposite to the northeastern extremity of **Boston**, and on the starboard side of the *Inner Harbor*, lies **East Boston,** built on

NODDLES ISLAND,

and mostly reclaimed land. The island was originally composed of salt meadow; and such portions of it as are not yet reclaimed and built upon are regularly mowed by the owners. The island lies on the east side of the harbor, and is separated from **Charlestown** by the *Mystic River*, and from the village of **Chelsea** by a narrow and shallow stream, called *Chelsea River.* Bridges connect it with the main land to the northward.

Here is the confluence of the *Charles* and the *Mystic.* The former runs to the eastward, between **Cambridge, East Cambridge**, and **Charlestown** on the north, and **Boston** on the south. Its channel is very intricate and narrow, and is crossed by several bridges. The latter, taking its rise at **Medford,** three miles and a half above its mouth, flows through a very crooked channel, but with a general direction about S E. to the eastern extremity of **Charlestown.** Here it is crossed by a bridge, called **Chelsea Bridge,** connecting **Charlestown** with **Chelsea.** At the bridge the *Mystic* runs about S S W. and joins the *Charles* at its junction with the *Inner Harbor.* Thus these three cities of **Boston, East Boston,** and **Charlestown** lie at the confluence of the *Charles* and *Mystic Rivers.*

The **United States Navy-Yard** occupies nearly all of the eastern shore-line of **Charlestown.** It is very conspicuous on account of its large ship-houses, foundries, smoke-stacks, and large granite buildings.

The *Inner Harbor* is irregular in shape and has extensive flats, but a deep channel. It is about two miles long, and at its widest part, just off **South Boston**, is a mile in width, while at its narrowest, between **Boston** and **East Boston**, it is only a quarter of a mile wide. Extensive flats fill the large bight between **Dorchester Point** and the eastern extremity of **Boston** proper, and are called *Dorchester Flats.* These flats it is proposed to reclaim and build upon, extending the wharf-line to the edge of the channel, and when this is done the *Inner Harbor* will in no place have a greater width than half a mile.

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR BY MAIN SHIP-CHANNEL.

I. *Coming from the northward.*—In approaching the *Main Ship-Channel* from the northward great care should be taken, especially in thick weather, to avoid

THE GRAVES.

These are very dangerous rocks, lying in a N. by E. and S. by W. direction, and united into one ledge at low water. The group is six hundred yards long. Four hundred and fifty yards N E. ¾ N. from the bare ledges is a small but very dangerous rock, bare at low water, called the *Northeast Ledge of the Graves,* or simply the *Northeast Grave.* This rock is *marked by a large bell-buoy painted black,* and carrying a five-hundred pound bell, which is rung by the motion of the buoy. It is placed in ten fathoms of water two hundred yards northeast from the rock, and serves to mark both the *Northeast Grave* and the bare ledges of the **Graves** proper. This bell can be heard at the distance of a mile.

The following bearings and distances of these dangerous obstructions will be found useful in avoiding them, or in going into *Boston Harbor* in thick weather, after hearing the sound of the bell.

The **Graves** proper bear from—	Miles distant.
Egg Rock Light-House, S. ½ E. ..... a little over	4¼
Hotel on Nahant Head, S. by E. ½ E.	3½
Grover's Cliff, S E. by E. ½ E.	4½
Deer Island Hospital,* EAST	4⅛
Long Island Light-House, E. by N. ½ N.	4¼
Outer Brewster, N E. by N. ¾ N.	1¼
Boston Light-House, N E. by N.	2⅓

The *bell-buoy* off the *Northeast Graves* bears from—	Miles distant.
Egg Rock Light-House, S. by E.	4
Long Island Light-House, E. by N. ¾ N.	4¾
Boston Light-House, N E. by N.	2⅞
Minot Ledge Light-House, N W. by N. ½ N.	7⅔

Passing the **Graves** the next danger met with, if bound for *Main Ship-Channel,* is

MARTIN LEDGE,

which lies on the northeast side of the approach, and is marked by a *red nun-buoy* of the second class, (No. 2.) It lies EAST from the **Outer Brewster,** distant nearly three-quarters of a mile; has sixteen feet at mean low water and fourteen at low spring

* Largest building visible.

tides. The *red nun-buoy* is placed in six fathoms just clear of the ledge, and on its eastern side, and bears SOUTH from the *bell buoy* off the *Northeast Grave*, a little over a mile and a half distant; N E. ½ N. from *Boston Ledge*, three-quarters of a mile; and N E. ½ N. from **Point Allerton** *buoy*, distant two miles.

BOSTON LEDGE.

When up with Martin Ledge another red nun-buoy will be seen on the northwest side of the channel. This is on *Boston Ledge*, which has fourteen feet at lowest tides, and lies S W. ½ S. from *Martin Ledge*, three-quarters of a mile; S E. by S. ½ S. from the eastern end of **Outer Brewster**, two-thirds of a mile; and E. by N. from **Boston Light-House**, nearly one mile and a quarter.

A *red nun-buoy* of the second class, marked No. 4, is placed in six fathoms on the southeastern side of the ledge.

THIEVES LEDGE,

or *The Thieves* as it is generally called, is not in the way of vessels bound in from the northward unless beating to windward, when they may near it on the southern tack. It has nowhere less than four and a half fathoms at lowest tides, and *is not buoyed.*

It lies E. by N. ½ N. from **Point Allerton**, distant two miles and a quarter; E. by S. ½ S. from **Boston Light-House**, distant two miles and three-eighths; N E. by N. ½ N. from **Hardings Ledge Spindle**, distant one mile and a quarter; and N W. by N. from **Minot Ledge Light-House**, four miles and three-quarters.

HARDINGS LEDGE,

or **The Hardings**, is an extensive ledge, composed of a number of bare rocks surrounded by shoal water, which lies a mile and a half from the shore and to the eastward of **Point Allerton**. It is so far to the southward, that it is not even seen by vessels coming from the northward bound in with a fair wind, but if standing to the southward of **Point Allerton**, they must beware of it.

The shoal ground of this ledge extends over a surface three-eighths of a mile long in a N E. and S W. direction, and a quarter of a mile wide in a N W. and S E. direction.

A **wrought-iron beacon**, thirty-one and a half feet high, marks the dry part of the ledge. It is surmounted by a day-mark, consisting of **a cast-iron ring or wheel four feet in diameter, set horizontally, with twelve wooden pendants five feet in length attached to the rim. The whole is painted black.** Bearings and distances are as follows:

	Miles distant.
Point Allerton Bar Buoy, N W. by W.	$1\frac{5}{8}$
Boston Light-House, N W.	$2\frac{1}{4}$
Martin Ledge, NORTH	$2\frac{3}{8}$
Graves Bell-Buoy, NORTH	4
Davis Ledge Buoy, S E. ½ E.	$4\frac{7}{8}$
Minot Ledge Light-House, S E. ½ E.	$4\frac{1}{2}$

Narrows Light and **Long Island Light** in range lead clear of **The Hardings**, to the northeastward of them.

After passing *Boston Ledge* there are no dangers met with until nearly abreast of **Boston Light-House**. Here, if beating in, do not approach the south shore too closely, to avoid

POINT ALLERTON BAR,

a ledge, with eight feet at mean low water, which makes off from the bare ledge of Point Allerton in a N N E. direction. Its northern end is nearly seven hundred yards

from the point, and on this end, in three and a half fathoms, is placed a *black nun-buoy* of the second class (No. 1) as a guide to vessels entering *Nantasket Roads.*

The dry ledge of **Point Allerton** extends off four hundred yards from the shore, and its north point is marked by a **four-sided granite pyramid surmounted by a black cone.** This is called **Point Allerton Beacon.** It is nearly three hundred yards inside of the *black buoy* on the bar, and bears from it S W. by S. ½ S. *There is no passage between them* except at high water, and then only for light-draught vessels.

LEDGES SOUTH FROM LIGHT-HOUSE ISLAND.

On the north side of the *Channel,* **Boston Light-House** should receive a berth to the northward of at least a quarter of a mile, to avoid the shoal ground on its south side. Some of the shoals are bare. *A rock, with fifteen feet at mean low water,* lies three hundred and fifty yards S. by E. from the **Light-House.**

NASH ROCK.

When abreast of **Boston Light-House** there will be seen a little to the northward, about six hundred yards off, *a red spar-buoy.* This is on *Nash Rock,* which has thirteen feet at low water and lies nearly in mid-channel. It bears from **Boston Light-House** S W. ½ W., three-eighths of a mile distant, and from **Narrows Light-House** W. by N., one mile distant. The *red spar-buoy* is marked No. 6, and is placed in twenty feet water on the south side of the ledge. There is good water on both sides of *Nash Rock.* Vessels wishing to pass to the northward of the rock must give the buoy a berth of three or four hundred yards to the southward.

When past *Nash Rock,* and standing to the westward through *Nantasket Roads,* a number of buoys will be seen ahead and on both hands. Do not allow these to confuse your judgment, for only three of them belong to this channel.

The *black nun-buoy* lying close in with the **Nantasket** shore, on the south side, is on *Toddy Rocks,* which lie six hundred yards NORTH from the **Nantasket Cliffs,** and have eleven feet close to the buoy.

The nun-buoy, painted red and black in horizontal stripes, which appears a little to the northward of the *black buoy,* and nearly in range with it when first seen, is on *Hunt Ledge,* which has twelve feet at lowest tides, and lies three hundred yards NORTH from *Toddy Rocks Buoy. The buoy is on the rock.* There is good water all around it, but vessels using the main channel do not go near it unless beating to windward.

Both of these buoys are placed for the use of vessels intending to anchor in *Nantasket Roads.*

The red nun-buoy seen nearly ahead is on the *south end of the Centurion.* The *black nun-buoy* ahead and close to the *red* one is on the *north end of the same shoal.* Vessels using the *Main Ship-Channel* pass to the *northward* of the *black buoy.* Those using *Back or Western Way* pass to the *southward* of the *red buoy. These nun-buoys are all replaced by spars in winter.*

CENTURION ROCKS,

which have twelve feet at lowest tide, lie three-eighths of a mile S E. ½ S. from **Narrows Light-House** and W. by S. ½ S. from **Boston Light-House,** a mile and an eighth distant. They are on the south side of the *Main Channel,* where it joins the *Back Channel* in *Nantasket Roads.* On the north end of the ledge is placed a *black buoy* (No. 3) to mark the *Main Channel.* It is in seventeen feet just clear of the ledge. On the south end is placed a *red buoy* (No. 2) to mark the *Back Way.* It is in fifteen feet on the southern part

of the rock. Vessels bound up the *Main Channel* sometimes pass to the southward of this buoy, and, rounding it to the westward, steer up for **Narrows Light**, leaving *George Island black buoy* on the port hand.

FALSE SPIT.

The red buoy seen on the north side of the channel, nearly in range with **Narrows Light**, is on *False Spit*, (see page 802,) the southeastern extension of *Spit Bar*. **The granite beacon bearing a red spindle and cage on top**, which appears just to the northward of the buoy, is **False Spit Beacon**, and is built on that part of the ledge which is dry at low water. The buoy is a little over one hundred yards S E. ½ S. from the beacon, is a *nun-buoy* of the third class, marked No. 8, and is placed south of the ledge in three and a half fathoms. *The nun-buoy is replaced in winter by a spar.*

GEORGE ISLAND ROCKS.

The *black buoy* which lies nearly due SOUTH from **Narrows Light-House** and a quarter of a mile to the westward of the buoy on the north end of the **Centurion** is on *George Island Rocks*, which make off in an easterly direction from **George Island** about six hundred yards. Twelve feet at mean low water is found at this distance from the southeast point of the island. The buoy is in three fathoms water on the eastern end of the ledge, and about four hundred yards S. ½ W. from **Narrows Light-House**, is marked No. 5, and is a *nun* of the third class.

A channel of four fathoms exists between this buoy and the *Centurion*. It is used by sailing-vessels when the wind is scant for the eastern passage.

The eastern shore of **George Island** *is all shoal, and must receive a good berth in passing through the Narrows.*

[*Kelly Rocks*, which formerly lay nearly half a mile S E. by E. ½ E. from **Narrows Light-House**, and *Tower Rock*, two hundred yards S W. ½ S. from the same light, have been removed by the United States Engineers. They have now not less than twenty-one feet upon them.]

After passing **Narrows Light-House** there are no dangers in the channel until past **Gallop Island** and approaching the north end of **Lovell Island**. Here a *red nun-buoy* will be seen lying off the northeast point of the island. This is on

SEVENTY-FOUR BAR,

which makes out from that point in a westerly direction for three hundred and fifty yards, and is nearly all dry at low water. The buoy is placed in seventeen feet on the western end of the shoal, and is marked No. 10. In winter it is replaced by a *spar*.

From this buoy the pier on the north side of the island bears E. ½ S., distant three hundred and fifty yards.

NIX MATE.

From the northwest part of **Gallop Island** extensive shoals stretch away to the northward a distance of eight hundred yards. Much of this is dry at low water, and on its northern point, nearly opposite to the *red buoy* on *Seventy-four Bar*, will be seen a *black spar-buoy;* and a **large stone beacon, also painted black**, will appear to the southwestward of it. The buoy is off the northeast end of a long ledge making off from the dry shoal on which the beacon is built. Ledge and shoal are known by the common name of *Nix Mate* or *Nick's Mate*. It is a very extensive and dangerous shoal. **Nix Mate Beacon** is a **granite monument with square base, surmounted by an octagonal pyramid. It is painted black**, and stands on the dry shoal a little over one hundred and fifty yards **SOUTH from its north end. Deer Island Point Beacon** in range with **Apple Island** leads clear of this shoal. (See ranges for *Ship-Channel*.)

The following bearings and distances may be useful: From **Nix Mate Beacon, Long Island Light-House** bears **WEST**, distant a little over half a mile; the pier on the north end of **Lovell Island** bears **EAST**, distant half a mile; **Narrows Light-House**, just on with southeast point of **Lovell Island**, bears S E. ¾ E., a mile and a quarter distant; west point of **Gallop Island** bears S. ¾ E., six hundred yards; **Old Quarantine Hospital on Rainsford Island** bears S W. by S. ½ S., a mile and one-fifth; **Deer Island Point Beacon** bears N W. by N., two-thirds of a mile.

Rounding *Nix Mate* the *Broad Sound Channel* is entered, and the course leads to the westward through *President Roads*. The channel is clear to the *Lower Middle*, a distance of nearly two miles; but from **Nix Mate Beacon** a shoal bar makes to the northwestward about an eighth of a mile, and on the end of this is placed a *black spar-buoy*, marked No. 9, in three fathoms water. This spit is known as the *North West Spit of Nix Mate.*

Do not approach the south end of **Deer Island** *too closely*, for a long point, dry at low water, makes off from it in a S. by W. direction for a quarter of a mile. On the end of this point is built a **four-sided granite pyramid, painted red.** The shoal is known as

DEER ISLAND POINT,

and the beacon as **Deer Island Point Beacon.** It is a guide to vessels coming in in *Broad Sound Channel*, and is also one of the *Ship-Channel* ranges. (See range for clearing *Nix Mate*, page 815.)

From this beacon **Nix Mate Monument** bears S E. by S., two-thirds of a mile; **Long Island Light-House** bears S S W., a little over half a mile; **The North Spectacle Island** bears W. by S. ½ S., a mile and a half; **Fort Independence** bears W. ¾ N., two miles and a half; **Apple Island** bears N W., two miles distant.

Long Island Head is tolerably bold, and may be safely approached within two hundred and fifty yards.

LOWER MIDDLE.

Passing through *President Roads* on the W. ½ N. course, there will be seen on the north side of the channel *a large red nun-buoy*, (in winter *a spar with two prongs.*) This is on the *Lower Middle*, a very extensive shoal, lying E S E. and W N W. and a mile in length. Portions of it are bare at mean low water. The *red buoy* is placed in seventeen feet on the eastern end of the bar, a little over half a mile **NORTH** from the **North Spectacle**, and is marked No. 6.

This buoy marks the dividing point of the channel, which here separates—one narrow but good channel, called the *North Channel*, passing along the north side of the *Lower Middle*, between it and **Governor Island Point**; the other, called the *Main Ship-Channel*, passing along the south side of the *Lower Middle*, between it and **Castle Island.** *The latter only should be used by strangers.*

This *red buoy* (No. 6.) bears from—

	Miles distant.
Deer Island Beacon, W. ½ N.	1½
Long Island Light-House, N W. by W. ¾ W.	1½

CASTLE ROCKS.

Passing the *red buoy* on the southeast end of the *Lower Middle, a black nun-buoy* in range with **Castle Island** is seen ahead. This is on *Castle Rocks*, which make off from the southeastern side of **Castle Island** in an easterly direction for nearly six hundred yards. The ledge is very shoal, three feet at low water being found one hundred yards inside of the buoy. There is no passage west of the buoy, the flats extending clear to **Dorchester Point.**

The buoy is marked No. 7, and is in eighteen feet at low water. In beating, while to the northward of this buoy do not approach **Castle Island** nearer than three hundred and fifty yards, or go inside of the buoy bearing S E. by S. ½ S. Near the north end of the island is a wharf extending out in a N E. direction. The end of this wharf is in sixteen feet at low water, and it will serve as a guide to vessels beating through. They should keep outside of the line from this wharf to the buoy. If using the lead, do not go to the westward after striking three and a quarter fathoms.

STATE LEDGE.

On the north side of the channel, nearly opposite to *Castle Rocks Buoy*, will be seen *a red nun-buoy*. This is on *State Ledge*, an obstruction formed by two small rocks lying on the south side of the *Lower Middle*, half a mile W. by N. from the southeast buoy. One of these rocks has only three feet at low water. The buoy is in seventeen feet south of the ledge, and is marked No. 8. Passing it, there will be seen ahead, also on the north side of the channel, *another red nun-buoy*. This is on the

NORTHWEST END OF THE LOWER MIDDLE.

The *Lower Middle*, as before stated, is a mile in length in an E S E. and W N W. direction, and the *North Channel* unites with the *Main Channel* at its northwest end. At this point the buoy is placed in seventeen feet water. It is a *nun-buoy of the third class, painted red*, and marked No. 10. It bears nearly NORTH from *Castle Rocks Buoy*, one-third of a mile distant, and SOUTH from **Governor Island Point**, the same distance.

When abreast of this buoy *another red nun-buoy* becomes visible. This is on

GOVERNOR ISLAND POINT,

as the shoal which extends off from the southeast end of **Governor Island** is called. Its direction is S W. by S. ½ S., its length a quarter of a mile, and it is dry at low water for half its length. The buoy is of the third class, is marked No. 12, and is placed in fourteen feet off the southwest end of the shoal and at the north point of the junction of the *North* with the *Main Channel*. Vessels using the *North Channel* will find the best water midway between this buoy and the buoy on the northwest end of *Lower Middle*.

The *North Channel*, as before stated, runs along the north side of the *Lower Middle*, which forms its southern boundary. The north boundary is formed by very extensive dry flats, quite bold, and known as

GOVERNOR ISLAND FLATS.

They extend off from the eastern shore of **Governor Island** in an E S E. direction one mile. Their eastern point is the south point of entrance to *Governor Island Channel*, which is at present the deepest channel into **Boston**, but fit only for steamers. On the north side of this eastern point is placed a *black spar-buoy* (No. 1) in three and a half fathoms.

The entrance to *Governor Island Channel* is obstructed by a *middle-ground shoal* with seven feet at mean low water. *A red spar-buoy* (No. 2) is placed on the southeast end of it, and *another of the same color*, and marked No. 4, on its northwest end. The channel passes between the *red buoy* No. 4 and the *black buoy* No. 1, on the eastern point of *Governor Island Flats*, and has nothing less than nineteen feet at mean low water. These *two red buoys* also serve as guides into *North Channel*, which leads between them and the *red buoy* on the southeast end of the *Lower Middle Ground*, the latter being passed to the northward in such cases.

UPPER MIDDLE.

When abreast of the *red buoy* on *Governor Island Point*, a *black buoy* will be seen bearing N W. ½ W. and one-third of a mile off. This is on the western side of the chan-

nel, and makes a "*four-feet spot*" on what is known as the *Upper Middle.* The buoy is a nun of the first class, painted *black*, and marked No. 9, and is replaced by a spar in winter.

The *Upper Middle* is not, strictly speaking, a middle-ground, *but a bar.* In fact, from **Castle Island** to a point one-third of a mile above *Upper Middle Buoy* the shoal water extends farther and farther from shore, encroaching upon the channel, and forming part of what is known as *South Boston* or *Dorchester Flats.* The *Upper Middle* is part of this. The bar extends nearly all the way across, and nineteen feet at mean low water is the best water that can be carried over it. But the U. S. Engineers are at present engaged in dredging a channel across it two hundred yards wide and twenty-three feet deep, which will probably be finished before the publication of this work. When completed, an unobstructed passage with three and three-quarters fathoms at lowest tides will exist from **Point Allerton** to the anchorage off **Boston.**

GLADE FLATS.

When abreast of the *black buoy* on the *Upper Middle*, there will be seen on the east side of the channel, and to the westward of **Governor Island**, a *black buoy*, (No. 7.) This buoy is placed on the northwest side of *Glade Flats*, making off from the northwest point of **Governor Island**, and properly belongs to *Governor Island Passage*, marking the point of junction of it and the main channel.

BIRD ISLAND FLATS.

A little over one hundred yards to the northwestward of the *black buoy* on *Glade Flats* there will be seen a *red buoy*, and about the same distance still farther to the northwestward a **spindle.** These are on *Bird Island Flats.*

Bird Island is an island only at low water. It is covered at half-tide, and the **spindle** marks its southeast point. This point is one-third of a mile N W. by W. from the western end of **Governor Island**, and between them passes the deep channel commonly known as the *GOVERNOR ISLAND PASSAGE.*

The spindle is iron, has a cage on top, and is painted red. The buoy is a *red spar*, (No. 14,) and is placed in fourteen feet water on the south point of *Bird Island Flats.* It is seventy-five yards S. ½ E. from the **spindle**, and is to be left to the northeastward by vessels using the *Main Channel.* This buoy should receive a good berth from vessels using *Governor Island Channel* unless of lighter draught than sixteen feet, as there is a spot with sixteen and a half feet at mean low water one hundred yards to the southward of the buoy.

SLATE LEDGE.

On the southwestern side of the channel, and nearly a mile above the *black buoy* on *Upper Middle*, (from which it bears N W. by W. ½ W.,) will be seen *a black nun-buoy.* This is on *Slate Ledge*, which lies on the northern edge of *South Boston Flats*, nearly midway between **Dorchester Point** and the *Fort Hill Channel.* It is two-thirds of a mile from the nearest shore, and is placed upon the northeast end of the ledge in seventeen feet of water. *Slate Ledge* is dry at low spring tides. There is no passage inside of it except at high water, and then only for light-draught vessels, as the extensive *South Boston* or *Dorchester Flats*, which are dry in most places at low spring tides, occupy the whole area in-shore of the *Upper Middle*, extending from **Castle Island** to the entrance to *Fort Hill Channel. The black nun-buoy* is marked No. 11. In winter it is replaced by a *black spar.*

SHOAL SPOT NORTH FROM SLATE LEDGE BUOY.

This small shoal is half a mile E S E. from the end of **Long Wharf**, and bears from the **State-House** E. by S. and from *Slate Ledge Buoy* N. ½ W. It is three-eighths of a mile

from this buoy, and is not marked in any way. It is, however, the intention of the Harbor Commissioners to dredge this portion of the channel to a depth of twenty-three feet at mean low water, in doing which they will remove this shoal as well as *Slate Ledge.*

South Boston Flats are to be filled up nearly to the edge of the channel, with the exception of a narrow channel leading along the north side of the peninsula of **South Boston.**

SHOAL SPOTS AT THE JUNCTION OF THE CHARLES AND MYSTIC RIVERS.

Nearly in mid-channel, and about two hundred and fifty yards from the northeast point of **Boston**, is a shoal spot with fifteen feet at mean low water. South of this spot two hundred yards is another with seventeen feet at low tide. The former bears N E. ½ E. from **Boston State-House**, the latter bears N E. by E. ½ E.

Vessels passing up to the **Navy-yard** or into the *Charles River* may avoid these shoals by keeping close to the line of wharves on either side, according as bound to **Charlestown** or into the *Charles River.* There are no dangers in the *Charles River* EAST of **Charlestown Bridge.** Beyond the bridge it will be necessary to take a pilot.

In the *Mystic River*, below **Chelsea Bridge**, there is a very long shoal, forming a kind of middle-ground. It makes off from the south side of the draw in the bridge in a S. by W. direction, and extends to the mouth of the river, a distance of three-quarters of a mile. A deep channel runs along its western side, along the navy-yard piers, into a kind of pocket at the north end of the yard. There is also good water on its eastern side, along the line of **East Boston** wharves. Fourteen feet at mean low water is the least water upon this shoal. There is no buoy on its southern end, but the bearings are as follows:

Bunker Hill Monument, N W. by W.; **Boston State-House**, S W. ½ W. It is about three hundred yards from either shore.

Vessels bound to **Chelsea** keep close around the line of **East Boston** wharves and hold the eastern side of the river aboard until up with the town. (See Sailing Directions, page 815.)

Above **Chelsea Bridge** the *Mystic* is a mass of flats with a narrow and crooked channel winding among them. It is crossed by three bridges between **Charlestown** and **Medford**, and it is impossible to give any sailing directions which would be intelligible. Vessels bound through the bridges must take a pilot.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BOSTON HARBOR BY MAIN SHIP-CHANNEL.

I. *Coming from the northward.*—The custom heretofore has been, when coming from the northward, to pass south of the *Thieves Ledge.* But there is no reason why the entrance should not be made to the northward of that ledge, which has five fathoms on it, and is only dangerous in rough weather. On the other hand *Hardings Ledge*, which lies on the south side of the usual entrance, is bare at low water in some places. At night it is especially recommended to pass on the north side of the *Thieves.*

To enter by this passage the course from **Cape Ann** is S W. ½ W., (heading for **Point Allerton.**) On this course, when **Boston Light-House** bears W. ½ N., a mile and a quarter distant, in ten and a half fathoms, steer W. ½ S. until it bears N. ½ W. and is a little abaft of the beam. On this course there will be not less than five fathoms and a half. Now, if intending to anchor in *Nantasket Roads*, steer W. ½ S., carrying not less than

four fathoms, which will bring up with the *red buoy* on the south end of *Centurion Rocks*. When past this buoy, if the weather be fine, haul over toward **Windmill Point**, and anchor at pleasure in from three to eight fathoms, *gravel and sand.*

But wishing to make the usual anchorage in the roads, when up with the *red buoy* on the south end of the *Centurion*, (as before,) steer W S W., carrying not less than six fathoms, until **Long Island Light** opens well clear of the southwest point of **George Island**, in eight fathoms water; then haul up for the **Light**, and anchor when **Boston Light** is well shut in behind **George Island**, in from three to four fathoms, *fine gray sand.* Heavy vessels must anchor farther to the southward than the above range, especially men-of-war drawing over twenty feet.

If bound into the harbor: When **Boston Light-House** bears N. ½ W., (as before,) steer **WEST** for the southern end of **George Island** until **Narrows Light-House** bears N W. ¾ N., in range with **Spit Beacon**. This course carries not less than four fathoms and leads up with the *black buoy* on the northwest end of the *Centurion.* Then steer N W. ½ W. for **Nix Mate Beacon**, carrying not less than four and a half fathoms passing between **Narrows Light-House** and **Fort Warren**, and when the eastern end of **Gallop Island** is nearly abeam (bearing S W. ½ S.) steer N W. by N. for the southern end of **Deer Island**, having **Nantasket Hill** to bear exactly S E. by S. On this course the least water is four and a half fathoms. When **Nix Mate Beacon** bears W. ¼ N., a quarter of a mile off, steer N W. for **Deer Island Point Beacon**, which will be in range with the extreme southwestern point of **Apple Island.** Continue this course, with not less than four and a half fathoms, and, keeping the range, pass *Nix Mate Northeast Buoy* close-to, leaving it to the westward; and when **Long Island Light** bears W S W., with six fathoms water, steer W. ½ N. into *President Roads*, carrying nothing less than four fathoms. Here anchor anywhere clear of the sailing-lines. The best anchorage is south of the line from *Nix Mate* to **Castle Island**, in from six to eight fathoms, good holding-ground.

But if bound to **Boston**, continue the course W. ½ N., passing three-eighths of a mile to the northward of the **Spectacles** until the **House of Correction** on the north end of **Deer Island** bears N E. by E. ¼ E. and the highest part of the northern **Spectacle** S E. by S. ½ S., with four and a half fathoms water. Then steer N W. ½ N., (passing *State Ledge Buoy* to the westward and *Castle Rocks Buoy* to the eastward,) and carrying four and a half fathoms, until nearly up with the *black nun-buoy* (No. 9) on *Upper Middle.* Now alter the course sufficiently to the northward to give this buoy a berth to the southwestward of seventy-five yards, and when abreast of it steer N W. ¾ N., having the westernmost pier-head in **East Boston** nearly ahead, the large brick buildings in the **Navy-yard** directly ahead, and **Bunker Hill Monument** just open to the westward of them. On this course there is not less than nineteen feet. Catch the range with **Bunker Hill Monument** and keep it, which will make the course good in spite of the tidal-current; and when **Boston State-House** bears N W. by W. ½ W. steer N W. by W., carrying four and a half fathoms, until it bears W. by N. ½ N. Here anchor in four and a half fathoms off the southern part of the town, or run in to the edge of the flats if of light draught, and anchor according to draught.

If bound into Mystic River and up to **Chelsea Wharves**: When the **State-House** bears W. by N. ½ N., (as before,) steer **NORTH** for about one-third of a mile, and then N. by W. ½ W., keeping close to the **East Boston Wharves** while passing them, and holding the east bank of the river aboard until up with the town. On the course past **East Boston Wharves** there is not less than nineteen feet at low water.

If bound to the **Navy-yard**: Steer directly for the two large buildings on **Navy-Yard Point**, run close to the point, and haul up about N E. by N. along the shore, anchoring at pleasure. On this course there is not less than four and a quarter fathoms.

If bound into Charles River: When **Boston State-House** bears W. by N. ½ N., steer N. by W. ¾ W., only keeping pretty close to the **Boston Wharves**, and round the northeast point of the peninsula into *Charles River*. On this course there is not less than twenty-one feet. If bound to **Cambridge** take a pilot.

The above courses pass a mile and a half to the southeastward of the *bell-buoy* on the *Northeast Graves;* nearly half a mile to the eastward of *Martin Ledge;* three-quarters of a mile to the northward of *Thieves Ledge;* a third of a mile to the eastward of *Boston Ledge;* a third of a mile to the southward of *Shag Rock;* nearly half a mile to the northward of *Point Allerton Bar;* one hundred and twenty yards to the southward of *Nash Rock Buoy;* fifty yards to the northward of the *black buoy on northwest end of Centurion Rock;* two hundred yards to the eastward of *George Island Rock;* two hundred yards to the westward of *Seventy-Four Bar;* fifty yards to the eastward of *Nix Mate Buoy;* a quarter of a mile to the southward of the *red buoy on the eastern end of Lower Middle;* three hundred yards to the eastward of *Castle Rocks;* two hundred yards to the southwestward of *State Ledge;* seventy-five yards to the southward of the *red buoy on northwest end of Lower Middle;* one hundred yards to the southward of the buoy on *Governor Island Point;* fifty to seventy-five yards to the eastward of *Upper Middle;* nearly a quarter of a mile to the northward of *Slate Ledge;* and about a hundred and fifty yards to the southward of the *Fourteen-Feet Shoal.*

II. *Coming from sea, from the eastward.*—If from sea, and the land off **Point Allerton** is fallen in with, bring **Boston Light-House** to bear W N W., three miles distant, and **Minot Ledge Light-House** S E. by S., four miles, when there will be ten and a half fathoms; steer W. by N. ½ N., carrying not less than five and a half fathoms. On this course **Long Island Head** and **Light-House** will be a little open to the northward. Continue it until **Boston Light-House** bears N. ½ W., with five and a half fathoms water, when, if bound to an anchorage in *Nantasket Roads*, steer W. ½ S., carrying four fathoms, until up with the *red buoy on the southeast end of Centurion Rock*, then haul over toward the **Nantasket Shore**. Or steer W S W. from the *Centurion Buoy*, carrying not less than six fathoms, until **Long Island Light** opens to the westward of **George Island**, when steer for it (about N W. ½ W.) until **Boston Light** is shut in behind **George Island**, and anchor in from three and a half to four and three-quarters fathoms.

If bound up the harbor: When **Boston Light-House** bears N. ½ W., as before, steer **WEST**, and follow the directions previously given for this channel.

The above courses pass a quarter of a mile to the southward of *Thieves Ledge* and three-quarters of a mile to the northward of *Hardings Ledge.*

DESCRIPTION OF APPROACHES TO BOSTON ENTRANCE, AS SEEN FROM THE SOUTHWARD.

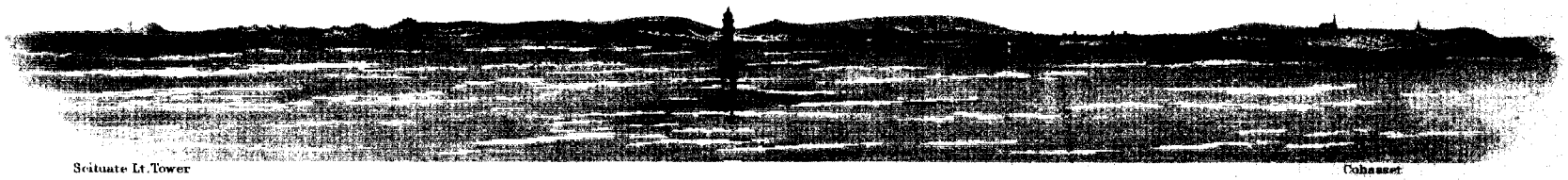
A vessel coming from the vicinity of **Cape Cod** and bound to **Boston** will notice, as a most conspicuous object on approaching the shore, a **tall gray light-tower**, apparently standing in the water at some distance from the land. This is

MINOT LEDGE LIGHT-HOUSE.

It is built on the outermost of the *Cohasset Rocks*, on what is called the *Outer Minot*, a ledge bare at low water. The **tower is of granite with a bronze lantern on top**; it is one hundred feet high, and shows a fixed white light of the second order of Fresnel from a height of ninety-two feet above sea-level. It is visible sixteen miles at sea.

The geographical position of this light is—

Latitude - - - - - - - -	42° 16′ 09″ N.
Longitude - - - - - - - -	70° 45′ 34″ W.



Minot's Ledge Light, bearing S. by E. distant 2¾ Miles.

Its bearings and distances are as follows: From—

	Miles distant.
Cape Ann, (Thatcher Island,) S W. by S. ½ S.	23½
Nahant Head, S E. by S. ½ S. nearly	11⅛
Bell-buoy on Northeast Graves, S E. by S. ½ S.	7¾
Outer Brewster, S E. ½ S.	6¾
Boston Light-House, S E. ½ E.	6¾
Point Allerton, S E. by E.	6
Thieves Ledge, S E. ½ S.	4¾
Spindle on Hardings Ledge, S E. ½ E.	4½
Strawberry Point, (east side of Cohasset Entrance,) N E. by N. ½ N.	1
Scituate Light-tower, N. by W. ⅝ W.	4⅓
Gurnet Lights, (entrance to Plymouth,) N N W.	18
Race Point Light, (Cape Cod,) N W. ½ W.	26½
Eastern extremity of Cape Cod, (above Highland Light,) N W. by W.	30

From *Minot Ledge* to the shore lie the *Cohasset Rocks*, a great number of sunken and bare ledges, through and among which winds what is called the *GANGWAY PASSAGE.* Strangers must never attempt to pass in-shore of the **Light-House.** Many of the ledges *are not buoyed*, and among those that are so marked a stranger would certainly get confused and run ashore.

STRAWBERRY POINT.

This, the most easterly point of **Boston Bay,** lies one mile S W. by S. from **Minot Ledge Light** and marks the southern limits of the bay, as **Nahant Head** forms its northern end. It will be seen, on approaching *Minot Ledge*, as a low, grassy point with groups of houses here and there upon its surface, and among them a large **Hotel.** Partly-wooded hills appear behind the point and to the eastward of it. The deep cove which opens on the west side of the point on passing to the westward of the **Light-House** is *COHASSET HARBOR.* The southern shores of this harbor are low, but there is high land back of them, which, showing over the low land, gives the appearance of a hilly country. The western shores are hilly and partly wooded, and the town of **Cohasset** is situated at the foot of these hills.

Passing to the westward, the country will be found quite hilly and wooded, and salt-works may be distinguished along the shores. Sand hillocks are also seen here and there near the beaches. The shore-line is much cut up by coves and indentations, and small islets lie at intervals along the shore.

Half a mile to the northeastward of *Cohasset Entrance* is a strip of sand-beach about three hundred and twenty-five yards long, which occupies what was formerly the entrance to a large cove of irregular shape, now known as *OLD HARBOR.* The beach having formed across the entrance, makes of the former cove a pond, very convenient for salt-works. The wind-mills of these works are a prominent feature of this part of the bay.

A little over a mile and a quarter W N W. from *Cohasset Entrance* is an oblong hill, bare of trees, and covered with grass, called **Green Hill.** It is fifty feet high. Two bare rocky islets, called the **Black Rocks,** lie N E. by E. from this hill, from a quarter to half a mile off. There is no passage between them and the hill. A life-boat station, established under the auspices of the Massachusetts Humane Society, lies E S E. from **Green Hill,** distant half a mile.

From **Green Hill** to the westward a low shore is passed, bounded by a narrow strip of sand-beach, behind which extend large salt meadows. The higher and wooded lands

lie still farther back, in no place approaching the beach nearer than three-eighths of a mile. This low shore extends from the base of **Green Hill**, a little over half a mile in a N W. by W. direction, to the foot of a group of bare hills, called the **Rockland Hills,** separating the low lands between them and **Green Hill** from the great **Nantasket Beach,** which begins at the foot of their western slopes and extends in an unbroken line two miles and three-quarters N N W. to the base of **Point Allerton.**

The **Rockland Hills** are eighty to ninety feet high, and bare of trees. Two large summer hotels, the **Atlantic** and the **Rockland Houses,** are built upon their summits, and serve to distinguish them.

When abreast of these hills, the **beacon** on *Hardings Ledge* will be plainly discernible to the northward and about a mile off. This is an **iron spindle painted black, and carrying a day-mark consisting of a ring or wheel four feet in diameter, set horizontally, with twelve wooden pendants attached to the rim.**

NANTASKET BEACH,

as before mentioned, extends in a N N W. direction to **Point Allerton.** It separates a large shallow bay, called *Hingham Bay*, from the ocean, and is at no point wider than half a mile. Several grassy hills rise at intervals just back of the beach, the most prominent of which are **Sagamore Head, White Head,** and **Strawberry Hill.**

Sagamore Head is grassy, eighty feet high, and has one or two houses upon it. Four hundred yards to the northward of it rises **White Head,** a bare hillock, only forty-five feet high.

Three hundred yards NORTH from **White Head** there is a hut of refuge, established by the Massachusetts Humane Society.

Nearly a mile farther to the northward rises a smooth green hill, bare of trees, and showing a single house on its summit. This is **Strawberry Hill,** and it is one hundred feet high. At its base is another life-boat station, established by the same society.

POINT ALLERTON.

The high bare cliff seen to the northward of **Strawberry Hill** is **Point Allerton,** the southern point of entrance to the *Main Ship-Channel.* The land, rising abruptly from the water to a peak, then descending to a small, low valley, and then rising again to a height of one hundred and fifteen feet, forms a head of very peculiar appearance. The southern part of the point is a round hill, bare of everything except grass, and with perpendicular faces. There is a life-boat station in the valley between the north point and the high cliff to the southward, and a hut of refuge on the beach three hundred and twenty-five yards from the base of the hill. A road leads from this hut to **Hull** and **Nantasket.** The sea-face of **Point Allerton** is protected by a sea-wall of granite.

On passing **Hardings Ledge Beacon, Boston Light-House** will be seen directly ahead and on with the southern end of a remarkable-looking island, which looks like **Point Allerton,** except that the high round hill is at its northern end, and the sharp peak, like the pommel of a saddle, at its southern end. But the perpendicular cliffs and the grassy surface are exactly similar to those on **Point Allerton.** This is the **Great Brewster.** (See page 801.) So exactly similar has been the action of the sea on this island and **Point Allerton** that they appear as if they had formerly been joined together and separated by some violent convulsion of nature.

To the eastward of the **Great Brewster** will appear two bare rocky islands, lying nearly EAST and WEST from each other. These are the **Middle** and **Outer Brewsters.** They are merely masses of black rock from fifty to sixty feet high, and lie on the north side of the main entrance.

HARDINGS LEDGE.

There is a large *bell-buoy* off this ledge, in deep water.

The city of **Boston**, with the dome of the state-house rising above the rest of the houses, will be seen in the distance, to the westward of the **Light-House**. The two bare islands just to the left are **Lovell** and **Gallop Islands**, and **Fort Warren** is plainly visible just to the northward of **Point Allerton**.

A description of the *Main Ship-Channel*, after passing **Point Allerton**, is given on pages 802 to 814.

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR BY THE MAIN SHIP-CHANNEL.

II. *Coming from the southward, from the vicinity of* **Cape Cod**.—In the approach to the *Main Entrance* from the southward the first danger met with is, as above mentioned,

MINOT LEDGE.

There are two rocks on this shoal, known, respectively, as the *Outer* and *Inner Minot*. On the *Outer Minot*, upon which is built the **Light-House**, there is no water at low tide. On the *Inner Minot* there is six feet at mean low tide.

Outer Minot bears N E. by N. ½ N. from **Strawberry Point**, distant one mile; from **Scituate Light-tower** N. by W. ⅝ W., four miles and three-eighths.

From the *Outer Minot*, **Point Allerton** bears N W. by W., distant six miles; **Narrows Light**, N W. by W. nearly, distant eight miles; **Boston Light**, N W. ¾ W., distant six miles and three quarters; and the eastern end of **Outer Brewster** N W. ½ N., distant six miles and three quarters.

DAVIS LEDGE.

This ledge, the northernmost of the *Stellwagen Ledges*, which lie in a NORTH and SOUTH line along the shore between **Strawberry Point** and **Scituate**, has fourteen feet at mean low water. It is three-eighths of a mile E. by S. ½ S. from **Minot Ledge Light**, and is marked by a *black nun-buoy* of the second class (No. 1) placed in five fathoms on the eastern side of the shoal.

Vessels must not attempt to go between this buoy and the **Light-House**.

After passing the *Minots*, there are no dangers in the approaches from the southward until up with the *Hardings*. Vessels may stand to within three-quarters of a mile of the shoal with safety from *Minot's Ledge* until up with the *Hardings*. There is an excellent passage between **Point Allerton** and this ledge with from three to six fathoms in it, but there are several shoal spots of sixteen feet, and on this account it is not recommended to vessels of heavy draught.

HARDINGS LEDGE,

or *The Hardings*, is an extensive ledge to the eastward of **Point Allerton** and about a mile and a half from shore. There are many rocks bare at low water and rocks awash upon it, the shoal ground extending over a surface of three-eighths of a mile square. **A wrought-iron beacon**, thirty-one and a half feet high, marks the dry part of this ledge. It is surmounted by a day-mark consisting of **a cast-iron rim or wheel four feet in diameter, set horizontally, with twelve wooden pendants five feet in length attached to the rim. The whole structure is painted black.** Bearings and distances are as follows:

	Miles distant.
Point Allerton Bar Buoy, N W. by W.	1⅝
Boston Light-House, N W.	2¼
Martin Ledge, NORTH	2⅜
Graves Bell Buoy, NORTH	4
Davis Ledge Buoy, S E. ¼ E.	4⅞
Minot Ledge Light-House, S E. ½ E.	4½

Narrows Light and **Long Island Light** in range lead clear of the *Hardings*, to the northeastward of them.

Passing the *Hardings*,

THIEVES LEDGE

is left to the northward, over half a mile off. This ledge has nowhere less than four and a half fathoms at lowest tides, and *is not buoyed.* It lies E. by N. ¼ N. from **Point Allerton**, distant two miles and a quarter; E. by S. ¼ S. from **Boston Light-House**, distant two miles and three-eighths; N E. by N. ½ N. from *Hardings Ledge* **Beacon**, distant one mile and an eighth; and N W. ¾ N. from **Minot Ledge Light-House**, distant four miles and three-quarters.

When past the *Hardings* the course is clear for the *Main Ship-Channel Entrance*, and there are no dangers until up with **Point Allerton**, when there will be seen on the port hand *a large black nun-buoy.* This is on

POINT ALLERTON BAR,

and is in three fathoms and a half at low water. The bar is a ledge, with eight feet at mean low water, making off from the bare ledge of **Point Allerton** in a N N E. direction. Its northern end is nearly seven hundred yards from the point, and it is upon this point that the buoy is placed. It is of the second class and marked No. 3. It serves as a guide to vessels entering *Nantasket Roads.*

The *dry ledge* of **Point Allerton** extends off four hundred yards from the shore, and its north point is marked by a **four-sided granite pyramid surmounted by a black cone.** This is called **Point Allerton Beacon.** It is nearly three hundred yards inside of the *black buoy* on the bar, and bears from it S W. by S. ¼ S. *There is no passage between the* **beacon** *and the buoy* except at high water, and then only for light draught vessels.

NASH ROCK.

When past *Point Allerton Bar Buoy*, the next danger met with is on the north side of the channel, and is called *Nash Rock.* When abreast of **Boston Light-House**, *a red spar-buoy* will be seen about six hundred yards off, and a little to the northward. This buoy is on the south side of the rock in twenty feet of water, and is marked No. 6.

Nash Rock has thirteen feet at low water, and lies nearly in the middle of the channel. It bears from **Boston Light-House** S W. ¼ W., and is three-eighths of a mile from it. From **Narrows Light-House** it bears W. by N., one mile distant.

There is good water on both sides of *Nash Rock.* Vessels wishing to pass to the northward of it must give the buoy a berth of three or four hundred yards to the southward.

When past *Nash Rock*, and standing to the westward through *Nantasket Roads*, a number of buoys will be seen ahead and on both bows. Do not be confused by them, for only three of them belong to this channel. The *black nun-buoy* lying close in with the **Nastasket** shore, on the port hand, is on

TODDY ROCKS,

making off as a ledge of rocks in a northerly direction for six hundred yards from the base of **Nantasket Hill.** Near the north end there is a depth of ten feet at low water, but *the ledge is awash at low tides a quarter of a mile from shore.* The *nun-buoy* is of the second class, and is marked No. 1. It is placed in twenty-two feet water on the north side of the ledge. These rocks are in the way of vessels going into *Nantasket Roads* for an anchorage, or bound to **Hingham, Weymouth, or Quincy.**

The nun-buoy, painted red and black in horizontal stripes, which appears a little to the northward of the buoy on *Toddy Rocks*, is on

HUNT LEDGE,

a detached rock, with twelve feet at lowest tides, lying three hundred yards **NORTH** from *Toddy Rocks Buoy.* The buoy is on the rock. There is good water between it and the *Toddy Rocks*, and that channel is perfectly safe even for strangers. It is much used by vessels going into the roads for an anchorage, or bound into *Nantasket Gut.*

The red nun-buoy seen a little on the port bow is on the *south end of the Centurion Rocks.* The *black nun-buoy* ahead, and close to the *red one*, is on the *north end of the same shoal.* Vessels using the *Main Ship-Channel* pass to the *northward* of the *black buoy.* Those designing to anchor in *Nantasket Roads*, or bound out from the *Back* or *Western Way*, pass to the southward of the *red buoy.*

CENTURION ROCKS,

which have twelve feet at lowest tides, lie three-eighths of a mile S E. ¾ S. from **Narrows Light-House** and one mile and an eighth W. by S. ½ S. from **Boston Light-House.** They are on the south side of the *Main Channel*, where it joins the *Back Way* in *Nantasket Roads.*

On the north end of these rocks is placed *a black buoy* (No. 5) *to mark the Main Channel.* It is in seventeen feet, just clear of the ledge. On the south end of the ledge is placed *a red buoy* (No. 2) *to mark the Back Way.* It is in fifteen feet, on the southern part of the rock. Vessels bound up *Main Channel* sometimes pass to the southward of this buoy, and, rounding it on the west side, steer up for **Narrows Light**, leaving *George Island Black Buoy* to the westward.

The *black buoy* on the north end of *Centurion Rocks* bears from—

	Miles distant.
Centre of Fort Warren, E. by S. ½ S.	⅔
Narrows Light-House, S E. ¾ S.	⅜
Boston Light-House, W. by S. ½ S.	1⅛

For dangers and sailing directions for *Main Ship-Channel*, see description of that channel, pages 809 to 816.

It must be kept in mind that the *can* and *nun-buoys* are always taken up as winter approaches, and replaced by *spar-buoys.*

SAILING DIRECTIONS
FOR APPROACHING BOSTON HARBOR, INTENDING TO ENTER BY THE MAIN SHIP-CHANNEL.

III. *Coming from the southward, from the vicinity of* **Cape Cod.**—When off the **Highlands**, the direct course for **Boston Light** is N W. by W. ½ W. Keep to the northward of this course if the wind is N E., and to the westward if it is S W., making due allowance for tide. On the flood-tide, with a leading wind, the direct course may be made good, but the ebb-tide sets on to *Minot Ledge.*

Continue on the course N W. by W. ½ W. for **Boston Light**, which will lead between the *Hardings* and *Thieves Ledge*, in eight fathoms. When **Point Allerton** bears S W. by W. ½ W., a little more than a mile distant, and **Long Island Light-House** W. by N. ¾ N., and in six fathoms, *sand and gravel*, steer W. by N. ½ N. until **Boston Light-House** bears N. ½ W. On this course there is not less than five fathoms. Then steer WEST for the southern end of **George Island** until up with the *black buoy* on the north end of the *Centurion*, and **Narrows Light-House** bears N W. ¾ N., in range with **Spit Beacon.** On this course there will not be less than four fathoms. Now steer N W. ½ W. for **Nix Mate Beacon**, and follow the directions for the *Main Ship-Channel*, on page 814.

The above courses pass one mile to the northward of **Minot Ledge Light-House**; a little over half a mile to the eastward of *Hardings Ledge* **Beacon**; half a mile to the south-

ward of *Thieves Ledge;* one-third of a mile to the northward of *Point Allerton Bar;* two hundred yards to the southward of *Nash Rock;* and fifty yards to the northward of the *black buoy* on the northwest end of *Centurion Rocks.*

If bound into Nantasket Roads: When **Boston Light House** bears N. ½ W., in five and a half fathoms, as before, steer W. ½ S., which will carry, with not less than four fathoms, up with the *red buoy* on the south end of *Centurion Rocks.* Pass to the southward of it and steer W S W., carrying not less than six fathoms, and anchor between **George Island** and **Windmill Point**; or, on the W S W. course, continue until **Long Island Light** is opened to the westward of **George Island**, and steer for the light about N W. ½ W., and anchor when **Boston Light** is shut in behind **George Island**, in from three to four fathoms, *fine gray sand;* or haul over to the **Nantasket** shore as soon as past the *Centurion Buoy*, and anchor according to draught. *The bottom is mostly gravel and sand*, and in easterly weather the open roadstead is not safe, as the sea heaves directly in. In such case vessels of heavy draught anchored in the open roads must run up the channel to *President Roads*, or enter *Nantasket Gut* and anchor under **Windmill Point.** This last can be safely done, as there is from five to six fathoms water and no obstructions.

The above courses for *Nantasket Roads* pass two hundred yards to the southward of *Nash Rock Buoy;* three hundred yards to the northward of *Hunt Ledge Buoy;* and close to the *red buoy* on the south end of the *Centurion*, leaving it to the northward.

IV. *Coming from the southward, along shore.*—When off **Scituate** be careful not to go to the westward of the **Light-Tower** bearing SOUTH, keeping in from four to six fathoms water. This will avoid the *Stellwagen Ledges.* The best directions that can be given for this approach are to bring **Scituate Tower** to bear SOUTH and steer NORTH, carrying not less than six fathoms water, until **Boston Light-House** bears N W. by W. ½ W., with fourteen fathoms; then steer for the light, carrying not less than four and a half fathoms, until **Point Allerton** bears S W. by W. ½ W. and **Long Island Light-House** W. by N. ¾ N., and in six fathoms water, when steer W. by N. ½ N., with not less than five and a half fathoms, until **Boston Light-House** bears N. ½ W.; now steer WEST for the south end of **George Island,** and follow the directions given for the *Main Channel.*

The above courses pass not less than half a mile to the eastward of *Stellwagen Ledges;* nearly three-quarters of a mile to the eastward of *Davis Ledge;* and one mile to the northward of *Minot Ledge.*

V. *In a vessel of light draught, to come along shore from the southward and enter Boston Harbor.*—**Scituate Light-House** may be brought to bear S. ½ E., when a N. ½ W. course *made good* will lead clear of *Stellwagen Ledges* and a quarter of a mile to the eastward of *Davis Ledge.* On this course the least water will be six and a half fathoms. But the bearing of **Scituate Light-Tower** must be carefully watched on the flood-tide to prevent being set by the current on the ledges, as the direction of the current of flood is nearly across the course.

When *Minot Ledge Light-House* bears W. by S. ¾ S., five eighths of a mile distant, (eleven hundred yards,) and **Boston Light** bears N W. ¾ W., and in fifteen and three-quarters fathoms, *stones, gravel, and clay*, steer N W. by W., which course made good will lead, with not less than seven fathoms, up to *Hardings Ledge* **Beacon.** Leave this about three hundred yards to the westward, and continue the course, with not less than four fathoms, until past **Point Allerton,** and **Boston Light-House** bears N. ½ W., when steer WEST, and follow the directions previously given.

The above courses pass three-eighths of a mile to the eastward and northward of *Davis Ledge Buoy;* about half a mile to the northward of *Minot Ledge Light-House;* three hundred yards to the eastward of *Hardings Ledge* **Beacon**; and four hundred yards to the northward of *Point Allerton Bar Buoy.*

In passing *Minot Ledge* be careful that the course is made good, as this ledge is very dangerous in the smoothest weather. *Neither is this channel recommended except to light-draught vessels and in the day-time*, as it is necessary to be able to see the **beacon** on the *Hardings* in order to keep on the eastern side of it. Should the flood set a vessel to the westward and the buoy be not visible, she would be very apt to go ashore on the ledges.

It may also be remarked that, with **Minot Ledge Light** bearing SE., a NW. course will lead clear of the *Hardings*.

A vessel using the in-shore passage and wishing to enter the anchorage in *Nantasket Roads*, or bound into *Nantasket Gut*, may, when on the NW. by W. course *Point Allerton Bar Buoy* bears SW. by S., (or is exactly abeam,) in five fathoms water, steer W. ¼ S., passing between *Hunt Ledge* and *Toddy Rocks* and carrying four and a half fathoms, and continue the course until **Long Island Light** opens to the westward of **George Island**, when she may steer for the **Light** and anchor.

These courses pass nearly four hundred yards to the northward of *Point Allerton Bar Buoy;* a hundred and twenty yards to the southward of the *red and black nun-buoy* on *Hunt Ledge;* and the same distance to the northward of the *black buoy* on *Toddy Rocks*.

It must not be forgotten that the *nun* and *can-buoys* are always taken up and replaced by *spar-buoys* in the winter.

General Remarks on the set of the Tidal-current in the Main Ship-Channel and its approaches.—Mariners, as a general thing, do not pay sufficient attention to ranges when entering harbors with a free wind. The velocity of the tidal-current in most of the harbors on the coast of New England demands, however, the closest attention, to prevent the vessel being carried aside from the sailing-lines. Such is the case in entering *Boston Harbor* by the *Main Ship-Channel*.

An inspection of the current table on the chart will show the direction and velocity of the current during the first quarter at half-tide, and during the last quarter of ebb and flood. Knowing these, the mariner may allow for the set of the current by changing his course, or may take a range with any two objects whose bearing from him is the same as his true course, and keeping that range will enable him to make his course good. It is always easy to catch a range ahead when on a course prescribed in sailing directions. These courses are laid down as if there were no tidal-current, and vessels must either allow for the set of the tide in shaping their courses, or must catch a head range and keep it until they have run the course out. By attention to head ranges no one need fear being set upon shoals or ledges if following the sailing-lines laid down.

In the southern part of the *Narrows* the flood-tide sets on to *George Island Rocks*, but these rocks are buoyed, which will enable vessels to avoid them.

From **Castle Island** wharf to *President Roads* a good range is a high steeple in the south part of the city, on with the north line of **Fort Independence**.

To clear the *Lower Middle* in the night, keep **Long Island Light** open about a ship's length to the northward of **Narrows Light**. The two lights in range will clear the shoal, but it is rather close work.

To pass to the northward of the *Lower Middle*, the north end of **Lovell Island** should be opened a little with the southern head of the **Great Brewster**, so as to show a gap between them.

Small vessels may go very near *Bird Island Flats* with safety by keeping **Long Island Light-House** open with the high part of **Governor Island**. This answers for day and night. But vessels of heavy draught can follow this range only at high water.

Spit Beacon, open a little to the northward of the hotel on **Long Island**, will lead

clear of *Nash Rock*, to the southward. The sailing-lines, however, give the rock more of a berth than this range.

Long Island Light, a little shut in on **Point Allerton**, or in the outer saddle, leads clear of the *Hardings*, to the southward of them.

When **Long Island Light** is open a little to the eastward of the **Graves**, the passage is clear to the eastward of the *Northeast Grave*.

To go between the **Graves** and the *Roaring Bulls*, (to the eastward of **Green Island**,) and to clear the latter, the range is to bring **Boston Light-House** a little to the eastward of the **Middle Brewster**, between it and the **Outer Brewster**, and keep this range until **Long Island Light-House** opens to the northward of **Green Island**. Being now clear of the *Bulls* and to the northward of them, haul to the westward to avoid the **Graves**.

Two miles east from **Boston Light-House** the tidal-current is weak. Between the **Light-House** and **Point Allerton** the flood sets up channel, but the ebb, coming from *Nantasket Gut*, sets somewhat across the channel toward the *Spit*. Care must be taken accordingly.

Vessels bound up through the *Narrows* must be careful, after passing **False Spit Beacon**, not to be set on to *George Island Shoals* on the flood-tide, as the current of flood sets through *Black Rocks Channel* strongly on to **George Island**.

The ebb sets strongly through the same channel, and vessels coming down from the *Narrows*, between **Lovell** and **Gallop Islands**, are in danger of being carried by it on to *Whiting Ledge* or into *Black Rocks Channel*.

The flood, setting between **Gallop** and **George Islands**, may, in light winds, carry a vessel through when going up. But here the channel-way and anchorage are good.

In the northern part of the *Narrows* the flood, during a part of its period, sets to the southward, but is not strong. The ebb, which is stronger, sets to the northward, and it requires a quick-working vessel to beat down the *Narrows* against an ebb-current.

Near *Nix Mate* the ebb will, in light winds, carry vessels out through the *Broad Sound Channels*.

GENERAL DIRECTIONS

FOR VESSELS BEATING UP BOSTON BAY AND BOUND IN BY MAIN SHIP-CHANNEL.

A vessel working up to *Boston Harbor* in the day-time may stretch safely anywhere from *Minot Ledge* to **Nahant Head** until up with the **Graves** on one side and the *Hardings* on the other. The northeast part of the *Graves* must not be approached nearer than half a mile. At the *Hardings* the **beacon** must receive a berth of at least three hundred yards to the westward and southward.

Inside of the line from the *Graves* to the *Hardings* vessels may stand to the southward to within half a mile of the shore, and to the northward to within three-quarters of a mile of the eastern end of **Outer Brewster**, or the eastern end of **Shag Rocks**. When up with **Shag Rocks**, go no farther to the northward than the range of **Boston Light-House** and **Long Island Light-House**. In passing **Point Allerton** be careful not to go inside the buoy.

In the day-time a stranger may beat up to the anchorage inside **Boston Light-House**, making short tacks and keeping two cables' lengths from **Light-House Island**. But beyond this it is not safe to go without a pilot. The description of the dangers in the channel (pages 807 to 814) includes the shoals surrounding the different islands, and will be found the best guide for keeping vessels off the shore; but the ledges and shoals in mid-channel (*some of which are not buoyed*) require the assistance of a pilot to avoid them if the vessel be of large draught.

To avoid the **Cohasset Rocks** and *Hardings Ledge*, do not go inside of **Boston Light** bearing **W N W.** When within two miles of the light do not, when standing to the northward, go beyond **Boston Light** bearing S W. ½ W., and when near **Shag Rocks** do not go to the northward of the range of **Boston** and **Long Island Lights.** For a proper understanding of the above directions, and for other guides to which it is not considered necessary here to refer, an inspection of the chart of *Boston Harbor* will be found advantageous to a stranger.

HYPOCRITE CHANNEL.

This is the first channel to the northward of the *Main Ship-Channel.* Its entrance lies between **Green Island** on the north and **Little Calf Island** on the south, and is three-eighths of a mile wide. But the channel itself is but three hundred yards wide between the curves of eighteen feet at low water. Vessels entering by this channel leave the **Brewsters** to the southward. It is not a good passage for strangers.

From **Green Island** this channel continues to the westward about a mile and a half, to what is called **Ram Head,** where it joins the *South Channel* of *Broad Sound*, and then nearly a mile farther to the westward, toward **Long Island Head**, joining the *Main Ship-Channel* off *Nix Mate.* There is not less than three and a half fathoms water throughout its entire length; but there are a good many sunken ledges, *some of which are not buoyed.*

A vessel coming from the eastward and intending to enter this channel will, when in thirteen and a half fathoms, bring **Boston Light-House** to bear W. by S. ¾ S. and **Egg Rock Light-House** N N W. The entrance to *Hypocrite* will then bear nearly WEST, and will appear as follows:

On the port bow the nearest land will be the **Outer Brewster,** which will appear quite differently from its description as given in the approaches to the *Main Ship-Channel.* (See page 800.) It will look much smaller, as this view is end on, and the high bare cliff on the north end of the **Great Brewster** will show just clear of it to the southward.

CALF ISLAND.

The low, grassy island, with its southern end on with the **Outer Brewster**, is **Calf Island.** It is about thirty feet high at its northern end, and appears somewhat undulating in outline.

This island is bare of trees, and has only one or two houses upon it, which are close to the south end, and are not seen unless the island is open to the northward of the **Outer Brewster.** This southern end is only ten or fifteen feet high.

Calf Island lies off the western end of **Middle Brewster**, from which its southern end is distant over three hundred yards. There is a shoal passage between them, unsafe for strangers. The island lies **NORTH** and **SOUTH**, and is a little over six hundred yards long. From the point of view above mentioned the north end will bear W. ¼ S., distant three miles and an eighth.

LITTLE CALF ISLAND.

To the northward of **Calf Island**, and bearing **WEST**, will appear a little island about the same height as **Calf Island**, and also bare of trees. This is **Little Calf Island**, and lies on the south side of the entrance to *Hypocrite Channel.* It is only about one hundred yards in diameter. From **Calf Island** it lies **N E. by N.**, an eighth of a mile distant, (two hundred and twenty-five yards,) and there is no passage between them.

To the northward of **Little Calf Island**, and the most northerly of the islands visible from this point of view, will appear a small island of moderate height, having an undulating surface, and faced by white-looking rocks on its eastern side. This is

GREEN ISLAND.

It lies on the north side of the entrance to this channel, bears about W. ½ N., and is in range with the high land in the middle of **Deer Island**; the high cliff on the northeast face of the latter appearing just to the northward of **Green Island.** It is bare of trees, lies nearly NORTH and SOUTH, and is an eighth of a mile long. From the **Graves** it bears W S W., one mile and a quarter distant, and from the east end of **Outer Brewster** N W. ½ N., one mile distant.

From the southern extremity extends a line of bare rocks in a S W. by W. direction about three hundred and fifty yards, its southern end marking the north side of the entrance to *Hypocrite Channel.*

Just clear of **Green Island,** to the northward, will appear the public buildings on **Deer Island**; north of these the other corporation buildings on **Point Shirley**, and the city of **Boston** in the distance, behind it. North of **Point Shirley** the high cliffs of **Winthrop Head** and **Grover Cliff** will appear. As the low land between these heads will not show at this distance, they will look like islands.

WINTHROP HEAD

is a precipitous headland one hundred feet high, and bare of trees, which is situated half a mile N N E. from **Point Shirley,** and on the west shore of *Broad Sound.* North from it runs a sand-beach an eighth of a mile wide and half a mile long, to the main land about a mile south from

GROVER CLIFF.

This headland, the most prominent point between **Point Allerton** and **Nahant Head,** lies one mile and one-fifth N. by E. from **Winthrop Head.** It is backed entirely by marsh, but the point itself is a precipitous headland, eighty feet high, and bare of trees.

POINT SHIRLEY

is the southwestern extremity of a very long and narrow peninsula, mostly sand-beach, which extends in a S. ½ W. direction from the main land south from **Chelsea Beach.** The point itself forms a sort of flat head to this peninsula, and lies N W. and S E. It is half a mile long and about one fifth of a mile wide, (three hundred and seventy-five yards.) Several public buildings are situated on this point.

DEER ISLAND,

which lies southeast from **Point Shirley**, extends in a N N W. and S S E. direction; is nearly a mile long, and a third of a mile wide at its widest part. On approaching it through *Hypocrite Channel* it will appear as a long, gently-sloping, green hill, having a flagstaff on its summit.

The houses of correction and other public buildings are situated on the north end of this island, at the northern base of the central hill, and behind the northeast cliff.

On the eastern slopes of the central hill is a life-boat station, established under the auspices of the **Massachusetts** Humane Society.

Both northern and southern ends of this island are low, covered with grass only, and there are no trees except those planted for ornamental purposes. On the north side a channel, eighty yards wide, separates the island from **Point Shirley.** This passage is known as *SHIRLEY GUT*, and is sometimes used by the steamers plying between **Boston** and **Nahant.**

On entering *Hypocrite Channel* the south point of **Deer Island** will appear ahead, and the **square, red, pyramidal beacon** south from it is **Deer Island Beacon.** This beacon is on **Deer Island Point** and must be left to the northward.

A little to the southward from it will be seen in the distance the **North Spectacle Island**, showing as a smoothly-outlined hillock with precipitous faces; and next to this, the high cliff of **Long Island Head**, with the **Light-House** and keeper's dwellings on its summit. Nearly in range with the hotel on **Long Island**, and a little south of the **Head**, **Nix Mate Beacon** may be seen; and the north end of **Lovell Island** will mark the south side of the passage.

This is the appearance presented by the *South Channel* when viewed from the entrance to *Hypocrite Channel*, between **Green** and **Little Calf Islands.**

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR BY HYPOCRITE CHANNEL.

Here, as in the approach to the *Main Channel* from the northward and eastward, the first danger met with, after passing **Nahant Head**, is

THE GRAVES.

These are very dangerous ledges of rocks, lying in a N. by E. and S. by W. direction, six hundred yards long. Four hundred and fifty yards N E. ¾ N. from the bare ledges is a small but very dangerous rock, bare at low water, called the *Northeast Ledge of the Graves*, or simply the *Northeast Grave.* This rock is marked *by a large bell-buoy painted black*, carrying a five hundred pound bell, rung by the motion of the sea, and placed in ten fathoms of water two hundred yards northeast from the rock, serving to mark both the *Northeast Grave* and the ledges of the **Graves** proper.

There are from five to nine fathoms water between the two ledges, but it is unsafe for a stranger to attempt to pass through.

The bell can be heard at the distance of a mile.

The following bearings and distances of these dangerous obstructions will be found useful in avoiding them, or in going into *Boston Harbor* in thick weather, after hearing the sound of the bell.

The Graves bear from—

	Miles distant.
Egg Rock Light-House, S. ½ E. ..... a little over	4¼
Hotel on Nahant Head, S. by E. ½ E.	3½
Grover Cliff, S E. by E. ½ E.	4½
Deer Island Hospital, EAST	4⅛
Long Island Light-House, E. by N. ½ N.	4¼
Outer Brewster, N E. by N. ¾ N.	1¼
Boston Light-House, N E. by E.	2⅓

The *bell-buoy* off the *Northeast Grave* bears from—

	Miles distant.
Egg Rock Light-House, S by E.	4
Long Island Light-House, E. by N. ¾ N.	4¾
Boston Light-House, N E. by N.	2⅞
Minot Ledge Light-House, N W. by N. ½ N.	7⅔
Entrance to Hypocrite Channel, N E. ½ E.	2

After passing the *bell-buoy* there is no danger in this channel with a free wind until between **Green** and **Calf Islands.** But with a head wind, or if the wind is scant, when obliged to stand to the southward, toward the **Brewsters**, beware of

MARTIN LEDGE,

which lies three-quarters of a mile E. ¼ N. from the **Outer Brewster**, and has sixteen feet

at mean low water and fourteen at lowest springs. It is marked by a *red nun-buoy* of the second class, (No. 2,) placed on its eastern point in six fathoms water.

This ledge lies on the south side of the approach to *Hypocrite Channel*, and bears **SOUTH** from the *bell-buoy* off the *Northeast Grave*, a mile and a quarter distant; **NE. ½ N.** from *Boston Ledge*, (in the main approach,) three-quarters of a mile; and **NE. by E. ¾ E.**, one mile and three-quarters from **Boston Light House.**

TEWKSBURY ROCK.

Between *Martin Ledge* and the **Outer Brewster** lies *Tewksbury Rock*, which has nine feet at mean low water, *and is not buoyed.* It is a small detached rock, with deep water on all sides, and lies six hundred yards **E. by N. ½ N.** from the **Outer Brewster** and nearly half a mile **W. ½ N.** from *Martin Ledge Buoy.* It is only in the way of vessels standing to the southward in the approach to this channel.

ROARING BULLS.

After passing the **Graves** and standing in toward **Little Calf Island**, there will be seen on the north side of the channel a long ledge, breaking at all times of tide. This is formed by a number of detached rocks lying in a line nearly **NE.** and **SW.**, with from three to six fathoms of water between them. They are bare in most cases at low spring tides, and extend over a surface, east and west, seven hundred yards long. The most easterly rock of the group has seven feet at mean low water and about five at low spring tides. These rocks are called the *Roaring Bulls*, and sometimes simply the *Sunken Rocks*, but the former is the proper name.

The easternmost rock bears **SW. ½ W.** from the **Graves**, half a mile distant, and **SW. ¼ W.** from the *bell-boat* on the *Northeast Grave*, nearly a mile distant. The westernmost rock bears from **Green Island E. ¼ N.**, seven hundred yards nearly. There is a wide and deep channel, with from four to eight fathoms water, between the *Bulls* and the **Graves**, and an equally clear though not so deep a passage between the *Bulls* and **Green Island.** This latter has from four to six fathoms in it. But neither of these channels is fit for strangers. (See also range for clearing the *Bulls*, in the former passage, page 824.)

The Roaring Bulls are not buoyed, but show themselves by breakers at high water in almost all weathers.

The north shores of **Middle** and **Outer Brewster** are very bold, and may be closely approached with safety.

GREEN ISLAND LEDGES.

These are the first obstructions met with after passing the **Graves** in the passage of a vessel having a free wind through this channel. The passage between **Green** and **Little Calf Islands** is very narrow, obstructed by these ledges on the north, and a sunken rock on the south side. The available channel is only an eighth of a mile in width.

The **Green Island Ledges** are a number of bare rocks, out of water at all times of tide, surrounded by many ledges, rocks bare at low water, and sunken rocks, which extend off from the island in a **SW. by W. ¼ W.** direction for nearly three hundred and fifty yards.

South and *southeast* from **Green Island** the shoal ground extends off nearly two hundred yards.

There are no buoys off these shoals, as the bare rocks serve sufficiently well as marks to avoid them. The rule is, to keep about midway between the southernmost bare rock and **Little Calf Island.**

SUNKEN ROCK NORTH FROM LITTLE CALF ISLAND.

But in following these directions beware of a sunken ledge, with nine feet at low tide, which lies N N W. from **Little Calf Island**, and about one hundred and seventy-four yards distant. It is quite bold-to, and is *not marked* in any way.

HALF-TIDE ROCKS.

When passing between **Green** and **Little Calf Islands** there will be seen ahead, and about a quarter of a mile off, *a red spar-buoy.* This is on *Half-Tide Rocks*, which lie in the middle of the passage, have two feet at mean low water, and are bare at low springs. They lie S W. by W. ½ W. from **Green Island**, a little over half a mile, and N W. by W. ¾ W. from **Little Calf Island**, five hundred yards. The buoy, marked No. 2, is placed in rocky bottom on the south side of the rock.

The channel now turns to the southward for one-third of a mile, and then runs to the westward, and on this west course a *black can-buoy* will be seen well to the northward. This is on

ALDERIDGE LEDGE,

which lies between the *South Channel* and *Hypocrite Channel*, and has only four feet at mean low water. From *Half-Tide Rocks* it bears W. ½ N., distant five-eighths of a mile, (eleven hundred yards,) and from the northeast point of **Lovell Island** N E. ¾ E., one mile distant. It is surrounded by deep water.

The buoy is *a black can-buoy* of the second class, and is placed in five fathoms *on the northwest side of the ledge, to mark the South Channel.* Vessels using the *Hypocrite Channel* must be careful, therefore, not to approach it nearer than an eighth of a mile, (two hundred and twenty-five yards.)

TWELVE-FEET ROCK.

Between *Half-Tide Rocks* and *Alderidge Ledge* there is a shoal of considerable extent, four hundred yards long in a N W. and S E. direction between the lines of three fathoms. There is a spot on this shoal exactly in range between *Alderidge* and *Half-Tide Buoys* which has twelve feet at low water and *is not buoyed.* From *Alderidge Buoy* it bears E. ½ S., three hundred and fifty yards distant.

RAM HEAD.

When past *Alderidge Ledge, a large black can-buoy* will be seen directly ahead and lying some distance off the northeast end of **Lovell Island.** This is on *Ram Head*, and marks the junction of this channel with *South Channel.* **Ram Head** is a long spit or reef, *bare at low water*, which extends N E. by N. from the northeast end of **Lovell Island** three-eighths of a mile, (nearly seven hundred yards.) The shoal water extends from the northeastern point of the dry spit three hundred yards to the northeastward, there being only six feet at mean low water half a mile N E. from the point of **Lovell Island.** *The buoy is a can-buoy of the second class, painted black*, marked No. 5, and placed in four fathoms off the northeast point of the shoal. Vessels must be careful, in stretching over toward **Lovell Island,** when beating through *South Channel*, not to go to the southward of the range of this buoy and the south end of **Green Island.**

When past *Ram Head Buoy* the *South Channel* is entered, and the course is W. by S. ½ S., with **Long Island Light** a little on the port bow. On this course enter the *Main Ship-Channel* off **Nix Mate Beacon.** There are no dangers in the *South Channel* after passing *Ram Head* if the wind be fair. With a head-wind do not stretch too far to the northward, to avoid

LITTLE FAUN BAR,

which is a bar or shoal making off from the eastern face of **Deer Island** near its southern end. It extends E. by S. from the island half a mile, and is bare at low spring tides. A *red can-buoy* of the second class (No. 4) is placed in seventeen feet off the eastern point of the shoal, and marks the western limits of the *North Channel.* The space between the *North* and *South Channels* at this point is full of shoals, having from eight to fifteen feet water upon them. For this reason a vessel of large draught should never attempt the *North Channel* without a pilot.

In stretching over toward **Deer Island**, after passing *Little Faun Buoy,* be careful not to approach the island nearer than three-eighths of a mile, (seven hundred yards,) as the water is shoal to a distance of nearly six hundred yards east of the south point of the island.

When approaching the south point of **Deer Island** be careful not to come nearer than six hundred and fifty or seven hundred yards, as *there is a rock, bare at low water,* which lies a quarter of a mile south from the point. It bears from **Deer Island Point Beacon** E. by S. ½ S., an eighth of a mile distant, (two hundred and twenty-five yards.) A good rule to avoid it is not to go to the northward of **Deer Island Beacon** bearing N W. by W. ½ W., and on with the north point of **Governor Island.**

Leaving this rock well to the northward, if the wind be fair pass to the northward of the buoy and black octagonal pyramid on *Nix Mate,* and to the southward of a **red granite pyramid** south of **Deer Island.** This is on

DEER ISLAND POINT,

a long reef making off from the south end of **Deer Island** in a S. by W. direction a quarter of a mile, and dry at low water. The **beacon** is on the extreme point of the shoal and may be approached quite closely with four fathoms water. It bears from

		Miles distant.
Nix Mate Beacon, N W. by N.		⅜
Long Island Light-House, N. by E. ¾ E.	a little over	½
Northern Spectacle Island, E. by N. ½ N.		1½
Fort Independence, (Castle Island,) E. ¾ S.		2½
Apple Island, S E.		2

Long Island Head is bold-to and may be safely approached within two hundred and fifty yards.

There are no dangers after passing **Deer Island Beacon** until through *President Roads* and up with the *Lower Middle.* On the southeast point of this shoal is *a large red nun-buoy,* (No. 6,) which will be seen on the starboard bow just after passing *Deer Island Point.*

LOWER MIDDLE

is a very extensive shoal, lying E S E. and W N W., and a mile long. Portions of it are bare at mean low water. The *red buoy* is placed in seventeen feet on the eastern end of the bar, and is a little over half a mile NORTH from the **North Spectacle.** *This buoy is replaced in winter by a red spar-buoy with two prongs.* It marks the dividing point of the channel, which here separates—one narrow but good channel (called the *North Channel*) passing along the north side of the shoal and between it and **Governor Island Point;** the other (called the *Main Ship-Channel*) passing along the south side, between the *Lower Middle* and **Castle Island.** This latter only should be used by strangers.

The *red buoy* on the *southeast* end of *Lower Middle* bears from **Deer Island Point Beacon** W. ¼ N., a mile and a half distant, and from **Long Island Light-House** N W. by W. ¾ W. a mile and a half.

CASTLE ROCKS.

Passing this red buoy, there will be seen ahead *a black nun-buoy* in range with **Castle Island.** This is on *Castle Rocks*, which make off from the southeastern side of **Castle Island** in an easterly direction nearly six hundred yards. The ledge is very shoal, three feet at low water being found one hundred yards inside of the buoy, and there is no passage on the west side of it—the flats extending clear to **Dorchester Point.**

Castle Rocks Buoy is marked No. 7, and is placed in eighteen feet at low water on the eastern point of the shoal.

In beating in or out do not, while to the northward of this buoy, approach **Castle Island** nearer than three hundred and fifty yards, or go inside of the buoy bearing S E. by S. ½ S. Near the north end of the island is a wharf extending out in a N E. direction, the end of which is in sixteen feet at low water, and will serve as a guide to vessels beating through, which should keep outside of the line from the wharf to the buoy. If using the lead, do not go to the westward after striking three and a quarter fathoms.

STATE LEDGE.

On the north side of the channel, nearly opposite to *Castle Rocks Buoy*, will be seen a *red nun-buoy.* This is on *State Ledge*, an obstruction formed by two small rocks lying on the south side of the *Lower Middle*, half a mile W. by N. from the southeast buoy. One of these rocks has only three feet at low water. The buoy is in seventeen feet south from the ledge, and is marked No. 8.

Passing it, there will appear ahead, and also on the north side of the channel, *another red nun-buoy* on the

NORTHWEST END OF LOWER MIDDLE.

The *Lower Middle*, as before stated, is a mile in length in an E S E. and W N W. direction, and the north and main channels unite at this northwestern end. At this point the buoy is placed in seventeen feet water. It is a *nun-buoy* of the third class, painted red, and marked No. 10. From *Castle Rocks Buoy* it bears NORTH, nearly one-third of a mile distant, and from *Governor Island Point* SOUTH, about the same distance.

When abreast of this buoy, *another red nun-buoy* becomes visible about four hundred yards off and on the starboard bow. This is on

GOVERNOR ISLAND POINT,

which is the shoal extending off from the southeast end of **Governor Island.** Its direction is S W. by S. ½ S., its length a quarter of a mile, and it is dry at low water for half its length. The buoy is of the third class, marked No. 12, and placed in fourteen feet off the southwest end of the shoal, and at the north point of the junction of *Main* and *North Channels.* Vessels using the *North Channel* will find the best water midway between this buoy and that on the northwest end of *Lower Middle.*

The *North Channel*, as before mentioned, runs along the north side of the *Lower Middle.* Its northern boundary is formed by very extensive dry flats, very bold-to, and known as

GOVERNOR ISLAND FLATS.

They extend off from the eastern shore of **Governor Island** in an E S E. direction one mile. Their eastern point is also the south point of the entrance to *Governor Island Channel*, which is at present the best channel up to **Boston** for heavy-draught steamers. On the north side of this eastern point is placed *a black spar-buoy* (No. 1) in three and a half fathoms, as a guide to the *Governor Island Passage.*

The entrance to *Governor Island Channel* is obstructed by a *middle-ground shoal*, with seven feet at mean low water. *A red buoy*, marked No. 2, is placed on the south-

east end of it, and another of the same color, and marked No. 4, on its northwest end. The channel passes between the *red buoy* No. 4 and the *black buoy* No. 1 on the eastern point of *GovernorIsland Flats*, and has nothing less than nineteen feet at mean low water. These two *red buoys* also serve as guides into *North Channel*, which leads between them and the *red buoy* on the southeast end of the *Lower Middle Ground*, the latter being passed to the northward in such cases.

UPPER MIDDLE.

When abreast of the *red buoy* on **Governor Island Point** *a black buoy* will be seen bearing **N W. ½ W.** and one-third of a mile off. This is on the western side of the channel, and marks *A Four-Feet Shoal* on what is known as the *Upper Middle.* The buoy is a nun of the first class, *painted black*, and marked No. 9. It is replaced by a spar in winter.

The *Upper Middle* is not, strictly speaking, a *Middle-Ground*, but *a bar.* In fact, from **Castle Island** to a point one-third of a mile above *Upper Middle Buoy* the shoal water extends farther and farther from shore, encroaching upon the channel, and forming part of what is known as *South Boston* or *Dorchester Flats.* The *Upper Middle* is part of this. The bar extends nearly all of the way across, and nineteen feet at mean low water is the best water that can be carried over it. The United States Engineers are at present (1872) engaged in dredging a channel across it two hundred yards wide and twenty-three feet deep at low water. This channel will probably be completed before the publication of this work. When so completed, a passage with three and three-quarters fathoms at lowest tides will exist from **Point Allerton** to the anchorage off **Boston.**

GLADE FLATS.

When abreast of the *black buoy* on the *Upper Middle* there will be seen on the northeast side of the channel, and to the westward of **Governor Island**, a *black buoy*, (No. 7.) This buoy is placed on the northwest side of *Glade Flats*, making off from the northwest point of **Governor Island**, and properly belongs to *Governor Island Passage*, marking the south point of junction of it and the *Main Channel.*

BIRD ISLAND FLATS.

A little over two hundred yards to the northwestward of the *black buoy* on *Glade Flats* there will appear a *red buoy*, and about the same distance still farther to the northwestward a **spindle.** These are on *Bird Island Flats.*

Bird Island is covered at half-tide. The **spindle** marks its southeast point. This point is one-third of a mile **N W. by W.** from the western end of **Governor Island**, and between them is the western entrance to the deep channel commonly known as the *Governor Island Passage.*

Bird Island **spindle is iron and has a cage on top, all being painted red.** *The buoy is a red-spar*, (No. 14,) and is placed in fourteen feet water on the south point of *Bird Island Flats.* It is seventy-five yards **S. ½ E.** from the **spindle**, and is to be left to the northeastward by vessels bound to **Boston** by the *Main Channel.* It should receive a good berth from vessels using *Governor Island Channel* unless of lighter draught than sixteen feet, as there is a spot with sixteen and a half feet at mean low water one hundred yards to the southward of the buoy.

SLATE LEDGE.

On the southwestern side of the channel, and nearly a mile above the *black buoy* on the *Upper Middle*, (from which it bears **N W. by W. ½ W.**,) a *black nun-buoy* will be seen. This is on *Slate Ledge*, which lies on the north side of *South Boston Flats*, nearly mid-

way between **Dorchester Point** and *Fort Point Channel.* It is two-thirds of a mile from the nearest shore, and is placed upon the northeast end of the ledge in seventeen feet of water. *Slate Ledge* is dry at low spring tides. There is no passage inside of it except at high water, and then only for light-draught vessels, as the extensive *South Boston* or *Dorchester Flats* (which are dry in most places at low spring tides) occupy the whole area in-shore of the *Upper Middle*, and extend from **Castle Island** to the entrance *Fort Hill Channel.*

Slate Ledge Buoy is marked No. 11. In winter it is replaced by a spar-buoy.

SHOAL SPOT NORTH OF SLATE LEDGE BUOY.

This small shoal is half a mile E S E. from the end of **Long Wharf**, and bears from the **State-House** E. by S. and from *Slate Ledge Buoy* N. ½ W. It is three-eighths of a mile from this buoy, and is not marked in any way. It is, however, the intention of the Harbor Commissioners to dredge this portion of the channel to a depth of twenty-three feet at mean low water, in doing which they will remove this shoal as well as *Slate Ledge.*

South Boston Flats are to be filled up nearly to the edge of the channel, with the exception of a narrow passage leading along the north side of the peninsula of **South Boston.**

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BOSTON HARBOR BY HYPOCRITE CHANNEL.

I. *Coming from the northeastward.*—The course from **Cape Ann** is S W. ¼ W. until **Boston Light-House** bears W. by S. ¾ S. and **Egg Rock Light-House** N N W., when there will be thirteen and a half fathoms. Then steer W. ¼ N., which course made good will lead, with not less than eight fathoms, safely through between **Green** and **Little Calf Islands.** On this course the south end of **Deer Island** will be a little open to the northward. When **Little Calf Island** is abaft the beam, bearing S. by E., and the *red buoy* on *Half-Tide Rocks* (which is almost directly in the course) is about four hundred yards off, and **Long Island Light-House** bears W. by S. and **Boston Light-House** SOUTH, in twelve fathoms, *mud and stones*, haul to the southward to avoid *Half-Tide Rocks* and *Alderidge Ledge*, and steer S W. by W. for one-third of a mile, with not less than ten fathoms water, and until **Boston Light-House** bears S. by E. ¼ E. **Deer Island Point Beacon (red beacon, built of stone)** will then bear W. ¼ N., open a very little to the southward of the southern end of **Castle Island**, and the course is W. ½ N., with not less than nineteen feet, into the *South Channel*, which enter as soon as past *Ram Head Buoy.* On this course, as soon as **Long Island Light-House** bears W S W. and **Nix Mate Beacon (black beacon, built of stone)** S W. by W. ¼ W., and in ten fathoms water, steer W. by S. ½ S., with the western edge of **Long Island Head** on with the southern end of the **South Spectacle Island**, and carrying not less than six fathoms. On this course, when **Deer Island Beacon** bears N W. and is in range with the western end of **Apple Island**, and **Long Island Light-House** bears S W. by W. ¾ W., there is six and a quarter fathoms in the *Main Ship-Channel* a quarter of a mile north from **Nix Mate Beacon.** Steer W. ½ N. through *President Roads*, and follow the directions given for the *Main Ship-Channel*, on pages 814 to 816.

The above courses pass eight hundred yards to the northward of *Martin Ledge;* about seven hundred yards to the northward of *Tewksbury Rock;* three-quarters of a mile to the southward of the south end of the **Graves**; six hundred yards to the southward of the *Roaring Bulls;* nearly two hundred yards to the eastward of *Half-Tide Rocks;* three hundred and fifty yards to the southward of the *black buoy* on *Alderidge*

Ledge, and two hundred yards to the southward of the ledge itself; about sixty yards to the northward of *Ram Head Buoy;* a quarter of a mile to the northward of **Nix Mate Beacon**; and a quarter of a mile to the southward of **Deer Island Point Beacon.**

II. *Coming from the northward, along shore.*—Vessels may pass **Egg Rock** at a distance of eight hundred yards, and when abreast of it, in thirteen fathoms water, steer S. by E., carrying not less than fourteen fathoms, until abreast of the *bell-buoy* off the *Northeast Grave.* Pass half a mile to the eastward of this buoy, and continue the course until **Long Island Light-House** bears W. by S. ¼ S. and **Boston Light-House** just opens from behind **Outer Brewster,** bearing S W. ½ W. The depth will be fourteen fathoms, hard bottom. Thence the course is S W. by W. ¾ W., carrying not less than seven fathoms, until **Long Island Light-House** is in range with **Little Calf Island** and bearing W. ¾ S., and **Boston Light-House** almost in range with the eastern point of **Middle Brewster** on a bearing of S W. by S. ¼ S. Here there will be ten fathoms; and thence the course is W. ¼ N., with not less than eight fathoms, through *Hypocrite Channel,* until within four hundred yards of *Half-Tide Rocks Buoy* and **Long Island Light** bears W. by S., with twelve fathoms, *mud and stones;* then steer S W. by W., following the directions given for this channel.

These courses pass half a mile to the eastward of the *bell-buoy* on *Northeast Grave;* three-eighths of a mile (six hundred and fifty yards) to the southward of the south end of the **Graves**; about six hundred yards to the southward of *Roaring Bulls;* and nearly two hundred yards to the southward of **Green Island Ledges.**

III. *Coming from sea, from the eastward.*—When in thirteen and a half fathoms, bring **Boston Light-House** to bear W. by S. ¾ S., and **Egg Rock Light-House** to bear N N W., and steer W. ¼ N., and follow the directions given for this channel.

Hypocrite Channel is not recommended for the use of strangers except in cases of extreme necessity. In view of such a case, the bearings of **Long Island Light** and **Boston Light** are given in the sailing directions at the turning-points in the channel. But strangers will rarely have occasion to use this passage; the safe and convenient *South Channel* being just to the northward of the entrance to *Hypocrite Channel,* and the *Main Channel Entrance* only a mile to the southward.

Tidal-Current.—In this channel the tidal-currents of flood and ebb set in the direction of the channel.

Ranges.—Keeping any part of the **Graves** open to the southward of **Green Island** clears *Half-Tide Rocks.*

THE BROAD SOUND CHANNELS.

Besides *Shirley Gut* there are two channels which lead into *Boston Harbor* from *Broad Sound.* The westernmost of these, which passes within less than half a mile of **Deer Island,** is called the *North Channel.* It is shoal and full of dangers, and is not fit for strangers. The eastern channel is called the *South Channel,* and is almost universally used by coasters of all sizes coming into **Boston** from the northward and northeastward.

SOUTH CHANNEL,

which is easy of access and has plenty of water at half-flood for vessels of the largest draught, comes into *Broad Sound* to the westward of **Green Island.** It is short and straight; its range is perfect, and strangers may resort to it with safety. The course in is S W. by W. ¼ W. for **Nix Mate Beacon** until past *Ram Head Buoy.* Then the channel turns to the westward and runs between **Deer Island** and **Long Island** into *President Roads.*

Vessels of light draught often steer S W. by W. for **Long Island Light,** crossing the shoals between the *North* and *South Channels.* When coming from the vicinity of **Cape**

Ann and intending to enter by the *South Channel*, the course is S W. by W. for **Long Island Light** until **Egg Rock Light** bears N. by E. ¾ E., when steer to the southward until **Nix Mate Beacon** is on with the middle of the northern and highest part of the **Blue Hills**, which is the range for the channel. From this position the entrance is easily recognized by a stranger by referring to the view.

The channel will appear open between **Long Island Head** and a long high island, with a gently-sloping green surface, bare of trees, but having a flagstaff on its summit, toward its eastern end. **Long Island Head** is easily recognized by its bold, bare, precipitous face, on which the **Light-House** and keeper's dwelling are seen. The other island, with the gently-sloping hill, is **Deer Island.** The hill on **Deer Island** appears to be joined to another at its northern end, which has an abrupt descent, forming a precipitous face. Over this high bluff will appear the public buildings. Both hills are on **Deer Island**, the low land connecting them not being visible at this distance.

To the northward of **Deer Island** will be seen *Shirley Gut*, open; and the low sandy point, with houses upon it, which lies on the north side of the opening, is **Point Shirley.** If the day be clear, **Fort Winthrop** on **Governor Island** may be seen over the north end of the point. The fort will appear as a square earth-work on a high smooth hill. To the northward of **Point Shirley** the high bare cliff which arises from the water, appearing like an island, is **Winthrop Head.** It is joined to **Point Shirley** by a strip of beach, not visible at this distance. The city of **Boston**, with the dome of the **State-House** in the centre, will show to the northward of this head.

If the day be clear, there may be seen in the distance, towering above the low hills that are visible to the northward of the city, a slim shaft or tower, looking like a tall gray chimney. This is **Bunker Hill Monument.** Some distance to the northward will appear a high bare cliff, apparently rising from the water. This is **Grover Cliff,** at the southern end of **Chelsea Beach.** Beyond this the land runs away toward **Lynn,** and then around to **Nahant Head.**

To the southward of **Deer Island** will be seen **Long Island**; then **Lovell Island** in range with **Gallop Island**; then the white walls of **Fort Warren** in the distance; then **Green Island** and **Little Calf Island** at the entrance to *Hypocrite Channel;* then the high, bare, precipitous head of the **Great Brewster**, presenting a very singular appearance, (see view;) then **Middle Brewster**, showing as a bare rocky island, and behind it **Nantasket Hill**, with a couple of steeples rising above it; and **Boston Light-House** will be in range with the eastern end of the **Middle Brewster.**

The channel being open from this bearing, steer in for *Nix Mate*, which course leads safely in.

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR BY THE SOUTH CHANNEL.

After passing **Nahant Head**, there are no dangers encountered in crossing *Broad Sound* until approaching the

GRAVES.

These are very dangerous rocks, lying in a N. by E. and S. by W. direction, and united into one ledge at low water. The group is six hundred yards long. Four hundred and fifty yards N E. ¾ N. from the bare ledges is a small but very dangerous rock, bare at low water, called the *Northeast Ledge of the Graves,* or simply the *Northeast Grave.* This rock is marked by a *large bell-buoy, painted black*, and carrying a large bell, which is rung by the motion of the sea. It is placed in ten fathoms water two

hundred yards northeast from the rock, and serves to mark both the *Northeast Grave* and the bare ledges of the *Graves* proper. This bell can be heard at the distance of a mile.

The following bearings and distances will be found useful in avoiding them, or in going into **Boston** in thick weather, after hearing the sound of the bell:

The *bell-buoy* off the *Northeast Grave* bears from—

	Miles distant.
Egg Rock Light-House, S. by E.	4
Long Island Light-House, E. by N. ¾ N.	4¾
Boston Light-House, N E. by N.	2⅞
Minot Ledge Light-House, N W. by N. ½ N.	7⅔

The *bare ledges* of the *Graves* proper bear from—

Egg Rock Light-House, S. ½ E. a little over	4¼
Hotel on Nahant Head, S. by E. ½ E.	3½
Grover Cliff, S E. by E. ½ E.	4½
Deer Island Hospital, EAST	4⅛
Long Island Light-House, E. by N. ½ N.	4¼
Boston Light-House, N E. by N.	2⅓

Next to the westward of the *Graves* lie the

ROARING BULLS,

but these are not in the way unless standing to the southward on a wind. In such case do not go to the southward of the line between **Long Island Light** and the *bell-buoy* on the *Northeast Grave*, or **Long Island Light** bearing W. by S. ¾ S. And if of heavy draught do not, when near **Green Island**, go farther to the southward than **Long Island Light** bearing W S W., to avoid *Maffitt Ledge*, which has eighteen feet at low water.

The *Roaring Bulls* are a number of small rocks lying in a line nearly N E. and S W., with from three to six fathoms between them. Several of them are bare at low spring tides, and they extend over a surface EAST and WEST seven hundred yards long. The most easterly rock has five feet at lowest tides, and bears S W. ½ W. from the *Graves*, half a mile distant. The westernmost rock bears E. ¼ N. from **Green Island**, nearly seven hundred yards distant. There is a wide and deep channel between the *Bulls* and the **Graves**, and one equally good but not so wide between them and **Green Island**. Neither channel should be attempted by strangers. (See directions for clearing the *Bulls*, in the former passage, page 824.)

There is no buoy on these ledges.

MAFFITT LEDGE,

before referred to, is a detached rock, with eighteen feet at mean low water, which lies a quarter of a mile N W. by N. ¼ N. from **Green Island** and on the south side of the channel. From it **Deer Island Point Beacon** bears W. by S., two miles and three-quarters distant. There is good water all around it, and vessels of light draught pay attention to it. *It is not buoyed.* A quarter of a mile to the westward of it lies

COMMISSIONERS LEDGE,

another detached rock, with fifteen feet at mean low water. It lies on the south side of the channel, and bears WEST from *Maffitt Ledge* and half a mile N W. by W. ¼ W. from **Green Island**, with six fathoms water on all sides of it. ***It is not buoyed***, but to avoid it, when in its vicinity, do not go to the southward of **Long Island Light** bearing W S W., or **Nix Mate Beacon** bearing S W. by W. ¼ W.

DEVIL BACK,

or *Devil Limb* as it is sometimes called, is the next danger met with, and is *marked by a black can-buoy.* This buoy will be seen to the southward, about half a mile off, from abreast of **Green Island.** It is a very dangerous ledge, three or four hundred yards long, bare in places at extreme low tide, and lies on the south side of this channel, in a N E. by N. and S W. by S. direction. The buoy is placed on the north side of the ledge, and is a black can of the first class, marked No. 1. It bears W. ¾ N. from **Green Island,** five-eighths of a mile (eleven hundred yards) distant, and from **Long Island Light** E. by N. ½ N.

When up with the buoy on *Devil Limb*, there will be seen on the south side of the channel *two black can-buoys* at distances of half a mile and a mile, respectively. The nearest is on

ALDERIDGE LEDGE,

a sunken ledge lying between this channel and *Hypocrite Channel*, and which has only four feet at mean low water. From the *black buoy* on the *Devil Back* it bears S W. by W., half a mile distant; from **Deer Island Point Beacon** E. ¾ N.; and from **Long Island Light-House** E. by N. ½ N. There are from five to six fathoms water all around it, but vessels beating up must not go so far to the southward as to bring this buoy in range with **Nix Mate Beacon,** to avoid the shoal ground of *Twelve-Feet Rock,* which lies between this ledge and *Half-Tide Rocks* in the *Hypocrite Channel.* (See also page 829.)

The *black buoy* on *Alderidge* is *a can of the second class*, marked No. 3, and placed in five fathoms on the *northwest side of the shoal.* It may be passed close-to, but the sailing-lines leave it well to the southward.

The other *black buoy* is on

RAM HEAD,

a long spit or reef, bare at low water, extending off for three-eighths of a mile (nearly seven hundred yards) N E. by N. from the northeast end of **Lovell Island.** From the end of this dry spit the water is shoal for three hundred yards to the northeastward, there being only six feet at mean low water half a mile N E. from the point of **Lovell Island.** The buoy is *a can of the second class, painted black*, marked No. 5, and is placed in four fathoms off the northeast point of the shoals.

Vessels must be careful, when to the westward of this buoy and stretching over toward **Lovell Island,** not to go to the southward of this buoy a little open with the south point of **Green Island** until so far to the westward as to fairly open the *Narrows,* (between **Lovell** and **Gallop Islands.**)

In passing *Alderidge Ledge Buoy* and that on *Ram Head* there will be seen to the northward *two red can-buoys,* **and a conical beacon of stone with an iron spindle and cage on top,** also **painted red.** These are all in the *North Channel. Do not approach the buoys nearer than half a mile,* nor go nearer to the beacon than one mile. The easternmost of these buoys is on the eastern end of *Great Faun Bar*, which makes off in an easterly direction from the eastern side of **Deer Island** a little more than a mile. The buoy marks the western limits of the *North Channel, and between it and the South Channel there are shoal soundings.* Eleven feet at low water is found between it and *Devil Back Buoy,* about five hundred yards from the former; and nine feet at mean low water between it and *Alderidge Ledge Buoy*, over eight hundred yards from *Great Faun Buoy.* Vessels, therefore, when standing to the northward on or near the line of *Great Faun* and *Alderidge Buoys*, cannot count on more than eighteen feet at high water if to the northward of **Nix Mate Beacon** bearing S W. by W., or **Long Island Light** bearing W S W.

The red conical beacon which is about thirteen hundred yards to the westward of the *Great Faun Buoy* is called **Great Faun Bar Beacon; and is built upon the dry**

part of the bar, near its eastern end. This part of *Great Faun Bar* makes off in an E. ½ N. direction from the middle of **Deer Island**, and is dry at low water to a distance of thirteen hundred yards—or three hundred and fifty yards beyond the beacon.

This **beacon is red, and has a square granite base surmounted by a granite cone, with iron spindle and cage on top.** It must not be approached even by vessels using the *North Channel* except at high water, and then not nearer than five hundred yards.

The *red can-buoy* to the westward of the buoy on *Great Faun Bar*, and half a mile to the southward of the **beacon**, is on *Little Faun Bar*, also on the west side of the *North Channel*. This buoy is a can of the second class, marked No. 4, and placed in sixteen feet off the eastern end of *Little Faun Bar*, which makes off in an easterly direction half a mile from the southeast point of **Deer Island**. This bar is bare at low spring tides to within two hundred and fifty yards of the buoy.

Vessels beating up the *South Channel at high water* cannot go to the northward of the line of *Little Faun Buoy* and the *black buoy* on *Alderidge Ledge* and carry over eighteen feet. A good rule is, when not drawing over fifteen feet, if it be half-flood, to go about (when to the westward of *Ram Head Buoy*) as soon as **Deer Island Point beacon** is brought on with the north end of the **Spectacles**. There is another range marking the limits of the beating channel in this vicinity. Do not stand to the westward of **Long Island Light** bearing S W. until to the westward of *Nix Mate*. After that only look out for *Deer Island Point* and the shoal which lies an eighth of a mile E. by S. ½ S. from the **beacon**. (See also page 830.) The channel is clear between the **beacon** and **Long Island Light**.

On the course through *South Channel*, when past *Ram Head Buoy* and approaching *Nix Mate* there will be seen, about three-quarters of a mile to the southward and westward, *two nun-buoys*. The easternmost, which is *red*, is on *Seventy-Four Bar*, west of the north end of **Lovell Island**, and on the eastern side of the northern entrance to the *Narrows*. The other, which is *black*, is on the shoal making off from **Nix Mate Beacon**. Both buoys are in the *Main Ship-Channel* at the northern end of the *Narrows*. Here, between **Deer Island** and *Nix Mate*, the *South Channel* unites with the *Main Channel*.

NIX MATE.

The channel, after passing *Ram Head*, leads to the westward between **Deer Island** and **Long Island**. On the north side of the channel will be seen **Deer Island Point Beacon, painted red.** On the south side of the channel will be seen **Nix Mate Beacon, painted black.** *Nix Mate* is the name given to the dry part of the extensive shoal which stretches from the northwestern part of **Gallop Island** eight hundred yards to the northward. **The beacon is an eight-sided granite pyramid, rising from a large square base, and painted black.** From it a shoal makes out in a northeast direction to the *black nun-buoy* before mentioned, and which is called *Nix Mate Buoy*. It is marked No. 9.

Deer Island Point Beacon in range with **Apple Island** leads clear of this shoal.

From **Nix Mate Beacon, Deer Island Point Beacon** bears N W. by N., two-thirds of a mile distant, and **Long Island Light-House** WEST, a little over half a mile.

DEER ISLAND POINT.

This is a long reef or point making off from the south end of **Deer Island** in a S. by W. direction a quarter of a mile; it is dry at low water, and on its south point is built a **pyramidal beacon of granite, painted red.** It may be approached quite closely. This **beacon** bears from

	Miles distant.
Nix Mate Beacon, N W. by N.	⅔
Long Island Light-House, N N E. a little over	½
Little Faun Buoy, S W. by W. ½ W.	⅔
Apple Island, S E.	2

After passing **Deer Island** there are no obstructions until past *President Roads*, when there will be seen, to the northward, a large *red nun-buoy*. This is on the southeast end of the

LOWER MIDDLE,

a long shoal, lying E S E. and W N W., and is a mile long. Portions of it are bare at mean low water. The *red buoy* is placed in seventeen feet on the eastern end of the bar. It is a little over half a mile **NORTH** from the **North Spectacle**. *This buoy is replaced in winter by a red spar-buoy with two prongs.* It marks the dividing point of the channel, which here separates—one narrow but good channel (called the *North Channel*) passing along the north side of the shoal and between it and *Governor Island Point;* the other (called the *Main Ship-Channel*) passing along the south side, between the *Lower Middle* and **Castle Island**. This latter, only, should be used by strangers.

The *red buoy* on the southeast end of *Lower Middle* bears from—

	Miles distant.
Deer Island Point Beacon, W. ½ N.	1½
Long Island Light-House, N W. by W. ⅝ W.	1½

CASTLE ROCKS.

When past the southeast end of *Lower Middle a black nun-buoy* will be seen ahead, in range with **Castle Island**, and a *red nun-buoy* on the starboard bow. The former is on *Castle Island Rocks,* the latter on *State Ledge.* The channel leads directly between them.

Castle Rocks make off from the southeastern side of **Castle Island** in an easterly direction nearly six hundred yards. The ledge is very shoal—three feet at low water being found one hundred yards in-shore of the buoy. There is no passage between it and the shore—the flats extending to *Dorchester Point.*

Castle Rocks Buoy is marked No. 7. It is placed in eighteen feet water on the eastern point of the shoal. In beating in or out do not, while to the northward of this buoy, approach **Castle Island** nearer than three hundred and fifty yards, or go inside of the buoy bearing S E. by S. ¼ S. Near the north end of the island is a wharf extending out in a N E. direction. The end of this wharf is in sixteen feet at low water, and will serve as a guide to vessels beating through. They should keep outside of the line from this wharf to the buoy. If using the lead, do not go to the westward after striking three and a quarter fathoms.

STATE LEDGE.

The *red buoy* on the starboard bow, as before mentioned, is on *State Ledge,* an obstruction formed by two small rocks lying on the southern edge of the *Lower Middle,* half a mile W. by N. from the southeast buoy. One of these rocks has only three feet at low water. The buoy is in seventeen feet south from the ledge, and is marked No. 8. Passing it, there will be seen *two red nun-buoys* on the starboard bow. The nearest, which is about six hundred yards off, is on

NORTHWEST END OF LOWER MIDDLE.

The *Lower Middle,* as before stated, is a mile in length in an E S E. and W N W. direction, and the north and main channels unite again at this northwestern end. At this point the buoy is placed in seventeen feet water. It is a nun of the third class, painted *red,* and marked No. 10. Vessels using the *North Channel* leave it to the southward; those using the *Main Channel* leave it to the northward.

This buoy bears from *Castle Rocks Buoy* **NORTH,** one-third of a mile, and from *Governor Island Point* **SOUTH,** about the same distance.

The *second red nun-buoy* (which is about four hundred yards northwest from the buoy on the *upper end of Lower Middle*) is on

GOVERNOR ISLAND POINT,

which is the shoal extending off from the southeast end of **Governor Island.** Its direction is S W. by S. ½ S., its length a quarter of a mile, and it is dry at low water for half its length. The buoy is of the third class, is marked No. 12, and is placed in fourteen feet water off the southwest end of the shoal, and at the north side of the junction of the *North* and *Main Channels.* Vessels using the *North Channel* will find the best water midway between this buoy and that on the northwest end of *Lower Middle.*

The north side of the *North Channel* is formed by dry flats extending off from **Governor Island** in an E S E. direction, called

GOVERNOR ISLAND FLATS.

They are a mile in length. Their eastern point is also the south point of the entrance to *GOVERNOR ISLAND CHANNEL,* which is, at present, the deepest channel up to **Boston** for steamers of heavy draught. On the north side of this eastern point is placed *a black spar-buoy* (No. 1) in three and a half fathoms, as a guide to *Governor Island Channel.*

The entrance to *Governor Island Channel* is obstructed by a middle-ground shoal with seven feet at mean low water. A *red buoy,* marked No. 2, is placed on the southeast end of it, and another of the same color, and marked No. 4, on its northwest end. The channel passes between the *red buoy* No. 4 and the *black buoy* No. 1 on the eastern point of *Governor Island Flats,* and has nothing less than nineteen feet at mean low water. *These two red buoys* also serve as guides into *North Channel,* which leads between them and the *red buoy* on the southeast end of the *Lower Middle Ground,* the latter being passed to the northward in such cases.

UPPER MIDDLE.

When abreast of the *red buoy* on *Governor Island Point a black buoy* will be seen bearing N W. ½ W., and about one-third of a mile off. This is on the western side of the channel, and marks *a four-feet shoal* on what is known as the *Upper Middle.* The buoy is a *nun* of the first class, *painted black,* and marked No. 9. It is replaced by a *spar* in winter.

The *Upper Middle* is not, strictly speaking, a middle-ground, but a bar. In fact, from **Castle Island** to a point one-third of a mile above *Upper Middle Buoy* the shoal water extends farther and farther from shore, encroaching upon the channel, and forming part of what is known as *South Boston* or *Dorchester Flats.* The bar extends nearly all the way across, and nineteen feet at mean low water is the best water that can be carried over it. The United States Engineers are at present engaged (1872) in dredging a channel across it two hundred yards wide and twenty-three feet deep at low water. This channel will probably be completed before the publication of this work. When so completed an unobstructed passage with three and three-quarters fathoms at lowest tides will exist from *President Roads* to the anchorage off **Boston.**

GLADE FLATS.

When abreast of the *black buoy* on the *Upper Middle* there will be seen on the northeast side of the channel, and to the westward of **Governor Island,** a *black buoy* marked No. 7. This buoy is placed on the northwest side of *Glade Flats* making off from the northwest point of **Governor Island,** and properly belongs to *Governor Island Passage,* marking the south point of junction of it and the *Main Channel.*

BIRD ISLAND FLATS.

A little over two hundred yards to the northwestward of the *black buoy* on *Glade Flats* there will appear a *red buoy*, and about the same distance still farther to the northwestward a **spindle.** These are on *Bird Island Flats.*

Bird Island is covered at half-tide. The **spindle** marks its southeast point. This point is one-third of a mile N W. by W. from the western end of **Governor Island,** and between them lies the western entrance to the deep channel known as the *GOVERNOR ISLAND PASSAGE.*

Bird Island **spindle is iron and has a cage on top, all being painted red.** The *buoy* is a *red spar*, (No. 14,) and is placed in fourteen feet of water on the south point of the flats. It is seventy-five yards S. ½ E. from the **spindle**, and is to be left to the northeastward by vessels bound to **Boston** by the *Main Channel.* It should receive a good berth from vessels using the *Governor Island Channel* unless drawing less than sixteen feet, as there is a spot with sixteen and a half feet at mean low water one hundred yards to the southward of the buoy.

SLATE LEDGE.

On the southwestern side of the channel, and nearly a mile above the *black buoy* on the *Upper Middle*, from which is bears N W. by W. ½ W., *a black nun-buoy* will be seen. This is on *Slate Ledge*, which lies on the northern edge of *South Boston Flats*, nearly midway between **Dorchester Point** and *Fort Point Channel.* It is two-thirds of a mile from the nearest shore. The buoy is marked No. 11, and is placed on the northeast end of the ledge in seventeen feet of water.

Slate Ledge is dry at low spring tides. There is no passage inside of it except at high water, and then only for light-draught vessels, as the extensive *South Boston Flats* (which are dry in most places at low spring tides) occupy the whole area in-shore of the *Upper Middle*, extending from **Castle Island** to the entrance to *Fort Hill Channel.*

The buoy on *Slate Ledge* is replaced by a spar in winter.

SHOAL SPOT NORTH OF SLATE LEDGE BUOY.

This small shoal is half a mile E S E. from the end of **Long Wharf**, and bears from the **State-House** E. by S. and from *Slate Ledge Buoy* N. ½ W. It is three-eighths of a mile from this buoy, and is not marked in any way. Fourteen and a half feet is the shoalest water at mean low tides. It is, however, the intention of the Harbor Commissioners to dredge this portion of the channel to a depth of twenty-three feet at mean low water, in doing which they will remove this shoal as well as *Slate Ledge.*

South Boston Flats are to be filled up nearly to the edge of the channel, with the exception of a narrow passage along the north side of the peninsula of **South Boston.**

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING BOSTON HARBOR BY THE SOUTH CHANNEL, THROUGH BROAD SOUND.

1. *From* **Cape Ann** *in the day-time.*—When a mile southeast of the **Lights** on **Thatcher Island,** in twenty-five fathoms water, steer S W. ¾ W. until exactly between **Nahant Head** and **Minot Ledge Light-House.** On this course the least water is fifteen fathoms. **Nix Mate Beacon** will then bear S W. by W. ¾ W. and will be in range with the northern and highest of the **Blue Hills.** Now steer that course, keeping the range, and carrying not less than twenty feet, until **Long Island Light** bears W. by S. ¾ S. and **Deer Island Beacon** W. ¾ N., when *Ram Head Buoy* will be past, and in ten fathoms water; then steer

W. by S. ½ S. for the cliff on the north side of **Long Island Head**, which will be on with the south end of the **South Spectacle Island.** Keep this range, on which there will be six fathoms, until **Deer Island Point Beacon** bears N W. and is on with the west end of **Apple Island,** when **Long Island Light-House** will bear S W. by W. ¾ W., and there will be six and a quarter fathoms in the *Main Ship-Channel.* Now steer W. ½ N. through *President Roads,* and follow the directions for that channel, on pages 814 to 816.

2. *From* **Cape Ann** *by night.*—Steer S W. ¾ W., as before, until **Minot Ledge Light** bears S E. by S. ¾ S., **Long Island Light** S W. by W. ½ W., and **Egg Rock Light** N. by W. Then, in fourteen and a half fathoms, steer S W. by W. ¼ W., with **Long Island Light** a little open to the northward, and continue this course, with not less than twenty feet water, until **Narrows Light** bears S. ¾ E. and **Long Island Light** W. by S. ¾ S., in ten fathoms water. Now steer W. by S. ½ S., carrying not less than six fathoms water, and continue this course until **Narrows Light** is in range with **Nix Mate Monument** on a bearing of S E. ¾ E., when there will be six fathoms water. The **Monument** may not be visible, but the bearing can be obtained. Now steer W. by N. through *President Roads,* carrying five fathoms, until the *black buoy* on *Castle Rocks* is made, or the *red buoy* on the southeast end of the *Lower Middle,* when N W. ½ N. leads up the channel to *Upper Middle;* follow the directions given for the *Main Channel,* on pages 814 to 816.

Or, if **Deer Island Beacon** can be seen on the W. by S. ½ S. course, as soon as it bears N W. and **Long Island Light** S W. by W. ¾ W., with six and a quarter fathoms, steer W. ½ N., and follow the directions given on pages 814 to 816.

3. *From vicinity of Salem Entrance.*—When **Baker Island Lights** bear N W. by N. ¾ N., about three miles distant, and **Marblehead Light** W N W., four miles, in twenty fathoms water, all dangers are cleared, and **Egg Rock Light** will bear W. by S. ½ S., eight miles off. Steer S W. by W. carrying sixteen fathoms, and **Long Island Light** will soon be made directly ahead. Steer for it until **Egg Rock Light** bears N W. by N. ¾ N. and **Narrows Light** S W. ½ S.; steer for the latter, with not less than ten fathoms, until **Nix Mate Beacon** bears S W. by W. ¼ W. and is in range with the northern and highest of the **Blue Hills.** Then steer for it, keeping the range, and carrying twenty feet water, and follow the directions given above.

4. *At night, from off* **Salem.**—Steer S W. by W., as above, until **Egg Rock Light** bears N W. by N. ¾ N. and **Narrows Light** S W. ½ S., when there will be sixteen fathoms. Now steer S W. ½ S. until **Long Island Light** bears S W. by W. ¾ W. and **Egg Rock Light** N. ¼ W. There will be ten fathoms, *fine gravel,* on these bearings. Now steer S W. by W. ¼ W. for **Nix Mate Beacon,** and follow the directions for *South Channel* in the night.

5. *To come along shore, past* **Nahant Head,** *and enter South Channel.*—When **Egg Rock Light-House** bears W. by N., distant three-eighths of a mile, in ten fathoms, steer S. by W. ¼ W. On this course carry not less than twelve fathoms, and crossing *Broad Sound* the high cliff of the **Great Brewster** will be seen rising from behind **Calf Island.** Keep this range until within a mile and a half of **Calf Island,** in ten fathoms water, when **Nix Mate Beacon** will bear S W. by W. ¼ W. and on with the highest **Blue Hill,** as before. Then steer that course, and follow the directions previously given for this channel.

The *South Channel* courses pass three-quarters of a mile to the westward of the *bell-buoy* on the *Northeast Grave;* three-eighths of a mile to the northward of *Maffitt Ledge;* three hundred and fifty yards to the westward of *Commissioner Ledge;* a quarter of a mile to the westward of *Devil Back Buoy;* a little over half a mile to the eastward of *Great Faun Buoy;* a quarter of a mile to the northward of *Alderidge Ledge;* a little over two hundred yards to the northward of *Ram Head Buoy;* half a mile to the southward of *Little Faun Buoy;* four hundred yards to the northward of *Nix Mate Buoy;* a quarter of a mile to the northward of the **Beacon;** and a little over a quarter of a mile to the southward of **Deer Island Beacon.**

Tidal-Current.—In this channel the current of ebb, after passing *Ram Head*, sets to the eastward, and care must be taken not to be carried on to *Alderidge Ledge* when bound out on the ebb-tide. To the northward of this ledge it sets in the direction of the channel.

NORTH CHANNEL.

This channel leads across *Great* and *Little Faun Bars*, and is never used except by vessels of light draught. Its entrance is just to the westward of the entrance to the *South Channel* and its course about S W. by W. ½ W. Vessels of lighter draught than ten feet, however, often bring **Long Island Light** to bear S W. by W. and run for it, which carries them safely across.

Thirteen feet at low water can be carried across the two bars, but the channel is narrow. A shoal with ten feet lies to the eastward of *Little Faun Buoy*, and about two hundred and fifty yards from it. The passage is unsafe for strangers unless of very light draught.

DANGERS

IN APPROACHING AND ENTERING BOSTON HARBOR BY THE NORTH CHANNEL, THROUGH BROAD SOUND.

The course from **Cape Ann** usually steered by vessels intending to enter by the *North Channel* leads too far to the northwestward of the **Graves** for the sound of the bell to be heard. Should the *bell-buoy* be fallen in with, however, in thick weather, it may be of use to state here that *Great Faun Buoy* bears exactly W. ¾ S. from it, distant three miles. There is nothing in the way on that course.

In approaching this channel the first danger met with is

GREAT FAUN BAR,

a long spit or bar which makes out from the eastern shore of **Deer Island** in an E. ½ S. direction for nearly one mile and three-quarters. For twelve hundred yards of this length it is bare at low water, the bare sand-spit having a general course E. by N., and its eastern end is marked by a **stone beacon**, called **Great Faun Bar Beacon.** To the eastward of this the shoal water continues with depths varying from two to seventeen feet. The *North Channel* leads directly over this shoal in fourteen or fifteen feet at mean low water.

Great Faun Bar Beacon is placed about three hundred and fifty yards back from the extreme point of the dry spit. **It is a granite cone rising from a square base, and surmounted by an iron spindle and cage, all being painted red.** Vessels must not approach this **beacon**, no matter how light their draught, as the water is shoal for a considerable distance to the eastward of it.

This **beacon** bears from **Nahant Head** S W. by S.

From the *bell-buoy* on **The Graves** it bears W. ¼ S., a little over three and a half miles distant; and from **Long Island Light** N E. by N., one mile and a half distant.

Two-thirds of a mile to the eastward of this **beacon** there is placed, in fifteen feet water, *a red can-buoy* of the second class as a guide to the *North Channel.* This buoy is marked No. 2, and shows the best water over the bar. It must be left to the westward, and may be passed close-to. When up with it there will be seen ahead, and nearly in range with **Deer Island Point Beacon**, another *red can-buoy.* This is on *Little Faun Bar.*

The *red buoy* on *Great Faun Bar* bears N E. ½ E. from **Long Island Light**, distant one mile and three-quarters.

LITTLE FAUN BAR.

This shoal, which makes out from the southeastern end of **Deer Island**, runs in an E. ¾ S. direction for a mile and a quarter to the edge of the *South Channel.* For three-eighths of a mile of this length (about seven hundred yards) it is dry at low tides; and about two hundred yards to the eastward of the dry bar is placed a *red can-buoy* of the second class, marked No. 4, in fifteen feet water. This buoy is a guide for the *North Channel*, which crosses this bar in thirteen feet. To the eastward of the buoy the bar has soundings varying from nine to seventeen feet. About two hundred and fifty yards EAST from the buoy there are but ten feet on a shoal extending EAST and WEST for three hundred yards. *This shoal is on the east side of the North Channel.*

Little Faun Buoy marks the western limits of this channel. It bears from

	Miles distant.
Great Faun Buoy, S W. by W. ½ W.	⅔
Deer Island Point Beacon, N E. by E. ¾ E.	⅔
Long Island Light-House, N E. ¼ N.	1⅛

DEER ISLAND POINT.

After passing *Little Faun Buoy* the course leads for **Long Island Light-House**, to avoid the shoals SOUTH from *Little Faun Bar* and *Deer Island Point.* The eastern shore of **Deer Island** must receive a berth of at least six hundred yards, and the south point not less than seven hundred yards; for E. by S. ¼ S. from the **beacon** lies a rock bare at low water, at the distance of an eighth of a mile, (two hundred and twenty-five yards.) To avoid this, do not go to the northward of **Deer Island Point Beacon** bearing N W. by W. ½ W. and on with the north point of **Governor Island.**

There are no other dangers in the *North Channel.*

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BOSTON HARBOR BY THE NORTH CHANNEL, THROUGH BROAD SOUND.

From off **Cape Ann**, when clear of the *Londoner*, steer S W. by W. On this course **Long Island Light-House** will be made directly ahead, and must be steered for until past *The Graves* and up with *Great Faun Buoy.* Pass close to it, leaving it to the westward, and steer S W. by W. ½ W. for *Little Faun Buoy.* When up with this buoy, leave it close to to the westward and steer S W. for **Long Island Light.** On this course, when **Deer Island Point Beacon** bears N W. ¼ W., or is exactly abeam, steer W. ¼ N. through *President Roads*, and proceed as directed for the *Main Ship-Channel.* On the above courses the least water is eleven feet. Or bring **Long Island Light** to bear S W. by W. and run for it until **Deer Island Beacon** bears N W. by N. and in seven fathoms water, with **Nix Mate Beacon** bearing S E. by S. Then W. ½ N. leads through *President Roads*, and follow the directions given for the *Main Ship-Channel.* Or continue the course for **Long Island Light** until **Nix Mate Beacon** is in range with **Narrows Light** on a bearing of S E. ¾ E. Then steer W. ¾ N., and proceed as directed for the *Main Ship-Channel.* This last channel may be run safely at night, as **Long Island Light** is steered for, and the course is altered only upon a bearing of **Narrows Light.** It crosses *Great Faun Bar* in thirteen feet on the eastern side of the channel, and leaves the buoy about one hundred and fifty yards to the westward. It crosses *Little Faun Bar* in thirteen feet on the eastern side of the *ten-feet shoal*, and leaves the buoy a quarter of a mile to the westward. Vessels of light draught may safely run it unless there is a heavy sea.

The *North Channel* is never attempted by strangers; but with the above directions a stranger may, in case of necessity, run safely in to an anchorage. It is not recom-

mended, however, to any but vessels of light draught, and to strangers only in case of urgent necessity.

SHIRLEY GUT.

This narrow and intricate passage is only fit for steamers, and must never be attempted by strangers under any circumstances. Thirteen feet at low water may be taken through it under the guidance of a pilot; but the channel is crooked and dangerous, with a swift current. It leads between **Point Shirley** and **Deer Island**, and is about one hundred and fifty yards wide.

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR THROUGH SHIRLEY GUT.

The first danger met with in approaching this passage lies on the western side of the approaches and east of **Winthrop Head.** When **Winthrop Head** bears **WEST**, about a mile and a quarter distant, there will be seen on the starboard bow, about twelve hundred yards off, *a red spar-buoy*, on

WINTHROP BAR,

which makes off from **Winthrop Head** in an E. by S. direction for three-quarters of a mile, with not over six feet at mean low water. For eight hundred yards of this distance the bar is bare at low water. The buoy is placed in fifteen feet off the southeastern side of the shoal, and bears from **Nahant Head** S W. ¼ S., about three miles and a half, and from **Deer Island North Beacon** E. by N. ¾ N., nearly one mile. It is well to give it a berth when passing it, so as to make a straight course for the **North Beacon.** There is *an eight-feet shoal* between the *buoy* and the **beacon.**

Passing *Winthrop Bar Buoy*, the course leads directly for **Point Shirley,** (easily distinguished by the **almshouse** and other public buildings upon it,) and there will be seen in range with the point **a black spar or spindle with a board on top.** This is **Deer Island North Beacon,** and is placed on the northern point of the shoal making off from the north end of that island. The channel leads to the westward of it, and makes a sudden and sharp turn around the **beacon** to the southward, the current running with considerable velocity. This is the most dangerous part of the channel.

DEER ISLAND FLATS.

When through the *Gut a red spar-buoy* will be seen ahead, about half a mile off, which must be steered for to avoid the long flats making off from the west shore of **Deer Island.** These flats have from four to six feet at mean low water, and run about W S W. for half a mile, almost over to the *red buoy* above mentioned. Pass close to this buoy to avoid them. The buoy, however, is on the southeast end of

APPLE ISLAND FLATS,

which are dry at low water, and surround **Apple Island**, extending in a S E. direction about eleven hundred yards. The buoy is in twelve feet water, just clear of the shoals. At low water the flats, being quite bold-to, mark the limits of the channel with great exactness, and may be passed close-to. The buoy is marked No. 6, and is to be left to the westward by vessels coming in and standing to the southward into *President Roads*, or to the northward when turning to the westward and entering the *Governor Island Passage.* It marks the north point of entrance to the latter.

When abreast of **Apple Island** *Buoy*, if intending to go up to **Boston** by the *Main Channel*, steer about S. by W. for the eastern end of **Spectacle Island.** In steering this course there will be left well to the westward the *black spar-buoy* on

GOVERNOR ISLAND FLATS.

which are extensive flats lying off the eastern shore of **Governor Island**, from which they run E S E. for about a mile. They are bare at low spring tides throughout their whole length. Between these flats and *Apple Island Flats* runs the *Governor Island Passage*, and the *black spar-buoy* marks the southern point of entrance to it. Between *Governor Island Flats* and the *Lower Middle* lies the *North Branch of the Main Ship-Channel*, and a *red spar-buoy* marks its northern point of entrance. Vessels using *Shirley Gut Channel* may pass up to **Boston** through either of these channels, or may continue past the *red buoy* on the southeast end of the *Lower Middle* and go up the *Ship-Channel* way.

The *black buoy* on *Governor Island Flats* is marked No. 1 as a guide to *Governor Island Passage*, and is placed in twenty-one feet at low water. If bound into *President Roads*, when past this buoy take care not to go ashore on the

MIDDLE GROUND,

which is a mass of shoal ground, lying in an E S E. and W N W. direction, between *Governor Island Flats* and *Deer Island Point*. It is about one-third of a mile long, and its southeast end is marked by a *red spar-buoy*, (No. 2.) The shoalest part of it, with only seven feet at mean low water, is on its northwest end, where is placed another *red spar-buoy*, marked No. 4, about a quarter of a mile S E. by S. from the *black buoy* (No. 1) on *Governor Island Flats*, the entrance to *Governor Island Channel* leading between these two buoys. Vessels using *Shirley Gut Entrance* and bound for the *Main Channel* pass also between these buoys, leaving the *black* one to the westward and the *red* one to the eastward notwithstanding their colors.

There is good water on both sides of the *Middle Ground;* but vessels are cautioned against using the eastern passage unless of light draught, as there is no buoy to guide them as in the western passage, although the water is equally deep. Vessels of light draught round **Deer Island Point Beacon** and steer N W. by W. for the *red buoy on Apple Island Flats;* but large vessels should go up into *Governor Island Channel* by the western passage.

When past the *black buoy on Governor Island Flats* there will be seen to the southwestward, and about seven hundred yards off, *a large red nun-buoy.* This is on the southeast end of the *Lower Middle.* Now, if bound up the *Main Ship-Channel*, steer for this buoy; pass to the eastward of it, and continue to the southward until *State Ledge Buoy (red nun-buoy)* is in range with the *red nun-buoy on the northwest end of Lower Middle* on a bearing of N W. ½ W. Then steer that course, and proceed as directed for *Main Ship-Channel.*

But *if bound up the north branch*, which is the usual passage, round the southeast end of *Governor Island Flats* and steer to the westward along their south side. On this course there will be *two red nun-buoys* ahead, one on each bow. The buoy to the southward is on *the northwest end of the Lower Middle*, that to the northward is on

GOVERNOR ISLAND POINT,

which is the shoal extending off from the southeast end of **Governor Island.** Its direction is S W. by S. ½ S., its length a quarter of a mile, and it is dry at low water for half its length. The buoy is of the third class, is marked No. 12, and is placed in fourteen feet water off the southwest end of the shoal, and marks the junction of this channel with the *Main Channel.* It must be left to the northward, and the *red buoy* on the northwest end of *Lower Middle* to the eastward and southward.

When past these buoys and in the *Main Ship-Channel*, steer for the *black buoy* on *Upper Middle* and follow the directions given for that channel, on pages 815 and 816. The least water in the passage is thirteen feet.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING BOSTON HARBOR THROUGH SHIRLEY GUT.

From **Nahant Head,** which may be passed within eight hundred yards, steer S W. nearly four miles. This will bring up with the *red spar-buoy* on *Winthrop Bar*—which should be left about four hundred and fifty yards to the westward—and when it bears N W. by N. ½ N., and **Great Faun Beacon** bears S. ¾ W., steer W. ½ S. for **Deer Island North Beacon.** Continue this course, on which there will be not less than sixteen feet, until within four hundred yards of the beacon, when alter the course to the northward so as to leave the beacon about one hundred yards to the southward. On this course there will be thirteen feet water. As soon as abreast of it, turn short to the southward, pass it close-to, leaving it to the eastward, carrying not less than four fathoms, and steer S. by W., toward **Deer Island,** for about an eighth of a mile, (two hundred and twenty-five yards,) until within a hundred and fifty yards of the **Deer Island** shore, in five fathoms. Then steer W. by S. ½ S. for the *red buoy* on *Apple Island Flats*, which will be in range with the middle of **Fort Independence** on **Castle Island.** On this course there will be not less than nineteen feet water, and when up with this buoy, if bound through the *Governor Island Channel*, leave it to the northward, round it to the westward, and steer W. by N. ½ N., with not less than four fathoms, for the centre of **Fort Winthrop,** and follow the directions given for that channel.

But if bound into *President Roads* and through the north branch of the *Main Channel*, when up with *Apple Island Buoy* steer S. by W. ½ W., passing between the *black buoy* on *Governor Island Flats* and the *red buoy* on the northwest end of the *Middle Ground.* Continue this course until *State Ledge Buoy* bears W. ½ S., when steer toward it, carrying not less than four and a half fathoms water, which course continue about four hundred yards until the *red nun-buoy* on *Governor Island Point* bears W. by N. ½ N., when a W. by N. ¾ N. course will carry through, between that buoy and the buoy on the northwest end of *Lower Middle*, with not less than fourteen feet water. When fairly through, steer for the *black buoy* on the *Upper Middle*, and follow the directions given, on pages 814 to 816, for *Main Ship-Channel.*

But if it be low water the above courses will not be necessary. The flats will show on each side, and it is only necessary to keep the middle of the passage to pass safely through.

Sailing vessels must not attempt the passage through *Shirley Gut* and thence into this channel. It is fit only for steamers. The sharp turn at **Deer Island North Beacon** is so abrupt that great care has to be exercised, even by steamers, in making it, and the velocity of the tidal:current, both of flood and ebb, is such as to render the passage at all times one of danger. None but those well accustomed to threading its windings ever attempt it. The above directions are given as a part of the description of *Boston Harbor*, and not as a guide to strangers.

THE GOVERNOR ISLAND CHANNEL.

This channel, which is only fit for steamers, begins at the eastern end of *Governor Island Flats* and runs in a W N W. direction, between **Governor** and **Apple Islands,** for a little over a mile and a half; then turning abruptly to the southward it runs between **Bird Island** and **Governor Island** into the *Main Channel*, which it joins a little above the *Upper Middle.*

This passage is crooked at its western end and narrow at both ends; but a steamship can carry not less than nineteen and a half feet at mean low water throughout its entire length up to the **East Boston Wharves.** *It is very well buoyed*, there being but

one danger left unmarked, and that is easily avoided by careful attention to the courses and sailing-lines laid down.

DANGERS
IN APPROACHING AND ENTERING GOVERNOR ISLAND CHANNEL FROM PRESIDENT ROADS.

After passing **Deer Island Point Beacon** the course leads to the northwestward for the *black buoy on Governor Island Flats.* The first danger encountered on this course is the

MIDDLE GROUND,

that extensive shoal, lying W N W. and E S E., which occupies the very middle of the passage, dividing it into two narrow channels with nineteen and a half feet in each, the western channel only being buoyed. A depth of from fourteen to seventeen feet at mean low water is found over this shoal except at its western end, where there are only seven. The *Middle Ground* is nearly half a mile long between the lines of three fathoms, and marked by *two red spar-buoys*—one (No. 2) on its southeast end and the other (No. 4) on its northeast end.

GOVERNOR ISLAND FLATS.

The *black spar-buoy* met with on the southwestern side of the entrance is on *Governor Island Flats,* which are extensive flats lying off the eastern shore of **Governor Island,** from which they extend E S E. for about a mile. They are bare at low spring tides throughout their entire length. Between these flats and the west end of the *Middle Ground* runs this southern entrance to *Governor Island Channel.* The buoy is placed in twenty feet water on the north side of the east point of this shoal, and must be left to the southward. When nearly up with it *a red spar-buoy* will be seen nearly half a mile to the northward. This is on

APPLE ISLAND FLATS,

which surround **Apple Island** and extend to the southeastward about eleven hundred yards. They are dry at low water nearly to the buoy, which is placed in fourteen feet on their southeastern point. It marks the north side of the channel, and is to be left to the northward.

From this point the course of the channel is N W. by W. ½ W., between *Apple Island Flats* on the north and *Governor Island Flats* on the south. At low water the limits are marked as by a wall, but at other times of tide it is not so easy to keep in the best water. To do this *Apple Island Buoy* must be left to the northward about two hundred and seventy-five yards, and a N W. by W. ½ W. course leads up the middle of the channel with not less than four fathoms water. On this course, on approaching the northeast point of **Governor Island** there will be seen, on the starboard bow, *another red spar-buoy* on the

WESTERN SPIT OF APPLE ISLAND FLATS.

These flats, which, as before mentioned, surround **Apple Island,** extend to the westward from it half a mile, and are dry at low water to within one hundred yards of the buoy. The buoy is marked No. 8 and placed in eighteen feet on the southern side of the western extremity of the shoal, and may be approached quite closely. It must be left to the northward, and there will then be seen on the port bow, and three-eighths of a mile off, (about seven hundred yards,) *a black spar-buoy.* This is on the

NORTH POINT OF GOVERNOR ISLAND FLATS,

and is intended to mark the southern limits of the passage at this point. These flats

make off from the north side of the island a quarter of a mile, but there are soundings of twelve, thirteen, and fourteen feet outside of them all the way to the buoy, which is in sixteen feet at mean low water between five and six hundred yards from shore. From *Apple Island Buoy* it bears N W., seven hundred yards distant. The *buoy is a black spar*, (No. 3,) and is placed on the northern extremity of the shoal. Pass to the northward of it to go in the best water, and an abrupt turn is then made to the westward toward the north end of **Bird Island**, with *a red spar-buoy* on the starboard bow about three hundred and fifty yards off, and a *black spar-buoy* on the port hand about the same distance. The former is on

NODDLES ISLAND SHOALS.

Noddles Island is almost entirely occupied by **East Boston.** It is an island of very irregular shape, lying on the south side of *Chelsea River.* A large bay, full of flats, with narrow slues leading through and among them, is formed by the great curves of the shore between this island and **Point Shirley.** It is, however, at present of no commercial importance. These flats extend to the northern edge of the *Governor Island Passage*, and it is on the southern point of one of these, making off from **Noddles Island,** and which is dry at ordinary low water, that this *red spar-buoy* is placed. It is marked No. 10, and is placed in eighteen feet on the edge of the channel.

FOUR-FEET SHOAL.

Almost exactly midway between this *buoy* and the *black buoy on Glades Flats*, to the southward, there is a shoal spot with four feet at mean low water, which *is not buoyed*, and is exactly in the way of vessels bound through this channel. This is the most formidable obstruction in the whole length of the passage, but is fortunately very small, and is easily avoided by keeping close to the *red spar-buoy* on *Noddles Island Shoals* or to the *black spar-buoy* on *Glades Flats.* The latter will be seen on the eastern side of the passage, nearly in range with another of the same color some distance to the southward. The channel turns abruptly at this point and runs in a nearly S S W. direction.

GLADES FLATS

make from the northwest end of **Governor Island** in a N W. by N. direction four hundred yards, are bare at low water, and rocky. The buoy is marked No. 5, and placed in four fathoms about one hundred yards N W. from the bare spit. It may be passed close-to, leaving it to the eastward, and the course continued passes between the *red and the black buoys* ahead. The *red spar*, which is met with first, is on the southeast point of

BIRD ISLAND FLATS.

Bird Island lies on the western side of this channel, and is covered at high water. There will be seen **an iron spindle with a cage on top, both painted red,** on the southeast point of the island, about seventy-five yards to the northward of the *buoy.* This is called **Bird Island Beacon,** and there is no passage between it and the *buoy* except for vessels of very light draught. The *buoy* marks the termination of the shoal water which makes to the southward from the island; is *a red spar*, (No. 10,) and is placed in two fathoms at low water. Give it a berth to the westward, passing midway between it and *the black spar-buoy* which lies off the west end of **Governor Island,** and which, when abreast of *Bird Island Buoy*, will be on your port hand. This *buoy* is on the northwestern side of

GOVERNOR ISLAND SHOAL.

This is the name given to the shoal ground making off from the west end of **Governor Island.** It has from two to five feet at low water upon it, and extends in a westerly direction nearly four hundred yards. The *buoy* is placed on the eastern edge of the channel and must be left to the eastward. Here the *Main Channel* unites with the *Governor Island Passage*, and about five-eighths of a mile to the westward (twelve hundred yards) will be seen the *black nun-buoy* on *Slate Ledge.* Now follow the directions given for the *Main Ship-Channel*, turning when abreast of the *buoy on Governor Island Shoal*, and steering exactly for the **State-House Dome** until well clear of the flats on the south side of **Bird Island**. Then haul up for the wharves on either side.

SAILING DIRECTIONS
FOR THE GOVERNOR ISLAND PASSAGE OR CHANNEL.

This channel may be entered either through *Broad Sound* or from the *Main Ship-Channel.*

1. *If coming through the Main Ship-Channel:* When past *Nix Mate* on the N W. course for **Deer Island Point Beacon**, and **Long Island Light-House** bears W S W., and in six and a quarter fathoms water, steer N W. by W. ¾ W. for the southern end of **Governor Island.** On this course there will not be less than four and a half fathoms, and the two *red spar-buoys* marking the *Middle Ground* will soon be seen a little open to the northward. Continue the course until the middle of **Apple Island** bears N. by W. ¾ W. and there are five fathoms water; then steer that course, which will lead safely through, between *Middle Ground* and *Governor Island Flats*, with nineteen and a half feet water. When abreast of the *black buoy* on the north side of these flats, steer N W. by W. ¼ W., having **Deer Island Point Beacon** over the stern and the *red spar-buoy* on the western spit of *Apple Island Flats* nearly ahead. On this course there is nothing less than three and a half fathoms. When fairly past the buoy off *Apple Island Flats*, steer N W. by N., carrying not less than three and a half fathoms, until the **State-House Dome** bears W. ¾ N. and the *red spar-buoy* on *Noddles Island Shoals* is in range with it. Steer for the **dome**, keeping the range, until past the *black spar-buoy* on the north point of *Governor Island Flats* and **Bird Island Beacon** bears S W. ½ W. Steer for the **beacon** until abreast of *Glade Flats Buoy*, (*black spar*,) when steer S W. by S. ½ S., which will carry up with the *black buoy* on *Governor Island Shoal*, passing to the southeastward of *Bird Island Buoy*, and carrying not less than nineteen and a half feet water. When past the *black buoy* on *Governor Island Shoal*, steer W. ¾ N. until **Bunker Hill Monument** bears N W. ¾ N., when steer for it if bound to **East Boston**, or steer N W. by W., and anchor on the edge of the flats off **Boston.**

2. *If the tide is up a little:* Continue the course N W. for **Deer Island Point Beacon** in range with the western end of **Apple Island** until within two hundred and fifty yards. Then steer W. ¼ N. for two hundred and fifty yards, (an eighth of a mile,) and the beacon will bear N N E., in nine fathoms water, with **Long Island Light-House** bearing S S W., as the bearings change rapidly. Now steer NW. ¼ W., which will lead through *the Eastern Channel*, between the *Middle Ground* and *Deer Island Flats*, with not less than nineteen and a half feet, and the *red spar-buoy* on *Apple Island Flats* will soon be seen directly ahead and open to the westward of **Apple Island.** Follow this course, and keep the buoy open until the *red spar-buoy* on the northwest side of the *Middle Ground* and the *red nun-buoy* on *State Ledge* are in range on a bearing of about W. ½ S. Now steer N W. by W. ½ W. up the passage for the *red buoy* on the westerly spit of *Apple Island Flats*, and when abreast of it steer N W. by N., and follow the directions given above.

In this passage, if the first course in (N W. ¼ W. for *Apple Island Buoy*) can be made good, there will be, at mean low water, not less than nineteen feet. But in all proba-

bility a vessel will be set to the eastward or westward by the tide and have only fifteen or sixteen feet. This channel, therefore, is not recommended to steamers of heavy draught unless the tide be up.

3. *If having come through South Channel*, pass **Deer Island Point Beacon** as usual; bring it to bear S E. by E. ¼ E., and steer N W. by W. ¼ W., keeping it over the stern for a range, and continue this course until abreast of the northeast head of **Governor Island** and up with the *red spar-buoy* on the westerly spit of *Apple Island Flats*, when steer N W. by N., and follow the directions given above.

THE GANGWAY.

This is a narrow channel which leads along the eastern shore of the bay from **Scituate** to the northward, threading the intricate passages among the **Cohasset Rocks.** Although there is good water through its entire length it is used only by vessels of light draught, and by them only when piloted by an experienced pilot. No stranger should ever attempt this passage even by day; it would be impossible by night.

From **Scituate** to **Cohasset Entrance** the shore is guarded by many bare and sunken ledges lying at various distances from the land—dangerous in the extreme, and many of them not buoyed. To thread the channels between these requires an experienced pilot, and since the extinguishment of **Scituate Light** few of these dare attempt the passage at night.

The shores from **Scituate** to **Strawberry Point** are of moderate height, undulating, and dotted here and there with trees. A few houses are seen now and then. *Scituate Entrance* lies about four and a half miles S. by E. ⅝ E. from **Minot Ledge Light-House** and three miles and three-quarters S E. by S. ½ S. from **Strawberry Point.** The tower is the only conspicuous object; it is situated on the north side of the entrance, but the **Light** has been discontinued, the tower being left as a day-mark.

It is said that the fishermen who trade to **Boston** in the summer maintain a light on this tower at their own expense, to enable them to come through the *Gangway* at night.

DANGERS
IN APPROACHING AND ENTERING BOSTON HARBOR BY THE GANGWAY.

Although no stranger should ever attempt this passage, a description of the approaches to **Boston** would not be complete without a mention of the numerous rocks and ledges which obstruct it.

After passing **Scituate Tower** the shore should not be approached nearer than three-quarters of a mile, to avoid

LONG LEDGE,

a dangerous ledge making off from the shore in a N E. ¼ N. direction three-eighths of a mile, and bare at low water. *It is not buoyed*, but almost always shows itself by breakers. When past it, the same rule must be observed until the entrance to the gangway is reached, as there are several sunken ledges lying well off the shore. Of these, among the most remarkable as well as the most dangerous, are the

COWEN ROCKS,

which lie one mile and three-quarters above **Scituate Tower**, a mile and a quarter above *Long Ledge*, and three-eighths of a mile (seven hundred yards) from the shore. They are a dangerous group, on the edge of the three-fathom line. Part are bare and part have from two to six feet at mean low water upon them. *They are not buoyed.* The

course usually sailed leads well to the eastward of them. But as this channel leads close along the shore, it is also necessary in the highest degree to guard against the extensive and dangerous

STELLWAGEN LEDGES,

which must be left to the eastward. They are numerous detached rocks, with from nine to eighteen feet at mean low water, which lie in a chain extending from *Davis Ledge*, in a direction nearly SOUTH, to within a mile and a half of **Scituate Tower**, a distance of nearly two miles and three-quarters. They are each surrounded by good water, *and are not buoyed*, with the single exception of *Davis Ledge;* but they break with great violence in easterly weather, and at such times should not be approached under any circumstances. **Scituate Light-Tower**, bearing SOUTH, clears them, leaving them well to the westward. But those using the *Gangway Passage* leave them to the eastward. *One of the most dangerous of these rocks, which has but seven feet at lowest tides*, lies five-eighths of a mile N E. from the *Cowen Rocks* (twelve hundred yards) and two miles N. by W. ½ W. from **Scituate Tower**. The course leads nearly a quarter of a mile in-shore of it.

SUNKEN LEDGE.

Five-eighths of a mile N. by W. from *Cowen Rocks*, and half a mile from the shore, lies a detached ledge, called *Sunken Ledge*, but for what reason is not known, as it is bare at low water. There are from five to seven fathoms water on all sides, *and it is not buoyed.* Passing it,

SMITH ROCKS

are approached. They are a group of bare rocky islets forming the eastern end of a long line of bare and sunken ledges which make off in an easterly direction from the shore just below the *Glades*, and to a distance of half a mile. **Smith Rocks** are surrounded by shoal water, but are boldest on their eastern side. They are five hundred yards to the northward of *Sunken Ledge.* The easternmost rock is a small islet, quite bold, and may be safely approached close-to, and on passing it leave to the eastward, a quarter of a mile off, *one of the Stellwagen Ledges, with eleven feet* at mean low water, and just to the northward of it the

COLOMORE LEDGES.

These are really part of *Stellwagen Ledges*, and are sunken rocks lying nearly three miles to the northward (N. by W. ½ W.) from **Scituate Tower**, one mile S E. by E. ½ E. from **Strawberry Point**, and a mile and three-eighths S. by E. from **Minot Ledge Light-House.** *They are not buoyed.* Vessels using this channel leave them to the eastward, and

OSHER ROCKS,

which are bare at low water, and lie half a mile in-shore of them, to the westward. These rocks lie close in with the shore of the *Glades*, being only three hundred yards off, and are not generally considered in the way by vessels using this channel. There is a small passage in-shore of them, but *they are not buoyed.*

One quarter of a mile EAST *from Osher Rocks is a detached rock with fifteen feet at mean low water.* The courses leave it to the westward.

After passing *Osher Rocks*,

CHEST LEDGE

is approached, which is a bare rock surrounded by shoals, lying one-third of a mile S E. by E. ½ E. from **Strawberry Point**, one mile S. by W. ½ W. from **Minot Ledge Light-House**, and nearly three-quarters of a mile to the northward of **Smith Rocks**. Though surrounded by shoals, there is a passage with twenty-two feet at low water between it and the shore. It is not, however, available except in the smoothest weather.

Chest Ledge *is not buoyed.* The courses leave it to the westward. About five hundred yards E. ¾ N. from it lies a detached pinnacle rock, called

MIKE LEDGE,

and the channel leads between them. *Mike Ledge* has six feet at mean low water, and lies three-eighths of a mile N. by W. ½ W. from *Colomore Ledges*, and one mile S. ½ E. from **Minot Ledge Light-House.** The courses leave it an eighth of a mile to the eastward, (two hundred and twenty-five yards.)

TOBIAS ROCK.

This is the next obstruction met with after passing **Chest Ledge.** It is three hundred and fifty yards above the latter and a quarter of a mile EAST from **Strawberry Point.** It is a bold bare rock, always out, and may be approached quite closely, but the sailing-lines leave it to the westward. It is the southernmost of the group known as the **Cohasset Rocks.** When abreast of it there will be seen a bare rocky islet to the westward, lying about three hundred yards NORTH from **Strawberry Point**, called **Gull Island,** and the channel leads between this and a dangerous ledge about five hundred yards to the eastward of it, called the

WEST WILLIES.

These, which are a part of the **Cohasset Rocks,** are bare at low water; are a quarter of a mile to the northward of **Tobias Rock** and five-eighths of a mile (twelve hundred yards) S S W. from **Minot Ledge Light-House.** They form a piece of shoal ground about an eighth of a mile square, and lie on the eastern side of the channel. *A black spar-buoy* (No. 1) is placed on the northwestern side of the shoal, *and must be left to the eastward (despite its color) by vessels going into* **Boston** through this channel, *as it is painted and numbered for a channel leading from the eastward into* **Cohasset.** *This buoy is the first one met with by vessels bound to the northward through the Gangway.*

EAST WILLIES.

This extensive ledge lies about four hundred yards to the eastward of the dry rock on *West Willies* and three-quarters of a mile S. ½ W. from **Minot Ledge Light-House.** It is bare at low water, and *is not buoyed.* A passage with six fathoms leads between the two ledges.

SHEPPARD LEDGE.

When up with *West Willies*, leave to the westward **Gull Island** and a line of ledges north of it, some of which are always out. A quarter of a mile west of these ledges lies *Sheppard Ledge*, which is bare at low water, and is marked by *a black spar-buoy.* From *Sheppard Ledge*, **Minot Ledge Light-House** bears N E. ½ E., seven-eighths of a mile distant. There is no passage between this ledge and **Gull Island,** nor between **Gull Island** and **Strawberry Point.** It marks the southeast side of the eastern entrance to *Cohasset Harbor.*

When past **Gull Island** the entrance to **Cohasset** opens to the westward, and to the eastward will be seen *a red spar-buoy.* This is on the south side of

ENOS LEDGE,

and is not in the *Gangway Channel*, but is on the north side of the eastern entrance to **Cohasset,** which leads between this ledge and the *West Willies.* It is a large ledge, lying nearly **EAST** and **WEST**, and dry at low water. From **Minot Ledge Light-House** it lies **S W. ¾ S.,** three-eighths of a mile distant. The buoy is placed on its southern side, and must not be approached by vessels using the *Gangway Channel*, for about three hundred

and fifty yards to the westward of it lies a bare rock surrounded by shoal water, and known as

EAST SHAG LEDGE.

This ledge lies on the eastern side of the *Gangway* and must receive a berth. *It is not buoyed*, the bare rocks serving as a guide. From this bare rock **Minot Ledge Light-House** bears N E. ½ E., half a mile distant. When abreast of **East Shag**, *two spar-buoys* will be seen ahead. The *black buoy* is on the western point of

WEST HOGSHEAD ROCK,

which is dry at low water, lying W. ¼ S. from **Minot Ledge Light-House**, a little over half a mile distant. An eighth of a mile to the eastward of it is another rock, bare at low water, called *Hogshead Rock;* but both form one large ledge, lying nearly EAST and WEST, and about three hundred and fifty yards long. The same distance still farther to the eastward lies another rock, bare at low water. This is called *East Hogshead Rock,* and is surrounded by deep water.

The buoy is a *black spar*, (No. 1,) and is placed in sixteen feet on the western edge of the ledge, and *marks the eastern limits of the main channel into* **Cohasset**. *By vessels bound to* **Boston** *through the Gangway it must be left to the eastward.*

On approaching the buoy on *West Hogshead* a large rock, called *West Shag,* will be passed to the eastward. From this rock the buoy bears N E. by E. ¼ E., six hundred yards distant. *West Shag* is shoal, and bare at low water on its western side for nearly four hundred yards, but its east side is pretty bold-to.

THE GRAMPUSES.

The *red spar-buoy* which will be seen on the port bow on coming up with *West Hogshead* is on the western side of the north entrance to the *Gangway*, and marks the point where it joins the main approach as well as the main channel into **Cohasset**. It is on the northeastern end of the *Grampuses*, two large ledges, bare at low spring tides, lying on the north side of *West Shag*, and about three-eighths of a mile (six hundred and fifty yards) to the westward of *West Hogshead Buoy.* There is a depth of six feet between these two ledges.

The buoy is a *red spar*, (No. 2,) but must be left to the westward by vessels bound to **Boston** through the *Gangway*, as it is painted and numbered for the *Cohasset Entrance.* It bears from **Minot Ledge Light-House** WEST, seven-eighths of a mile; from the **Glades House** N. ¼ W.; and from the buoy on the *West Hogshead* W. by N., a little over a quarter of a mile distant.

The *Grampuses* form the northern extremity of an extensive line of ledges which extends in a N N E. and S S W. direction up the middle of *Cohasset Harbor* and separates the approach into two channels. That to the eastward is called the *Main Channel*, and the western passage is known as *Brush Island Passage.*

When past the *red buoy* on the *Grampuses* the channel is clear to the *Hardings.*

SAILING DIRECTIONS

FOR APPROACHING BOSTON HARBOR BY THE GANGWAY PASSAGE.

Pass **Scituate Light-tower** at the distance of half a mile, in four and a half fathoms; bring it to bear S. by E. ¾ E. as soon as past *Long Ledge* and steer N. by W. ¼ W., carrying not less than four fathoms water. This course continue past *Cowen Rocks, Sunken Ledge*, and *Entrance Rock;* leave *Colomore Ledges* to the eastward, **Chest Ledge** to the westward, and *Mike Ledge* to the eastward; and when abreast of **Tobias Rock**, in eight and a half fathoms, with **Minot Ledge Light** bearing N. ¾ E. and the **Glades House** W. ¾ S.,

steer N W. ¼ N. for the *red buoy* on the *Grampuses.* On this course the least water will be three fathoms. Pass to the eastward of this buoy, and when well past it steer N W. ½ W. for the eastern cliff of **Point Allerton.** This leads, with not less than four fathoms, half a mile in-shore of the westernmost rock of the *Hardings.* When *Hardings Ledge* **spindle** bears E. ¾ N. and **Boston Light-House** N W. by N. ½ N., in four fathoms, *stony bottom*, steer for the **Light-House** until **Narrows Light-House** bears W. by N. ¾ N., when steer W. by N. for the *black buoy* on the north end of *Centurion Rock*, carrying not less than three and a half fathoms. Pass to the northward of this buoy and steer N W. ½ W., and follow the directions for *Main Ship-Channel*, on pages 814 to 816.

The above courses pass nearly six hundred yards to the eastward of *Cowen Rocks;* four hundred yards to the eastward of *Sunken Ledge;* a quarter of a mile to the westward of *Nine-Feet Rock* on *Stellwagen Ledges;* two hundred yards to the eastward of *Entrance Rock;* an eighth of a mile to the westward of *Colomore Ledges;* three hundred and fifty yards to the eastward of the dry part of **Chest Ledge**; two hundred yards to the westward of *Mike Ledge;* an eighth of a mile to the eastward of **Tobias Rock**; two hundred yards to the westward of the bare rock of *West Willies;* two hundred yards to the eastward of *Sheppard Ledge;* two hundred yards to the westward of the bare rock on **East Shag**; an eighth of a mile to the eastward of *West Shag;* three hundred yards to the westward of the *black buoy* on *West Hogshead;* and about fifty yards to the eastward of the *Grampuses.* They pass half a mile in-shore of *Hardings Ledge* **spindle**, and three hundred yards to the northeastward of the *black buoy* on *Point Allerton Bar.*

This channel must not be used by strangers. It is of great convenience, however, to the fishermen and light coasters, who are familiar with its dangers.

BLACK ROCK CHANNEL

is that narrow channel which leads from the *Main Ship-Channel* in a N E. direction, between **Lovell Island** and **Narrows Light-House**, into *Hypocrite Channel.* It is dangerous, and is never used by large vessels unless there is ice in the *Narrows.* The southeastern side of this passage is marked by *Spit Bar*, the northwestern side by the shoals on the east side of **Lovell Island.** Strangers must not attempt it.

DANGERS

IN THE BLACK ROCK CHANNEL, OUT OF BOSTON HARBOR.

In leaving the *Main Channel*, and bound out through the *Black Rock Channel*, the first danger met with is

WHITING LEDGE.

This dangerous ledge, which has about six feet at lowest tides, lies nearly in the middle of the passage, and the ebb-tide sets strongly on to it. *It is not buoyed;* but the following bearings were taken upon it:

Narrows Light-House, S E. by S. ½ S., with **Spit Beacon** just open to the eastward two hundred and forty yards.

Black Rock, E. by N., six hundred yards.

To avoid it, keep the eastern side of the passage aboard, and in doing so care must be taken not to go ashore on

SPIT OR BREWSTER BAR.

(See also page 801.) This long spit makes off from **Great Brewster** in a westerly direction to **Narrows Light-House**, a distance of nearly one mile. It is dry at low water and tolerably bold-to, and is not very dangerous to vessels using this channel unless they hug the eastern side too closely while endeavoring to avoid *Whiting Ledge.*

On the northern edge of this spit, about five hundred yards N E. ½ E. from **Narrows Light-House**, lies a prominent rock or islet, called **Black Rock,** which gives the name to the channel, and serves also as a guide to keep vessels off the spit.

SHOALS EAST OF LOVELL ISLAND.

From the eastern side of **Lovell Island** shoal water extends to the northeast three-quarters of a mile, there being only twelve feet at low water at that distance from the island. The spit is bare at low water for an eighth of a mile N E. from the south end of **Lovell Island,** and there is less than six feet one-third of a mile to the eastward of the east shore. The ebb-tide sets on to these shoals, and vessels bound out must be careful, after passing *Whiting Ledge*, not to go to the westward of **Green Island** bearing N E. The northeast point of these shoals is three-quarters of a mile E. by N. ½ N. from the northeast point of **Lovell Island** and about two-thirds of a mile W. by N. from the south end of **Calf Island.**

The west shore of **Calf Island** is bold, and can be approached quite closely.

SAILING DIRECTIONS

FOR VESSELS LEAVING MAIN SHIP-CHANNEL AND BOUND OUT THROUGH BLACK ROCK CHANNEL.

Coming down the *Main Channel* on the S E. ½ E. course, when about midway between the southeast end of **Lovell Island** and **Narrows Light House,** and the southeastern angle of **Fort Warren** (on **George Island**) bears S W., steer N E., keeping that range, with **Green Island** a very little open to the westward. This clears *Whiting Ledge.* On this course continue until **Little Calf Island** bears S. by E., three hundred yards off, and when in *Hypocrite Channel*, about five hundred yards S W. from **Green Island,** steer EAST or E. ½ S., which will carry clear of everything. Not less than four fathoms is found on these courses.

If the tide be flood, do not depend upon the N E. course to lead clear of *Whiting Ledge.* The course made good carries within thirty yards of that ledge and the flood sets toward it. In such a case keep the eastern side of the channel aboard, guiding the courses by **Black Rock** until past the ledge, when haul up for **Green Island** and proceed as before directed. But vessels seldom use this channel except on the ebb-tide.

Both flood and ebb-tides set strongly through this channel. The former sets nearly in the direction of the channel, the latter sets more toward the eastern side. In either case, however, care must be taken not to be set on to *Whiting Ledge.* A good rule is to pass close to **Narrows Light-House** and steer to the northeastward, keeping **Black Rock** open to the eastward. But no stranger ought to attempt this passage, as a pilot can always be obtained in **Boston.**

BACK OR WESTERN WAY.

This channel is used on the ebb in light winds to avoid being set out into the *Sound* at *Nix Mate*, or into *Black Rock Channel* at the southeast end of **Lovell Island.** The entrance is between **Thompson Island** and **The Spectacles,** whence it passes between the southwest end of **Long Island** and **Moon Head**; then, turning abruptly to the northeastward, passes along the eastern shore of **Long Island,** between it and **Rainsford Island,** and thence toward **George Island** into *Inner Nantasket Roads.* With care this channel is safe, even for strangers.

When abreast of the *black buoy* on *Castle Rocks* the entrance to this channel will bear S S E. To the westward will be seen the precipitous face of

THOMPSON ISLAND,

which lies on the western side of the entrance to *Back Way* and on the eastern side

of the entrance to *Neponset River*. This island lies E N E. and W S W., and is a mile long. The group of large houses on its summit is the hotel and its surrounding buildings, built near the middle of the island, where the land rises to a height of seventy-five feet. Nearly all of the rest of the island is low land. It is surrounded by flats and shoals, which on its eastern side extend off to a distance of three-quarters of a mile with less than six feet at low water; but on its western side it is much bolder, and may be approached (when bound into *Neponset River*) within three hundred and fifty yards.

South of **Thompson Island** lies the peninsula of **Squantum,** and from the southeast end of the former a long and narrow sand-spit extends nearly S. by E. for five hundred yards, its southern end being within seventy-five yards of **Squantum**. Thus the island is nearly joined to the main land and there is no passage between them at low water. (See also page 805.)

On the east side of the entrance will be seen the

SPECTACLE ISLANDS,

which will be nearly in range from this point of view. They are two islands of moderate height, bare of trees, lie NORTH and SOUTH from each other, and at low water are joined by a dry bar. The northern island lies nearly EAST and WEST; is seven hundred yards long and sixty-five feet high, with cliff-like faces worn by the action of the water. On coming up with it there will be seen a group of houses on its southern end, where there is a low sand-point. The southern island, on approaching it, will be seen to be equally bare with the **North Spectacle**, but not so steep, although its height at the summit is the same. The north face of this island is as precipitous as that of the **North Spectacle**, but this side is not visible from the *Back Way*. On the south side the shore is low and sandy. Here a wharf is passed making out to the edge of the channel from the west shore of the **South Spectacle**, near its southern end.

MOON ISLAND.

When past **The Spectacles** on the S S E. course, **Moon Island** will appear on the west side of the channel and **Long Island** on the east side. **Moon Island** cannot fail to be recognized by its high, bare, precipitous head, called **Moon Head,** which forms its eastern end. Viewed from near **The Spectacles** it will look like an extension of the southeast face of **Squantum.**

Moon Island lies E. by N. and W. by S., and is three-quarters of a mile long. **The Head,** which is eighty-five feet high, forms the principal part of the island, as west of its base there is nothing but a low sand-spit extending to the westward over one-third of a mile. At low water this is joined to the peninsula of **Squantum,** whose rugged hills appear to the westward of **Moon Head.**

Opposite to **Moon Head** appears, on the eastern side of the channel, the southwestern extremity of

LONG ISLAND.

It presents a bare hill, fifty feet high, with a precipitous face. To the northward of this hill the surface slopes regularly almost to the sea-level, rises again to a height of twenty or thirty feet, then falls again, and so continues, presenting a series of elevations and depressions, the hills varying from fifty to ninety feet in height. The highest land on the island is about midway between its north and south ends, where the smooth green hill rises to a height of ninety feet. On the north slopes of this hill will be seen, on passing to the southward of **Spectacle Islands,** the hotel buildings; and here is a large wharf, used as a steamboat-landing during the summer season. Still farther to the north-

ward rises **Long Island Head**, eighty feet high, with the **Light-House** on its summit. It will appear like a separate island; the land between it and the base of the hill, upon which the hotel is built, being so low as to be scarcely perceptible.

The channel passing between **Moon Head** and **Long Island** leads directly toward a bare precipitous head, with water-worn face, behind which rises a still higher hill, smooth and grassy, but not so steep. The high hill is **Quincy Great Hill**; the smaller head in range with it is **Nut Island.** The latter is sixty feet high, is two miles to the southeastward of **Moon Head**, and lies on the east side of *QUINCY BAY.*

HANGMAN ISLAND.

A little to the westward, and about three-quarters of a mile off, will appear a low, bare, rocky islet. This is **Hangman Island**, which lies in the middle of the entrance to *Quincy Bay*, about midway between **Moon Island** and **Nut Island**, and is surrounded by shoals. To the northeastward of this island, and in range with the western end of **Peddock Island**, will appear **a large beacon of open-work, with a granite base, and surmounted by a staff and cage.** This is on **Sunken Island,** and is one of the guides to the approaches to *Weymouth Fore River.* Neither this ledge nor **Hangman Island** are in the way of vessels bound out by the *Back Way.*

When well past the southwest end of **Long Island**, the channel turns abruptly to the northeastward along the eastern face of **Long Island**, between it and

RAINSFORD ISLAND.

This will appear as a low island, nearly bare of trees, but having several groups of buildings upon it, and a long wharf making off from its southern end. The buildings belong to the quarantine station, which was formerly established upon this island. They are partially concealed by trees planted around them for ornament and shade. South of the western end of the island a long ledge of bare rocks will be seen extending to the southward a considerable distance. These are the *Quarantine Rocks,* and are among the principal obstructions to the entrance to **Weymouth.**

The course to the northeastward leads directly toward the west end of **Gallop Island**, which, from this point of view, will show as low, gently-sloping land, with a couple of houses close to the shore, and two small wharves making out to the southward and westward. **Nix Mate Beacon** will appear a little to the westward, and **Long Island Light** still farther to the westward.

When past the eastern end of **Rainsford Island** the channel turns to the eastward, the course leading directly for the southern angle of **Fort Warren** on **George Island** until within three-eighths of a mile of it, when it turns to the southward, leading directly toward a high bare hill, on the western slopes of which will be seen the village of **Hull.** This is **Nantasket Hill.** This course leads into *Nantasket Roads*, after which follow the directions for the *Main Ship-Channel.*

DANGERS
IN BACK OR WESTERN WAY.

Scant nine feet at mean low water is all that can be taken through this channel. The shoalest part is south of **Spectacle Island**, between it and **Moon Head.**

The first obstruction met with, after passing the *black buoy on Castle Rocks*, is known as

THOMPSON ISLAND FLATS.

These extend off from the northeastern end of **Thompson Island** to the eastward for nearly three-eighths of a mile. *They are not buoyed*, and to avoid them the **Spectacle**

Island shore must be kept best aboard. These flats extend off from the eastern shore of **Thompson Island** for three-quarters of a mile with less than six feet water. Vessels must be careful not to approach this shore.

SCULPIN LEDGE.

When abreast of the southern end of **Spectacle Island** there will be seen on the east side of the channel, about half a mile off, *a red spar-buoy.* This is on the eastern end of *Sculpin Ledge*, a long reef, with many rocks awash, lying on the eastern side of the channel, about midway between **Long Island** and **Spectacle Island.** The *red buoy* is no guide for the *Back Way*—being placed as a guide to the passage into **Weymouth** between **Long** and **Spectacle Islands.** *Sculpin Ledge* lies W N W. and E S E., is nearly three hundred yards long, and its western end bears S E. by S. from the wharf on the **South Spectacle,** six hundred yards distant. There is no buoy on this end of the ledge, and to avoid it do not go to the eastward of the line joining the southwest end of **Long Island** and the wharf on the **South Spectacle.**

MOON HEAD FLATS.

From **Moon Head** to the eastward a flat extends about an eighth of a mile with less than six feet water. *It is not buoyed*, but the sailing-lines lead well clear of it.

QUARANTINE ROCKS.

These dangerous rocks are the next obstruction met with. They extend in a S. by W. direction from the western end of **Rainsford Island** for three-eighths of a mile, are mostly bare at low water, and are not marked in any way. They are, however, not dangerous to vessels using the *Back Way* unless beating to windward, in which case, to avoid them, keep **Long Island Light** open to the westward of **Rainsford Island.**

HOSPITAL SHOAL.

When past **Rainsford Island**, and steering toward **Fort Warren,** there will be seen on the side of the channel *a black nun-buoy.* This is on *Hospital Shoal*, an extensive ledge lying in a **W N W.** and **E S E.** direction between **Rainsford** and **George Islands.** It is three-eighths of a mile long, and has upon it a small rock with five feet at low water, called *Wilson Rock.* The western end of the shoal bears from the west end of **Rainsford Island E N E.** and from **Long Island Light-House** S. by E. ¾ E. The buoy is a black nun of the third class, and is placed in eighteen feet off the eastern end of the shoal; bears from the southern end of **George Island WEST,** half a mile, and from **Long Island Light** S E. by S. ½ S., one mile and one-eighth distant.

After passing the buoy on *Hospital Shoal*, and in *Nantasket Roads*, either shape the course for the *Centurion Buoy* or pass between *Toddy Rocks* and *Hunt Ledge.* If taking the former course, steer E N E. for *a red nun-buoy*, with a *black nun-buoy* a short distance to the northward of it. The *red buoy* is on the southeast end of *Centurion Rock*, which has fourteen feet water at mean low tides and twelve feet at low springs. The rock bears S E. ¾ S. from **Narrows Light-House,** three-eighths of a mile distant, and W. by S. ¾ S. from **Boston Light-House,** one mile and one-eighth distant. Vessels using this channel leave the buoy to the northward close to.

HUNT LEDGE.

On passing the red buoy on the *Centurion*, leave to the southward, a quarter of a mile off, *a nun-buoy painted in red and black horizontal stripes.* This is on *Hunt Ledge*, which lies on the south side of the channel, about half a mile from the **Nantasket** shore. It has fourteen feet at mean low water and from three to five fathoms on all sides. The buoy is *on* the rock.

When past the *Centurion Buoy* the course leads to the eastward, leaving to the northward *a red spar-buoy*. This is on *Nash Rock*, a detached rock, with thirteen feet at low tide, in the middle of the channel. The buoy is placed on the south side of the rock in eighteen feet water. After passing **Boston Light-House** the channel is clear to sea.

If intending to pass between *Toddy Rocks* and *Hunt Ledge*, the course will be about EAST, and there will be seen about three-quarters of a mile to the eastward a *black nun-buoy* on the south side of the passage and *a red and black nun-buoy* on the north side. The latter is on *Hunt Ledge*, the former on the north end of *Toddy Rocks*. These rocks make off in a long line from the base of the **Nantasket Hills**, and are bare at low water one-eighth of a mile from shore. The buoy on *Toddy Rocks* is a nun of the second class, marked No. 3, and placed in three and a half fathoms on the north side of the ledge. The channel leads directly between this buoy and that on *Hunt Ledge*, and continues to the eastward to **Point Allerton**, leaving the black nun-buoy on *Point Allerton Bar* to the southward. When past this buoy the channel is clear to sea.

SAILING DIRECTIONS

FOR VESSELS BOUND OUT OF BOSTON HARBOR BY THE BACK WAY.

When at the *black buoy* on *Castle Rocks* steer S S E. for **Quincy Great Hill**, which will be about four miles off. This course leads in, with the best water, (nine feet,) between **Thompson** and **Spectacle Islands**, leaving *Thompson Island Flats* to the westward and *Sculpin Ledge* well to the eastward. It may be possible to see **Nut Island** in range with **Quincy Great Hill**, and to recognize it by its bare precipitous head. On this course, when **Bass Point** (which is the southeast end of **Long Island**) is opened from behind the southwestern point on a bearing of N E. by E. ¾ E., steer S E. for one-quarter of a mile exactly for the summit of the hill on the southwest end of **Peddock Island**. On this course there will not be less than nineteen feet, and when the southwestern end of **Long Island** bears N. ½ W. and is in range with the eastern end of the **North Spectacle**, steer N E. by E. for the west end of **Gallop Island**, passing between **Rainsford** and **Long Islands** and carrying four fathoms water. On this course continue until **Long Island Light-House** bears **NORTH** and the eastern end of **Rainsford Island** S. by E. ½ E., when there will be three and three-quarters fathoms; steer E. by S. for the southern angle of **Fort Warren** on **George Island**. On this course the least water is three and a half fathoms. When within five hundred yards of the island, with the centre of **Nantasket Hill** bearing S E. ½ E., steer for the hill until **Narrows Light-House** bears N N E., with seven and a half fathoms. Now steer E N E. for the *southeast buoy* on the *Centurion*, and when up with that buoy E. ½ N. to sea.

Or, when, on the S E. ½ E. course for **Nantasket Hill**, **Narrows Light** bears N N E., wishing to pass between *Toddy Rocks* and *Hunt Ledge*, steer **EAST**, passing about midway between the two buoys, in five and three-quarters fathoms. This course will carry safely to sea.

OTHER PASSAGES IN BOSTON HARBOR.

There is a deep and unobstructed passage between **George** and **Gallop Islands** with not less than five fathoms. Vessels passing up the *Narrows* on the flood-tide may, if the wind be light, be set through this passage. In such case they will find good anchorage anywhere south of **Gallop Island** or west of **George Island**. If such a vessel be of light draught, she may avail herself of a channel with ten feet at mean low water which leads to the northward between *Nix Mate* and **Long Island Head** into the *Main Channel*.

DANGERS
IN THE PASSAGE BETWEEN LONG ISLAND HEAD AND NIX MATE, FROM INNER NANTASKET ROADS.

If designing to enter this channel from *Nantasket Roads*, the course leads toward the low land south from **Long Island Head**, and a *black nun-buoy*, marked No. 1, will be left to the westward. This is on

HOSPITAL SHOAL,

a large ledge, lying W N W. and E S E., between **Rainsford** and **George Islands.** *Wilson Rock,* the shoalest part of this ledge, has five feet at low water. The buoy is placed on the eastern side of the shoal, and is half a mile west from the southern angle of **Fort Warren.** When past it there are no dangers until near the west end of **Gallop Island,** when there will be seen on the starboard bow *a red spar-buoy.* This is on the

SOUTH SPIT OF NIX MATE,

and must be left to the eastward. This shoal is dry at low water, and extends from **Nix Mate Beacon** in a southeast direction a quarter of a mile to this buoy, which is marked No. 2. In passing it leave the buoy close to on the starboard hand to avoid the shoals on the **Long Island** side.

SAILING DIRECTIONS
FOR PASSING FROM INNER NANTASKET ROADS, BETWEEN NIX MATE AND LONG ISLAND HEAD, INTO PRESIDENT ROADS.

From the *Southeast Centurion Buoy* steer W S W. until **Narrows Light House** bears N N E., when steer N W. ½ W. for the low land just south of **Long Island Head.** On this course **Nantasket Hill** will be directly over the stern. Continue it until past **George Island** and **Deer Island Point Beacon** bears N. by W. Now steer for the **beacon,** passing to the westward of the *red buoy* on the south spit of *Nix Mate,* and when fairly in the *Main Channel,* with **Long Island Light-House** bearing S W. ¾ S., steer W. ½ N. into *President Roads.* Ten feet is the least water, and this is found between *Nix Mate* and **Long Island Head.** Everywhere else there is over three fathoms.

PASSAGE BETWEEN LONG ISLAND AND SPECTACLE ISLANDS.

This channel, commonly called *SCULPIN LEDGE CHANNEL,* leads from *President Roads* into *Back* or *Western Way,* and is commonly used by vessels bound to **Quincy** and **Weymouth.** It is good for twelve feet at mean low water. The channel lies nearest to **Long Island,** extensive shoals lying off the eastern shore of **The Spectacles.**

In coming into this channel from *President Roads,* when abreast of **Long Island Light** there will be seen on the port bow a *black spar-buoy,* lying close in with the wharf near the hotel. This is on *Wharf Rock,* which lies to the westward of the wharf and has two feet at lowest tides. The buoy is a black spar, marked No. 1, and is placed on the northwest side of the rock in twelve feet water. It must be left well to the eastward. When past it, *a red spar-buoy* will be seen ahead about half a mile off. This is on *Sculpin Ledge,* an obstruction already described in the dangers in the *Back Way.* It is a long reef, awash in several places at low water, lying about midway between **Long Island** and **The Spectacles,** and on the western side of this channel. *The buoy is a red spar,* marked No. 2, and is placed in twelve feet water off the eastern end of the shoal. It is to be left to the westward.

SAILING DIRECTIONS.

I. *Coming from the eastward, to enter this channel.*—When **Long Island Light-House** bears S E. ¾ S. and **Deer Island Point Beacon** E. by N. ¾ N. steer S W. by S., carrying not less than three fathoms, until up with the *red buoy on Sculpin Ledge*, which leave to the westward fifty yards off, and steer S W. by W. ½ W. for the summit of **Moon Head.** On this course there will not be less than fourteen feet, and when within one-third of a mile (about six hundred and fifty yards) of **Moon Head,** with **Quincy Great Hill** bearing S S E. and the wharf on the southwest point of **The Spectacles** N. by W., the *Back Way* is entered; now steer S S E. or N N W., according as bound to **Quincy** or into *Neponset River.* On this course there will be not less than twelve feet.

II. *Coming from the westward.*—When, on the course through *President Roads,* **Long Island Light-House** bears E S E. and the eastern end of the **North Spectacle** S. by W., steer S E. for the wharf near the hotel on the west side of **Long Island.** Continue this course, with not less than three fathoms, until within three hundred and fifty yards of the wharf, when steer S W. by S. for the *red buoy on Sculpin Ledge,* and proceed as above directed.

FORT HILL CHANNEL.

This channel separates **South Boston** from **Boston** proper and leads into *South Bay.* It has eight feet at low water. Its shores are lined with wharves, and it is crossed by no less than five draw-bridges. Vessels must be towed in and out. The Harbor Commissioners design making extensive improvements in this channel, one of the most important of which is a heavy granite sea-wall.

LIGHT-HOUSES.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Interval of Flash.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.				
	° ′ ″	° ′ ″	h m s		m s	Feet.	
Boston Light....	42 19 39	70 53 25	4 43 33.7	Rev'g.	0 30	111	17
Long Island Lt...	42 19 46	70 57 23	4 43 49.5	Fixed.	.....	121	16
Narrows Light...	42 19 21	70 55 10	4 43 40.7	F'd, red.	.....	46	10
Minot Ledge Lt..	42 16 09	70 45 34	4 43 02.3	Fixed.	.....	92	16
Egg Rock Light..	42 25 58	70 53 52	4 43 35.5	F'd, red.	.....	87	12

TIDES.

	U. S. Dry Dock.	Boston Light.
Corrected Establishment	$11^h\ 27^m$	$11^h\ 12^m$
Rise of Highest Tide observed above Mean Low Water	15.1 ft.	12.2 ft.
Fall of Lowest Tide observed below Mean Low Water	2.9 "	2.5 "
Fall of Mean Low Water of Spring Tides below Mean Low Water	0.7 "	0.9 "
Height of Low Water of Neap Tides above Mean Low Water	0.8 "	0.7 "
Mean Rise and Fall of Tides	10.0 "	9.4 "
Mean Rise and Fall of Spring Tides	11.3 "	10.9 "
Mean Rise and Fall of Neap Tides	8.5 "	8.1 "
Mean Duration of Rise	$6^h\ 13^m$	$6^h\ 20^m$
Mean Duration of Fall	$6^h\ 13^m$	$6^h\ 06^m$
Mean Duration of Stand	$0^h\ 09^m$	$0^h\ 11^m$

FOG-SIGNALS.

At **Minot Ledge Light-House** there is a bell struck by machinery.

At **Boston Light-House** there is an air trumpet, giving blasts of seven seconds at intervals of forty-three seconds.

CURRENTS.

Stations.	First Quarter.		Maximum.		Third Quarter.	
	Set.	Drift.	Set.	Drift.	Set.	Drift.
Three-eighths of a mile SOUTH from Bird Island.	N W. ¼ N.	0.8	N W. ¼ N.	1.3	N W. ¼ N.	0.9
	E. by N. ½ N.	0.8	E. by N. ¼ N.	1.2	E. ⅜ N.	0.7
Three-eighths of a mile NORTH from Spectacle Island.	W. ¼ N.	0.6	W. by N.	0.9	W. ⅜ N.	0.7
	E. by N. ¾ N.	0.7	E. by N. ¼ N.	0.9	E. ⅜ N.	0.7
WEST from Long Island Light-House.	S W. ¾ W.	0.5	S S W.	0.7	S. ¼ W.	0.3
	N E. ½ N.	0.4	E. by N.	0.9	N E. by E. ¾ E.	0.4
Between Long Isl'd Lt.-House and Deer Island Beacon.	W. by N. ¾ N.	1.4	W. by S. ½ S.	2.5	N W. by W. ¾ W.	1.2
	E. ½ S.	1.4	E. by S.	3.3	E. ½ S.	2.1
Between Lovell and Galiop Islands.	S S E.	0.3	N W. by N.	0.6	N W. by N.	0.4
	N N W.	0.2	N. ¾ W.	0.9	N. ¾ W.	0.5
Between Barrel Beacon and Centurion Buoy.	W. by S.	1.0	S W. by W. ¾ W.	1.5	W. by N.	0.6
	E. by N. ⅜ N.	0.6	E N E.	1.2	E. ⅞ N.	0.7
NORTH from Peddock Island.	W. by S. ¾ S.	1.1	W. by S. ⅝ S.	2.1	W. by S. ⅝ S.	1.4
	E. by N. ¾ N.	0.8	N E. by E. ¾ E.	1.3	E. by N. ⅜ N.	0.6
Between Boston Light-House and Point Allerton.	W. ¼ S.	1.3	W. ¼ S.	1.6	W. by S.	1.2
	E. ¾ S.	1.0	E. ¾ S.	1.5	E. by S.	1.2
WEST from Calf Island	S W. by W.	0.6	S W.	1.0	S W. ¼ W.	0.6
	N E. by N. ½ N.	0.5	N E. ¾ E.	0.6	N E. ⅝ E.	0.5
Between Outer Brewster and the Graves.	S W. ¾ W.	0.6	S W. ½ S.	1.1	S W. ⅞ W.	0.7
	N E. by E. ¼ E.	0.8	N E. by E. ¼ E.	1.1	N E. by E. ⅝ E.	0.6
Broad Sound Channel	S W. by S. ½ S.	0.2	W. by N. ⅛ N.	0.3	W. by N. ⅞ N.	0.2
	E. by S. ¾ S.	0.3	E. by S. ⅞ S.	0.5	E. by S. ⅞ S.	0.4
SOUTHEAST from Nahant Pt.	W. by S. ⅝ S.	0.3	W. ¾ S.	0.4	W. ⅞ N.	0.3
	N E. by E. ½ E.	0.2	E. ⅞ N.	0.4	N E. by E.	0.2

In the above table, at each station the set and drift of the flood-tide is placed first, followed by that of the ebb. The set is given by compass; the drift is in nautical miles per hour.

VARIATION OF THE COMPASS.

In January, 1875, the magnetic variation will be 11° 10′. The present annual increase is about 2¾′.

LIFE-BOAT STATIONS.

There is a life-boat at **Nahant**, on the northeast side, near the hotel, which can easily be launched on either side of the peninsula.

At **Deer Island** there are three boats, one large and two small ones, in charge of the superintendent; at **Point Allerton**, inside of the buoy and rocks on the northeastern part of the point, there is a life-boat, under care; on **Hull Beach**, on the inside of the neck connecting **Hull** with **Nantasket**, there is a boat with a life-car, mortar, hawser, and other means of communicating with a wreck. These are all under care.

On **Nantasket Beach**, about a mile and a quarter to the southward of **Point Allerton**, there are two life-boats, also under care; on **Pleasant Beach**, a little over a mile to the westward of the entrance to *Cohasset Harbor*, there is a boat, under care; near **Hominy**

Point, inside the western entrance to *Cohasset Harbor*, there are two boats, under care; on **Simons Farm Beach, North Cohasset**, there is one life-boat, under care; on the beach near the **Glades House** there is a boat, under care; at **Fourth Cliff, Scituate**, there is a life-boat, under care; on **North Scituate Beach**, inside of *Minot Ledge* and *Rocks*, there is a boat, under care; at *Bass Cove*, about a mile to the eastward of the town of **Scituate**, there are two boats in one house, under care; on the beach near **Scituate Light-Tower** there is one large metallic life-boat, placed under the care of the Massachusetts Humane Society by the Secretary of the Treasury.

SHORES OF BOSTON BAY.

FROM DORCHESTER POINT TO NEPONSET RIVER.

From **Dorchester Point**, the eastern point of the peninsula of **South Boston**, the shore runs to the westward a mile and a quarter, then turns to the southward for nearly half a mile, and then to the eastward into a long marshy point, called **Old Harbor Point.** Thus is formed a large but shallow cove, called *OLD HARBOR*, bare at low water. A small cove, also dry at low water, makes in on the south side of **Old Harbor Point**, between it and a steep partially-wooded hill, called **Savin Hill.** It is one hundred feet high. The shore extends from the base of **Savin Hill** to the eastward into a long narrow sand-point, called **Savin Point.**

On the south side of **Savin Hill** another large cove makes in, the shores of which are thickly settled. It is dry at low water, and is crossed near its head by a bridge, over which passes the Old Colony Railroad. The south point of the entrance to this cove is a flat peninsula, called **Commercial Point,** composed of low cleared land, thickly covered with houses. A large wharf, called **Commercial Wharf**, extends off to the eastward from the southeast point of this peninsula. **Commercial Point** forms the western point of entrance to

NEPONSET RIVER.

This is the first river emptying into *Boston Bay* to the eastward of **South Boston.** It leads to **Neponset Village,** one mile above its mouth, and thence to **Milton Mills,** two miles farther by the river. It is narrow and crooked; the approaches are dangerous, and it is not considered safe for strangers to enter without a pilot. Some description of its shores and obstructions will be given, however, and such sailing directions as can be made intelligible.

The river is a third of a mile wide at its mouth, but grows gradually narrower until, at **Milton Mills**, it is only one hundred yards in width. The west side of the entrance is thickly settled, and is marked by a long wharf with many buildings on it, which is called **Commercial Wharf**, and extends out to the edge of the channel. The eastern shores of the river are almost entirely composed of salt meadow and are destitute of houses.

In entering this river pass between **Spectacle** and **Castle Islands**, then keep along the west shore of **Thompson Island**, steering nearly for **Commercial Point.** When past **Thompson Island** the thickly-settled country between **Mount Bowdoin** and **Neponset** will be seen ahead; on the west side of the channel **Savin Hill** will appear as a high steep hill, partly wooded, and with a number of handsome houses dotting its slopes. It will be noticeable as the only high land on the shore between **Dorchester Point** and **Squantum.** To the southward of the hill, however, and well back from the shore, will appear the summit of **Mount Bowdoin**, one hundred and seventy feet high. Its sides are cultivated and the whole surface of the hill dotted with houses and orchards.

Next to the southward will appear **Commercial Point**, marking the western side of the mouth of the river; and to the eastward of it a low, broad, marshy point will be seen, with the mouth of the river between them. This point is called **Farm Point,** and the extensive marshes, of which it is the extremity, are called **Farm Meadows.** **Farm Point** is the eastern point of entrance to *Neponset River.* There are several patches of firm ground on the peninsula which are under cultivation, and two or three small groves of trees. To the eastward of it, and just to the southward of **Thompson Island,** the high land of **Squantum** will appear, grassy, bare of trees, and under cultivation. **Squantum** separates *Neponset Entrance* from *Quincy Bay*—the large shallow bay which makes in between **Squantum** and **Hough Neck.**

On entering *Neponset River* between **Commercial Point** and **Farm Point** the course of the stream is at first S by E. for nearly a mile—between low marshy banks, with occasional groves of trees—until abreast of **Neponset,** which is seen about a quarter of a mile back from the western shore. Thence the stream makes a turn about S W. by W. for a quarter of a mile, passing under the Old Colony Railroad bridge and the county bridge just to the southward of it. Thence it runs S. by W., still between marshy banks, for one-third of a mile; thence S W. by W. for a quarter of a mile; and continues its windings, with an average width of a little over a hundred yards, to **Milton Mills Village.** This village is two miles and a quarter above the mouth of the river in a straight line, but nearly three miles and a half by the windings of the river. The land upon which the village stands is high and slopes gently to the water. It is under high cultivation.

About a mile above the county bridge, a third bridge carries the road to **Railway Village,** across the river. All of these are, of course, draw-bridges.

DANGERS
IN APPROACHING AND ENTERING NEPONSET RIVER.

Vessels intending to enter this river from the eastward will leave *President Roads,* when past **Spectacle Island,** and steer to the southwestward for **Commercial Point.** On this course, **Thompson Island** will be left to the eastward, keeping its northwest shore pretty close aboard, and to the southwestward will be seen *two spar-buoys—a red buoy on the* west side of the channel *and a black* on the east side. The former is on

OLD HARBOR SHOAL.

This is the name given to the extensive flats making off from the western shore, between **Dorchester Point** and **Old Harbor Point.** The eastern point of these flats extends to within half a mile of **Thompson Island** with less than six feet at low water. The buoy is a **red spar,** marked No. 2, and is placed in eight feet water on the south side of the eastern end of the shoal. It bears from **Dorchester Point** S. ¾ W., distant seven-eighths of a mile, and from **Fort Independence** S W. by S., a mile and a quarter. The best water is about one-third of the way from this buoy to the *black-spar-buoy* on the eastern side of the channel, which is on

THOMPSON ISLAND FLATS,

making off from **Thompson Island.** It is about two hundred and fifty yards from the shore, and bears S. by W. ¾ W. from the *red buoy on Old Harbor Shoal,* a quarter of a mile distant. The buoy is placed in seven feet on the northwest side of the flats.

The space inclosed between **Thompson Island, Farm Point,** and **Squantum** is one mass of flats, bare at extreme low tides, which it would be impossible for a stranger to avoid except at low water, when the flats on both sides show themselves. It is possible for

a vessel drawing not over five feet to beat through this channel with the aid of a chart and a free use of the lead; but no one is advised to attempt it.

OLD HARBOR FLATS.

When abreast of the *black spar-buoy* on *Thompson Island Flats* there will be seen ahead, and in range with **Commercial Point**, *a red spar-buoy.* This is on *Old Harbor Flats*, which make off from **Old Harbor Point** in a southeast direction about three-eighths of a mile. They are often called *Cow Pasture Flats*, are bare at low tide, and the southeastern edge is quite bold-to. *The buoy is a red spar*, marked No. 4, and is placed in seven feet on the extreme point of the flat. It is to be left to the westward, and when abreast of it the course leads more to the westward, with **Savin Hill** on the starboard bow and three *spar-buoys* on the port bow appearing close together. Of these three buoys the first one met with will be a *black spar.* This is on

FARM POINT SHOAL,

which is the name given to the dry flat extending off from **Farm Point** in a N W. by N. direction one-third of a mile. *The buoy is a black spar*, marked No. 3, and is placed in seven feet on the northwest point of the flats. It bears from the *red spar-buoy on Old Harbor Flats* W. by S. ½ S., five-eighths of a mile, and from **Commercial Wharf** N. by E., one-third of a mile. It must be left to the eastward. Here the channel makes an abrupt turn to the southward and passes to the eastward of *a spar-buoy painted in red and black horizontal stripes.* This is on

HALF-TIDE ROCK,

which lies on the western side of the channel, one-eighth of a mile to the westward of *Farm Point Buoy.* The rock is dry at half-tide and the buoy is to be left to the westward. Passing it, also leave to the westward *a red spar-buoy*, which marks the edge of the flats making off from the cove north from **Commercial Point.** When abreast of this buoy the channel turns more to the eastward, running nearly for **Farm Point**, and leaving to the westward the large square pier built on the edge of the flats off **Commercial Point.** When abreast of **Commercial Point** *a black spar-buoy* will be seen ahead. This is on

TILSTON FLATS,

and is to be left to the eastward. These flats make off from **Tilston Point**, which is the first point on the east side of the river south from **Farm Point.** They extend a quarter of a mile from shore with less than six feet water. The buoy is placed on the western edge of the flats, and bears from **Commercial Wharf SOUTH** one-eighth of a mile. The channel is here very narrow and difficult to navigate. About three hundred yards to the southward from *Tilston Buoy* will be seen another *black spar-buoy.* This is on

CHATMAN POINT FLATS,

which make off from **Chatman Point**, the first point to the southward of **Tilston.** The flats here make out nearly a quarter of a mile from the eastern shore, and are quite bold-to. The buoy is marked No. 7, and is placed on the edge of the flats. Leaving it to the eastward, there will be seen on the westward *a red spar-buoy.* This is on the eastern end of

MINOT POINT FLATS.

Minot Point is the low marshy point, backed by trees, which makes out on the west side of the river nearly half a mile below **Commercial Point.** The flats here extend out several hundred yards from the shore, and the buoy marks their eastern extremity.

Leaving it to the westward, the course leads toward another *red spar-buoy* about a quarter of a mile to the southward. This is on

WOOD POINT FLATS.

Wood Point is also on the west side of the river, just below **Minot Point.** The flats make off from it two hundred and fifty yards, and the buoy marks their eastern edge. It is to be left to the westward, and the course steered toward *a black spar-buoy* which will be seen ahead, about an eighth of a mile off, and in range with the eastern end of the **Railroad Bridge.** This buoy marks

SEAL ROCK,

which lies on the eastern shore about a hundred and thirty yards north of the bridge, and is dry at low water. The buoy is marked No. 9, is placed on the western side of the rock, and bears from *Wood Point Buoy* S W. by S. ¼ S., and from the draw in the railroad bridge EAST, distant one hundred and seventy-five yards.

Above the **Railroad Bridge** there are no buoys.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING NEPONSET RIVER.

I. *Coming from the eastward.*—In *President Roads*, when the wharf on the south end of **Castle Island** bears W. by N. ½ N. and the west end of the **North Spectacle Island** S. ¼ E., steer S W. by W. ½ W. for **Commercial Point,** which will appear between **Savin Hill** and **Farm Point.** Continue this course, with not less than fifteen feet water, passing about midway between the *red buoy on Old Harbor Shoal* and the *black buoy on Thompson Island Flats;* and when abreast of the latter steer S W. ¾ W., with the *red buoy* on *Cow Pasture Flats* a little on the starboard bow. Continue this course, with not less than fourteen feet, past the buoy until the centre of **Savin Hill** bears W N W., when, in three and a half fathoms water, the eastern pier of **Foundry Wharf** will bear W. ½ S. Steer that course for the pier, carrying not less than thirteen feet water, and passing to the westward of *Farm Point Buoy;* then steer S W. by S. for a *red spar-buoy*, leaving the *red and black buoy* on *Half-Tide Rock* to the westward, and carrying not less than eleven feet. When within about a hundred feet of the *red buoy*, haul around sharply and steer S E. by E. ½ E. for **Farm Point,** carrying between three and four fathoms. On this course, when abreast of the pier off **Commercial Point,** steer S. ¾ W. for **Commercial Wharf,** passing it close-to with not less than eleven feet, and continue the course (if bound up to the village) until past the *black buoy* off **Tilston Point,** to which give a berth of thirty yards. When this buoy is one hundred yards astern, steer S E. by S. ¾ S. for the *black buoy* off **Chatman Point.** On this course there will be not less than fourteen feet. Give this buoy a berth of about forty yards to the eastward and continue the course until it is about one hundred yards astern. Then steer S E. ¼ E., carrying not less than eight feet water, until abreast of the *red buoy* off **Minot Point.** On this course, if it is flood-tide, be careful not to be set on to **Minot Point.** Give the buoy a berth to the westward, and steer S. ¼ E., keeping the east shore best aboard, carrying not less than eight feet water, until past the *red buoy* off **Wood Point.** Now steer S W. by W. ¼ W. for the draw in the **Railroad Bridge.** Passing this, the same course will lead to the **County Bridge** abreast of the village. Seven feet at mean low water may be taken thus far.

II. *From Boston, bound into Neponset River.*—On the course S E. ½ S. toward **Spectacle Island,** when the buoy on *Castle Rocks* bears WEST, steer S. by W. for the eastern point of **Thompson Island** until **Long Island Light** is brought to bear E. by S. On this course the least water will be three and a half fathoms. Then steer S W. by W. ¼ W. toward **Com-**

mercial Point, carrying not less than fifteen feet water, and when abreast of the *black buoy* on *Thompson Island Flats* steer S W. ½ W., and follow the directions given above for the river.

Above the bridge no sailing directions can be given. An inspection of the chart will guide those who have no pilot; but a pilot may always be obtained either in **Boston** or at the settlement on **Commercial Point.** Only four feet at low water can be carried up to **Milton Mills.**

QUINCY BAY.

This large but shallow bay indents the south shore of *Boston Bay* just to the eastward of *Neponset River.* On the west it is separated from that river by the peninsula of **Squantum**; on the east, **Hough Neck** separates it from *Weymouth Fore River.* Between these two points the bay is two and one-third miles wide and about a mile long. Its shores are mostly low and gently sloping toward the water, cleared, and under fine cultivation; but high steep hills will appear behind and over the low lands. Of these, the highest summits are those of **Forbes Hill** and **Mount Wollaston.**

The town of **Quincy** is situated about a mile inland from the shores of this bay, near its eastern end. It has no communication by water with the bay, but there is a narrow frontage on a small stream emptying into *Town River Bay.*

SQUANTUM.

This peninsula, which forms the western boundary of *Quincy Bay,* is of irregular shape, lies E N E. and W S W., is a mile long, and has an average width of two-thirds of a mile. Its surface is hilly, bare of trees, and the highest land is about one hundred and twenty-five feet above sea-level. At its western end, where it joins the main land, it is composed almost entirely of salt meadow, forming part of the **Great Farm Meadows,** which extend to *Neponset River.* The whole of the high land of **Squantum** is under careful cultivation. Its north point is a steep hill one hundred feet high, with a few houses at its base.

East of **Squantum** lies **Moon Island,** easily recognizable by the precipitous head on its eastern end. The island is entirely bare of trees, and at low water is joined to **Squantum** by a dry flat. (See also page 857.)

HOUGH NECK

forms the eastern boundary of *Quincy Bay* and separates it from *Weymouth Fore River.* It is of irregular shape, lies about E. by N. and W. by S., is about a mile long, of moderate height, the surface being smooth and gently sloping, and bare of trees except orchards. At its northeast end it terminates in a smooth green hill one hundred feet high, with precipitous faces, called **Quincy Great Hill.** Two hundred yards north from it, but connected at low water, lies

NUT ISLAND,

a small bare islet, sixty feet high, with a precipitous face on the north side, the cliff descending abruptly from the summit of the island to the water. The channel from the westward into **Weymouth** passes between this island and **Peddock Island.**

HALF-MOON ISLAND

lies nearly half a mile from the south shore of *Quincy Bay,* off the mouth of *Black Creek.* It is not, properly speaking, an island, but a high, crescent-shaped, sandy shoal or bank, seven feet and a half out at mean low water and covered at high water; at all other stages of the tide it has the appearance of an island, the surrounding flats being much lower. It is of no importance.

HANGMAN ISLAND

is a small, bare, rocky islet, lying off the mouth of *Quincy Bay*, midway between **Moon** and **Nut Islands.** It is surrounded by shoals and must not be closely approached. It is one of the dangers in the approach to **Weymouth** from the westward.

WEYMOUTH FORE RIVER

empties into *Boston Bay* to the eastward of **Hough Neck. Quincy Great Hill** forms the western point of entrance and **Grape Island** the eastern. That portion of the *Bay* into which this river empties is usually called *HINGHAM BAY*, and its boundaries are, on the east, **Nantasket Beach**; on the north, **Point Allerton** and the shore from thence to **Windmill Point**; on the west, **Peddock Island** and **Hough Neck.**

Weymouth Fore River is quite wide at its mouth, but the width quickly diminishes until at the bridge it is only an eighth of a mile wide. It has not less than three fathoms water as far as the bridge, and even for some distance above it; but the channel is narrow and somewhat crooked, and it is not safe for strangers to enter it.

GRAPE ISLAND

lies **EAST** and **WEST**, is about half a mile long, and has a somewhat saddle-shaped appearance when viewed from the northward, the land in the centre being the lowest. Passing it, there opens a narrow passage, nearly dry at low water, which leads to the eastward toward *Hingham Harbor*. The south side of this passage is formed by a long, low, and narrow point, called **Lower Neck.** It is entirely bare of trees, as is also **Upper Neck,** just to the southward of it. **Lower Neck** separates *Weymouth Fore River* from *Weymouth Back River*, which empties into *Hingham Bay* just to the eastward of *Fore River*.

The entrance to *Weymouth Fore River* from the eastward is through *NANTASKET GUT*, the narrow but deep passage which leads into *Hingham Bay* between **Windmill Point** and **Peddock Island.**

WINDMILL POINT

is the low sandy point which makes out to the westward from the foot of the **Nantasket Hills.** It is occupied by extensive salt-works, and will be recognized by the wind-mills employed in raising the water for that purpose.

PEDDOCK ISLAND.

On the western side of *Nantasket Gut* will appear the high round head, with precipitous faces, which forms the north end of **Peddock Island.** This head is over a hundred feet high and covered only with grass. Passing to the southward, it will be seen to be connected with the rest of the island by a narrow strip of low land about three hundred yards long. The whole of the island is bare of trees and the surface undulating. The length is a mile and a quarter and the shape very irregular. On its southwestern side, between it and **Nut Island,** leads the western passage into **Weymouth.**

A small bare islet, lying about two hundred yards off the southern shore of **Peddock Island,** and connected with it at low water, is called **Pen** or **Prince Head.**

SHEEP ISLAND.

Bound into this river through *Nantasket Gut*, when abreast of **Prince Head** pass to the westward of a small, low, bare islet, called **Sheep Island.** It lies a little over half a mile to the southeastward from **Prince Head** and about the same distance north from **Grape Island**; is surrounded by shoals, and must not be closely approached. When past it, the channel leads to the southward and well to the eastward of **a square granite**

beacon surmounted by a staff and cage. This is on *Pig Rocks,* which lie a little over half a mile west from **Quincy Great Hill.**

After passing between **Grape Island** and **Quincy Great Hill** there will be seen to the westward, well in with the shore of **Hough Neck,** a small bare islet, called **Raccoon Island,** which is connected at low water with the **Neck.** A little to the southward the southern point of **Hough Neck** runs into a long point or head, called **Rock Island Head,** sixty feet high, smooth, and grassy. On its south side the shore makes in to the westward, forming a large cove, dry at low water, called *Rock Island Cove,* whose shores are mainly composed of meadow.

On the eastern shore of the river the first prominent point lies nearly opposite to **Rock Island Head,** and is called

EASTERN NECK,

and the first point above, **Upper Neck.** It is a long peninsula, lying EAST and WEST between *Fore* and *Back Rivers;* is undulating, bare of trees, and about sixty feet high near its western end. Here the shore turns to the southward and then to the westward, forming a shallow cove, which skirts the base of a smooth green hill with somewhat precipitous face, called **Weymouth Great Hill,** a hundred and forty-five feet high. Hence to the bridge the eastern shores are of moderate height, cleared, and cultivated. The settlement of **Old Spain** will be visible about half a mile back from the shore. All of this part of the shore presents a steep but not high face toward the river.

On the western side, after passing **Gull Point,** (which is the southern point of the entrance to *Rock Island Cove,*) is seen the village of **Germantown,** a small hamlet situated on the north side of the entrance to *Town River Bay,* which leads up to **Quincy. Germantown** is situated among smooth, low, cleared lands, and has several wharves both on the *Fore River* and on *Town River Bay.*

On the south side of the entrance to *Town River Bay* is

BENT POINT,

a long, low, thickly-settled point, with wharves and docks on its eastern face. The village of **Bent Point** occupies the shores on the south side of the entrance to *Town River Bay* as **Germantown** does the north side. The **county bridge** crosses at this village, the river being here about an eighth of a mile wide, but after passing under the bridge it soon widens out into a large shallow bay.

The point on the eastern side of *Fore River,* where the bridge crosses, is wooded, and is remarkable as being the first wooded point met with on this side of the river. Here the eastern shores spread away to the southeastward and terminate in a shallow cove, whence a small streamlet or brook leads to **North Weymouth.** There is no passage, however, even for boats.

On the western shore, just to the southward of the bridge, is opened *Ruggles Creek,* a shallow stream, running to the westward, between **Bent Point** and a cleared and settled peninsula of moderate height, called **Braintree Neck.** On the south side of **Braintree Neck** makes in *Hayward Creek,* another shallow stream, which leads up to **Newcomb Landing.** Above this creek the shore runs about ESE. for half a mile, and then turns to the southward toward **Weymouth Landing.** *Fore River* has here contracted to the width of a small creek. The channel is very shoal and crooked. The shores are almost all cleared, settled, and highly cultivated, with occasional groves of trees.

TOWN RIVER BAY.

This bay makes in on the northwest shore of *Fore River*, as before mentioned, between the villages of **Germantown** and **Bent Point.** It is very shoal, and not safe for strangers to enter at any time, being only about a hundred and seventy-five yards wide at its entrance, but rapidly widens, after passing **Bent Point,** to nearly three-eighths of a mile. The north shores are mostly marshy, the south shores cleared and settled, with somewhat steep faces.

On the west side of the peninsula upon which **Germantown** is built there makes in a large but shallow cove, called **Sailor's Snug Harbor.** It is dry at low water. The name does not indicate any advantages as a harbor, but is derived from the institution of that name for worn-out ship-masters, which is built upon its banks. The eastern point of the entrance to this cove is called **Phillips Head.**

Town River empties into the bay nearly a mile above **Bent Point.** It is nothing but a small creek, very crooked and extremely shoal. The sloops which go to **Quincy** can only sail to the mouth of the canal.

DANGERS

IN APPROACHING AND ENTERING WEYMOUTH FORE RIVER.

I. *From Nantasket Roads through Nantasket Gut.*—Vessels use this passage coming from the eastward. They pass through the *Gut* and steer about midway between **Sheep Island** and **Prince Head.** In doing so, look out for

PRINCE HEAD SHOALS,

which make off from **Peddock Island** and **Prince Head** to a distance of six hundred and fifty yards from the former. These shoals have from two to six feet on them at low water, and to avoid them vessels must not go to the westward of **Windmill Point** bearing N E. by N.

SHEEP ISLAND SHOALS.

Sheep Island, on the eastern side of the channel, is also surrounded by flats. *They are not buoyed,* and are rather bold-to, so that the lead is of little use as a guide. Give them a berth of three hundred yards to the eastward.

PIG ROCKS.

Hough Neck is surrounded by flats; especially is this the case on its eastern side, where they extend off from the foot of **Quincy Great Hill** half a mile. On the northeast point of these shoals there is a ledge of rocks, bare at low water, called *Pig Rocks.* They lie E. ¼ N. from the north end of **Quincy Great Hill** about five-eighths of a mile. **A square granite beacon surrounded by a narrow staff and cage** is erected upon these rocks. *It is painted black,* but is to be left well to the westward by vessels using this channel. This **beacon** bears from the western end of **Peddock Island** S E. by S., about five-eighths of a mile distant; from **Windmill Point** S W. ½ S., one mile and five-eighths distant; and from **Sheep Island** W. ¼ N., a little over half a mile. When past it the course leads nearly for **Weymouth Great Hill,** and there will be seen ahead and about a mile off *a black spar-buoy,* on

JACK-KNIFE LEDGE,

which lies on the eastern side of the channel, one-eighth of a mile to the westward of **Eastern Neck.** It has about three feet at lowest tides, and is marked by a *black spar-buoy* (No. 1) placed in ten feet water on the western side of the rock. Passing to the westward, the channel leads between it and *a red spar-buoy* on the western side of the passage. This buoy is on

GULL POINT FLATS,

sometimes called *Bass Point Flats.* They make off to the eastward from **Gull Point** for half a mile, and are bare at extreme low tides. The buoy is in ten feet water on the extreme point of the flats. When abreast of it, *a spar-buoy, painted in red and black horizontal stripes*, will be seen ahead, about a quarter of a mile off, on

CHANNEL ROCK,

a bad ledge, lying on the western side of the channel, nearly half a mile to the eastward of **Gull Point.** In passing leave it to the northward and give it a good berth. The channel is here very narrow, but has four fathoms water. Above this there are no dangers in the channel, but the flats make off to the very edge of the deep water and are quite bold-to. The channel is also narrow and crooked. Vessels must not attempt to go above **Gull Point** without a pilot.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING WEYMOUTH FORE RIVER.

I. *Coming from the eastward, through Nantasket Gut.*—When past the southeast *Centurion Buoy*, steer W S W. until *Nantasket Gut* is fairly open. On this course the least water is eight fathoms. Then steer S. by W. ½ W. nearly for **Sheep Island**, carrying not less than three and a half fathoms, until the long wharf on the south side of **Nantasket** bears E. ¼ N. or the summit of **Nantasket Hill** E. by N. ¼ N. Then steer S W. by S. ½ S. until abreast of **Sheep Island**, carrying not less than three and a half fathoms water. Then steer S. ¼ E. toward **Grape Island**, and continue this course for about five hundred yards, with not less than three fathoms, until the southeastern extremity of **Sheep Island** bears N E. by E. ¾ E., when S W. ¾ S. leads, with not less than three fathoms water, up with the *red buoy* on *Gull Point Flats.* When past this buoy steer S W. ¼ S. toward *Channel Rock Buoy*, giving it a berth to the westward, and carrying four fathoms water, and then W. ¾ S. toward **Bent Point**, carrying not less than four fathoms. It is not safe to go beyond this point without a pilot.

DANGERS
IN APPROACHING AND ENTERING WEYMOUTH FORE RIVER.

II. *Coming from President Roads, between* **Long Island** *and* **Spectacle Island.**—Leaving *President Roads* for **Weymouth**, the course leads to the southeastward, through *Sculpin Ledge Channel*, for **Long Island Wharf**, and when past *Wharf Rock*, to the southwestward, toward **Moon Head.** On this course there will be seen ahead, and about three-quarters of a mile off, *a red spar-buoy*, on

SCULPIN LEDGE,

an obstruction already described in the dangers in the *Back Way.* It is a long reef, awash in several places at low water, lying about midway between **Long Island** and **The Spectacles**, and on the western side of this channel. The buoy is a *red-spar*, marked No. 2, and is placed in twelve feet water off the eastern end of the shoal. It is to be left to the westward. When past it, and in the *Back Way*, look out for

MOON HEAD FLATS,

which make off from **Moon Head** to the eastward about an eighth of a mile with less than six feet at mean low water. *They are not buoyed*, but the sailing-lines lead clear of them.

SUNKEN ISLAND.

When between **Moon Head** and the southwest end of **Long Island** the channel turns to the southeastward, running nearly for **Quincy Great Hill.** On this course there will

be seen to the eastward a **beacon of open-work with a granite base, and surmounted by a wooden staff and cage.** This is on *Sunken Island*, or *Sunken Ledge* as it is sometimes called. The ledge is dry at low water, lies half a mile E. by N. from **Hangman Island** and the same distance N W. ¼ W. from the southwest end of **Peddock Island.** There is good water between it and the latter, but ten feet at mean low water is the best that can be taken between the ledge and **Hangman Island. The beacon is painted black**, and should be left to the eastward a quarter of a mile.

After passing **Sunken Island Beacon** the channel leads between **Peddock** and **Nut Islands**, and there will be seen on the starboard bow, about half a mile to the southward of **Sunken Ledge Beacon**, *a red spar-buoy*, on

WRECK ROCK,

a dangerous sunken ledge, lying half a mile to the northward of **Nut Island.** It has three feet at low water, and the timbers of a wreck upon it are seen awash at low water. *The buoy is a red spar*, marked No. 4, placed in eight feet water on the northeast side of the rock. It is to be left to the westward, and the course leads to the eastward toward **a square granite beacon with staff and cage on top.** This is on

PIG ROCKS,

a dangerous ledge, lying on the northeastern point of the flats which make off from **Quincy Great Hill.** They are dry at low water. The **beacon** bears from the western end of **Peddock Island** S E. by S., about five-eighths of a mile distant; from **Windmill Point** S W. ½ S., one mile and five-eighths distant; and from **Sheep Island** W. ¼ N., a little over half a mile. *It is painted black*, but must be left to the southward by vessels using this channel. When past it the channel continues to the eastward, toward **Sheep Island**, until past the eastern edge of the flats off **Hough Neck**, and then turns to the southwestward into the river.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING WEYMOUTH FORE RIVER.

II. *Coming from the westward, through Sculpin Ledge Channel.*—When, on the course through *President Roads*, **Long Island Light-House** bears E S E. and the eastern end of the **North Spectacle** S. by W., steer S E. for the wharf near the hotel on the west side of **Long Island.** Continue this course, on which there will not be less than three and a half fathoms, until within three hundred and fifty yards of the wharf, when steer S W. by S. for the *red buoy on Sculpin Ledge.* On this course there is not less than eighteen feet water. Leave this buoy to the westward, and steer S W. by W. ¼ W. for **Moon Head** until within six hundred yards and the southwestern end of **Long Island** bears E. by S. On this course the least water is thirteen feet; then steer S E. by S. ½ S., crossing the *Squantum Flats* in eight feet water, passing midway between **Hangman Island** and *Sunken Ledge* in ten feet at low water, and continue the course until abreast of the *red buoy* on *Wreck Rock.* Pass to the eastward of this, and steer S E. ½ E. for **Pig Rock Beacon**, passing between **Peddock** and **Nut Islands**, carrying not less than three fathoms water. When within two hundred and fifty yards of the **beacon**, with **Prince Head** bearing N E. ½ N., steer E. by S. for **Sheep Island**, carrying not less than four fathoms water. On this course, when within about four hundred yards of **Sheep Island** steer S. ¼ E. for **Grape Island**, carrying not less than three fathoms, and continue this course for about two hundred and fifty yards until the southeastern point of **Sheep Island** bears E. ¼ N., when steer S W. ½ S., following the directions given for the river.

To come through Broad Sound and enter Weymouth Fore River by the Sculpin Ledge Channel: On the W. ½ N. course through *President Roads*, when **Long Island Light-House** bears S E. by S., steer S W. by S. for *Sculpin Ledge Buoy*, and follow the directions given above.

To enter Fore River by the Back Way from **Boston**: This channel is good for nine feet at low water, (see description of same, page 860.) When at the *black buoy on Castle Rocks*, steer S S E. for **Quincy Great Hill**, which will be about four miles off. This course leads in the best water (nine feet) between **Thompson** and **Spectacle Islands**, leaving *Thompson Island Flats* to the westward. Continue this course until the southwestern head of **Long Island** bears E. by S., when steer S E. by S. ½ S. toward the *red buoy on Wreck Rock*, carrying not less than eight feet water. When up with this buoy, follow the directions given above for entering this river by the *Sculpin Ledge Channel.*

TIDES.

The rise and fall of tides is about the same as at **Boston Light-House**—nine and a half feet. No observations for set and drift of tidal-currents have been made in this river. The set is generally in the direction of the channel, and the velocity is small except at the several entrances into *Hingham Bay.* At *Nantasket Gut* the current sets directly in and out with a maximum velocity of two and a half knots; between **Peddock** and **Nut Islands** the drift is about one knot; and between **Long Island** and **Spectacle Islands** about three-quarters of a knot.

WEYMOUTH BACK RIVER

empties into *Hingham Bay* just to the eastward of *Fore River*, from which it is separated by **Lower** and **Eastern Necks.** It is narrow, crooked, and shallow, and is of little commercial importance. Directly across the mouth of this river lie **Grape** and **Slate Islands**, which are connected at low water and completely shut off the entrance from the northward. This leaves a very narrow, crooked, and shallow passage on each side of these islands. That on the eastern side has but five feet at mean low water, and the western channel (which leads between **Grape Island** and the **Lower Neck**) has three fathoms, but is so extremely narrow as to render it impossible for anything but a steamer to keep in the best water. Six feet at mean low water is all that can be taken up to the bridge.

At its mouth *Weymouth Back River* is nearly seven hundred yards wide, but most of this width is occupied by the large flats, dry at low water, which make off from the eastern side of the entrance, extending to the northward nearly to **Grape Island** and to the westward within two hundred and fifty yards of **Lower Neck.**

From its mouth this river runs, first, about S. ½ W., half a mile; then turns abruptly and runs WEST five-eighths of a mile to a headland on the south bank, called **Stodder Neck,** which is of moderate height, but has steeply-sloping faces on its north and west sides. Its summit is bare of trees, but there is a thin growth on its western and southern slopes. A small narrow cove makes in on its eastern side, called *Stodder Cove.* At **Stodder Neck** the river widens out considerably and takes an abrupt turn SOUTH, which course it continues, with slight variation, to its head. A quarter of a mile above **Stodder Neck** it is crossed by a bridge, and beyond this bridge it is very narrow between its banks, and so continues for about one-quarter of a mile, forming what is called *THE NARROWS.* Above this point it becomes a wide and shallow bay, and so continues to the southward three-quarters of a mile, beyond this being a mere creek.

GRAPE ISLAND,

which lies in an EAST and WEST direction across the mouth of *Back River*, is about

half a mile long, and presents when viewed from the northward a somewhat saddle-shaped appearance, the land in the middle being the lowest. It is entirely bare of trees and of moderate height, with a somewhat steep face on its northern and western sides. It is surrounded by shoals. On the east it is connected by a flat, bare at low water, with **Slate Island,** a small, low, thinly-wooded island, lying an eighth of a mile to the eastward and about five hundred yards north of the entrance to *Back River.* These two islands shut off any direct approach to *Back River,* leaving only the narrow and crooked channels mentioned above.

No stranger should attempt to enter this river under any circumstances. *None of the shoals and ledges are buoyed,* and no sailing directions can be given for the channel.

HINGHAM HARBOR.

This harbor is formed by a large but shallow cove which makes into the main land in the southeast corner of *Hingham Bay.* It is a mile long, and seven-eighths of a mile wide at its widest part, but at low water it is a dry flat with the exception of a narrow and crooked slue which runs along the eastern shore. The town of **Hingham** occupies the southern and part of the eastern shores of this harbor.

The principal entrance to this harbor is through *Nantasket Gut.* When past the *Gut* the course leads to the southeastward between two small bare islands, nearly a mile apart. That to the eastward, which is also much the larger of the two, is called

BUMKIN ISLAND.

It is about fifty feet high, smooth, and entirely bare of trees; lies in an E S E. and W N W. direction, and is three-eighths of a mile long. Its western end is somewhat bold-to and may be closely approached, but on the east it is connected with **Nantasket Beach** by an extensive flat, dry at extreme low tides.

The small island on the western side of the passage is **Sheep Island.** It is low, bare, about one-eighth of a mile long, and surrounded by shoal water. From **Bumkin Island** it bears W. by N., three-quarters of a mile distant.

The channel into **Hingham** leads close along the western shore of **Bumkin Island,** and here opens to the eastward a narrow channel leading into *Weir River.* On the south side of the entrance to this river will be seen a bare grassy head, about eighty feet high, with a steep face on its western side. This is called **World's End,** and marks the southern point of the entrance to *Weir River.* On its southern side **World's End** is joined by a very narrow strip of low land, about a hundred yards long, to another high, smooth, grassy hill with a precipitous face on its western side. This is called **Planter's Hill,** and it forms the eastern point of the entrance to *Hingham Harbor.* It is one hundred feet high and its southern slopes are under cultivation.

The western point of the entrance to *Hingham Harbor* is called

CROW POINT.

When past **Bumkin Island** it will appear as a high bare hill with a steep face to the northward. It is sixty-five feet high and bare of trees. A pier or breakwater is built out from its eastern end to the edge of the channel. Three-eighths of a mile to the southward of **Crow Point** a long narrow cove, called *Walton Cove,* makes into the western shore. On the south side of the entrance to this cove is a large, high, smooth hill with a somewhat steep face on its northern side. This is called **Otis Hill,** and separates *Walton Cove* from a long narrow cove, called *Broad Cove,* which makes in on the south side of the hill.

On the eastern side of *Hingham Harbor* the only indentation of any size makes in on the south side of **Planter's Hill**, and is called **Martin's Well.** All of these coves are dry at low water.

In coming into this harbor several small islands will be noticed lying apparently in the middle of the passage. The most northerly of these is called

CHANDLER ISLAND.

It is nearly two hundred yards square, low, bare, and rocky. From **Crow Point** it bears S E. by E. ½ E., one quarter of a mile distant. It lies on the eastern side of the channel, which here takes an abrupt turn to the eastward, leaving to the southward two small rocky islets, the westernmost of which, called

RAGGED ISLAND,

lies about three hundred and fifty yards S W. from **Chandler Island** and one-quarter of a mile EAST from the entrance to *Walton Cove.* It is low, bare, and rocky, three hundred yards long, and there is no passage to the westward of it except at high water. About one hundred and fifty yards EAST from **Ragged Island** lies

SAILOR ISLAND,

also rocky and bare, lying EAST and WEST, two hundred yards S S E. from **Chandler Island.** It marks the second turning-point in the channel, which here runs to the southward past the eastern end of this island. **Sailor Island** is two hundred and eighty yards long.

The channel continues to the southward from **Sailor Island** for three hundred and fifty yards, then runs to the eastward until within about one hundred and fifty yards of the eastern shore, near the wharf belonging to the salt-works. Here it turns to the southward and skirts the eastern shore at about the same distance to the head of the harbor.

BUTTON ISLAND.

In the middle of the flats, about a quarter of a mile north of the head of the harbor and one-third of a mile south from **Sailor Island,** lies a very small bare islet, called **Button Island.** It is only about fifty yards in diameter.

DANGERS
IN APPROACHING AND ENTERING HINGHAM HARBOR THROUGH NANTASKET GUT.

No stranger can enter this harbor without a pilot. The channel is so narrow and so much obstructed as to render such an attempt hazardous in the extreme. A pilot can always be obtained at **Hull** by making the usual signal.

After passing through the *Gut* there will be seen ahead, nearly three-quarters of a mile off, *a black spar-buoy.* This is on the northwest point of

BUMKIN ISLAND SHOALS,

a long narrow shoal, which lies three-quarters of a mile N N W. from **Bumkin Island,** (western end,) and has six feet at mean low water. From **Windmill Point** this ledge bears S. by E. ½ E., three-quarters of a mile distant. *The buoy is a black spar,* and is placed in thirteen feet on the northwest point of the shoal. It is to be left to the eastward, and in passing it beware of

SHEEP ISLAND FLATS,

which extend in a N E. direction from **Sheep Island** for nearly half a mile with less than six feet at low water. These flats *are not buoyed,* and to avoid them keep pretty close

to the *black buoy* on *Bumkin Island Shoals*, giving it a berth of about one hundred and fifty yards. After passing between *Bumkin Island Shoals* and *Sheep Island Flats* the course leads toward **Bumkin Island**, and when abreast of the western end of that island there will be on each side of the channel *a spar-buoy*. That on the east side marks the southern point of

WHITE HEAD FLATS,

by which, as before mentioned, **Bumkin Island** is connected with the west shore of **Nantasket Beach**. These flats are dry at extreme low tides. The *black spar-buoy* is also intended to mark the north side of the entrance to *Weir River*.

The *buoy* on the west side is *red*, and is intended to mark the eastern point of

CROW POINT FLATS.

These extensive flats make off from the north side of **Crow Point** in a N. by E. direction one mile and a quarter, and are, in places, bare at low water. The north point of these flats is abreast of **Bumkin Island**, and is not marked. It is to be avoided by keeping the western end of the island well aboard. The eastern point of these flats is marked by the *red spar-buoy* above mentioned, which is placed in nine feet water, and is intended to mark the western limits of *Hingham Channel*. It should be left to the westward, and when past it the course leads for **Crow Point Wharf**. Now beware of *the flats on the eastern side of the channel* making off from **World's End** and **Planter's Hill** in a westerly direction half a mile, and mostly bare at low tide. *They are not buoyed*, and great care is necessary, on the course for **Crow Point**, to avoid them.

When past **Crow Point**, *a black spar-buoy* will be seen about a quarter of a mile off, between **Chandler** and **Ragged Islands**, on

CHANNEL ROCK,

a small rock, which lies in the middle of the channel nearly at the turning point, where it turns to the eastward to run between **Chandler** and **Sailor Islands**. The best water is to the southward of the buoy, which is placed in fifteen feet on the southwestern side of the rock. It is a *black spar*, marked No. 3.

Above *Channel Rock* there are no buoys. The channel is too narrow and crooked to describe intelligibly. Just below the wharf, at the salt-works, there is a **beacon** in the channel, which is placed about eighty yards N N E. from a small rocky islet, called **Beacon Island,** connected with the shore by a wharf.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING HINGHAM HARBOR THROUGH NANTASKET GUT.

From *Nantasket Gut* steer S. by E. ½ E., with not less than five and a half fathoms, for the *Black Buoy* on *Bumkin Island Shoal*, which leave to the eastward about one hundred yards off, and steer S E. by S. ½ S., passing the western end of **Bumkin Island** one hundred and fifty yards off, and continue this course until abreast of the *red buoy* on the eastern point of *Crow Point Flats*, carrying not less than sixteen feet water. Leave this buoy to the westward and steer S. by W. for one-quarter of a mile, or until the north point of **World's End** bears E. ½ N., then steer S. by E. ½ E. for the eastern end of **Ragged Island**, passing to the eastward of **Crow Point Wharf** about one hundred and fifty yards, and continue this course, with not less than thirteen feet, until up with the *black buoy* on *Channel Rock*. Pass to the westward of this, and steer E. ½ S., between **Chandler and Sailor Islands**. Here good anchorage will be found in from ten to twenty feet water. No intelligible sailing directions can be given beyond this point. Strangers never enter the harbor without a pilot.

If bound in through *Weir River*, take a pilot either at **Hull** or outside. The channel is too narrow and crooked for anything but steamers.

TIDES.

The mean rise and fall of tide in *Nantasket Gut* is 9.3 feet. The tidal-current in the harbor is weak and interferes but little with a vessel's movement.

COHASSET HARBOR

is situated at the southeastern end of *Boston Bay*. It is formed by a large but shallow cove of irregular shape which makes into the shore on the western side of **Strawberry Point**. The entrance lies five miles and a quarter SE. from **Point Allerton**. The eastern and southern shores of this harbor are composed almost entirely of salt meadow. The western shores show innumerable sand hillocks interspersed with marshy land. A prominent feature of the western shore of this harbor is the number of salt-works, the wind-mills attached to which form conspicuous objects.

This harbor cannot be entered by strangers, for it is so surrounded by bare and sunken ledges as to need all the skill of those well acquainted with the locality to enable them to come safely through. There are three channels commonly used—one, the *WESTERN OR BRUSH ISLAND CHANNEL*, which enters between *Brush Island Ledge* and *Chittenden Rock;* the second, leading between *West Hogshead Rock* and the *Grampusses*, called the *MIDDLE CHANNEL;* and the third, called the *EASTERN CHANNEL*, which leads between **East Shag Rock** and the *Western Willies*.

On approaching this harbor the most conspicuous object is **Minot Ledge Light-House**, built on the *Outer Minot*, the most northerly of the **Cohasset Rocks**. **It is a dark gray granite tower**, which shows a fixed white light of the second order from a height of ninety-two feet above sea-level, and is visible sixteen miles. At low water the *Outer Minot* is bare, as are also many of the rocks in-shore of it, between the **light-house** and **Strawberry Point**.

STRAWBERRY POINT,

which marks the eastern boundary of *Boston Bay*, is a low cleared point, with groups of houses scattered here and there over its surface. It is a summer resort of some note—the well-known **Glades House** being situated upon it. Masses of bare and sunken ledges, with a few bare islets, surround this point and render close approach to it very hazardous.

DANGERS

IN APPROACHING AND ENTERING COHASSET HARBOR.

1. *Coming from the westward, through Brush Island Channel.*—If wishing to enter this channel, the first danger met with will be found off *Old Harbor*, half a mile to the westward of the entrance. It is called

BLACK LEDGE,

and is formed by a group of dry rocks surrounded by shoals, lying three eighths of a mile to the northward of **Old Harbor Beach** and a little over half a mile **W. by N. ½ N.** from *Chittenden Rock*. When past it a small, round, rocky islet will appear to the southeastward, about three hundred and fifty yards distant, and a little in-shore of **Black Ledge**. This is **Round Rock**. It is about ten feet out of water, bold-to, and bears from **Black Ledge** S E. by E. ½ E.

BRUSH ISLAND AND BRUSH ISLAND LEDGE.

Brush Island marks the western point of the entrance to *Cohasset Harbor*. It is a small, bare, rocky islet, about two hundred yards long, lying four hundred yards from

the shore and three hundred and fifty yards S S E. from **Round Rock.** At low water it is connected with the main shore, and from it to the northeastward shoal water extends two hundred yards to a group of bare rocks lying on the edge of the channel. The common name, *Brush Island Ledge*, is given to all of this shoal. *It is not buoyed*, the bare rocks serving to mark the limits of the channel.

CHITTENDEN AND BARREL ROCKS.

When abreast of **Black Ledge**, and bound in by this channel, *a black spar-buoy* will be seen about half a mile to the eastward. This is on *Chittenden Ledge*, which is a detached rock, bare at half-tide, lying to the westward of the *Grampusses* and on the eastern side of this channel. From *Brush Island Ledge* it bears E. by N. ½ N., a quarter of a mile distant. The *buoy is a black spar*, marked No. 1, and is placed on the eastern end of the rock. When past it the channel turns to the southward, and on the east side of the passage there will be seen another *spar-buoy painted red and black in horizontal stripes.* This buoy marks a rock, bare at half-tide, called *Barrel Rock.* It lies near the north end of a large shoal which makes off from **Strawberry Point** nearly to the western shore, and bears from *Chittenden Rock* S. ½ E., distant a quarter of a mile. Passing to the westward of it there will be seen, a quarter of a mile still farther to the southward, and on the same shoal, a number of bare rocks, known under the general name of

SUTTON ROCKS.

They consist of a large dry rock, surrounded by ledges, bare at low water. The dry rock bears N. by E. ½ E. from **White Head,** (which is the bare islet, about forty feet high, lying on the west side of the harbor, about seventy-five yards from the western shore and a quarter of a mile from the head of the harbor.) **Sutton Rocks** are three-eighths of a mile to the northward of **White Head.**

QUAMINO ROCK.

In passing **Sutton Rocks** leave to the westward a small, round, dry rock, called **Quamino Rock**, which lies one hundred and fifty yards from the western shore of the harbor and about one hundred and seventy-five yards W. by S. ½ S. from **Sutton Rocks.**

Above **Quamino Rock** the harbor is nearly all dry at low water, there being only a very narrow slue running close under **White Head** to the head of the cove.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING COHASSET HARBOR.

I. *Coming from the westward, inside the Hardings.*—No intelligible sailing directions can be given by which strangers, however light their draught, can enter this harbor. But vessels may approach it from **Point Allerton,** inside the *Hardings*, by following the courses given below.

When **Minot Ledge Light-House** bears S E. by E. ½ E. and the spindle on the *Hardings* E. by N. ½ N., and in five fathoms water, about one mile below **Point Allerton,** steer S E., which will lead up to the *black buoy* on *Chittenden Rock.* When abreast of this buoy, in about sixteen feet water, pass to the westward of it and to the eastward of *Brush Island Ledge*, and steer S. ½ W. into the harbor, passing between **Sutton Rocks** and **Quamino Rock,** carrying eight feet water. Above this no directions can be given.

DANGERS
IN APPROACHING AND ENTERING COHASSET HARBOR.

II.—*By the Middle Channel, between Hogshead Rock and the Grampuses.*—Coming from the westward, bound in by this channel, there will be seen, when about a mile and

a half from **Minot Ledge Light-House**, *two spar-buoys* ahead, about three-quarters of a mile off. Of these the easternmost is a *black spar*, and marks

WEST HOGSHEAD ROCK,

which lies on the eastern side of the *Middle Channel.* **Hogshead Rock** is the name given to the dry part of this ledge. *The buoy is a black spar*, marked No. 1, and is placed in sixteen feet on the western end of the ledge. It bears from **Minot Ledge Light-House** W. ½ S., five-eighths of a mile distant, and from **White Head** N E. ¾ N., one mile and a quarter distant, and is to be left to the eastward.

THE GRAMPUSES.

The westernmost buoy is a red spar, and is placed on the northeastern side of *The Grampuses.* These are extensive ledges, bare at low spring tides, lying off the middle of the approach to *Cohasset Harbor*, about three-eighths of a mile to the westward of *West Hogshead Rock* and one mile N. by W. from the **Glades House.** The buoy is placed on the northeast end of the northernmost ledge, and is to be left to the westward by vessels using this channel.

These two buoys, *the black buoy on the Hogshead and the red buoy on The Grampuses*, mark the entrance to **Cohasset** by the *Middle Channel.* The entrance is here a quarter of a mile wide, and there is not less than three fathoms anywhere between the buoys.

WEST SHAG ROCK.

Passing between *Hogshead Rock* and *The Grampuses*, there will be seen on the starboard hand a high dry rock, called the **West Shag.** It lies about three hundred and fifty yards SOUTH from the *red buoy on The Grampuses*, a little over a quarter of a mile S W. by W. ½ W. from the *black buoy on the West Hogshead*, and seven-eighths of a mile W. by S. from **Minot Ledge Light-House.** It is tolerably bold-to on its eastern side, but to the westward bare ledges extend nearly to *The Grampuses.* This rock marks the turning-point in the *Middle Channel*, where the course leads more to the westward, toward **White Head.**

SHEPPARD LEDGE,

which is bare at low water, lies on the south side of the channel, about three hundred and fifty yards to the westward of **Gull Island.** It is but a part of the extensive ledges and shoals which make off in a northerly direction from **Strawberry Point**, and it bears N. ½ E. from the **Glades House**, distant three-eighths of a mile. Near the northwest side of the ledge lies a detached rock, called **Jaques Rock.** It is awash at lowest tide, and bears from **Minot Ledge Light** S W. ½ W., seven-eighths of a mile distant. *A black spar-buoy*, marked No. 3, placed on the northwestern side of this rock, marks the southern limits of the *Middle Channel* into **Cohasset** and must receive a good berth to the southward.

SAILING DIRECTIONS
FOR APPROACHING AND ENTERING COHASSET HARBOR.

II. *By the Middle Channel, between West Hogshead and The Grampuses.*—1. *Coming from the westward, inside of the Hardings:* When **Minot Ledge Light-House** bears S E. by E. ½ E. and the **spindle** *on the Hardings* E. by N. ¾ N., steer S E. ¾ E., with from four and a half to five fathoms water, which will carry up to the entrance, between the *black buoy on the West Hogshead and the red buoy on The Grampuses*, in not less than six fathoms. Pass midway between these two buoys, in from three to four fathoms, and steer S. ½ W., with not less than four fathoms, until past **West Shag**, when haul up S W. ¾ S. for **White Head.**

Should the buoy on the *Grampuses* be gone, the **Glades House**, open east of **West Shag**, will carry safely in.

2. *Coming from the eastward, and wishing to enter by this channel:* Pass **Minot Ledge Light-House**, leaving it half a mile to the southward, and steer WEST, carrying not less than nine fathoms water, until the **Glades House** bears S. ½ W. Steer that course, which will lead midway between the *buoy on the Hogshead* and that on the *Grampuses*, with from three to four fathoms. Continue the course until past **West Shag**, when haul up S W. ½ S. for **White Head**, as before.

DANGERS
IN APPROACHING AND ENTERING COHASSET HARBOR.

III. *By the eastern channel, between Enos Ledge and the West Willies.*—This channel is often used by vessels coming from the eastward or from the southward, although, in the latter case, the *Gangway Channel* is more frequently used. In approaching it pass to the southward of **Minot Ledge Light-House**, and when about half a mile southeast of it there will be seen ahead the *two spar-buoys* which mark the entrance. The *buoy to the northward is a red spar*, and marks the southeastern end of

ENOS LEDGE,

a long ledge, lying nearly EAST and WEST, and dry at low water. From **Minot Ledge Light-House** it bears S W. ½ S., three-eighths of a mile distant. *The buoy is a red spar*, marked No. 2, and placed on the southeastern side of the rock to mark the northern limits of this channel.

WEST WILLIES.

The southernmost buoy at the entrance is a *black spar*, and is placed on the northwestern side of the *West Willies*, which are dry at low water, and lie five-eighths of a mile (twelve hundred yards) S S W. from **Minot Ledge Light-House** and one-quarter of a mile to the southward of *Enos Ledge*. The buoy marks the southern limits of this channel.

EAST SHAG.

When past the *red buoy* on *Enos Ledge*, the course leads to the westward toward *Sheppard Ledge Buoy*, and leaves to the northward a small dry rock, surrounded by shoal water. This is **East Shag Rock**, which lies an eighth of a mile to the westward of *Enos Ledge Buoy* and half a mile S W. ½ W. from **Minot Ledge Light-House**. Although shoal on its north and west sides, it is tolerably bold-to on its south side. *It is not buoyed*, being always out.

On the south side of the channel, beware of

GULL ISLAND LEDGES,

which are the rocks extending off to the northward and eastward of **Gull Island**, and mostly dry at low water. The northern end of these ledges is two hundred yards from **Gull Island** and three hundred and fifty yards to the westward of *West Willies*. Passing these, there will be seen the *black spar-buoy* on

SHEPPARD LEDGE,

on the port bow. This ledge, as before mentioned, is on the south side of the channel, about three hundred and fifty yards to the westward of **Gull Island**, and is but a part of the extensive ledges and shoals which make off in a northerly direction from **Strawberry Point**. It is bare at low water, and from the **Glades House** bears N. ½ E., distant

three-eighths of a mile. The *buoy is a black spar*, marked No. 3, and is placed on the northwestern side of the ledge. It should receive a berth to the southward.

SAILING DIRECTIONS

FOR APPROACHING AND ENTERING COHASSET HARBOR.

III. *By the Eastern Channel, between Enos Ledge and the West Willies.*—When **Minot Ledge Light-House** bears **N W.** by **W.**, three-quarters of a mile distant, in about ten fathoms, *rocky bottom*, steer **WEST**, passing between the *red buoy* on *Enos Ledge* and the *black buoy* on the *West Willies*, carrying not less than three and a half fathoms. Continue this course between **East Shag** and *Sheppard Ledge*, carrying not less than seventeen feet, until past the *black buoy* on the latter, and **White Head** bears **S W. ½ S.** Now steer that course into the harbor.

LIGHT-HOUSE.

Name.	Latitude N.	Longitude W. from Greenwich.		Fixed or Revolving.	Height above Level of Sea.	Distance visible in nautical miles.
		In arc.	In time.			
Minot Ledge Light..	42° 16′ 09″	70° 45′ 34″	4^h 43^m 02.3^s	Fixed.	92 ft.	16

REMARKS ON THE GEOLOGY OF THE COAST OF MAINE, NEW HAMPSHIRE, AND THAT PART OF MASSACHUSETTS NORTH OF BOSTON.

ORIGIN OF THE SURFACE.

The outline of this coast, as well as the shore to the northward as far as the Arctic Circle and beyond, is believed to be mainly the product of the peculiar form of erosion brought about by one or more glacial periods. This deeply-indented sort of shore is only found beyond the forty-first degrees of north and south latitudes. Even before the origin of this peculiar structure was known it was remarked that it was confined to these high latitudes, and such regions received the name of FJORD ZONE.*

A comparison of any section of this shore with a section lying in the same sort of rock in any more southern region shows us at once that the character of the surface is quite different in the two regions. In the more *southern* section the surface will be found cast into fewer valleys than that within the *Fjord Zone;* these valleys in the south will usually each contain a stream of a size great enough to have caused its development. The cross-section of the valleys will not usually be very wide, the sides sloping together in the form of a letter V. In the *Fjord Zone*—and the coast of Maine is an especially good specimen of this structure—the valleys are far more numerous than the streams, the cross-section generally being U-shaped, and when their bottoms are occupied by rivers these latter are generally of too small account for their excavation.

A more detailed comparison of the regions shows that the *northern* has its surface cast into many wrinkles, rounded bosses, and irregular depressions, which have no likeness to the contours in the *southern* district, and that these lesser irregularities are in proportion to the hardness of the rock; the whole surface having been worn down by an agent which found every weak spot and developed it to the utmost. Still further study will show that this region is covered, even to the highest mountain tops, with pebbles, stones, and sand, brought from the northward or worn from the rock beneath, and that the movement has evidently been from inland, and generally from the north by west toward the south by east. Beneath this covering of "drift" we find a surface rounded as by art, scored and scratched in the fashion we now find in the case of rocks when rounded and smoothed beneath existing ice-streams. In a word, the evidence requires us to suppose that a vast ice-sheet, at a very recent time in a geological sense, passed over this region with a velocity of several hundred feet a year, coming down from the northward, with a depth that buried the hills of Mount Desert, grinding and tearing the rock with enormous power, and sweeping its burden of wasted materials far out to sea. When the period of shrinkage came and the glacial sheet began to retreat toward the highlands it found the shore depressed some three or four hundred feet below the present level; but the original level was rapidly regained and the diminishing ice-sheet gradually became reduced to local ice-streams on the principal river-beds, and there shrunk, step by step, toward the higher upland, as the glacial period faded away.

A glance at the map of the Coast of Maine shows that all the glacial valleys or *fjords* are nearly north and south in their course; in some places, however, the ice-cutting has a different course. When obstructions such as the Mount Desert Hills interposed in the way of the ice-river, the stream cut channels which do not always coincide with the north and south course of the ice.

---

* A Scandinavian name for such inlets.

There are some points connected with the ice-wearing which have practical importance, inasmuch as they help to account for the peculiarities in the detailed structure of the shore. The valleys here, as in all glaciated regions, are deep, and the channels of the sounds and harbors which lie in them, though they have been filling for thousands of years by the wash from the shore, correspond in depth; as, for instance, the deep channel on the west side of Mount Desert. This is accounted for when we see that the cutting power of any ice-stream is proportionate to its weight, and this weight depends upon the depth. The greater the depth of the channel the deeper and heavier will be the ice at that point, and the more violent will its base, with its arming of stone and sand, rasp against the floor. On this account the sides of the channel do not work down as rapidly as the middle, and the deeper the middle becomes the more intense the wearing power.*

There is no doubt that the ice-sheet pushed far out to sea, and we find, in fact, that these channels are prolonged far to seaward. In the same way the ridges which bound the channels, being less worn, are also continued far out to sea in the shape of reefs or scattered knobs of rocks. This makes the southern prolongations of the capes and headlands far more dangerous than the spaces south of the channels.

Other useful considerations are derived from a study of the result of glaciation; it is easily perceived that when we submerge a land as hilly and irregular as this shore is seen to be we must expect great difficulties in finding all the hidden dangers of the shore. Sharp rocks of small diameter may rise from considerable depths to form dangerous obstructions, which are liable to be missed; soundings may be had within a few feet of them yet show no signs of their presence. Another important fact is to be learned by a study of the wear of the hillocks and ridges on the shore. These are seen to be generally steepest on the southern sides and sloping gradually to the north. This rule holds also for the submerged ridges, where the deepest water will generally be found to the south of any given obstructions.†

It will be noted that the shore when it turns rather abruptly southward at Portland loses the indented or *fjord* character which belongs in the region to the north. This is explained by the fact that the shore-line here coincides nearly with the direction of the flow of the ice, so that the ridges lie broadside to the sea.

At Portsmouth we had the strong glacial stream of the river basin which opens there; it has left a series of marine deposits marking the continuance of the local glacier long after the great ice-sheet had disappeared. The inlet here, extending nearly east and west, shows a change in the course of the ice-stream.

At the Merrimac we have another east and west inlet, and at its mouth a corresponding accumulation of materials deposited by the local glacier. Plum Island is in good part made up of such materials.

Where Cape Ann projects itself into the sea we have once more the north and south cutting, shown by the deep channel of Annisquam Reach and Gloucester Harbor, which in character and origin precisely resembles the *fjords* of the coast of Maine.

The great depression of Boston Bay is apparently the work of glacier streams from the Mystic, the Charles, and the Neponset Rivers, aided by the comparative softness of the rocks.

The deepest water region of this coast, lying between Cape Cod and Cape Sable, has several peculiar features, which can only be explained by reference to ice action

* There were probably running streams beneath the glacier occupying the valleys and helping in the excavation, our warrant for which, as well as many other suppositions, is derived from existing facts in Greenland, where the present conditions undoubtedly closely resemble the glacial conditions on the coast of Maine.

† This arrangement of slopes is so common in all regions where hard rocks have been long swept by ice that it may be regarded as a necessary consequence of such action.

during the glacial period of recent geological epochs. The great rugged submarine ridges of Georges Banks are probably the outer moraine of the continental glacier. It is quite evident that there must have been deposits of great extent at the point where the glacial sheet ceased to convey its load of materials in the direction of the deep sea.

The island belt along the south shore of New England, extending from Long Island through Block Island, the Elizabeth Islands, Martha's Vineyard, Nantucket Shoals, all of which are in good part composed of glacial drift, retreats from the shore as we go northward. In the direction in which the ice thickens the sheet would extend farther from shore and the accumulations along its border would, therefore, be heaped up in greater quantities farther from the shore-line, and the original irregularity in the quantity of this accumulation would be increased by the action of tidal currents sweeping away the lighter matter.

The origin of the deep excavation of the Bay of Fundy is probably connected with the ice action. The Gulf and upper valleys of the St. Lawrence doubtless discharged a great volume of ice, and in the rocky mass of Nova Scotia we find a strong barrier opposing its discharge to the southward. The Bay of Fundy lies where this stream, crowding around the obstacle, found a passable channel through a low gap and moved freely into the sea. This deep channel repeats on a grand scale what we have on the west side of Mount Desert Island, where the ice, similarly driven into a narrow channel, has cut it out to a great depth.

All the great valleys which mark north and south the Appalachian system of elevation—the Hudson, the Connecticut, the Bay of Fundy, and Gut of Canso—are apparently original valleys, whose depth and width have been greatly increased by ice wearing.

THE BED ROCKS OF THE COAST.

It will be readily imagined that rocks not much affected by the wearing action of the ice-sheets which have doubtless often swept this region are all of the most solid and resisting character. The soft rocks of the formation older than the glacial period of North America do not exist on the shore much above the southern limit where ice swept the coast; they probably do not remain in existence, except in the isolated mass of Martha's Vineyard, at any point north of New York.

The precise history and age of the rocks along the coast of Maine are not known. The whole shore consists, however, of very ancient rock, the newest of which had origin when the organic life of the earth was just beginning. They probably, with small and local exceptions, belong to the systems of Laurentian and Huronian rocks; systems made up of granites, syenites, mica schist, soapstones, and other rocks of a highly metamorphic character. From their great antiquity these rocks have been subject to very many disturbances, and in fact we find them overturned, set up on edge, and generally thrown about in the most confused manner. Like all rocks of great age the hardness varies exceedingly from point to point, hardly remaining the same over a single acre of surface. When we consider that the glacial action wears in direct proportion to the hardness of the material over which it moves, we are able to see the reason for the undulating surface characteristic of all this region.

At one or two points on the shore we find formations considerably newer than the other beds. On Passamaquoddy Bay, at Perry, we have rocks of a time just anterior to the coal period, and at Rockland a series of limestones which possibly belong to the Cambrian group, a later series of rocks than those with which they are associated. Entangled in the disturbed beds at other points on the shore we may have other masses of newer rocks, but their amount is too small to affect the general statement.

CHANGE OF LEVEL.

During the last glacial period the coast was certainly depressed very much below its present level; how great this depression was when the ice-sheet was thickest we cannot determine, but when the ice passed away it was not far from one hundred feet on Cape Ann, and gradually increased in amount until at Eastport and Calias it seems to have exceeded three hundred feet. The cause of this depression is not certainly known, but as the depression increased at an equal rate with the estimated increase in the thickness of the ice, there is an apparent connection between the weight of the ice and the depression of the land.*

The most important practical question in connection with the matter of subsidence and re-elevation is whether the re-elevation has been completely accomplished. All the evidence points to the conclusion that, though the land has nearly recovered from that depression, there is still some upward movement along the shore. This is a matter of the utmost importance to mariners, and evidence in regard to it should be carefully examined. A shore which is gradually rising is a shore of increasing dangers. The rate of elevation at some points on the shore is probably over a foot in a century, and may be as much as three feet in the same time.

CURRENTS.

The shore throughout is swept by violent tide currents, but fortunately the amount of material which can now be moved by them is small. The waste within the influence of tide streams has already been carried down, generally into the deeper channels, as into pockets, leaving the navigable water-courses as they now are, and not much subject to change from the action of tidal currents.

CONCLUSIONS.

The following conclusions of a practical character result from the foregoing considerations:

1st. That this shore-line, with small and local exceptions, consists of very hard rocks of great antiquity, which are now changing little or nothing in their form and place.

2d. That the irregular surface of these rocks continues beneath the water for a great distance, as it does over the land, making soundings variable, and in some cases unreliable indications of near dangers.

3d. That the risk from great detached boulders which may have a height of fifty feet or more is considerable, as the neighboring soundings can give no evidence of their existence.

4th. That there is greater risk of dangers in the southern prolongation of the capes than in the prolongations of the channels.

5th. That the southern end of a reef or ledge is more apt to give bold water than the northern end.

6th. That this shore lately arose from the depth to which it had been depressed, and that the re-elevation is not quite finished; hence the gradual shoaling of water along the whole coast is bringing rocks and shoals slowly within the limits of depth where they may become dangerous to navigation.

N. S. SHALER.

---

* See Memoirs of the Boston Society of Natural History, Vol. II, page 338.

INDEX.

A.

Page.

Abagadusset Point, (*Kennebec River*) 523
Abagadusset River 523
Abbot Monument 760, 768, 773
Abbot Rock, (*Salem Harbor*) 760, 768, 773
Ackley Point 58, 59, 62
Adams Head 655
Addison, Village of 133, 138–139
Alden Rock, (off Portland) 643, 646, 649
Alden Rock, or Bud Rock, (off *Penobscot Bay*) 369–370
Alderidge Ledge 829, 837
Allen Cove, (*Blue Hill Bay*) 234
Allen Cove, (*Deer Island Thoroughfare*) 257
Allen Head 752
Allen Ledge, (entrance to *St. George River*) 388, 392, 409–410
Allen Island, (George Islands) 380, 415
Allerton, Point 14, 15, 17
Alley Bay 103
Alley Island, (*Trenton River*) 198
Amazeen Island 691
Ames Creek, (Fox Islands) 284
Ames Point, (Fox Islands) 283
Amesbury Point, (Fox Islands) 284
Ammen Rock 1, 15–16, 730
Anchorages: In—
Fisher Eddy, 521; *Gouldsboro Bay*, 176; *Heal Eddy*, 518; *Hunniwell Cove*, 529–530; *Kennebec River*, 518, 521, 529–530, 534; *Morse Cove*, 534; *Stage Island Bay*, 534.
North of Hewell and Grafton Islands, 371; On south side of Cape Neddick, 681; Under north shore of Trafton Island, 153; West of Bear Island, (Mount Desert,) 207.
Anderson Ledge 701
Andrew Island, (*Deer Island Thoroughfare*) 258
Andrew Rocks, (*Muscongus Bay*) 431
Andrews Island, (Muscle Ridges) 316
Andrews Ledges 401
Andrews Point, (Cape Ann) 724, 728
Androscoggin River 523
Anguilar Island 85, 87, 94
Ann, Cape 1, 6, 14, 15, 16, 666
Annisquam Harbor 719–724
Annisquam Light-house 719–720, 723, 728
Annisquam, Village of 719, 724
Appearance of approaches and shores of—
Boston Harbor, 799–807, 816–819, 825–827, 834–835, 851, 856–858; *Camden Harbor* from the southward 336; shores of Cape Ann from the northward, 727–728; shores of Cape Ann from the southward, 731; shores of *Cape Porpoise Harbor* from the northward, 671–672; shores of *Cape Porpoise Harbor* from the southward, 673.
Appearance of shores and approaches of—
Eastport Harbor from the eastward, 23–26; *Eastport Harbor* through *Lubec Narrows*, 28–30; *Englishman Bay* from the eastward, 93–95; *Englishman Bay* from the westward, 97–98; *Gloucester Harbor*, 742; *Little Kennebec River*, 81–83; *Little River* from the eastward, 59; *Little River* from the westward, 60–61; *Machias Bay*, 70–71; *Newburyport Harbor*, 709; *Pembroke River*, 49–51; *Portland Harbor* from the eastward, 635–639; *Portland Harbor* from the southward, 645–646; *Portsmouth Harbor* from the northward, 692; *Portsmouth Harbor* from the southward, 700; *Potts Harbor*, 590–591; *Saco Bay*, 661; *Salem Harbor* from *Cat Island Channel*, 763–764; *Salem Harbor* from *Main Channel*, 756; *Salem Harbor* from *Western Channel*, 770–771; *St. Croix River*, 40–42.
Apple Island 803–804
Apple Island Flats 806, 845, 848
Archer Rock 771–772, 780, 783
Arey Cove 183
Arey Ledge 307–308
Ark, The 512
Arrowsic Island 520
Ash Island, (*Frenchman Bay*) 191
Ash Island, (*Muscle Ridge Channel*) 319–320

Page.
Ash Island Ledge, (*Muscle Ridge Channel*) 324
Ash Neck, (*Frenchman Bay*) 189
Ash Point:
(*Casco Bay*,) 587; (*Frenchman Bay*,) 189, 191; (*Muscle Ridge Channel*,) 319, 324.
Ash Point Cove, (*Casco Bay*) 587
Atkins Bay 519, 541
Atkins Bay Flats 526
Atlantic Point, (Rockland) 327
Atlantic Wharf, (Rockland) 327
Augusta, City of 524
Avery Ledge 734, 737
Avery or *Channel Rock* 67

B.

Babbidge Island 281
Babson Island 244
Babson Ledge 744
Babson Point 719, 720
Bache Rock 644
Bachelor, The Old 122
Back Bay, (near *Harrington River*) 144–145
Back Bay Settlement 144
Back Cove:
(Mt. Desert Island,) 199, 231; (*New Harbor*,) 424; (Portland,) 652; (Wooden Ball Island,) 276
Back-Door Passage, (*Sasanoa River*) 537
Back Narrows, (*Damariscotta River*) 464
Back or *Western Way*, (*Boston Harbor*) 799, 856–860
Back River:
(Between Georgetown and Arrowsic Islands,) 520, 536; (connecting *Montseag* and *Wiscasset Bays*,) 501; (*Medomak*,) 418; (*Meduncook*,) 416; (*Sheepscot*,) 499, 505, 514.
Back River Cove, (*Medomak*) 418
Badger Island 691
Badger Rock 710
Bagaduce River 273, 299–304, 350
Bailey Island 555, 562–563, 576
Bailey or *Fullerton Ledge* 389
Bailey Point 385
Baker Island, (*Salem*) 748, 755–756, 763–764, 770
Baker Island, (*Mt. Desert*) 13, 14, 151, 202
Baker Island Light, (*Mt. Desert*) 202
Baker Island Lights, (*Salem*) 748, 755–756, 764, 786
Baker Island Shoal 757
Baker Island Shoals 781–782
Baker Point, (*Steuben*) 176
Balch Head 56
Bald Head:
(Campobello,) 18, 19, 26; (*Casco Bay*,) 543; (*Kennebec*,) 520.
Bald Head Cliff 679
Bald Head Cove, (*Casco Bay*) 542, 543
Bald Head Ledge 530–531, 542, 548, 572
Bald Hill Cove 325, 352
Bald Rock, (*near* Lincolnville) 340
Bald Point 176
Bald Tusket Passage 13
Ballast Island 90, 98
Ballast-stone Ledges 555, 573
Balls, The 257–258
Ballyhac Cove 319
Bangor, City of 273, 350, 352, 353
Bangs Island 637, 640
Bantam Ledge (*Penobscot Bay*) 359
Bantam Rock, (off Damiscove Island) 475, 483, 489, 501, 525
Bar Harbor 183, 199–200
Bar Harbor Island 195, 200
Bar Island:
(*Blue Hill Bay*,) 234; (George Islands,) 380, 382; (*Machias Bay*,) 65, 66, 70; (*Moos-a-bee Reach*,) 108, 112; (*Muscle Ridge Channel*,) 316; (*Muscongus Bay*,) 422, 426, 446; (*Pigeon Hill Bay*,) 157–158; (*Potts Harbor*,) 587; (*Somes Harbor*,) 214.
Bar Island Ledge, (*Muscongus Bay*) 446
Bar Island Ledges, (*Somes Harbor*) 215
Bar Island Rock, (*Muscongus Bay*) 446
Bard Islands, The 297
Bare Cove, (*Little Kennebec*) 78, 82
Bare Island 66
Bare Ledge, (Coast of New Hampshire) 706

Page.
Bare Neck Island 537
Barges, The 231, 237
Barn Point, (Cape Neddick) 679
Barn Point, (*Squam River*) 719, 720
Barn Point Rocks 680
Barn Rocks 720, 721
Barnes Island 601
Barnes Point, (*Middle Bay*) 602
Barney's Little Island 104
Barrel Rock, (*Cohasset*) 879
Barter Island:
(George Islands,) 380, 381, 415; (*Merchant Row,*) 267–268; (*Sheepscott,*) 498, 499.
Barter Island Ledges 268, 269–270
Barter Shoal 387, 409
Bartlett Harbor, (North Haven) 293
Bartlett Island, (*Blue Hill Bay*) 198, 232
Bartlett Point, (*Blue Hill Bay*) 198
Bartlett Point, (*Casco Bay*) 629
Bartlett Rock 734–735
Bartol Island 617, 618
Bartol Point 617, 618
Bartol's Point Village 617, 618, 620
Barton Island, (*Hurricane Sound*) 310
Basin Cove 587
Basin, The, (*Hurricane Sound*) 310
Basin, The, (*New Meadows River*) 546
Basin Point, (*New Meadows River*) 546
Basin Point, (*Potts Harbor*) 590
Basket Island, (*Casco Bay*) 625
Basket Island, (*Saco Bay*) 658, 660
Basket Island Ledges 627–628
Bass Cove, (*Frenchman Bay*) 189–193
Bass Harbor 199, 218–223
Bass Harbor Bar 220, 236–237
Bass Harbor Head 218
Bass Harbor Head Light-House 218, 242
Bass Harbor Point 218, 219
Bass Island 670
Bass Point, (Long Island, *Boston Bay*) 860
Bass Point, (Nahant) 794
Bass Point Flats 872
Bass Rock 794
Bates Island 589, 593, 597
Bath, City of 522, 547
Batson Ledge 123
Bay Bridge 523
Bay Ledge, or *Mark Island Ledge*, (*East Penobscot Bay*) 261
Bay Ledge, (entrance to *Penobscot Bay*) 357, 358
Bay Ledges, (*Englishman Bay*) 108–109
Bay of Fundy 7–77
Bayley Hill 795
Bayley Ledge, (*Bayley's Mistake*) 56
Bayley Ledge, (near Nahant) 795
Bayley's Mistake 56
Bays:
Alley, 103; *Atkins*, 519; *Back*, (*Harrington River,*) 144–145; *Belfast*, 273, 341–343; *Blue Hill*, 219, 223–242; *Booth*, 484–492; *Boston*, 739, 792–882; *Brookings*, 536; *Cape Cod*, 739; *Casco*, 542–654; *Cobscook*, 46–55; *Drummore*, 520; *Dyer*, 169–173; *Dyers*, 138; *East*, (*Cobscook Bay,*) 46, 48, 51; *East Penobscot*, 273–304; *Egypt*, 194; *Englishman*, 86–100; *Flanders*, or *Sullivan Harbor*, 183, 189, 194–197; *Flat*, 140, 143–144; *Franklin*, 194; *Frenchman*, 183–201; *Friar*, 19, 30; *Fundy*, 7–77; *Goose-Fair*, 667; *Gouldsboro'*, 173–178; *Great Marsh*, 175; *Hall*, 537; *Herrick*, 233–234; *Herring*, 18, 27; *Hingham*, 802, 818, 869–878; *Hockomock*, 536–537; *Holmes*, 67, 71; *Howard*, 65, 70; *Ipswich*, 712–724; *Isle au Haute*, 249, 280; *Jericho*, 259; *John*, 450–460; *Johnson*, 29, 35; *Joy*, 173, 175–176; *Kennebec*, 81; *Knubble*, 538; *Linekin*, 478–484; *Little Machias*, 62–63; *Look*, 92; *Machias*, 63–77; *Mason*, 89–100; *Maquoit*, 593, 596, 597, 608–615; *Mare Point*, 596, 597, 607–615; *Marsh*, (*Penobscot River,*) 352; *Massachusetts*, 724, 738–882; *Merrymeeting*, 523; *Middle*, (*Casco Bay,*) 593, 595–596, 597–607; *Middle*, (*Cobscook,*) 46; *Middle*, (*New Meadows,*) 548; *Montsweag*, 501, 536; *Morgan*, 235; *Muscongus*, 413–450; *Nahant*, 787–792; *Narraguagus*, 145–155; *Northern*, 299; *Oak*, 36, 38; *Owl's Head*, 320; *Passamaquoddy*, 7, 17–46; *Patten*, 236; *Pemaquan*, 46–55; *Penobscot*, 227, 273–372; *Pigeon Hill*, 155–169; *Pinkham*, 171; *Placentia*, 224; *Pleasant*, 133–145; *Quincy*, 868–869; *Quohog*, 554–562; *Rackliff*, 315, 372, 373, 374; *Reynolds*, 108; *Saco*, 657–666; *Sagadahoc*, 494, 516; *Sandy*, (*Cape Ann,*) 724, 728, 732, 734–735, 736; *Seal*, (Vinal Haven Island,) 293; *Sheepscot*, 492, 516; *South*, (Boston,) 806; *South*, (Castine,) 299; *South*, (*Cobscook,*) 46, 48, 50; *St. Andrew*, 36–37; *Stage Island*, (*Kennebec,*) 516; *Straight*, 46; *Todd*, 518–519; *Town River*,

Page.

Bays—Continued.
871; *Union River*, 198, 224, 235–236, 240–241, 242; *West*, or *Gouldsboro' Harbor*, 174–175; *West Penobscot*, 305–348; *Wheeler*, 372, 373–374; *Winnegance*, 546; *Wiscasset*, 501; *Wohoa*, 107; *Wyman*, 519.
Beach Island 296
Beach Ledges 456
Beach, The, (Lincolnville) 310
Beacon Island 877
Beacon Ledge 671
Beacon on—
Fort Point Ledge, 351, 353; *Harding Ledge*, 808, 818; *Hospital Point Rocks*, 318; *Porterfield Ledge*, 333; *Ram Island Ledge*, 584, 637, 640; Salvages, 728, 733; *Western Duck Rock*, 366.
Beal Cove 562, 578
Beal Island, (*Englishman Bay*) 98, 102, 103
Beal Mountain 125
Beal Point 103
Beals Island 537
Bean Island 190, 195
Bean Island Ledge 195
Bean Point 189, 195
Bear Island, (*Casco Bay*) 545
Bear Island, (*South-West Harbor* 202, 203–204
Bear Island Light-House, (*South-West Harbor*) 203–204
Bears Island, (Deer Isle) 294
Bearings of—
Matinicus Rock Light-Houses, 275; Saddle-Back Ledge Light, 274; Thatcher Island Lights, 727; Whitehead Light-House, 274.
Beattie, Mount, (Camden Hills) 332, 336
Beauchamp Point 332
Beaver-dam Brook 171
Beaver Harbor 18, 23
Beaver Island 453
Beaver Tail, The, (*Belfast Bay*) 341
Beech Mountain 199
Belfast Bay and Harbor 273, 341–343
Belfast, City of 273, 299, 342
Belfast River 273, 341–343
Bell-buoy off Northeast Graves 807, 827, 835–836
Bell Rock 643, 644, 647, 650
Belleville, Village of 708
Ben Island 556
Benjamin River 245, 252, 253
Benner Island 380, 381, 415
Bennett Ledges 197
Bent Point 870
Berry Island 537
Beverly Bar 784
Beverly Cove 752
Beverly Creek 753
Beverly Farms 752, 756
Beverly Harbor 753, 763, 784–786
Beverly, Town of 753, 784
Bibber Island 609, 615, 616
Bibber Rocks 611, 615
Bickford Island 668, 670, 671, 673
Bickford Point 107, 130
Biddeford Pool, Village of 659, 661, 673
Biddeford, Town of 657, 659, 661
Big Ben 174
Big Black Ledge 179
Big Head 167
Big Hill, (*Linekin Bay*) 479
Big Pea Ledge 158, 165–166
Big Pot, The 106, 132–133
Bigger Island 185
Bigger Point 185, 186, 187
Bill Wallace Ground 531, 542
Bill Island 267
Billings Cove 245
Birch Harbor 182
Birch Island:
(*Casco Bay*,) 597, 601, 607, 610; (*Eggemoggin Reach*,) 247, 248; (*Fox Island Thoroughfare*,) 282; (*John Bay*,) 451, 456; (*Muscle Ridge Channel*,) 317.
Birch Island Ledge 603
Birch Islands 136

Page.

Birch Point:
(*Casco Bay, New Meadows River,*) 546; (*Cobscook Bay.*) 47–48, 50, 52; (*Cousins Island,*) 626; (*Machias Bay,*) 67, 71; (*Sheepscot River,*) 501; (*Weskeag River,*) 319.
Birch Point Flats 72–73
Birch Point Ledge 507
Bird Island, (*Boston Harbor*) 813, 832, 841, 849
Bird Island Beacon 813, 832, 841, 849
Bird Island Flats 813, 832, 841, 849
Bird Point 385
Bishop Head 8, 33
Black Bess 740
Black Bess Point 740, 742
Black Head, (Head Harbor Island) 90, 98, 100
Black Head, (Monhegan) 365
Black Island:
(*Blue Hill Bay,*) 219, 224, 233; (*Casco Passage,*) 224, 230, 270; (*Muscongus Bay,*) 427.
Black Jack Rock 526
Black Ledge:
(*Cohasset,*) 878; (*Fox Island Thoroughfare,*) 285–286; (*Gloucester,*) 745; (*Merchant Row,*) 269, 270; (near *Monhegan,*) 366.
Black Ledges, The 63
Black Marsh Channel 796
Black Rock:
(*Black Rock Channel, Boston Harbor,*) 856; (*Gloucester,*) 744; (*Manan Ledges,*) 8, 26, 27; (*Middle Bay,*) 604; (near Metinic Island,) 365, 367; (off *St. George River,*) 391–392; (*Passamaquoddy,*) 26.
Black Rock Channel in Boston Bay 799, 855–856
Black Rock Channel, (Sheepscot Bay) 508
Black Rock Point 794
Black Rocks:
(*Essex River,*) 718; (*Lynn Harbor,*) 796; (off *Boston Entrance,*) 817.
Black Rocks, The:
(Newburyport,) 710; (*Sheepscot Bay,*) 502, 508, 510–511; (*York River Entrance,*) 683.
Blacksnake Ledge 557
Blake Point 539
Blaney Point, (*Casco Bay*) 626
Blaney Point, (*Nahant Bay*) 788
Blaney Rock 788
Blasket Point 143–144
Block-House Point, (*St. Croix River*) 37, 41
Blubber Island 383
Blue Hill 223, 259
Blue Hill, Village of 234, 235
Blue Hill Bay 219, 223–242
Bluff Head 521
Bluff Island 661
Board Point 92
Boat, The, or *Channel Rock* 259, 265
Bobby Creek 158
Boden Rock 780, 783
Bog Brook Passage 39, 42, 44–45
Boiler, The, (*Goose Rock Passage*) 539
Boilers, The, (Newburyport) 711
Boilers, The, (*Sasanoa River*) 536, 537, 539
Boisbubert Harbor 155–169
Boisbubert Island 155, 157
Boisbubert Ledge 159, 162
Bold Dick, (*Casco Bay*) 552, 556, 564
Bold Dick, (*Kennebec Entrance*) 531, 541
Bold Island 255
Bold Island Ledge 255, 260
Bombazine Island 547
Boon Island 698–699
Boon Island Ledge 699
Boon Island Light-House 666, 681, 698–699, 703
Bootman Head 30
Booth Bay, or *Town's End Harbor* 484–492
Boston Bay 739, 792–882
Boston, City of 806, 819, 826
Boston Harbor 739, 799–864
Boston Island 496, 497
Boston Ledge 808
Boston Light-House 15, 17, 800–801, 818, 862
Bounty Cove, (Islesboro') 298
Bowden Ledge 205, 208
Bowditch Ledge 758

Page.
Bowditch Ledge Beacon 756, 758
Bowdoinham, Village of 523
Bowl of the Ladle 106, 132
Bowman Island 617
Bowman Island Ledge 620
Brace Cove 725
Bracy Cove 199, 201–202
Bradbury Island 295
Bradford Point, (*Meduncook River*) 416
Bradford Point, (*St. George River*) 385
Bradstreet Cove 455
Bradstreet Rock 286
Bragdon Castle 355
Bragdon Island 547
Bragdon Rock 550
Braintree Neck 870
Branning Ledge 604
Brant Ledges 604
Brave Boat Harbor 686
Brazils, The, (*Manan Ledges*) 8
Breakwater in *Portland Harbor* 635
Breakwater Ledge, (Rockport) 734
Breakwater Light, (Portland) 628, 635, 641
Breed Island 793
Bremen Long Island 414, 417
Brewer Village 352
Briar Cove 466
Brick-kiln Cove 25
Brick-yard Cove 556
Brick-yard Wharf 659
Brick-yard Point 37, 41
Brier Neck 725
Brigadier Island 303, 348–349
Brigadier Island Ledge 303–304, 343, 349, 353
Brimbles, The 766, 782
Brimstone Island, (*Penobscot Bay*) 307, 308
Brimstone Point, (*Casco Bay*) 627, 631
Brimstone Point Ledge 627, 631
Bristol Neck 450, 452, 463–464
Bristol, Village of 452
Broad Cove:
(*Cape Elizabeth,*) 638; (*Casco Bay,*) 629, 630; (*Gilkey Harbor,*) 344–345; (*Harbor of Eastport,*) 21, 23, 47, 50; (*Hingham Bay,*) 875; (*Medomak River,*) 421; (*New Meadows,*) 547; (*Richmond Island,*) 655; (*St. George River,*) 385; (*Somes Sound,*) 212, 214.
Broad Cove Rock 647, 649
Broad Sound, (*Boston Bay*) 792–794
Broad Sound, (*Casco Bay,*) 593–597
Broad Sound Channels in *Boston Bay* 799, 834–845
Broken Cave 594
Brookings Bay 536
Brooklin, Village of 234, 250
Brooks Cove 539
Brooks Point 538
Brooksville, Village of 299
Brothers, The:
(*Casco Bay,*) 625, 631; (off *Machias Bay,*) 74, 81, 87, 94; (off *St. George River,*) 378, 379; (Richmond Island,) 656.
Browney Island 98, 119
Browney Island Ledges 122
Brown Cow, (*Casco Bay*) 545, 593, 594
Brown Cow, Eastern 545
Brown Cow, (*East Penobscot Bay*) 259
Brown's Corner, Settlement of 341
Brown's Cove, (*Fox Island Thoroughfare*) 287
Brown's Cove, (*Muscongus Sound*) 422–423
Brown's Head:
(*Fox Island Thoroughfare,*) 284; (*Muscongus Sound,*) 422; (*West Penobscot Bay,*) 341.
Brown's Head Ledge 445
Brown's Head Light-House, (*Fox Island Thoroughfare*) 284
Brown's Hill, (*St. Croix River*) 39, 42
Brown's Island, (*Flat Island Passage, Moos-a-bec*) 126
Brown's Island, (*Machias Bay*) 65, 75
Brown's Mountain 199, 212, 214
Brown's Point, (*Cousins River*) 629
Brunswick, Town of 523
Brush Island 878–879

Page.
Brush Island Channel, (Cohasset) 878–879
Brush Island Ledge 878–879
Bryer Island 7, 13
Bubble Mountain 199, 201
Buchanan Creek 147
Buchanan Point 147
Buck Harbor, (Machias Bay) 65–66, 70, 71, 76
Buck Head 65, 66, 70
Buck Head Ledges 66, 76
Buck Ledge 354
Buck Neck 66, 71
Buckles Island 226, 271
Buckles Island Harbor 226, 271
Buckles Island Ledge 272
Buckman Head 35, 51
Buckman Ledge 51
Buckmaster Ledges 255
Bucks Harbor, (Eggemoggin Reach) 243, 246–247, 252, 253
Bucks Harbor Ledge 247, 252
Bucks Island 246
Bucksport Harbor 351–352
Bucksport, Village of 351–352
Bud or *Alden Rock* 369
Bull Bridge, *(New Meadows River)* 548
Bull-Dog Ledge 468
Bull Dog, The, (Eastport Entrance) 25
Bull Dog, The, (off *Damariscotta River*) 468
Bull Head Rip, (Manan Ledges) 8
Bull Ledge, (Sheepscot River) 503
Bull Rock, (Murr Ledges) 10
Bulwark Shoal 643
Bumkin Island 875
Bumkin Island Shoals 876
Bumpkin Island 672, 673, 675
Bumpkin Island Eastern Ledge 673, 676
Bumpkin Island Southwest Ledge 673, 676
Bunganuc Landing 608
Bunganuc Rock 611
Bunker Harbor 182
Bunker Head 203
Bunker Hill Monument 835
Bunker Ledge 205, 208
Bunker Ledge Monument 205, 206, 215
Bunker Ledges 180
Bunker's Slippery Rock 259–260
Bunker's Whore Ledge 210–211, 219–220
Burial Island 33, 50, 54
Burke Hill 139, 174
Burnt-Coat Harbor 225, 230
Burnt-Coat Harbor Lights 226, 242
Burnt-Coat Island, *(Casco Bay)* 549
Burnt-Coat, or Swan Island, (off *Blue Hill Bay*) 224, 225–226
Burnt Cove, (Deer Isle) 294
Burnt Island:
(*Booth Bay,*) 485, 486; (Fox Islands,) 281; (George Islands,) 380–381, 415; (*Merchant Row,*) 267, 280; (*Muscle Ridge Channel,*) 315.
Burnt Island, Little 381
Burnt Island Harbor 267, 280
Burnt Island Ledge, (Muscle Ridge Channel) 322
Burnt Island Ledges, (Merchant Row) 280
Burnt Island Light-House 485, 486, 492
Burnt Jacket Channel 522
Burnt Point, (Burnt-Coat Island) 225
Burnt Point, *(Steuben Harbor)* 176
Burton Point 385
Bush Island 554, 571
Bushy Island 550
Busting Island 616
Busting Island Ledge 619
Butter Island 296
Butter-milk Cove 579
Buttermilk Point 547, 579
Button Island 876
Button-Moulds, The 531, 542
Byard Point 246
Byer's Ship Ledge 399, 403, 407–408, 428–429
Byrne Head 37, 41

C.

Page.
Cabbage Island 479, 480
Cabbage Island Ledges 481
Calais, City of 17, 36, 42
Calderwood Island 281–282
Calderwood Neck 281
Calderwood Point 282
Calderwood Rock 288
Caldwell Island 379, 380, 382
Caldwell Islands, Little 380, 382
Calf Island:
(*Blue Hill Bay,*) 224, 230–231, 233, 271; (*Boston Bay,*) 825; (Elwell Group,) 372; (*Frenchman Bay,*) 190; (near *Little Kennebec River,*) 85.
Calf Point, (*Fox Island Thoroughfare*) 283
Calf Point, (near *Little Kennebec River*) 85
Calm streak near *Cape Rosier* 248
Calton Point 92
Camden Harbor 335–339
Camden Hills 248, 328, 382, 336
Camden Mills, (*Mill River*) 144
Camden, Town of 273, 336
Camp Island, (*Jericho Bay*) 256
Camp Island, (*Penobscot Bay*) 317
Campbell Creek 487
Campobello Island 17–19, 28
Campobello Light-House 17
Cape Ann 724–738, 739–747
Cape Carter 245
Cape Cod 738, 739
Cape Cod Bay 739
Cape Elizabeth 543, 635–636, 638, 639, 645
Cape Elizabeth Light-Houses 543, 636, 653, 657
Cape Gellison 349, 350
Cape Harbor 484, 485, 512
Cape Hedge 725
Cape Island, (*Cape Porpoise*) 668, 671, 673
Cape Island, (*Sheepscot Entrance*) 476, 484, 485, 493
Cape Neddick 679–680
Cape Neddick Knubble 679–680
Cape Neddick Roads 679, 680–681
Cape Neddick, Village of 679
Cape Newagen 484
Cape Porpoise 668
Cape Porpoise Harbor 668–675
Cape Porpoise, Village of 670, 671
Cape Rosier 243, 247–248, 298, 299
Cape Small Point 542
Cape Split 102, 108, 131, 135
Cape Split Harbor 108, 130–133
Cape St. Mary 13
Cape Wash 63
Card Cove 479
Card Rock 477, 480–481, 487–488
Carey Rock 394
Carlisle Point 465
Carney Island 245–246
Carr Island 708
Carrying-Place Cove:
(*Moos-a-bec Reach,*) 108; (*New Meadows,*) 544; (*Pleasant Bay,*) 135; (*Union River,*) 236.
Carrying-Place Head 544
Carrying-Place Island 108
Carver Cove 282
Carver Harbor 281, 305–309
Casco Bay 542–654
Casco Island 24
Casco, or Portland Iron Works 652
Casco Passage 222, 243, 270–273
Caske Ledge 1, 730
Castine Harbor 299–304
Castine, Town of 273, 350
Castle Hill 712
Castle Island, (*Boston Harbor*) 805
Castle Island, (*Sasanoa River*) 537
Castle Neck 712
Castle Rocks 811–812, 831, 839
Castle, The 168, 131

Page.
Caswell Rock 777
Cat Cove 754
Cat Island 752, 756, 763, 764, 769
Cat Island Channel into Salem 763–769
Cat Ledges 502–503
Cat Point 544
Cates Cove 59
Cates Point 59
Catfish Rock 640
Cathanse, or *Cathance River* 523
Cedarbush Ledge 503
Cedar Island, (Isles of Shoals) 701
Cedar Island, (*Muscongus Bay*) 427
Cedar Island Ledge 701
Cedar Ledges 546, 550, 555, 557, 565
Centre Harbor 250
Centre Island 555–556
Centre Village 793
Centurion Rocks 809–810, 821, 859
Chair, The 157
Chamberly Island 141, 143
Chamcook Hills, The 37, 41
Chance Island 66, 70
Chandler Cove 598
Chandler Island 876
Chandler Point 658
Chandler River 86, 91–93, 95, 97, 99
Channel Rock:
(*Blue Hill Bay,*) 234, 240, 241; (*Carver Harbor,*) 306, 308; (*Deer Island Thoroughfare*, 255; (*Essex River,*) 718; (*Fox Islands Thoroughfare,*) 282, 286; (*Hingham Harbor.*) 877; (*Machias Bay,*) 67, 70, 72; (*Moos-a-bec Reach,*) 115; (*Muscle Ridge Channel,*) 323; (*St. George River,*) 388, 395; (*Weymouth Fore River,*) 872.
Channel Rock, or the *Boat*, (*Southeast Harbor*) 259, 265
Channels—
Among the Muscle Ridge Islands, 371–372; between Metinic Island and *Southern Triangles*, 369–370; into *Penobscot Bay*, 356; into *St. George River*, 379
Chappel Ledge 766, 772, 783
Charity Ledge 560, 566, 569
Charles River 806, 814, 816
Charlestown, City of 806
Charlestown Navy-Yard 806
Charley Point 19, 29
Chatman Point 866
Chatman Point Flats 866
Chauncey Creek 689
Chebeag Bar 626, 628
Chebeag Point 598, 622, 626
Chelsea Beach 792
Chelsea Bridge 806
Chelsea Creek 793
Chelsea River 806
Chelsea, Town of 806
Cherry Island 25, 27
Cherry Ledge 272
Cherryfield, Township of 174
Chest Ledge 852
Chimney Rock 655–656
Chitman Cove 147
Chitman Point 147, 157
Chittenden Ledge 879
Chivers Ledge 549, 572
Chops of the Kennebec 522–523
Chops Point 523
Chow-Chow Cove 298
Christmas Cove, (*Damariscotta River*) 452, 463
Christmas Cove, (*Sheepscot River*) 493, 512
Chubb Island 751
City of—
Augusta, 524; Bangor, 273, 350; Bath, 522, 547; Belfast, 273, 299, 342; Boston, 806, 819, 826; Calais, 17, 36, 42; Charlestown, 806; Eastport, 17, 21, 23, 26; Gloucester, 724, 726, 740, 741; Machias, 63, 69; Portland, 634–635; Portsmouth, 691; Rockland, 273, 327; Salem, 753, 754.
Clam Cove:
(Above Eastport,) 20, 40–41; (*Richmond Island Harbor,*) 655; (western shore *Penobscot Bay,*) 331.
Clam Cove Head 20, 40
Clam Island, (*Jericho Bay*) 255

Page.
Clam Island, (*Medomak River*) 442
Clam Ledges, (*Jericho Bay*) 255
Clam Ledges, (*Muscle Ridge Channel*) 313, 322
Clam Rock 745
Clapboard Island Lower Ledge 631
Clapboard Island Upper Ledge 631
Clapboard Island, Woody 625
Clark Cove:
(Approach to *Wheeler Bay*,) 374; (*Damariscotta*,) 465; (*Harpswell*,) 577.
Clark Island, (Approach to *Wheeler Bay*) 374–375
Clark Ledge, (*Harpswell*) 581
Clark Ledges, (*Pembroke*) 55
Clark Ledges, (*Prospect Harbor*) 179, 181
Clark Point, or *Clark Island Ledges* 374
Clarke Ground, (*Manan Ledges*) 9
Clarke Island, (*Portsmouth*) 690
Clarke Ledge, (*Eastport*) 42
Clarke Point:
(*John River*,) 455; (*South-West Harbor*,) 207–208, 213; (*Wheeler Bay*,) 373, 374.
Cleave Neck 667
Closson Ledges 250
Clou Ledge 504
Clough Point 500, 506
Coast from—
Cape Neddick to *York River Entrance*, 681–682; Fan Island to *Englishman Bay*, 85–86; *Sheepscot River* to *Kennebec River*, 516; Whitehead Island to *St. George River*, 372–379.
Coast-line from Cape Porpoise to Kennebunk Point 675–676
Coast-line from Kennebunkport to Cape Neddick 678–680
Coast of Maine between West Quoddy Head and *Little River* 56–57
Coasters' Passage through Davis' Straits 408–413
Cobscook Bay 21, 46–55
Cobscook River 21, 46, 48, 50
Cod Head 95–96
Cod Ledges, (*Frenchman Bay*) 189
Cod Rock 695
Coffin Point, (*Harrington River*) 141
Coffin Point, (*Merrimac River*) 711
Coggins Cove 49, 51
Coggins Head 49, 51, 53
Cohasset Harbor 817, 878–882
Cohasset Rocks 851, 853–854
Cohasset, Town of 817
Colby Cove 500, 506
Colby Ledge 269
Coleman Cove 598
Coles Creek 143, 144
Coles, or Hardwood Point 139, 142
Collins Cove 752
Collins Mountain 81, 83
Colemore Ledges 852
Colt-Head Island 296
Colt Ledge 307
Columbia Ledge 205
Columbia, Village of 138
Commercial Point, (*Neponset River*) 864
Commercial Wharf, (*Neponset River*) 864
Commissioners Ledge 836
Compass, Variation of:
Annisquam Harbor, 723; *Bass Harbor*, 223; Bath, 535; *Blue Hill Bay*, 242; *Boston Bay*, 863; Cape Neddick, 681: *Casco Bay*, 654; *Castine Harbor*, 304; *Deer Island Thoroughfare*, 262; *Dyer Bay*, 173; Eastport, 36; *Eggemoggin Reach*, 253; *Englishman Bay*, 102; *Frenchman Bay*, 188; *Gloucester Harbor*, 747; *Gouldsboro' Bay*, 178; *Kennebec Entrance*, 535; Kennebunkport, 678; *Little Kennebec River*, 85; *Little River*, 62; *Machias Bay*, 77; *Moos-a-bee Reach*, 102, 129; *Muscongus Bay*, 450; Nahant, 792, 799; *Narraguagus Bay*, 155; Newburyport, 712; *Pembroke River*, 55; *Penobscot Bay*, 370; *Pigeon Hill Bay*, 168; *Pleasant Bay*, 143; *Plum Island Sound*, 716; *Portland Entrance*, 654; *Portsmouth Harbor*, 704; *Prospect Harbor*, 181; *Richmond Island Harbor*, 657; Rockport, (Massachusetts,) 738; *Saco Bay*, 666; *Salem Harbor*, 787; *Sheepscot Bay* and *River*, 515; *Somes Sound*, 218; *St. Croix River*, 46; *St. George River*, 413; *Swampscott*, 792; *Tennant Harbor*, 378; *Western Entrance to Penobscot Bay*, 370; *Winter Harbor*, (*Frenchman Bay*,) 188; *York River*, 686.
Comstock Point 47, 50
Conary Cove 254
Conary Island 243, 244
Conary Ledge 250
Condon Point 247
Cone Island 106, 128, 134

Page.

Cone Island Passage, (*Moos-a-bec Reach*) 128
Coney Island 763, 764
Coney Island Rock 769, 772–773
Coney Ledge 767, 772
Constable, The 9
Conway Point 311
Coombs Cove 454
Coombs Head 293
Coombs Island 548
Coombs Ledge 441
Cooper Island 47, 50
Cooper Island Ledges 47, 50, 51–52, 54
Coot Rocks 541
Corn Ledge 123
Cornfield Point 626
Corvette Ledge 456
Corwin Rock 646
Cousin Island 626
Cousin River 628, 629
Coves:

Allen, (*Blue Hill Bay*,) 234; *Allen*, (*Deer Island Thoroughfare*,) 257; *Arey*, 183; *Ash Point*, (*Casco Bay*,) 587; *Back*, (Mount Desert, West Shore,) 199, 231; *Back*, (*New Harbor*,) 424; *Back*, (*Portland*,) 652; *Back*, (Wooden Ball Island,) 276; *Back River*, 418; *Bald Head*, 542, 543; *Bald Hill*, 352; *Ballyhac*, 319; *Bare*, 78, 82; *Basin*, 587; *Bass*, (*Frenchman Bay*,) 183, 189, 190–193; *Bass*, (near Scituate,) 864; *Beal*, 562, 578; *Beverly*, 752; *Billings*, or *Sargent*, 245; *Bounty*, 298; *Brace*, 725, 731; *Bracy*, 199, 201–202; *Bradstreet*, 455; *Briar*, 466; *Brick Kiln*, 25; *Brickyard*, 556; *Broad*, (Cape Elizabeth,) 638; *Broad*, (*Casco Bay*,) 629, 630; *Broad*, (*Eastport Harbor*,) 21, 23, 30, 47, 50; *Broad*, (*Gilkey Harbor*,) 344–345; *Broad*, (Hingham,) 875; *Broad*, (*Medomak*,) 421; *Broad*, (*New Meadows*,) 547; *Broad*, (Richmond Island,) 655; *Broad*, (*Somes Sound*,) 214; *Broad*, (*St. George River*,) 385–386; *Brooks*, 539; *Brown's*, (*Fox Islands Thoroughfare*,) 287; *Brown's* (*Muscongus Sound*,) 422–423; *Burnt*, (Deer Isle,) 294; *Buttermilk*, 579; *Card*, 479; *Carrying-Place*, (*Moos-a-bec*,) 108; *Carrying-Place*, (*New Meadows*,) 544; *Carrying-Place*, (*Pleasant Bay*,) 135; *Carrying-Place*, (*Union River*,) 236; *Carver*, 282; *Cat*, 754; *Cates*, 59; *Chandler*, 598; *Chitman*, 147; *Chow-Chow*, 298; *Christmas*, (*Damariscotta*,) 452, 463; *Christmas*, (*Sheepscot*,) 493, 512; *Clam*, (above Eastport,) 20, 40–41; *Clam*, (*Richmond Island Harbor*,) 655; *Clam*, (western shore *Penobscot Bay*,) 331; *Clark*, (approach to *Wheeler Bay*,) 374; *Clark*, (*Damariscotta*,) 465; *Clark*, (Harpswell,) 577; *Coggins*, 49, 51; *Colby*, 500, 506; *Coleman*, 598; *Collins*, 753; *Conary*, 254; *Coombs*, 454; *Cow*, 578; *Crockett*, (Deer Isle,) 264, 294; *Crockett*, (*Fox Islands Thoroughfare*,) 285; *Cromwell*, 545; *Cummings*, 120; *Cummins*, 20, 40; *Curry*, 25; *Curtis*, 667; *Cutler*, 385, 386; *Dark*, 538; *Davis*, 384, 415; *Day*, (*Damariscotta River*,) 467; *Deadman*, 366; *Deep*, (Campobello,) 19, 29; *Deep*, (*Frenchman Bay*,) 188; *Deep*, (Green Island,) 305; *Deep*, (Moose Island,) 21; *Deep*, (*St. George River*,) 384; *Delano*, 418; *Diamond*, 624; *Dingley*, 546; *Dodge*, 467; *Dolliber*, 770; *Dyers*, 138; *Fernald*, 213; *Fish*, 383; *Fish-House*, 544; *Fitch*, 466; *Five Island*, 141; *Folly*, 724; *Fort Point*, 351; *Foster*, 454; *Fowle*, 499; *Fresh-Water*, 739–740, 742; *Frost*, 41; *Gay*, 380; *Gilbert*, 741, 745; *Gilpatrick*, 213; *Gin*, 41; *Gleason*, 41; *Godfrey*, 686; *Gondola*, 351; *Goose*, (*Little Kennebec River*,) 80; *Goose*, (*Trenton River*,) 198; *Goose*, (west shore of Mount Desert,) 199, 231–232; *Grant*, 196; *Graveyard*, 454; *Great*, 85–86, 91, 94; *Great Harbor*, 576; *Greenland*, 414, 422, 423–424; *Greenleaf*, 499; *Gurry*, 638; *Haley*, 702; *Harrington*, 372; *Harpswell*, 577; *Hatchet*, 414, 416–417; *Havenner*, 421; *Head*, 543; *Heal*, 537–538; *Hen*, 571; *Henry*, 185; *Herring*, 27; *Hersey*, 49, 51; *Hilton*, 501; *Hodgdon*, 498; *Hog*, 335; *Hornbarn*, 416; *Horse*, 562, 563, 576; *Hull*, 183, 199, 200–201; *Hunniwell*, 529–530; *Huston*, 467; *Hyler*, 386; *Jellison*, (*Sullivan Harbor*,) 196; *Jewell Island*, 599; *Jewett*, 498, 514; *Johnson*, (*Casco Bay*,) 598; *Johnson*, (Moose Island, Eastport,) 20, 40; *Jones*, 463–464; *Joy*, 175, 176; *Juniper*, 754; *Kent*, 282; *Kettle*, 747; *Lane*, 722; *Larrabee*, 67, 71; *Lewis*, (*Linekin Bay*,) 480; *Lewis*, (*St. Croix River*,) 41; *Light-House*, 740, 742; *Lily*, 142; *Little*, 467; *Loblolly*, 725; *Lobster*, (*Annisquam Harbor*,) 719, 720; *Long*, (*Hurricane Sound*,) 311; *Long*, (*Medomak*,) 419; *Long*, (*Muscongus Sound*,) 424; *Long*, (near *Tennant Harbor*,) 372, 376; *Long*, (Orr Island,) 562, 578; *Long*, (*Sheepscot*,) 499; *Long*, (*South-East Harbor*,) 295; *Long Ledge*, 60; *Looks*, 137; *Lowe*, (*Damariscotta*,) 465; *Lowe*, (*Sasanoa*,) 539; *Lowell*, 562, 578; *Lower Dodge*, 467; *Lower Wass*, 137; *Lunt*, 229; *Mac*, 86; *Mac Farling*, 452, 459; *Mackerel*, (Burnt-Coat,) 225–226, 271; *Mackerel*, (*Casco Bay*,) 563, 576–577; *Mackerel*, (Salem,) 753; *Maddox*, 513; *McCarty*, 499; *Manchester*, 213; *Maple Juice*, 385; *Marsh*, 278; *Marshall*, or *Deep*, 384; *Meadow*, 464; *Mears*, 466; *Meeting-House*, 419–420; *Merriman*, 577; *Middle Bay*, 602; *Mill*, (Campobello,) 18, 27; *Mill*, (Harpswell,) 577; *Mill*, (*New Meadows River*,) 547; *Mill*, (*Penobscot River*,) 351; *Mill*, (*Quohog Bay*,) 556; *Mill*, (*St. Croix River*,) 36, 37, 41; *Mill*, (Thurlow Island,) 257; *Moore*, 278; *Moose*, 56–57; *Morse*, 521; *Muscle*, (Richmond Island,) 655; *Mussel*, 629; *Naskeag*, 244; *Newdick*, 539; *Norman's Woe*, 739, 742; *Norwood*, 213; *Old*, 601; *Orr*, 556; *Otis*, 385; *Over*, 170; *Palmer*, 754; *Parker*, 298; *Pepperell*, 689, 692, 696; *Perry*, 283; *Peters*, or *Long*, (*Damariscotta*,) 465; *Peters*, (Harpswell Neck,) 601–602; *Pig*, 486; *Pigeon*, 724, 731–732; *Pitcher*, 419; *Pleasant*, (*Damariscotta*,) 465; *Pleasant*, (*Sasanoa River*,) 535–536; *Plum*, or *Lane*, 722; *Pond*, (Cape Elizabeth,) 638; *Pond*, (*Englishman Bay*,) 91, 94; *Pond*, (Wells,) 679; *Pond Island*, 183–184; *Porpoise*, 670; *Pottle*, 501; *Preble*, 211; *Prentiss*, 466; *Prince*, 30; *Pulpit*, 294; *Pumpkin*, 445; *Raccoon*, 198; *Ramsdell*, 137; *Reed*, 562, 578; *Rich*, 556; *Ridley*, 554, 571–575; *Riggs*, 538; *Ripley*, 141; *Robin Hood*, 494, 538;

Page.

Coves—Continued.
Robinson, 455; *Rock Island*, 870; *Rum*, 500; *Sabbath Day*, 298; *Salisbury*, 198, 199; *Salt Marsh*, 466; *Sampson*, (*Cape Porpoise Harbor*,) 670; *Sampson*, (*Medomak River*,) 419; *Sanborn*, 68, 71; *Sand*, (*Gouldsboro' Bay*,) 174; *Sand*, (*Winter Harbor*,) 186, 187; *Sandy*, (Great Island,) 545; *Sandy*, (*Harrington River*,) 141; *Sargent*, (*Eggemoggin Reach*,) 245; *Sargent*, (*Somes Sound*,) 214; *Saturday*, 341; *Sawyer*, (*Chandler River*,) 92; *Sawyer*, (*Moos-a-bec Reach*,) 107; *Schooner*, 18, 27; *Seal*, (Boisbubert Island,) 166, 167; *Seal*, (Burnt-Coat,) 226; *Seal*, (Cape Elizabeth,) 654; *Seal*, (*Damariscotta*,) 464; *Seal*, (Fox Islands,) 283; *Seal*, (Mount Desert, south shore,) 199, 201; *Seal*, (Mount Desert, west shore,) 199, 232; *Seal*, (Small Point,) 542; *Seavey*, 137; *Sherman*, 335, 337, 338, 339; *Ship*, 638; *Shorey*, 88–89, 95; *Simonton*, 638; *Slate*, 120; *Small's* (*Fox Islands Thoroughfare*,) 294; *Small's*, (*Pembroke River*,) 47, 50; *Smith*, (*Bagaduce River*,) 300; *Smith*, (*Gloucester Harbor*,) 731, 741; *Snare*, 120; *Snug*, 19, 30; *Spar*, 617; *Spruce*, 80; *Squirrel Island*, 479, 486; *Stanley*, 170; *Staples*, 617; *Stodder*, 874; *Stover*, 562, 577; *Stump*, 250, 252; *Tabbott*, 131; *Tarbox*, (*Sasanoa*,) 538; *Tarbox*, (*Sheepscot*,) 499; *Tenney*, 92, 95; *Thompson*, 498; *Timber*, 141; *Tottman*, 544; *Treworgy*, or *Carrying-Place*, 236; *Turkey*, 384; *Upper Dodge*, 467; *Upper Wass*, 138; *Valley*, 213; *Walton*, 875; *Ward*, 174; *Waterman*, 283; *Watts*, 385, 386; *Webb*, 255–256; *Weir*, 478; *Whale*, 725; *Wheeler*, 461; *White's*, (*Yarmouth River*,) 630; *Whitey*, 466; *Widgeon*, 577; *Willard*, 59; *Wilson*, (Harpswell Neck,) 602; *Wilson*, (Ragged Island, *Penobscot Bay*,) 276; *Winter Harbor*, 185–186; *Wooster*, 293; *Yeaton*, 170; *Yo-ho*, 79; *Zeb*, 638.

Cow and Calf Ledges 238, 240, 241
Cow Cove 578
Cow Island, (*Medomak*) 414, 417
Cow Island, (near Portland) 624–625
Cow Island Dry Ledges 441
Cow Island Ledge 627, 631
Cow Island Sunken Ledges 440–441
Cow Ledge 211
Cow Pasture Flats 866
Cow Point 78, 82, 94
Cow-Yard, The 101
Cowen Rocks 851–852
Cox Head 518, 519
Crab Island 616
Crab Island Ledge 619
Crabtree Ledge 196
Crabtree Neck 195
Crabtree Point, (*Flanders Bay*) 195
Crabtree Point, (*Fox Island Thoroughfare*) 285
Crabtree Point Ledge, (*Fox Island Thoroughfare*) 288
Cranberry Island, (*Harrington River*) 142
Cranberry Island, (*Muscongus Bay*) 427
Cranberry Island Bar 211
Cranberry Island Harbor 202, 203, 210
Cranberry Island Ledge 211
Cranberry Island Passage 210–212, 216–217
Cranberry Islands, The 202, 203
Cranberry Marsh Ledge 225, 272
Cranberry Marsh Point 225, 271
Cranberry Point, (Campobello) 19, 29
Cranberry Point, (*Prospect Harbor*) 178
Crane Island 405, 426, 435
Crawford Island 522
Crawley Shoal 8
Crocker Point 69
Crockett Cove, (Deer Isle) 264, 294
Crockett Cove, (*Fox Islands Thoroughfare*) 285
Crockett Point, (*Fox Islands Thoroughfare*) 285
Crockett Point, (*Rockland Harbor*) 327
Cromwell Cove 545
Cross Island, (*Fox Islands Thoroughfare*) 284
Cross Island, (*Machias Bay*) 63, 64, 70
Cross Island Ledge, (*Fox Islands Thoroughfare*) 288
Cross Island Ledge, (*Machias Bay*) 72
Cross Island Narrows 63, 70, 76–77
Cross River 499–500
Crotch Island, (*Casco Bay*) 597, 599
Crotch Island, (*Meduncook*) 415–416
Crotch Island Ledge, (*Casco Bay*) 602, 613, 622
Crotch Island Ledge, (*Deer Island Thoroughfare*) 257, 261
Crotch Island Ledges, (*Meduncook*) 429–430
Crotch, or Thurlow Island 257
Crouch's Folly 319
Crow Island:
(*Eggemoggin Reach*,) 243; (*Middle Bay*,) 601; (*Muscle Ridge Channel*,) 314; (near Burnt-Coat,) 225, 271; (off Great Chebeag,) 598; 2d (Southeast of Burnt-Coat,) 229.

Page.
Crow Island Ledge, (near Burnt-Coat) 225
Crow Island Ledges, (*Two-Bush Channel*) 363
Crow Islands, (*John Bay*) 451
Crow Point 875
Crow Point Flats 877
Crumple Island 97, 119
Cuckolds, The 476, 483, 484, 485, 489, 502
Cultivator Shoal 2–3
Cummings Cove 120
Cummings Ledge 111
Cummins Cove 20, 40
Cummins Head 20
Cundiz Harbor 546
Currant Island 158, 166
Currant Island Passage 158
Currents:
Annisquam Harbor, 723; *Booth Bay*, 492; *Boston Bay*, 834, 863; *Cape Porpoise Harbor*, 675; *Casco Bay*, 653–654; *Damariscotta River*, 478; *Gloucester Harbor*, 747; *Ipswich Bay*, 716; *Kennebec River*, 535; *Little River*, 62; *Lubec Narrows*, 35; *Muscle Ridge Channel*, 326; *Muscongus Bay*, 449–450; off Nahant, 799; *Portland Harbor*, 653–654; *Portsmouth Harbor*, 704; *Richmond Island Harbor*, 657; *Salem Harbor*, 786–787; *Sasanoa River*, 535, 536, 537, 539; *Sheepscot River*, 515; *St. Croix River*, 36; *St. George River*, 413; *Tennant Harbor*, 377–378.
Curry Cove 25
Curtis Cove 667
Curtis Point 752
Cushing Point, (*Portland Harbor*) 639
Cushing Point, (*Weskeag River*) 319
Cushman's Wharf 548
Cutler Cove 386
Cutler, Village of 57, 59
Cutts Island 686
Cutthroat Ledge 782

D.

Damariscotta River 460–478
Damariscotta, Village of 460, 467
Damiscove Harbor 462, 485, 511–512
Damiscove Island 462, 485
Damiscove Point 485
Dangers alongshore between Portsmouth and Newburyport 706–707
Dangers in approaching and entering—
Annisquam Harbor, 720–721, 722; *Bar Harbor*, 200; *Bass Harbor*, 219–221; *Bayley's Mistake*, 56; *Belfast Harbor*, 342, 343; *Benjamin River*, 252; *Beverly Harbor*, 784–785; *Blue Hill Bay*, 236–238, 239–240, 241–242; *Booth Bay* and *Town's End Harbor*, 487–488, 489–490, 491–492; *Boston Harbor*, 807–814, 819–821, 827–833, 835–841, 843–844, 845–846, 848–850, 851–854; *Broad Sound*, (*Casco Bay*,) 594–595; *Bucks Harbor*, 252; *Burnt-Coat Harbor*, 228–229, 230; *Camden Harbor*, 336–337, 338–339; *Cape Neddick Roads*, 680; *Cape Porpoise Harbor*, 672, 673–674; *Cape Split Harbor*, 131, 132; *Carver Harbor*, 306–307, 307–308; *Casco Passage*, 272; *Castine Harbor*, 300–301, 301–303, 303–304; *Cohasset Harbor*, 878–879, 879–880, 881–882; *Damariscotta River*, 467–471, 473–475, 476–477; *Davis Straits Passage*, 409–412; *Deer Island Thoroughfare*, 259–261; *Douglass Island Harbor*, 167–168; *Dyer Bay*, 171–172, 172–173; *East Sullivan Harbor*, 191–192, 192–193; *Eastport Harbor*, 26, 30–33; *Eggemoggin Reach*, 249–252; *Englishman Bay*, 95–96, 98–99; *Essex River*, 717–718; *Fisherman Island Channel*, 363–364; *Fisherman Island Passage*, 476, 480–481; *Flanders Bay*, or *Sullivan Harbor*, 196–197; *Fox Island Thoroughfare*, 285–290; *Freeport River*, 618–620, 622, 627–628; *Gilkey Harbor*, 345–347; *Gloucester Harbor*, 742–745; *Gouldsboro' Bay*, 176–177; *Gurnet, The*, 564–565; 566–568, 568–569, 569–571; *Harrington River*, 142–143; *Head Harbor*, 101; *Herring Gut Harbor*, 387–388, 391–392; *Hingham Harbor*, 876–877; *Home Harbor*, 371; *Inside Passage from Portland to Freeport*, 634; *Isle au Haute Thoroughfare*, 278–279, 279–280; *John Bay and Tributaries*, 455–457; *Kennebec River*, 525–529, 530–533; *Kennebunkport Harbor*, 676–677; *Lincolnville Harbor*, 340; *Linekin Bay*, 480–481, 482–483; *Little Kennebec River*, 83–84; *Little River*, 60, 61; *Machias Bay*, 71–73, 75, 76–77; *Manchester Harbor*, 749–751; *Marblehead Harbor*, 779–780, 781–783; *Mare Point and Maquoit Bays*, 610–612, 613–615; *Medomak River*, 434–437, 439–443; *Meduncook River*, 427–430, 431–432, 433, 434; *Merchant Row*, 269–270; *Mericoneag and Harpswell Sounds*, 580–581, 582–583, 584–586; *Middle Bay*, 602–605; *Moos-a-bec Reach*, 108–112, 114–116, 117–118, 122–124, 126–127; *Moose River*, 57; *Muscle Ridge Channel*, 321–325; *Muscongus Sound*, 444–447; *Nahant Bay*, 789–790, 790–791; *Nahant and Lynn Harbors*, 795–796; *Narraguagus Bay*, 148–149, 150–151, 151–153; *Neponset River*, 865–867; *New Meadows River*, 548–550, 551–553; *Newburyport Harbor*, 709–711; *North-East Harbor*, 204–206; *Pembroke River*, 51–53, 54–55; *Penobscot Bay*, 321–325, 357, 358–360, 363–364, 366–369; *Penobscot River*, 353–354, 355; *Pepperell Cove*, 696; *Pigeon Hill Bay*, 159–160, 160–161, 161–163, 163–164, 164–165, 165–166, 166–167, 167–168; *Plum Island Sound*, 714–715; *Portland Harbor*, 639–642, 643, 644, 646–647, 648–650, 651; *Portsmouth Harbor*, 692–697, 698–699, 700–703; *Potts Harbor*, 589–590, 591; *Prospect Harbor*, 179, 180–181; *Quohog Bay*, 556–558, 559–561; *Richmond Island Harbor*, 655–656;

Page.

Dangers in approaching and entering—Continued.
Ridley Cove, 572–573, 574; *Rockland Harbor*, 328–329, 329–330; *Rockport Harbor*, (Maine,) 332–333; *Rockport Harbor*, (Mass.,) 733–734, 736–737; *Salem Harbor*, 756–761, 764–768, 771–774, 775–778; *Seal Harbor*, 325–326; *Searsport Harbor*, 349; *Sedgwick*, or *Benjamin River*, 252; *Sheepscot River*, 501–507, 508–509, 509–511; *Somes Sound*, 214–215; *South-East Harbor*, 264; *South-West Harbor*, 208, 209, 210–212; *Spruce Creek Harbor*, 697; *St. Croix River*, 42–44; *St. George River*, 387–389, 391–392, 393–395, 396–400, 400–404, 405–408, 409–412; *Stockton Harbor*, 349; *Sullivan Harbor*, 196–197; *Swampscott Harbor*, 789–790, 790–791; *Tennant Harbor*, 376–377; *The Gurnet*, 564–565, 566–568, 568–569, 569–571; *Two-Bush Channel of Penobscot Bay*, 362, 363; *Western Harbor*, or *Sandy Bay*, 734–735; *Western Passage into St. George River*, 404–405, 405–408; *Weymouth Fore River*, 871–872, 872–873; *Wheeler* and *Rackliff Bays*, 373–374; *Whitehead Passage*, 651; *Winter Harbor*, (*Frenchman Bay.*) 186; *Winter Harbor*, (*Saco Bay*,) 661–663, 664–665; *Yarmouth River*, 630–632; *York River Harbor*, 683, 684, 685.

Dangers in *Back*, or *Western Way* 858–860
Dangers in *Black Rock Channel*, (*Boston Harbor*) 855–856
Dansbury Reef 665
Danvers New Mills 753
Darcy Mountain 340
Dark Cove, (*Knubble Bay*) 538
Dark Cove, (*Passamaquoddy Bay*) 8
Dave Leighton Ground 132, 152, 160
David Island 494
David's Castle 572
Davis Cove, (off *St. George River*) 384, 415
Davis Island:
(George Islands,) 379, 380, 381, 415; (*John Bay*,) 452; (*Sheepscot*,) 500.
Davis Ledge 819
Davis Neck 722
Davis Point 62
Davis Straits 379, 381
Davis Straits Passage 379, 408–413
Day Cove 467
Day Head 68
Day Point 68
Day Point Flats 69, 73
Deadman Cove 366
Deadman Ledge 306, 309–310
Deadman Point, (Cranberry Islands) 203
Deadman Point, (*Rockport Entrance*) 335
Deep Cove:
(Campobello,) 19, 29; (*Frenchman Bay*,) 188; (Green Island,) 305; (Moose Island,) 21; (*St. George River*,) 384.
Deep Hole 292
Deep Hole Point 92
Deep-Water Passage into *Moos-a-bec Reach* 114, 117
Deer Island:
(*Boston Bay*,) 793, 803, 826, 835; (near *Little Machias Bay*,) 61, 62–63; (*Merrimac River*,) 708–709; (*Passamaquoddy Bay*,) 17, 19–20.
Deer Island Flats 845
Deer Island North Beacon 845
Deer Island Point 20, 803, 811, 830, 838–839, 844
Deer Island Point Beacon 803, 811, 830, 838–839, 844
Deer Island Thoroughfare 222, 243, 253–262, 356
Deer Island Thoroughfare Light-House 258, 262, 370
Deer Isle 263–265, 294–295
Deer Isle, Settlement of 294
Deer Point, (*Casco Bay*) 598
Deer Point, (*Passamaquoddy Bay*) 19
Deer Point Rock, (*Casco*) 634
Delano Cove 418
Delano Hill 418
Denbow Point 48, 51
Dennison Point 62
Dennysville, Village of 21, 46, 48
Derby Wharf 754
Derby Wharf Light-House 754, 786
Description of approaches and shores of—
Boston Bay, 816–819, 864; *Burnt-Coat Harbor*, 227–228, 229–230; *Casco Bay*, 543–545, 554–556, 562–563, 575–579, 587–589, 593–595, 597–600, 623–627, 629–630, 634–639; *Kennebec River*, 517–524; *Middle*, *Mare Point*, and *Maquoit Bays*, 597–602; *Pembroke River*, 47–49; *Penobscot Bay*, 273–277; *St. George River*, 379–383; *Yarmouth River*, 629–630.
Description of coast—
From *Bunker Harbor* to Schoodic, 182–183; between Fletcher Neck and Cape Porpoise, 666–669; between *Kennebec* and *Sheepscot Rivers*, 516; from *Kennebec River* to Cape Small Point, 540–542; from Portsmouth to Newburyport, 704–705; from *York River* to *Portsmouth Entrance*, 686–687.

Page.

Description of shores of—

Back, or *Western Way*, in *Boston Bay*, 856–858; *Bar Harbor*, 199–200; *Bass Cove*, or *East Sullivan*, 190–191; *Bass Harbor*, 218–219; *Belfast Bay* and *Harbor*, 341–342; *Birch* and *Bunker Harbors*, 182; *Blue Hill Bay*, 223–228, 229–230, 230–236; *Booth Bay* and *Town's End Harbor*, 485–487; *Boston Bay*, from Dorchester Point to *Neponset River*, 864; *Broad Sound*, (*Boston Bay*,) 792–795; *Buckles Island Harbor*, 226; *Burnt-Coat Harbor*, 226–227; *Camden Harbor*, 335–336; Cape Ann, 724–726; *Cape Porpoise Harbor*, 669–671; *Carver Harbor*, 305–306; *Casco Bay*, (Small Point to *New Meadows River*,) 543–544; *Casco Passage*, 270–272; *Castine Harbor*, 299–300; *Cat Island Channel*, (Salem,) 763; *Cohasset Harbor*, 878; *Damariscotta River*, 460–467; *Deer Island Thoroughfare*, 253–259; Deer Isle, 263, 264, 294–295; *Dyer Bay*, 169–171; *East Penobscot Bay*, 277–278, 280–285, 293–300; *Eastern Point Harbor*, 193–194; *Eastport Harbor*, 23–26, 27–30; *Eggemoggin Reach*, 243–249; *Englishman Bay*, 90–93; *Essex River*, 717; *Flanders Bay*, or *Sullivan Harbor*, 194–196; Fox Islands, 280–281, 293–294; *Fox Islands Thoroughfare*, 280–285; *Freeport River*, 615–618; *Frenchman Bay*, 183–186, 188–191, 194–196, 199–200; *Gangway Passage*, 851–855; *Gilkey Harbor*, 344–345; *Gloucester Harbor*, 739–742; *Goose Cove*, (Mount Desert,) 231–232; *Gouldsboro' Bay*, 173–176; *Governor Island Channel* into Boston, 847–848; *Harrington River*, 139–142; *Hingham Harbor*, 875–876; *Hurricane Sound*, 309–311; *Hypocrite Channel* into Boston, 825–827; *Indian River*, (*Moos-a-bec*,) 129–130; *Isle au Haut*, 227, 277–278; *Isle au Haut Thoroughfare*, 278; *John Bay*, 450–453; *John River*, 454–455; *Lincolnville Harbor*, 340; *Linekin Bay*, 479–480; *Little Kennebec River*, 77–81; *Little River*, 57–59; *Long Island*, (*Penobscot Bay*,) 298–299, 343–345, 347–348; *Lubec Narrows*, 19; *Lynn Harbor*, 794–795; *Machias Bay*, 64–70; *Mackerel Cove*, (*Burnt-Coat Island*,) 225; *Main Ship Channel* into Boston, 799–807; *Main Ship Channel* into Salem, 752–755; *Manchester Harbor*, 749; *Massachusetts Bay*, 747–748, 787–788; *Medomak River*, 417–422; *Meduncook River*, 415–417; *Merchant Row*, 265–269; *Mericoneag* and *Harpswell Sounds*, 575–579; *Middle, Mare Point*, and *Maquoit Bays*, 597–602, 607–608; Monhegan and Metinic Islands, 364–366; *Moos-a-bec Reach*, 107–108; Mount Desert Island, 199–200, 201, 202, 212–213, 218–219, 231–232; *Muscle Ridge Channel*, 313–321; *Muscongus Bay*, 415–427; *Muscongus Sound*, 422–425; *Nahant Bay*, 787–788; *Narraguagus Bay* and *River*, 145–148; *Neponset River*, 864–865; *New Meadows River*, 544–548; *Newburyport Harbor*, 707–709; *North-East Harbor*, 204; *Pemaquid River*, 453–454; *Pembroke River*, 47–49; *Penobscot Bay*, 273, 277–278, 294–300, 305, 309–311, 312–321, 331–332, 335–336, 340, 344–347, 348–349; *Penobscot River*, 350–353; *Pigeon Hill Bay*, 155–159; *Pleasant Bay* and *River*, 134–139; *Plum Island Sound*, 712–714; *Portland Harbor*, 634–639; *Portsmouth Harbor*, 687–692; *Potts Harbor*, 587–589; *Prospect Harbor*, 178; *Quincy Bay*, 868–869; *Quohog Bay*, 554–556; *Richmond Island Harbor*, 654–655; *Ridley Cove*, 571–572; *Rockland Harbor*, 327–328; *Rockport Harbor*, (Maine,) 331–332; *Rockport Harbor*, (Massachusetts,) 732; *Saco Bay* and *River*, 657–661; *Seal Cove*, (Mount Desert,) 232; *Seal Harbor*, (Long Island,) 347–348; *Searsport Harbor*, 349; *Sheepscot River*, 493–501; *Skillings River*, 197–198; *Somes Sound*, 212–214; *South Channel* into Boston, 834–835; *South Channel* into *Salem Harbor*, 775; *South-East Harbor*, 263–264; *South-West Harbor*, 207–208; *Squam River* and *Annisquam Harbor*, 719–720; *Stave Island Harbor*, 189; *St. Croix River*, 36–40; *St. George River*, 383–387; *Stockton Harbor*, 349; *Tennant Harbor*, 376; *The Gurnet*, 562–563; *Trenton River*, 198–199; *Union River* and *Bay*, 235–236; *West Gouldsboro' Harbor*, 174–175; *Western Channel* into *Salem Harbor*, 769–770; *West Penobscot Bay*, 312–321, 327–328, 331–332, 335–336, 340–342, 343–347, 348–349; *Weymouth Back River*, 874–875; *Weymouth Fore River*, 869–871; *Winter Harbor*, (*Frenchman Bay*,) 184–186; *Winter Harbor*, (*Saco Bay*,) 658, 659–660; *York River*, 681–683.

Description of Shores between Marblehead Neck and *Nahant Bay* 787–788

Description of the—

Broad Sound Channels into Boston, 834–835; *Gangway Passage*, 851; Western approach to *Penobscot Bay*, 312–321.

Description of Vinal Haven and North Haven Islands 280–281, 293–294

Devil Island 256

Devil's Back, or *Devil's Limb*, (*Boston Bay*) 837

Devil's Back Ledge 434

Devil's Elbow 433–434, 439

Devil's Head, (*Eggemoggin Reach*) 233, 240, 241, 244

Devil's Head, (*St. Croix River*) 38, 41

Devil's Limb 439

Diamond Cove 624

Diamonds, The 8

Dice Head 299, 350

Dice Head Light-House 299, 304, 350, 356

Dick's Shoal 573

Dingley Cove 546

Dingley Island 546

Dipper Cove Ledges 581

Divide, The:

(*John River*,) 457; (*Machias River*,) 69; (*Pembroke River*,) 46, 49; (*Penobscot River*,) 351; (*St. Croix River*,) 36, 38.

Dix Island, (*Kennebec River*) 519

Dix Island, (*Muscle Ridge Channel*) 316, 317

Dix Island Harbor 317

Dobbin Rock 287

Dochet Island 37, 38, 41

Page.
Dochet Island Light-House 38, 41, 45
Dochet Island Sunken Ledge 43
Dodge Cove 467
Dodge Point:
(*Carver Harbor,*) 309; (*Damariscotta,*) 467; (*Muscle Ridge Channel,*) 320, 324, 328.
Dodge Point Ledge 324, 328
Dodge Rock 735
Dog Bar 743
Dog Island 21, 42
Dog Mountain 202
Dog Point 310
Dogfish Head 494
Dogfish Island 285
Dogfish Ledges 289
Dogfish Rock, (*Little Kennebec River*) 83
Doggett's Castle 500
Dog's Head 579
Dogtown, Village of 720
Dolliber Cove 770
Dolphin Rock 789, 791
Dorchester Flats 807, 813, 814, 840
Dorchester Point 806, 864
Double-Headed Island 64
Doubling Point 521
Doughty Point 578, 579
Douglass Island Harbor 166–168
Douglass Island Ledge 167, 168
Douglass Islands 147, 158–159
Dow Ledges 256, 260
Doyle Island 105, 107, 129
Doyle Point 626
Drachm Point 354
Dread Ledge 790, 791
Drinkwater Point 628, 630
Drisco Island 119–120
Drisco Ledges 115, 118
Drummore Bay and Mills 520
Drunkard Ledge 289–290, 301–302
Drunker Ledges 559, 566, 569, 570, 583, 594, 610, 618
Dry Breakers, (off Salem) 765
Dry Ledges 381, 396
Dry Salvages, The 728, 733–734
Duck Harbor 278
Duck Island, (Isles of Shoals) 702
Duck Islands, (Mount Desert) 224
Duck Islands, (*Quoddy Roads*) 19, 28
Duck Ledges, The 105, 111, 121, 123–124, 126, 127
Duck Point 19
Duck Rocks, (near Monhegan) 366
Duck-Trap, or *Lincolnville Harbor* 340–341
Duck-Trap Mountain 340
Duck-Trap River 340
Dudley Island 28, 30
Dumpling Island 254
Dumplings, The 284
Dunn Beach 19
Dunning's Wharf 605
Dunstan River 658
Dutch Neck 418, 419
Dyer Bay 169–173
Dyer Bay Ledges 171, 172, 173, 176–177
Dyer Harbor 171
Dyer Island, (*Hurricane Sound*) 310
Dyer Island, (*Pleasant Bay*) 134, 139–140, 147
Dyer Island Eastern Ledge 142, 150
Dyer Island Ledge 140, 149, 150–151
Dyer Neck 174
Dyer Point, (Cape Elizabeth) 638
Dyer Point, (*Dyer Bay*) 169, 174
Dyers Cove or *Bay,* (*Pleasant River*) 138

E.

Eagle Hill 170
Eagle Island:
(*Blue Hill Bay,*) 231; (*Broad Sound,*) 588, 591, 593; (*East Penobscot Bay,*) 295; (Elwell Group,) 373; (*Newburyport Harbor,*) 708; (*Pleasant Bay,*) 136; (*Saco Bay,*) 660–661; (*Salem Harbor,*) 763, 764.

Page.
Eagle Island Bar 766
Eagle Island Ledge 592, 595, 610, 618–619
Eagle Island Light-House 295
Eagle Island Point 610–611, 619
Eagle Islands, (George Islands) 380, 382
East Bay, (*Cobscook*) 46, 48, 51
East Branch of Kennebec River 524
East Cod Ledge 643
East Cod Ledge Rock 643
East Cundiz Point 545
East Halibut Rock 269
East Head and Ear, (Isle au Haut) 227
East Hogshead Rock 854
East Hue and Cry 646
East Machias, Village of 68, 69
East Penobscot Bay 273–304
East Point:
(*Cobscook*,) 48, 51; (Little Nahant,) 788; (Richmond Island,) 654; (*York River*,) 681.
East Quoddy Head 17, 22, 24
East Quoddy Head Light-House 17–18, 22, 24, 35
East Rock, (entrance to Eastport) 24
East Salisbury, Village of 709
East Shag Ledge 854, 881
East Sister 693
East Sullivan, Village of 190
East Sullivan Harbor 189–193
East Trenton, Village of 198
East Whale's Back 750, 757
East Willies 853
Eastern Branch of—
John River, 454; *Kennebec River*, 522, 524; *Little Kennebec River*, 81; *Machias River*, 68–69; *Medomak River*, 421.
Eastern Channel into *Cohasset* 878, 881–882
Eastern Channel of West Penobscot Bay 356–358
Eastern Duck Rock 366
Eastern Ear of Isle au Haut 277
Eastern Egg Rock 400–401, 406, 425
Eastern Goose Rock 667
Eastern Half-Tide Rock 249–250
Eastern Harbor 77
Eastern Harbor of Booth Bay 484
Eastern Head:
(Isle au Haut,) 277; (*Little River*,) 58, 59; (*Moose River*,) 57; (*Sullivan Harbor*,) 196.
Eastern Head Ledge 60, 61
Eastern Head Ledges, (*Moose River*) 57
Eastern Head, or Hodgkins Point 196
Eastern Island 171, 173, 174
Eastern Island Ledges 171, 172
Eastern Kennebec River 81
Eastern Knubble 57–58, 59, 61
Eastern Ledge, (*Booth Bay*) 490
Eastern Ledge, (off *Damariscotta River*) 469
Eastern Ledges 99, 114
Eastern Mark Island 254, 266
Eastern Mark Island Ledge 259
Eastern Neck, (*Weymouth Fore River*) 870
Eastern Passage into *Narraguagus Bay* 139, 150–151
Eastern Passage into *Pigeon Hill Bay* 158
Eastern Point, (Cape Ann) 724, 726, 739, 740, 742
Eastern Point, (East Sullivan) 190
Eastern Point Harbor 191, 193–194
Eastern Point Ledge 742
Eastern Point Light-House 731, 740, 746
Eastern Point Rock 742
Eastern River, (*Kennebec River*) 524
Eastern Rocks 702
Eastern shores of *Blue Hill Bay* 231–232
Eastern shores of *Frenchman Bay* 183, 188–191
Eastern Yellow Rock 255, 259–260
Eastman Rock 565, 568
Eastport Bridge 21
Eastport, City of 17, 21, 23, 26
Eastport Harbor 22–36
Eaton Point 335
Eben Island 315
Ebenecook Harbor 494, 496–497, 513–514

Page.
Eddy, The 500
Eden, Harbor of 199
Eden, Village of 198
Egg Rock:
(*Burnt-Coat Harbor,*) 230, 239; (*Nahant Bay,*) 788; (near North Haven,) 302; (*Pigeon Hill Bay,*) 152–153, 156, 159, 161, 162, 164.
Egg Rock Light-House 788, 798, 862
Egg Rock North Ledge 401–402, 406, 411, 431
Egg Rock South Ledge 401, 406, 431
Egg, or *Shag Rocks* 800
Eggemoggin Light-House 233, 242, 253
Eggemoggin Reach 222, 243–253, 356, 361, 362
Egypt Bay 194
Eight-Feet Ledge, The 504
Elisha Ledge 744
Ellingwood Rock 510, 518, 532
Elliott Flats 44
Ellis Point 658
Ellison Creek 670
Ellsworth, Town of 198, 235, 236
Elm Island Ledge 573
Elm Islands 555
Elwell Group 372–373
Elwell Island 373
Elwell Point 372
Emm Rock 109
Emmerson Point 724, 725, 731, 739
Enchanted Island 266
Endeavor Rock, or *Outer Endeavors* 776–777
Englishman Bay 86–100
Englishman River 91
Enos Ledge 853–854, 881
Ensign Islands, The 346
Essex Branch 753
Essex River and *Harbor* 712, 716–719
Essex, Village of 716, 717
Estes Head or Point 21, 30, 50
Etang Harbor 23
Ewe Island 268

F.

Falls, The, (*Cobscook River*) 48
Falls, The, (*Sullivan Harbor*) 196
Falmouth Corner, Village of 652
False Spit 802, 810
False Spit Beacon 802, 810
False White Head 314, 315
False White Head Harbor 314, 315
Fan Island 78, 82
Farm Meadows 865
Farm Point 865
Farm Point Shoal 866
Farnsworth Point, (*Mason Bay*) 93, 95
Farnsworth Point, (*Medomak*) 419
Farnum Point 463
Farrel Island 268–269
Farrel Island Ledges 269, 270
Feather-bed Island 68
Fellows Island 92, 94
Fellows Point 92
Fenno Dyke 69
Fernald Cove 213
Fernald Point 213
Fernald Rock 215
Ferry Beach 658
Ferry Village, (Newburyport) 711
Ferry Village, (*Portland Harbor*) 639
Ferry Wharf 658
Fessenden Ledge 111, 124
Fiddle Head 248, 297
Fiddler Ledge 288
Fiddler Ledge Monument 288
Fiddler Reach 521
Field Ledge 261
Field Rocks 743–744

Page.
Fifield Point 294
Fifteen-Feet Shoal, (approaches to *St. George River*) 392
Fifteen-Feet Spot, (*Kennebec River*) 526
Fish Cove 383
Fish-Hawk Island 480
Fish-Hawk Island Ledges or *Shoals* 481
Fish Head, (*Fox Islands Thoroughfare*) 284
Fish Head, (Grand Manan) 18
Fish-House Cove 544
Fish Point, (*Fox Islands Thoroughfare*) 286
Fish Point, (*John Bay*) 450, 456
Fish Point Ledge 286–287
Fisher Eddy 521
Fisherman Island:
(*Damariscotta Entrance,*) 461; (*Moos-a-bec Reach,*) 98, 119; (*Muscle Ridge Channel,*) 313, 320, 363.
Fisherman Island Channel, (*Penobscot Bay*) 320, 356, 363
Fisherman Island Passage, (*Moos-a-bec Reach*) 119–125
Fisherman Island Passage, (near *Damariscotta River*) 461, 475–476
Fisherman Island Point 476, 480, 487
Fisher's Mills 536
Fishing Island Ledge 695, 696
Fishing Islands 689
Fishing Point 788
Fishing Rocks 676
Fitch Cove 466
Fitch Point 466
Fitch Point Rocks 470
Five-Fathom Rock 228
Five-Feet Shoal 321
Five Island Cove 141
Five Island Harbor 495, 513
Five Islands, The, (*Harrington River*) 141
Five Islands, The, (*Sheepscot River*) 495
Five-Pound Island 742
Five-Pound Island Ledge 745
Flag Island, (*Casco Bay*) 544
Flag Island, (*Muscle Ridge Channel*) 316
Flag Island Ledge 549
Flake Bar 96
Flake Point 96
Flanders Bay, or *Sullivan Harbor* 189, 194–197
Flash Island 554, 555, 571
Flat Bay 140, 143–144
Flat Ground, or *Temple Ledge* 639
Flat Ground, The, (Rockport, Mass.) 733
Flat Island 125
Flat Island Ledges 125, 126
Flat Island Passage, (*Moos-a-bec Reach*) 125–127
Flat Point 725
Flats between Crab and Bowman Islands 620
Flats of Atkins Bay 526
Fletcher Neck 657, 659
Flint Island 134, 146
Fluent Point 777
Flye Island 233
Flye Point 233
Flye Point Ledge 240, 241
Flying Mountain 199, 212
Flying Passage, (*Medomak River*) 417, 436
Flying Place, (*Boston Bay*) 800
Flying Place, (Great Wass Island) 103, 120, 125
Flying Point, (*Maquoit Bay*) 608
Flying Point, (Marblehead Neck) 770, 787
Flying Point Ledges 619
Flying Point Neck 608
Flynn Ledge 211
Flynn Point 211, 218
Fog-Signals:
On Baker Island, (*Salem Entrance,*) 748, 756; in *Boston Bay*, 863; at Boston Light-House, 800, 863; at Cape Ann, 729; at Cape Elizabeth, 636; on *Gannet Rock*, 9; on *Half-Way Rock*, 636; on Libbey Island, 65, 102; on Little River Island, 58; on Machias Seal Island, 11, 71; on Manana Island, 365; on *Matinicus Rock*, 275; on *Minot Ledge*, 863; on Petit Manan Island, 151, 156; at Portland Head, 636; on Seguin Island, 517; on Thatcher Island, 727; at West Quoddy Head, 23; on *Whale's Back*, (*Portsmouth,*) 688, 700; on Whitehead Island, 274, 312.
Fogg Hill 318

Page.
Fogg Island, (*Clam Ledges*) 322
Fogg Islands, The, (off *Blue Hill Bay*) 266
Fogg Point, (*Casco Bay*) 628
Fogg Point, (Western approach to *Penobscot Bay*) 318, 372
Folly Cove 724
Folly Island 669, 671
Folly Island Point 669, 672, 674
Forbes Hill 868
Fore River 635, 638
Forest River 754, 755
Forest River Mills 755
Forked Point Shoal 796
Fort Constitution 688, 692, 700
Fort Gorges 624, 639
Fort Independence 805
Fort Knox 351
Fort Lee, (*Salem Harbor*) 753
Fort McClary 689, 700
Fort Pickering 754
Fort Popham 518
Fort Preble 638
Fort Scammel 638
Fort Sewell 770, 778
Fort St. George 386
Fort Sullivan, (Eastport) 19
Fort Sullivan, (Portsmouth) 690, 692
Fort Warren 802, 819, 835
Fort Washington 691, 692
Fort Winthrop 805
Fort Hill Channel 806, 862
Fort Island, (*Damariscotta*) 464
Fort Island, (*Pleasant Bay*) 137
Fort Pickering Light-House 754, 786
Fort Point:
(*Castine Harbor,*) 300; (*Damariscotta,*) 464; (*Gloucester Harbor,*) 731, 739, 740, 742; (Great Island,) 545; (*Marblehead Harbor,*) 778; (*Penobscot River,*) 350–351; (*Portsmouth Harbor,*) 688–689, 692, 700; (*Salem Harbor,*) 754.
Fort Point Cove 351
Fort Point Ledge 351, 353
Fort Point Light-House 351, 356
Fort Point Reef 353
Foss Ledges 706
Foss Point 80
Foster Cove 454
Foster Island:
(*Harrington River,*) 140, 144, 147; (*John River,*) 454; (*Machias Bay,*) 74.
Foster Island Ledge 74
Foster Island Point 74
Foster Ledges 359
Foster Point (*New Meadows River*) 547
Foster Point, (Rutherford Island) 463
Foster's Landing 629
Foundry Wharf 342
Four-Fathom Rock 525
Four-Feet Rock (*Casco Bay*) 620
Four-Feet Shoal, (*Boston Harbor*) 849
Four-Feet Spot, (*Sheepscot River*) 505
Fourteen-Feet Spot, (*Two-Bush Channel*) 367
Fowle Cove 499
Fowle Point 499
Fox Islands, The, (off *Kennebec Entrance*) 532, 540
Fox Islands, The, (*Penobscot Bay*) 280–293
Fox Islands Ledge 285–286
Fox Islands Thoroughfare 280, 281–293, 356, 360, 362
Fox's Ears, The 288
Frankfort Flats 354
Frankfort, Village of 352
Franklin Bay 194
Franklin Island 379, 405, 426
Franklin Island Light-House 405, 413, 449
Franklin Island Shoals 401, 402, 431–432, 435
Franklin, Village of 194
Freeport River 615–628
Freeport Upper Ledge 620
French House Island 104
French Island 609
French Island Reef 611, 614–615

Page.
French, or Sandy Point 351, 354
Frenchman Bay 183–201
Frenchman Island 249
Fresh-Water Cove 739, 742
Fresh-Water Cove Ledge 743–744
Friar Bay 19, 30
Friar Roads 20, 23, 24
Friar, The 19
Friar's Head 19, 28, 30
Friendship Harbor 414
Friendship Long Island 414, 416
Friendship, Town of 414
Frohawk Mountain 340
Frohawk Point 340
Frost Cove 41
Frost Head 42
Frost Ledges 42
Frost Point 687, 700
Frost Point Ledge 694
Frye House Point 219
Fuller or *Glover Rock* 531, 542
Fullerton or *Bailey Ledge* 389

G.

Gales Ledge 749–750, 756
Gales Point 747, 748
Gallop Island 803, 819, 835
Gammay Island 452
Gangway Ledge:
(*Cobscook,*) 52; (*Moos-a-bec Reach,*) 114, 117–118; (*Muscongus Bay,*) 403, 407, 432; (off *Damariscotta River,*) 476, 480, 487.
Gangway Ledge, Lower, (Muscle Ridges) 322
Gangway Ledge, Upper, (Muscle Ridges) 324
Gangway Passage 817, 851–855
Gangway Rock:
(*Deer Island Thoroughfare,*) 260–261; (*Newburyport Harbor,*) 710; (*Portsmouth,*) 696.
Gannet Rock 9–10
Gannet Rock Light-House 9–10
Gap Head 724
Garden Island 315
Garden Island Ledge, (*Muscle Ridge Channel*) 323
Garden Island Ledges, (*Muscongus Bay*) 435
Garden Island South Ledge 435
Garden Island Sunken Ledge 322–323
Garden Point 175
Gardiner, Village of 524
Garey Mountain 340
Garnett Head 46, 48, 51, 52
Garrison Island 416
Gay Cove, (approaches to *St. George River*) 380
Gay Cove Ledge 399–400
Gay Island 379, 380, 415
Gelaspas Point 678
General courses between principal ports, from *Penobscot Bay* to Boston 728–729
General directions for beating up *Boston Bay* 824–825
General remarks for guidance of vessels entering the *Bay of Fundy* 12–13
General remarks on channel of *York River* 685–686
General remarks on coast of New England 1–7
General remarks on *Pleasant Bay* 139
General sailing directions between Quoddy Head and Boston 14
General sailing directions for *Wheeler* and *Rackliff Bays* 374
Geographical positions of—
Annisquam Light-House, 720, 723; Baker Island Light-House, (Mount Desert,) 202, 217; Baker Island Light-Houses, (Salem,) 748, 756, 786; Bass Harbor Head Light-House, 218, 223, 242; Bear Island Light-House, 204, 217; Boon Island Light-House, 618, 686, 703; Boston Light-House, 801, 862; Brown's Head Light-House, 284, 370; Burnt-Coat Harbor Light-Houses, 226, 242; Burnt Island Light-House, 486, 492; Cape Ann, 724; Cape Elizabeth, 542; Cape Elizabeth Light-Houses, 653; Cape Neddick, 679; Cape Small Point, 542; *Cashe Ledge,* 1; Deer Island Thoroughfare Light-House, 258, 262, 370; Dice Head Light-House, 299, 304, 350, 356, 370; Eagle Island Light-House, 295, 370; East Quoddy Head Light-House, 22; Eastern Point Light-House, 726, 740, 746; Egg Rock Light-House, 788, 792, 798, 862; Eggemoggin Light-House, 233, 242, 253; entrance to *John Bay,* 450; Fort Pickering Light-House, 754, 786; Fort Point Light-House, 351, 356, 370; Franklin Island Light-House, 405, 413, 426, 449; Gannet Rock Light-House, 9; *George Bank,* 2, 3, 5; *Gloucester Entrance,* 739; Goat Island Light-House, 669, 675; *Grand Manan Bank,* 12; Grindel Point Light-House, 344, 347, 370; Half-Way Rock Light-House 583, 636, 653; Hendrick Head Light-

Page.

Geographical positions of—Continued.
House, 494, 515; Heron Neck Light-House, 305, 370; Hospital Point Light-House, 753, 786; Indian Island Light-House, 332; Ipswich Light-House, 713, 715; *Jeffrey Ledge*, 6, 729; Libbey Island Light-House, 64, 77, 85; Little River Light-House, 58, 62; Long Island Head Light-House, 804, 862; Machias Seal Island Light-Houses, 11, 71, 77; Marblehead Light-House, 769, 778, 786; Mark Island Light-House, 258, 262, 370; Mark Island Monument, 575; Marshall Point Light-House, 380, 413; Matinicus Rock Light-Houses, 275, 370; Minot Ledge Light-House, 816, 862, 882; Monhegan Island, 365; Monhegan Light-House, 365, 370, 449; Moos-a-bec Light-House, 86–87, 101, 129; Mount Desert Light-House, 205, 217; Narraguagus Light-House, 146, 155, 168; Narrows Light-House, (*Boston Bay*,) 802, 862; Nash Island Light-House, 107, 128, 129, 134; Negro Island Light-House, 334, 336, 339, 370; *Newburyport Entrance*, 707; Newburyport Light-House, 708, 712; north point of *Massachusetts Bay*, 738; Owl's Head Light-House, 321, 326, 331, 370; Pemaquid Light-House, 413, 425, 449, 460; Petit Manan Light-House, 151, 155, 156, 168; Pond Island Light-House, (*Kennebec*,) 517–518, 534; Portland Breakwater Light-House, 653; Portland Head Light-House, 636, 653; *Portsmouth Entrance*, 687; Portsmouth Light-House, 703; Prospect Harbor Light-House, 178, 181; Pumpkin Island Light-House, 247, 253, 370; Saddle Back Ledge Light-House, 274, 370; *Salem Entrance*, 751; Seguin Light-House, 515, 517, 534; south point of *Massachusetts Bay*, 738; *Squam River Entrance*, 719; St. Croix Light-House, 38; Straitsmouth Island Light-House, 725, 731, 738; Ten Pound Island Light-House, 746; Tennant Harbor Light-House, 375, 377; Thatcher Island Light-Houses, 726–727, 731, 738; West Quoddy Head Light-House, 22; Whale's Back Light-House, 628, 703; White Island Light-House, 686, 703; Whitehead Light-House, 274, 312, 326, 370; Winter Harbor Light-House, 185, 187; Wood Island Light-House, 660, 666; *York River Entrance*, 682.

George Bank 1, 2–5
George Harbor 381, 396
George Island, (*Boston Harbor*) 799, 802
George Island, (*Casco Bay*) 554, 571
George Island, or Head, (*Merchant Row*) 268
George Island Rock, (*Casco Bay*) 573
George Island Rocks, (*Boston Bay*) 810
George Islands, The 380, 415
Georgetown Island 493, 494–495
Germantown, Village of 870
Gerrish Island 686–687, 692, 700
Gerry Island 770
Gibbs Island 137
Gig Rock 410
Gilbert Cove 741, 745
Gilbert Head 518, 519
Gilchrist Rock 109
Gilkey Harbor 298, 344–347
Gilpatrick Cove 213
Gilpatrick Ledge 215
Gilpatrick Point 204, 213
Gin Cove 41
Glades Flats 813, 832, 840, 849
Glass Head 749
Gleason Cove 41
Gleason Point 44
Gloucester, City of 724, 726, 740, 741
Gloucester Harbor 726, 739–747
Glover, or *Fuller Rock* 531, 542
Goat Island:
(Cape Porpoise,) 669; (*Kennebec River*,) 520; (*Portsmouth Harbor*,) 691.
Goat Island Light-House 669, 671, 673, 675
Goat Island Point 672
Goat Island Rock 527
Godfrey Cove 686
Godfrey Ledge 706
Goldsmith Point 747
Gondola Cove 351
Good Point 171
Goose Cove:
(*Blue Hill Bay*,) 199, 231–232; (*Little Kennebec River*,) 80; (*Trenton River*,) 198; (west shore of Mount Desert,) 199.
Goose Cove Point 80
Goosefair Bay 667
Goosefair Creek, (near Cape Porpoise) 667
Goosefair Creek, (*Saco Bay*) 658
Goose Island 47, 50
Goose Island Ledge 52, 54–55
Goose Islands 105, 129–130
Goose Ledge 604, 612
Goose Ledges 467, 471
Goose Nest Ledges 614, 622
Goose Nest, The 603–604, 614, 622

Page.
Goose River, (Belfast Bay) 342
Goose River, (Medomak River) 418
Goose River Point 342
Goose River Point Ledge 342
Goose Rock:
(*Blue Hill Bay,*) 237; (*Damariscotta River,*) 471; (*Little Kennebec River,*) 80, 84; (Long Island,) 346; (off Camden,) 335; (*Sasanoa River,*) 539; (*St. George River Entrance,*) 399.
Goose Rock Ledge 399
Goose Rock Passage 496, 538–540
Goose Rocks, (Fox Islands Thoroughfare) 286
Goose Rocks, (near Cape Porpoise) 667
Gooseberries, The 752, 756, 763, 764
Gooseberry Island, (*Merchant Row*) 266
Gooseberry Island, (*Winter Harbor of Saco*) 665
Gooseberry Islands 689
Gooseberry Ledge 765
Gooseberry Point 228
Gordon Rock 780, 783
Goslings, The 597, 600
Gott Islands, The 219, 224
Goudy Ledge 549–550, 553
Gouldsboro Bay 173–178
Gouldsboro Harbor, or *West Bay* 174–175
Gouldsboro, Village of 174–175
Gove Point 47, 50
Governor Island 805–806
Governor Island Channel 813, 841, 847–851
Governor Island Flats 806, 812, 831, 840, 846, 848
Governor Island Point 812, 831, 840, 846
Governor Island Shoal 850
Grace Rock 529
Grafton Island 313
Grampuses, The 854, 880
Grand Manan Bank 12
Grand Manan Island 7–8
Grand Passage, or *St. Mary Bay* 13
Grant Cove 196
Grant Ledge 196
Grant Point 195–196
Grape Island, (*Boston Bay*) 869, 874–875
Grape Island, (*Ipswich Bay*) 714
Grassy Ledge 604
Graves Island 747
Graves, The, (*Boston Bay*) 807, 827, 835–836
Graves, The, (off Camden) 334, 336, 337
Graveyard Cove 454
Gray Point 246
Gray Rock 770, 772, 776
Great Aqua Vitæ Monument 760–761, 768, 774
Great Aqua Vitæ Ledge 760–761, 768, 774
Great Boar's Head 705
Great Boar's Head Ledge 706
Great Brewster, The 801, 818, 825, 835
Great Chebeag Island 597, 598, 625–626
Great Cove 85–86, 91
Great Cranberry Island 202, 203
Great Duck Island 224
Great Duck Pond 19, 28, 31
Great Egg Rock 747, 749
Great Faun Bar 837, 843
Great Faun Bar Beacon 837, 843
Great Gott Island 219, 224
Great Harbor Cove 576
Great Harbor Cove Ledges 589
Great Haste, The 759–760, 767, 773
Great Head, (*Little River*) 59, 61
Great Head, (Roque Island) 86, 88, 94, 96
Great Hell Gate, (Sasanoa River) 537
Great Hen Island 554, 572
Great Hill 678
Great Hog Island 624
Great Island, (*Casco Bay*) 545, 546, 562, 572, 578
Great Island, (*Portsmouth Harbor*) 687, 688–689, 700
Great Ledges, (East Sullivan) 191
Great Mark Island 576
Great Marsh Bay 175
Great Misery Island 748, 755, 756, 771

Page.
Great Moshier Island 615, 616, 626–627
Great Neck, (*Plum Island Sound*) 713
Great Pig Rocks 789
Great Pond Island 317
Great Porcupine Island 195
Great Ram Island 120
Great Spoon Island, (off Isle au Haut) 227, 277
Great Spruce Head, (*East Penobscot Bay*) 296
Great Spruce Head, (*West Penobscot Bay*) 341
Great Spruce Head Island 296
Great Spruce Island 88, 94, 98
Great Two-Bush Island 314
Great Wass Island 98, 103
Green Creek 713–714
Green Hill 817
Green Island:
(*Blue Hill Bay,*) 233; (*Boston Bay,*) 825, 826, 835; (*Burnt-Coat Entrance,*) 227, 228; (Cape Porpoise,) 669, 671; (*Damariscotta River,*) 462; (*Eastport Entrance,*) 25; (*Entrance to Carver Harbor,*) 305, 309; (*Moos-a-bec Reach,*) 106, 128; (*Muscle Ridge Channel,*) 313, 317.
Green Island, or Stinson Neck 243
Green Island Knub 308
Green Island Ledge, (*Casco Bay*) 609, 614, 622
Green Island Ledges, (*Boston Bay*) 828
Green Island Light-House 233, 242, 253
Green Island Reef 585
Green Islands, (*Bay of Fundy*) 9
Green Islands, (*Sheepscot River*) 496
Green Ledge 298
Green Ledges 550
Green Mountain 169, 183, 199
Green Point 365
Green Point Shoal 369
Greening Island 202, 204, 207, 213
Greening Ledge 209, 212, 217
Greenland Cove 414, 422, 423–424
Greenleaf Cove 499
Greenleaf Ledge, or *Ledges* 499, 506
Green's Head 256
Green's Landing 256
Grey's Beach 79, 82
Griffin Ledge 410–411
Griffith Head 493, 494–495
Griffith Head Ledge 502, 511
Grindel Point 344
Grindel Point Light-House 344, 347
Grindstone Ledge:
(*Frenchman Bay,*) 184, 186; (*Fox Islands Thoroughfare,*) 287; (*Muscle Ridge Channel,*) 363.
Grindstone Neck 184, 185
Grindstone Point 184, 185
Grog Island 255
Grog Island Ledge 255
Grover Cliff 793, 826, 835
Guards Point 136
Gull Island 853
Gull Island Ledges 881
Gull Point 870, 872
Gull Point Flats 872
Gull Rock, (*Eastport Entrance*) 24, 33
Gull Rock, (*Southwest Passage* into Eastport) 54
Gull Rock Ledge 368
Gull Rocks 435
Gunboat Shoal 702, 706
Gundell Island 310
Gunning Rock Ledges 387, 409
Gunning Rock Shoal 392
Gunning Rocks, The 379
Gurnet, The 562–571
Gurry Cove 638
Gut, The (between *Damariscotta* and *John Rivers*) 452, 463

H.

Haddock Island, (*Muscongus Bay*) 429
Haddock Island Kelp Ledge 439
Haddock Island Ledge 439
Haddock Ledge, (approaches to *Penobscot Bay*) 368

Page.

Haddock Ledge, (off Lincolnville) 340
Haddock Rock, (*Casco Bay*) 588, 592
Haley Cove 702
Half-Moon Island 868
Half-Tide Ledge:
(*Little Kennebec River,*) 83; (*Muscongus Harbor,*) 447; (*Narraguagus Bay,*) 149; (*St. Croix River,*) 43; (*Sullivan Harbor,*) 196.
Half-Tide Ledge, or *Lobster Rock,* (*Gilkey Harbor*) 344, 345
Half-Tide Ledges, (*Eggemoggin Reach*) 249–250
Half-Tide Ledges, (*Greenland Cove*) 423, 447
Half-Tide Rock:
(*Cobscook,*) 48; (*East Sullivan,*) 191–192, 193; (*Neponset River,*) 866; (*Newburyport,*) 711; (*Salem Harbor,*) 761, 768, 774, 777–778; (*Winter Harbor of Saco,*) 663.
Half-Tide Rocks, (*Boston Entrance*) 829
Half-Tide Rocks, (*Pigeon Hill Bay*) 160, 163, 166
Half-Way Point 328
Half-Way Rock:
(*Casco Bay,*) 543, 582–583, 635–636; (near Portland,) 624, 627, 630; (off Marblehead,) 756, 764, 765, 771, 779.
Half-Way Rock Light-House, (*Casco Bay*) 543, 583, 635–636, 653
Half-Way Rocks, (Isles of Shoals) 701
Halibut Hole 188, 189
Halibut Point 724, 728
Halibut Rock, (approach to *Home Harbor*) 371
Halibut Rock, West, (*Merchant Row*) 269
Halibut Rocks, (off Cape Small Point) 531
Halifax Island 87, 94
Hall Bay 537
Hall Island 405, 426
Hall Point 467
Hallowell, Village of 524
Hampton Ledges 707
Hampton River 705
Hampton, Village of 705
Hancock, Village of 195
Hangman Island 858, 868
Harbor De Lute 18–19, 25
Harbor Island:
(*Bar Harbor,*) 195, 200; (*Bucks Harbor,*) 246; (*Burnt-Coat Harbor,*) 226–227, 228; (*Eggemoggin Reach,*) 232, 233, 243, 244; (*Lunt Cove,*) 229; (*Merchant Row,*) 267; (*Muscongus Bay,*) 379, 405, 426, 435.
Harbor Island Ledge 229
Harbor Island Rock 435
Harbor Ledge, (Rockport, Maine) 333
Harbor Ledge, (*Tennant Harbor*) 377
Harbor, or *White Ledge,* (*Camden*) 337, 339
Harbor Point 219
Harbor Point Ledge 220–221
Harbor Rock 745
Harbor Shoal Ledge 342
Harbors:
Annisquam, 712, 719–724; *Bar,* 183, 199–200; *Bartlett,* 293; *Bass,* 199, 218–223; *Bayley's Mistake,* 56; *Beaver,* 18, 23; *Belfast,* 341–343; *Beverly,* 751, 753–754, 763, 784–786; *Birch,* 182; *Blue Hill,* 234–235, 239, 241, 242; *Boisbubert,* 155–169; *Boston,* 739, 799–882; *Brave Boat,* 686; *Buck,* (*Machias Bay,*) 65–66, 70, 71, 76; *Buckles Island,* 226, 271; *Bucks,* (*Eggemoggin Reach,*) 243, 246–247, 252–253; *Bucksport,* 351–352; *Bunker,* 182; *Burnt-Coat,* 225, 226–230; *Burnt Island,* 267, 280; *Camden,* 335–339; *Cape,* 512; *Cape Neddick Roads,* 679–681; *Cape Porpoise,* 668–675; *Cape Split,* 108, 128, 130–133, 139; *Carver,* 281, 305–309; *Castine,* 299–304; *Centre,* 250; *Cohasset,* 817, 878–882; *Cranberry Island,* 202–204, 210; *Cundiz,* 546; *Damiscove,* 462, 485, 511–512; *De Lute,* 18–19, 25; *Dix Island,* 317; *Douglass Island,* 166–168; *Duck,* 278; *Duck Trap,* or *Lincolnville,* 340–341; *Dyer,* 171; *East Sullivan,* or *Bass Cove,* 189, 190–193; *Eastern,* 77; *Eastern of Booth Bay,* 484; *Eastern Point,* 193–194; *Eastport,* 22–36; *Ebenecook,* 494, 496–497, 513–514; *Eden,* 199; *Essex,* 712, 716–719; *Etang,* 23; *False Whitehead,* 315; *Five Island,* 495, 513; *Friendship,* 414, 431, 438; *George,* 381, 396; *Gilkey,* 298, 344–347; *Gloucester,* 726, 739–747; *Gouldsboro',* 174–175; *Harpswell,* 577; *Haycock,* 56; *Head,* (near Campobello,) 18, 27; *Head,* (off *Englishman Bay,*) 86–87, 90, 98, 100–101; *Hendrick,* 494, 512; *Herman,* 495, 512–513; *Herring Gut,* 378, 379, 383, 387–388, 390, 391–392, 393; *Hingham,* 875, 878; *Home,* 313, 371–372; *Horse Island,* 546, 553; *Howard,* 247; *Inner,* (*Pemaquid River,*) 453; *Inner,* of *Benjamin River,* 245; *Inner,* of Boston, 806–807; *Inner,* of Camden, 335–336; *Inner.* of Gloucester, 740, 741–742, 744–745, 746; *Inner,* of Salem, 754–755, 760–761; *Ipswich,* 707, 712–716; *Kennebunkport,* 676–678; *Lakeman,* 88, 100; *Lincolnville,* or *Duck Trap,* 340–341; *Little Boisbubert,* 157; *Little,* (*John Bay,*) 451; *Little,* (Marblehead,) 770; *Little,* (*Portsmouth Entrance,*) 687–688, 692, 697, 700; *Little River,* 57–62; *Long Pond,* 199, 201–202; *Lunt,* 229; *Lynn,* 794–799; *Manchester,* 747, 749–751, 762; *Marblehead,* 751, 778–784; *Marsh,* 422, 426; *Merchant,* 267; *Monhegan,* 365–366; *Moore,* 279; *Moose River,* 56–57; *Mosquito,* (near *Herring Gut,*) 378; *Mosquito,* or *Winter Harbor,* (*Frenchman Bay,*) 184–187; *Muscongus,* 423; *Nahant,* 794–799;

Page.

Harbors—Continued.
Nash, 135; *Naskeag*, 233, 244; *New*, 424, 448; *Newburyport*, 705, 707–712; *North*, (North Haven Island,) 294; *North-East*, 199, 202, 204–207; *Northern*, 64; *North-West*, (Deer Isle,) 263, 294–295; *Old*, (*Boston Bay*,) 817; *Old*, (*Hurricane Sound*,) 310, 311; *Orcutt*, 247; *Otter Creek*, 201; *Outer*, of Camden, 335; *Owl's Head*, 320; *Pemaquid*, 450, 453–454, 458, 459; *Perry*, 41; *Plymouth*, 739; *Poets*, 136; *Portland*, 634–654; *Portsmouth*, 687–704; *Potts*, 576, 587–592; *Prospect*, 178–181; *Richmond Island*, 654–657; *Rockland*, 327–331; *Rockport*, (Maine,) 331–334; *Rockport*, (Massachusetts,) 724, 732–738; *Roque Island*, 88; *Round Pond*, 423, 448; *Rye*, 704; *Sabbath Day*, 298; *Sailor's Snug*, 871; *Salem*, 751–778; *Schoodic*, or *Rowland*, 182; *Seal*, (Long Island,) 298, 341, 347–348; *Seal*, (*Muscle Ridge Channel*,) 314, 315, 325–326; *Searsport*, 349; *Sedgwick*, 245, 252, 253; *Ship*, 218; *Small Point*, 543–544; *Somes*, 212, 213, 214, 215, 216, 217; *South-East*, (Deer Isle,) 244, 254, 263–265, 295; *South-East*, (Gloucester,) 740–741, 742, 745, 746; *Southern*, 283–284, 292; *South-West*, (Deer Isle,) 294; *South-West*, (Mount Desert,) 199, 202, 207–212; *St. Andrew*, 37, 41; *Stage Island*, 668, 669, 671, 674–675; *Stave Island*, 189; *Steel-Coat*, 90, 101; *Steuben*, 173, 175–176; *Stockton*, 349–350; *Sullivan*, or *Flanders Bay*, 183, 194–197; *Swampscott*, 787–792; *Tennant*, 375–378; *Town's End*, 478, 484; *West Bay*, or *Gouldsboro'*, 174–175; *West Gouldsboro'*, 183, 189; *West Sullivan*, 183; *Western*, of *Booth Bay*, 485; *Western*, of Gloucester, 739–740, 742, 746; *Wilson*, 25; *Winter*, (*Frenchman Bay*,) 183, 184–187; *Winter*, (*Saco Bay*,) 658, 659–666; *Winter*, (Vinal Haven Island,) 293; *York River*, 681–686.

Harbors and Channels among the Muscle Ridge Islands 371–372
Harbors on North Face of Cape Ann 731–738
Harbors of Refuge in *Sheepscot River* 511–515
Harbors on West Shore of Long Island, (*Penobscot Bay*) 343–348
Harding Ledge, (*Northeast Harbor*) 205
Harding Ledge, (*Sheepscot*) 504
Hardings Ledge, or *The Hardings*, (*Boston Bay*) 808, 819–820
Hardings Ledge Beacon 808, 818
Hardwood Island:
(*Blue Hill Bay*,) 232; (*Merchant Row*,) 268; (*Moos-a-bec Reach*,) 105, 121.
Hardwood Island Ledges 121, 124
Hardwood, or Coles Point 139, 142
Hardwood Point, Lower 141
Hardy Point 49, 51
Hardy Point Ledge 53
Hardy Rocks 757, 781, 782
Hardy Rocks Beacon 757, 782
Hardy Rock Shoal 757, 781
Harpswell and *Mericoneag Sounds* 575–587
Harpswell Cove 577
Harpswell Harbor 577
Harpswell Neck 575, 576, 577, 587, 591
Harpswell, Township of 577
Harpswell, Western Shores of 576–577
Harridan Rock 721, 722
Harrington Cove 372
Harrington River 139–143
Harrington, Village of 139, 140, 142
Harris Island 682–683
Hart Bar 383, 388, 392, 409–410
Hart Island 383
Hart Island Ledges 394
Hart Ledge 376
Hart Neck 372, 375, 376
Harvey Ledge 83
Haskell Island 576, 591, 593
Haskell Island Point 592
Haskell Ledge 255, 260
Haste Rock 759, 767, 773
Haste Shoal 760, 767, 773
Haste, The 759–760, 767, 773
Hat Island 228
Hat Island Ledge 230, 239
Hatchet Cove 414, 416–417
Havenner Cove 421
Havenner Ledge 419, 437
Havenner Point 418
Hay Creek 130
Hay Island, (*Burnt-Coat Harbor*) 227
Hay Island, (*John Bay*) 451
Hay Island Ledge, (*Eggemoggin Reach*) 249
Hay Island Ledge, (*Muscle Ridge Channel*) 322
Hay Ledge 378, 379
Haycock Harbor 56
Haycock, The, (*Deer Island Thoroughfare*) 255, 259
Haycock, The, (*Muscle Ridge Channel*) 322
Hayden Point 319

Page.
Haynes Point 198
Hayward Creek 870
Head Beach 543
Head Cove 543
Head Harbor, (near Campobello) 18, 27
Head Harbor, (off *Englishman Bay*) 86–87, 90, 98, 100–101
Head Harbor Island, (near Campobello) 18, 27
Head Harbor Island, (off *Englishman Bay*) 86, 90, 94, 100, 102, 103
Head Harbor Light-House 86–87, 100, 101
Head, The, (*Head Harbor*) 100
Heal Cove 537–538
Heal Eddy 494, 518
Heath Point 421
Heckman Point 36, 39, 42
Hemlock Island 137
Hen Cove 571
Hen Island, (near Elwell Group) 373
Hen Island, (*New Meadows River*) 550
Hen Island Ledge 550
Hen Islands, The 571
Henderson Ledge 385, 389
Hendrick Harbor 494, 512
Hendrick Head 494
Hendrick Head Light-House 494, 515
Henry Cove 185
Henry Point 300
Herman Harbor 494, 512–513
Heron Island, (approach to *Burnt-Coat Harbor*) 228
Heron Island, (off *Kennebec River*) 532, 541
Heron Island Ledge, (*Eggemoggin Reach*) 251
Heron Island Point 228
Heron Island South Ledges 474
Heron Neck Ledge 306
Heron Neck Light-House 305
Herrick Bay 233–234
Herriman Point 234
Herring Bay, or *Cove* 18, 27
Herring Bay Head 18
Herring Gut and *Harbor* 378, 379, 383, 387–388, 390, 391–392, 393
Herring Gut, Village of 383
Hersey Cove 49, 51
Hersey Head 46, 49, 51
Hersey Point 49, 51
Hersey Upper Head 49, 51
Hersey Upper Head Ledge 52
Hewell Island 313
Hewell Island Rocks 371
Hickey Island 78, 82, 94
Hickey Island Ledge 83
Hickey Island Point 95
Hicks Creek 107
Hicks Rocks 697
High Head:
(Cape Elizabeth,) 654; (*Castine Harbor*,) 300; (*Harpswell*,) 577; (Mount Desert,) 211.
High Head Shoal 211
High Island:
(*John Bay*,) 454–455; (Muscle Ridges,) 313, 317; (*Wheeler Bay*,) 375.
High Rocks 541
Hilton Cove 501
Hilton Point 500, 506
Hingham Bay 802, 818, 869–878
Hingham Harbor 875–878
Hingham, Village of 875
Hockomock Bay 536–537
Hockomock Channel 418, 420, 421
Hockomock, or Hokomoaka Head 225
Hockomock Point, (*Medomak River*) 414, 421
Hockomock Point, (*Sasanoa River*) 536
Hodgdon Cove 498
Hodgdon Island 498
Hodgdon Ledge 506
Hodgdon's Mills 463
Hodgkins Point 196
Hoffee Point 420
Hog Cove 335
Hog Cove Ledge 335

Page.

Hog Island:
(*Damariscotta River,*) 467; (*East Penobscot Bay,*) 248, 297; (*Eggemoggin Reach,*) 232, 233, 243, 244; (*Essex River,*) 717; (Isles of Shoals,) 702; (*Little Kennebec River,*) 81, 82; (*Machias Bay,*) 67, 71; (*Medomak River,*) 414, 420–421; (near Metinic Island,) 364; (*South Bay,*) 50; (*West Gouldsboro',* 189.
Hog Island Ledge, (*Medomak River*) 441
Hog Island Ledge, (near Portland) 624, 638, 641
Hog Island Ledges, (*Machias Bay*) 67, 71
Hog Island Roads, (*Portland Harbor*) 635
Hogshead Rock 854, 880
Holbrook Island 299–300
Holbrook Ledge, or *Linekin Ledge* 481
Hollis Point 419
Holman Point 659
Holmes Bay 67, 71
Holmes Island 185
Holmes Neck 67
Holmes Point 68, 71
Holmes Point Flats 73
Holway Point 80
Home Harbor 313, 371–372
Hooper Island 383
Hooper Island Bar 388
Hooper Island Rocks 394–395, 410
Hooper Point, (*Machias Bay*) 68
Hooper Point, (*St. George River*) 383–384
Hooper Shoal, (near Metinic Island) 367
Hope Island, (*Casco Bay*) 597, 599
Hope Island, (*Little Kennebec River*) 78, 82
Hopkins Island 546
Hopkins Point:
(Long Island, in *Blue Hill Bay,*) 234–235; (*Fox Islands Thoroughfare,*) 283; (*Moos-a-bec Reach,*) 104, 105, 107, 129; (*Union River,*) 235–236.
Hopkins Point Shoal 237
Horn Island 688
Hornbarn Cove 416
Hornbarn Hill 416
Horse Cove 562, 563, 576
Horse Head Island 297
Horse Heads, The 147, 158–159
Horse Island, (*New Meadows River*) 544, 545–546
Horse Island, (*Potts Harbor*) 587, 591
Horse Island Harbor 546
Horse Ledge 110
Horton Rock 238
Hosmer Ledge 301
Hospital Point:
(*Beverly Harbor,*) 753; (*Kennebec River,*) 521; (*Salem Entrance,*) 752–753; (*St. George River,*) 386.
Hospital Point Light-House, (*Salem*) 752–753, 786
Hospital Point Rocks, (*St. George River*) 389
Hospital Shoal 859, 861
Hough Ledge 402, 407, 431
Hough Neck 868
House Island, (near Portland) 638
House Island, (*Salem Entrance*) 748, 756
House Ledge 758
Howard Bay 65, 70
Howard Harbor 247
Howard Ledges 250
Howard Mountain 65, 70
Howard Point:
(*Machias Bay,*) 65; (*New Meadows River,*) 548; (*St. George River,*) 384.
Hoyt Head 69
Hoyt Neck 667
Hubbard Point 537
Hue and Cry Rocks 646
Hughes Ledge 303
Hull Cove 183, 199, 200–201
Hull, Village of 802, 818, 858
Humpback Mountain 139, 174
Humpkins Island 255
Hungry Island 417–418
Hunniwell Cove 529–530
Hunniwell Hill 518
Hunniwell Point 516, 518
Hunt Ledge 809, 821, 859–860
Hunting Island 493

Page.
Hurricane Island, (*Hurricane Sound*) 309
Hurricane Island, (*Muscle Ridge Channel*) 316
Hurricane Ledge 322
Hurricane Sound 281, 309–312
Hussey Rock, (*Saco Bay*) 664
Hussey Sound 638
Hussey, The, (*Casco Bay*) 585, 602, 613, 622
Huston Cove 467
Hutchinson Head 383
Hyler Cove 386
Hypocrite Channel, (*Boston Bay*) 799, 825–834
Hypocrite Ledge, (*Damariscotta*) 474, 480, 487

I.

Indian Island:
(*Muscongus Bay*,) 422; (*Passamaquoddy Bay*,) 22, 25; (*Rockport Harbor*,) 332.
Indian Island Light-House 332
Indian Narrows 257, 260–261
Indian Point:
(Georgetown Island,) 516; (Great Chebeag.) 598, 626; (*Kennebec River*,) 521; (*New Meadows*,) 547; (North Haven Island,) 286.
Indian River, (*Moos-a-bec Reach*) 105, 107, 129–130
Indian River, (*Passamaquoddy Bay*) 22
Indian River Settlement 130
Indian Settlement on Pleasant Point 40
Indiantown Island 497–498
Ingalls Island 196
Inner Bar Ledge 165
Inner Bay Ledges 289
Inner Breakers 764
Inner Duck Rock 366
Inner Endeavors 777
Inner Green Island 585, 597
Inner Grindstone Ledges 323–324
Inner Harbor of—
Benjamin River, 245; *Boston*, 806–807; *Camden*, 335–336; *Gloucester*, 740, 741–742, 746; *Portland*, 635, 638–639; *Salem*, 754–755, 761.
Inner Harbor, (*Pemaquid River*) 453
Inner Heron Island 461
Inner Heron Island Ledge 468, 474
Inner Ledge, (Isle au Haut) 279
Inner Ledge, (off Muscongus Island) 441
Inner Ledges, (*Camden Entrance*) 337, 338
Inner Minot 819
Inner Petit Manan Bar 151, 154–155, 163
Inner Sand Island 119
Inner Shag 394
Inner Spit 715
Inner Tinker Ledge 250
Inside Passage from Portland to Freeport 623–628
Inside Passage from Cape Small Point to Portland 634
Interval Shoal 580
Ipswich Bay 712–724
Ipswich Harbor 707, 712–716
Ipswich Light-House 709, 713, 715
Ipswich River 712, 713
Iron Bound Island 186, 188, 194
Iron Point 283
Iron Point Ledge 287
Irony Island 597, 600
Isaiah's Head 541
Islands:
Allen, 380, 415; Alley, (*Trenton River*,) 198; Amazeen, 691; Andrew, 258; Andrews, 313, 316; Anguilar, 85, 87, 94; Apple, 803–804; Ark, The, 512; Arrowsic, 520; Ash, (*Frenchman Bay*,) 191; Ash, (*Muscle Ridges*,) 313, 319–320; Babbidge, 281; Babson, 244; Badger, 691; Bailey, 555, 562–563, 576; Baker, (Mount Desert,) 202; Baker, (*Salem Entrance*,) 748, 755–756, 763–764, 770; Ballast, 90, 98; Bangs, 637, 650; Bar, (*Blue Hill Bay*,) 234; Bar, (George Islands,) 380, 382; Bar, (*Machias Bay*,) 65, 66; Bar, (*Moos-a-bec Reach*,) 108, 112; Bar, (*Muscle Ridges*,) 316; Bar, (*Muscongus Bay*,) 422, 426, 446; Bar, (*Pigeon Hill Bay*,) 157–158; Bar, (*Potts Harbor*,) 587; Bar, (*Somes Harbor*,) 214; Bard, 297; Bare, 66; Bareneck, 537; Barnes, 601; Barney's Little, 104; Barter, (George Islands,) 380, 381, 415; Barter, (*Merchant Row*,) 267–268; Barter, (*Sheepscot River*,) 499; Bartlett, 198, 232; Bartol, 617, 618; Barton, 310; Basket, (*Casco Bay*,) 625; Basket, (*Saco Bay*,) 658, 660; Bass, 670; Bates, 589, 597; Beach, 296; Beacon, 677; Beal, (*Moos-a-bec Reach*,) 98, 102, 103; Beals, 537; Bean, 190, 195; Bear, (*Casco Bay*,) 545; Bear, (*South-West Harbor*,) 202, 203–204; Bears, (Deer Isle,) 294; Beaver, 453; Ben, 556; Benner, 380, 381, 415; Berry, 537; Bibber, 609,

Page.

Islands—Continued.
615, 616; Bickford, 668, 670, 671, 673; Bigger, 185; Bill, 267; Birch, (*Eggemoggin Reach,*) 247; Birch, (*Fox Islands Thoroughfare,*) 282; Birch, (*John Bay,*) 451; Birch, (*Middle Bay,*) 597, 601, 607; Birch, (*Muscle Ridge Channel,*) 317; Birch, (*Pleasant Bay,*) 136; Black, (*Casco Passage,*) 224, 230, 233, 270; Black, (*Muscongus Bay,*) 427; Black, (off *Blue Hill Bay,*) 219, 224; Blubber, 383; Bluff, 661; Boisbubert, 155, 157; Bold, 255; Bombazine, 547; Boon, 698–699; Boston, 496, 497; Bowman, 617; Bradbury, 295; Bradford or Hooper, 383; Bragdon, 547; Breed, 793; Bremen Long, 414, 417; Brigadier, 303, 343, 348–349; Brimstone, 307; Brothers, The, (*Casco Bay,*) 625; Brown Cow, (Eastern part *Casco Bay,*) 545; Brown Cow of Broad Sound, 593, 594; Browney, 98, 119; Brown's, (*Flat Island Channel,*) 126; Brown's, (*Machias Bay,*) 65, 74, 75; Brush, 878–879; Bryer, 7, 13; Buckles, 226, 271; Bucks or Harbor, 246; Bumkin, 875; Bumpkin, 671–672, 673, 675; Burial, 33, 50, 54; Burnt, (*Booth Bay,*) 485, 486; Burnt, (Fox Islands,) 281; Burnt, (George Islands.) 380–381, 415; Burnt, (*Merchant Row,*) 267, 280; Burnt, (*Seal Harbor,*) 315; Burnt-Coat or Swan, 224, 225, 226; Bush, 554, 571; Bushy, 550; Busting, 616; Butter, 296; Button, 876; Cabbage, 479, 480; Calderwood, 281–282; Caldwell, 379, 380, 382; Calf, (*Blue Hill Bay,*) 224, 230–231, 233, 271; Calf, (*Boston Bay,*) 825; Calf, (Elwell Group,) 372; Calf, (*Frenchman Bay,*) 190; Calf, (near *Little Kennebec,*) 85; Camp, (*Deer Island Thoroughfare,*) 256; Camp, (*Muscle Ridges.*) 317; Campobello, 17–19, 28; Cape, (Cape Porpoise,) 668, 671, 673; Cape, (*Sheepscot Entrance,*) 476, 484, 485, 493; Cape Neddick Knubble, 679–680; Carney, 245–246; Carr, 708; Carrying Place, 108; Casco, 24; Castle, (*Boston Bay,*) 805; Castle, (*Sasanoa River,*) 537; Cat, 752, 756, 763, 764, 769; Cedar, (Isles of Shoals,) 701; Cedar, (*Muscongus Bay,*) 427; Centre, 555–556; Chamberly, 141, 143; Chance, 66, 70; Chandler, 876; Cherry, 25, 27; Chubb, 751; Clam, (*Jericho Bay,*) 255; Clam, (*Medomak River;*) 442; Clapboard, 625; Clark, (approaches to *Wheeler Bay,*) 374–375; Clarke, (*Portsmouth Harbor,*) 690; Colt Head, 296; Conary, 243, 244; Cone, 106, 128, 134; Coney, 763; Coombs, 548; Cooper, 47, 50; Cousin, 626; Cow, (*Medomak River,*) 414, 417; Cow, (near Portland,) 624–625; Crab, 616; Cranberry, (*Harrington River,*) 142; Cranberry, (*Muscongus Bay,*) 427; Cranberry, The, (Mount Desert,) 202, 203; Crane, (*Muscongus Bay,*) 405, 426, 435; Crawford, 522; Cross, (*Fox Islands Thoroughfare,*) 284; Cross, (*Machias Bay,*) 63, 64, 70; Crotch, (*Casco Bay,*) 599; Crotch, (*Meduncook River,*) 415–416; Crotch or Thurlow, (*Deer Island Thoroughfare,*) 257, 268; Crow, (*Eggemoggin Reach,*) 243; Crow, (*John Bay,*) 450, 451; Crow, (*Middle Bay,*) 601; Crow, (*Muscle Ridge Channel,*) 314; Crow, (near Burnt-Coat Island,) 225, 271; Crow, (off Great Chebeag,) 598; Crow, 2d, (southeast of Burnt-Coat.) 229; Crumple, 97, 119; Currant, 158; Cutts, 686; Damiscove, 462, 485; David, 494; Davis, (George Islands,) 379, 380, 381, 415; Davis, (*John Bay,*) 452; Davis, (*Sheepscot,*) 500; Deer, (between *Blue Hill Bay* and *Penobscot Bay,*) 246, 258, 263, 265, 294–295; Deer, (*Boston Bay,*) 793, 803, 826, 835; Deer, (near *Little Machias Bay,*) 61, 62–63; Deer, (Newburyport,) 708; Deer, (*Passamaquoddy Bay,*) 17, 19–20; Devil, 256; Dingley, 546–547; Dix, (*Kennebec River,*) 519; Dix, (*Muscle Ridge Channel,*) 313–316; Dochet or St. Croix, 37, 38, 41; Dock or Norton, 134; Dog, 21; Dogfish, 285; Double-Headed, 64; Douglass, 147, 158–159; Doyle, 105, 129; Drisco, 119–120; Duck, (*Blue Hill Bay,*) 224; Duck, (Isles of Shoals,) 702; Duck, (*Quoddy Roads,*) 19, 28; Dudley, 28, 30; Dumplings, 284; Dyer, (*Hurricane Sound,*) 310; Dyer, (*Pleasant Bay,*) 134, 139–140, 147; Eagle, (*Blue Hill Bay,*) 231; Eagle, (*Casco Bay,*) 588, 591, 593; Eagle, (*East Penobscot Bay,*) 295; Eagle, (Elwell Group,) 373; Eagle, (George Islands,) 380, 382; Eagle, (Newburyport,) 708; Eagle, (*Pleasant Bay,*) 136; Eagle, (*Saco Bay,*) 660–661; Eagle, (*Salem,*) 763, 764; Eastern, (off *Dyer Bay,*) 171, 173, 174; Eastern Mark or Dumpling, 254, 265, 266; Eben, 315; Elm, 555, 573; Elwell, 372–373; Enchanted, 266; Ensign, 346; Ewe, 268; Fan, 78, 82; Farrel, 268–269; Featherbed, 68; Fellows, 92, 94; Fish-Hawk, 480; Fisherman, (*Moos-a-bec Reach,*) 98, 119; Fisherman, (*Muscle Ridge Channel,*) 313, 320, 363; Fisherman, (near *Linekin Bay*, 461; Fishing, 689; Five, The, (*Harrington River,*) 141; Five, The, (*Sheepscot River,*) 495; Five-Pound, 742; Flag, (*Casco Bay,*) 544; Flag, (*Muscle Ridge Channel,*) 316; Flash, 554, 571; Flat, 125; Flint, 134, 146; Flye, 233; Fogg, (*Clam Ledges, Penobscot Bay,*) 322; Fogg, The, (near Isle au Haut,) 266; Folly, 669, 671; Fort, 137; Foster, (*Harrington River,*) 140, 144, 147; Foster, (*John River,*) 454; Foster, (*Machias Bay,*) 74; Fox, The, (near *Kennebec Entrance,*) 532, 540–541; Fox, The, (*Penobscot Bay,*) 280–294; Franklin, (*Muscongus Bay,*) 379, 405, 426; French, 609; French-House, 104; Frenchman, 249, 296; Friendship Long, 414, 416; Gallop, 803, 819, 835; Gammay, 452; Garden, 315; Garrison, 416; Gay, 379, 380, 415; George, (*Boston Bay,*) 799–800, 802; George, (*Casco Bay, Ridley Cove,*) 554, 571; George, (*Merchant Row,*) 268; George, (off *St. George River,*) 380–383, 415; Georgetown, 493, 494–495; Gerrish, 686–687, 700; Gerry, 770; Gibbs, 137; Goat, (Cape Porpoise,) 669; Goat, (*Kennebec River,*) 520; Goat, (*Portsmouth Harbor,*) 691; Goose, (*Cobscook Bay,*) 47, 50; Goose, (*Moos-a-bec Reach,*) 105, 129–130; Goose Nest, The, 603–604, 614, 622; Gooseberry, (*Merchant Row,*) 266; Gooseberry, (*Portsmouth Harbor,*) 689; Gooseberry, (*Winter Harbor of Saco,*) 665; Gooseberries, The, 752, 756, 763, 764; Goslings, The, 597, 600; Gott, 219, 224; Governor, 805–806; Grafton, 313; Grand Manan, 7–8; Grape, (*Boston Bay,*) 869, 874–875; Grape, (*Ipswich Bay,*) 714; Graves, (near Salem,) 747; Graves, The, (off Camden,) 334, 337; Great, (*Casco Bay,*) 545, 546, 563; Great, (*Portsmouth Harbor,*) 687, 688–689, 700; Great Brewster, The, 801, 818, 825, 835; Great Chebeag, 597, 598, 625–626; Great Cranberry, 202, 203; Great Duck, 224; Great Gott, 219, 224; Great Hen, 554, 572; Great Hog, 624; Great Mark, 576; Great Misery, 748, 755, 756, 771; Great Mosbier, 615, 616, 626; Great Pond, 317; Great Porcupine, 195; Great Spoon, (East Shore of Isle au Haut,) 227, 277; Great Spruce, 88, 94, 98; Great Sprucehead, 249, 296; Great Two-Bush, 314; Great Wass, 98, 103; Green, (*Blue Hill Bay,*) 233; Green, (*Boston Bay,*) 825, 826; Green, (*Burnt-Coat Entrance,*) 227, 228; Green, (Cape Porpoise,) 669, 671; Green, (*Damariscotta,*) 462; Green, (*Eastport Entrance,*) 25; Green, (*Eggemoggin Reach,*)

Page.

Islands—Continued.
243, 254, 263; Green, (*Entrance to Carver Harbor,*) 305, 309; Green, (*Moos-a-bec Reach,*) 106, 128; Green, (*Muscle Ridges,*) 313, 317; Green, (*Sheepscot River,*) 496; Greening, 202, 204, 207, 213; Grog, 255; Gull, 853, 880, 881; Gundell, 310; Haddock, (*Muscongus Bay,*) 425; Half-Moon, 868; Half-Way Rock, 582–583, 635–636; Halifax, 87, 94; Hall, (*Muscongus Bay,*) 405, 426; Hangman, 858, 869; Harbor, (*Bar Harbor,*) 195, 200; Harbor, (*Bucks Harbor,*) 246; Harbor, (*Burnt-Coat Harbor,*) 226–227, 228; Harbor, (*Eggemoggin Reach,*) 232, 233, 243, 244; Harbor, (*Lunt Cove,*) 229; Harbor, (*Merchant Row,*) 267; Harbor, (*Muscongus Bay,*) 379, 405, 426; Hardwood, (*Blue Hill Bay,*) 232; Hardwood, (*Merchant Row,*) 268; Hardwood, (*Moos-a-bec Reach,*) 105, 121; Harris, 683; Hart, 383; Haskell, 576, 591; Hat, 228; Hay, (*Burnt-Coat Harbor,*) 227; Hay, (*John Bay,*) 451; Hay, (*West Gouldsboro',*) 189; Head Harbor, (near Campobello,) 18; Head Harbor, (off *Englishman Bay,*) 86, 90, 94, 100, 102, 103; Hemlock, 137; Hen, (near Elwell Group,) 373; Hen, (*New Meadows River,*) 550; Hen, (*Ridley Cove,*) 572; Heron, (approach to *Burnt-Coat Harbor,*) 228; Heron, (off the *Kennebec,*) 532, 541; Hewell, 313; Hickey, 78, 82, 94; High, (*John Bay,*) 454–455; High, (Muscle Ridges,) 313, 317; High, (near *Wheeler Bay,*) 375; Hodgdon, 498; Hog, (*Damariscotta River,*) 467; Hog, (*East Penobscot Bay,*) 248, 297; Hog, (*Eastern Branch, Little Kennebec,*) 81, 82; Hog, (*Eggemoggin Reach,*) 232, 233, 243, 244; Hog, (*Essex River,*) 717; Hog, (Isles of Shoals,) 702; Hog, (*Machias Bay,*) 67, 71; Hog, (*Medomak River,*) 414, 420; Hog, (near Metinic Island,) 364; Hog, (*South Bay,*) 50; Hog, (*West Gouldsboro',*) 189; Holbrook, 299–300; Holmes, 185; Hooper, 383; Hope, (*Little Kennebec River,*) 78, 82; Hope, (*Casco Bay,*) 599; Hopkins, 546; Horn, 688; Horse, (*New Meadows River,*) 545–546; Horse, (*Potts Harbor,*) 587, 591; Horse-Head, (*Douglass Island Harbor,*) 147, 158–159; Horse-Head, (*East Penobscot Bay,*) 296, 297; House, (near Portland,) 638; House, (*Salem Harbor,*) 748, 756; Humpkins, 255; Hungry, 417–418; Hunting, 493; Hurricane, (*Hurricane Sound,*) 309–310; Hurricane, (Muscle Ridges,) 316; Indian, (*Muscongus Bay,*) 422; Indian, (*Passamaquoddy Bay,*) 22, 25; Indian, (*Rockport Harbor,*) 332; Indiantown, 497–498; Ingalls, 196; Inner Green, 585; Inner Heron, 461; Inner Sand, 119; Iron Bound, 186, 188, 194; Irony, 597, 600; Isle au Haut, 227, 259, 273, 277–280; Jamaica or Trefethen, 690; Jaquish, 560, 563, 575; Jeggles, 755; Jenny, (*Casco Bay,*) 554; Jenny, (White Islands,) 462; Jewell, 585, 599–600; Job, 344, 346; Joe, (*Sheepscot River,*) 494; John, (*Blue Hill Bay,*) 224, 231, 233, 271; John, (*John Bay,*) 450, 452–453; John, (*Merchant Row,*) 268; John, (near Long Island,) 229–230; Johnson, 421; Jones' Garden, 427; Jordan, (*East Penobscot Bay,*) 294; Jordan, (*Frenchman Bay,*) 188; Jordan's Delight, 132, 146, 153; Kettle, 747; Killick-Stone, 422; Kimball, 227, 278; Knight, 90; Lairey, 311; Lakeman, 89; Lamp, 233; Lane, (off *Carver Harbor,*) 309; Lane, (off *Yarmouth River,*) 630; Lasell, 303, 346; Lazy Gut, 254; Leadbetter, 310, 311; Lee, 521; Libbey, 64, 70, 86; Light-House 800–801; Lime, 346; Lines, 522; Little, (*Linekin Bay,*) 480; Little, (*Muscongus Bay,*) 424; Little Babson, 244; Little Bangs, 593, 597; Little Birch, (*Middle Bay,*) 601; Little Birch, (*Potts Harbor,*) 588, 590; Little Boisbubert, 157; Little Burnt, 381; Little Caldwell, 380, 382; Little Calf, (*Boston Harbor,*) 825, 835; Little Calf, (*West Gouldsboro',*) 190; Little Camp, 256; Little Chebeag, 598–599, 625; Little Cranberry, 202, 203; Little Deer, 246, 295; Little Dochet, 37, 38, 41; Little Drisco, 120; Little Duck, 224; Little Gott, 219, 224; Little Green, 317–318; Little Hen, 93, 95; Little Hog, 624; Little Hurricane, 310; Little Iron, 601; Little Jaquish, 560; Little Mark, (*Casco Bay,*) 575; Little Mark, (*Englishman Bay,*) 92, 95; Little Mink, 136; Little Misery, 748, 755; Little Moshier, 617; Little Pond, 317; Little Porcupine, 194; Little River, 58, 60; Little Round, 422; Little Sally, 246; Little Sheep, 254, 263; Little Spoon, 227, 277; Little Spruce, 88, 98; Little Stage, 668; Little Thrumbcap, (*Frenchman Bay,*) 194; Little Two-Bush, 314; Little Whaleboat, 597, 600; Little Wood, 544; Littlejohn, 626; Lobster, (*Gouldsboro',*) 175; Locust, 437; Long, (*Blue Hill Bay,*) 234–235; Long, (*Boston Harbor,*) 804, 835, 857–858; Long, (*Casco Bay,*) 597; Long, (*Cobscook,*) 50; Long, (*Kennebec River,*) 519; Long, (*New Meadows River,*) 547; Long, (off *Blue Hill Bay,*) 229–230; Long, (*Penobscot Bay,*) 298–299, 343–348; Long Porcupine, 194; Lovell, 803, 819, 835; Lowell, or Cat, 752, 756, 763, 764, 769, 771; Lower Goose, 597, 600; Lower Mark, 493; Lunging, 701; Machias Seal, 11, 71–72; Mackey, 624, 652; Macmaster, 24; Mahoney, 224, 233; Major, 50; Malaga, 545; Man, 90, 98, 100; Manana, 365; Marblehead, 317, 320; Mark, Woody, (*Casco Bay,*) 543, 544; Mark, (*Deer Island Thoroughfare,*) 258, 269; Mark, (*East Penobscot Bay,*) 296, 297; Mark, (*Eastport Harbor,*) 29; Mark, (off *Englishman Bay,*) 90, 94, 98, 102; Mark, (*Penobscot Bay,*) 303, 346; Mark, (*Winter Harbor of Frenchman Bay,*) 184–185; Marr, 518, 519; Marsh, (*Casco Bay,*) 597–598; Marsh, (*Muscongus Bay,*) 422; Marshall, 224, 227–228, 271–272; Matinicus, 275–276; Matinicus Seal, 276–277; McGee, 380, 381, 415; McGlathery, 243, 266; McMahan, 495, 496; Merchant, 243, 266, 267; Merrit, 547; Merry, 466; Metinic, 364–365; Metinic Green, 364; Middle Brewster, 800, 818, 835; Middle Mark, 496; Milk, 727, 731; Miller, (*Damariscotta River,*) 465; Miller, (*Medomak River,*) 418–419; Ministerial, 589, 591, 597; Mink, 63; Minot, 346–347; Mistake, 86–87, 89, 97, 100; Money, (*Gouldsboro',*) 175; Money, (*Head Harbor,*) 101; Monhegan, 365–366; Moon, 857; Moose, (*Deer Island Thoroughfare,*) 257; Moose, (Eastport,) 17, 20–21; Moose, (*Indian River,*) 107, 129, 130; Morse, 414, 415; Mosquito, 378; Mount Desert, 169, 183, 199–223; Mouse, (*Booth Bay,*) 486; Mouse, (*East Penobscot,*) 302; Munroe, 313, 320, 363; Muscle Ridge, 313–321; Muscongus, 414, 421–422; Narrows, 135; Nash, 102, 106–107, 128, 134; Nash Harbor, 135; Naumkeag, 524; Nautilus, 300; Navy, (*Portsmouth Harbor,*) 690; Navy, (*St. Andrew Bay,*) 37, 41; Ned, 184; Negro, (*Linekin Bay,*) 478, 479; Negro, (*Penobscot Bay,*) 333–334, 336; Negro, (*Saco Bay,*) 660; Nigger, (*Cape Porpoise Harbor,*) 670; Night-Cap, 136; Nipple, The, 103; Noble, 691; Noddles, 806; No Man's Land, 276; North Haven, 281, 327; North Spectacle, 804, 827, 857; Northern, 375; Norton, (*Moos-a-bec Reach,*) 102, 104, 121; Norton, (near White Head Island, 315, 372; Norton, (off *Pleasant Bay,*) 112, 134; Nut, 858, 868; Oak, (*Casco Bay,*)

Page.

Islands—Continued.
565; Oak, (Muscle Ridges,) 317; Oar, 421; Oliver, 691; One-Bush, 104; One-Tree, 691; Orne, 770; Orono, 224, 230, 270; Orr, 555, 562, 577–578; Otter, (Muscle Ridges,) 313, 317, 318; Otter, (*Muscongus Bay,*) 399, 405, 427; Outer Brewster, 800, 818, 825; Outer Green, 585, 637; Outer Heron, 462; Outer Sand, 119, 125–126; Overset, 597; Partridge, 144; Pea, 795; Peabow, 455; Peaks, 637–638, 650; Peddock, 869; Peirce, 691, 692; Pell, 267; Pendleton, 20, 41; Perkins, 519–520; Peters, 465; Petit Manan, 151, 156; Pettingill, 609; Phœbe, 266; Pickering, 296; Pig, (*Booth Bay,*) 486; Pig, (*Moos-a-bec Reach,*) 103; Placentia, 219, 224–225; Pleasant, 313; Plum, 707–708, 709, 712, 713; Plummer, (*Damariscotta,*) 464; Plummer, (*Moos-a-bec Reach,*) 126; Poets, 136; Pole, (*Casco Bay,*) 555; Pole, (*Hurricane Sound,*) 311; Pomp, 104, 121; Pond, (*Casco Bay,*) 560, 563; Pond, (*East Penobscot Bay,*) 248, 297; Pond, (*Frenchman Bay,*) 183–184; Pond, (*Jericho Bay,*) 231, 233, 271; Pond, (*Kennebec River,*) 517–518; Pond, (Muscle Ridges,) 317; Pond, (off *Pigeon Hill Bay,*) 145–146, 158; Pond or Ross, 425–426; Pond Cove, 91, 94; Porcupine, 79, 82; Potato, (*Carver Harbor,*) 307; Potato, (*Pleasant Bay,*) 135; Powderhorn, 497; Preble, 190, 195; Pudding, 276; Pumpkin, (*Damariscotta Entrance,*) 462; Pumpkin, (*Eggemoggin Reach,*) 246, 247; Pumpkin, (*Portsmouth Harbor,*) 691; Raccoon, (*Skillings River,*) 198; Raccoon, (*Hingham Bay,*) 870; Rackliff, 315, 372; Ragged, (*Casco Bay,*) 543, 545, 554–555; Ragged, (*Hingham Bay,*) 876; Ragged, (*Penobscot Entrance,*) 275; Rainsford, 858; Ram, (between Marblehead and Swampscot,) 789; Ram, (*Damariscotta Entrance,*) 461; Ram, (*Englishman Bay,*) 91, 93, 94; Ram, (*Fisherman Island Passage,*) 120; Ram, (*Greenland Cove,*) 423; Ram, (*Harpswell,*) 579; Ram, (*Lower Kennebec,*) 521; Ram, (*Machias Bay,*) 74; Ram, (*Meduncook River,*) 416; Ram, (*Merchant Row,*) 268; Ram, (near George Islands,) 382; Ram, (near Rockport, Maine,) 331; Ram, (*Newburyport Harbor,*) 708; Ram, (off the Gurnet,) 563; Ram, (off *Salem Entrance,*) 748; Ram, (*Portland Entrance,*) 584, 637; Ram, (*Richmond Island Harbor,*) 656; Ram, (*Saco Bay,*) 660; Ram, (*Sheepscot River,*) 498; Ram, (*Tabbott Narrows,*) 102, 106, 126; Ram, (*Upper Kennebec River,*) 522; Ram, (*West Gouldsboro',*) 190, 195; Raspberry, (*Herring Gut,*) 383, 388; Raspberry, (*Pleasant Bay,*) 136; Razor, 48, 50; Red, 48, 50; Redding, 668; Reed, 463; Richmond, 645, 654–655; Ringtown, 228; Ripley, 140; Rocky Neck, 741, 742; Roberts, 307; Rodgers, (Eastport,) 50; Rodgers, (*Englishman Bay,*) 93, 94; Rogue, (*New Meadows River,*) 545; Rogue, (off Hope Island, *Casco Bay,*) 599; Roque, 88–89, 94, 98, 100; Ross or Pond, 425–426; Rouen, 25; Round, (*Deer Island Thoroughfare,*) 256; Round, (*Machias Bay,*) 67, 70; Round, (*Merchant Row,*) 266–267; Round Porcupine, 195, 200; Rum Key, 194; Russ, 256; Rutherford, 451–452; Saddle-Back, 265, 266; Sailor, 876; Sally, 171, 173; Salt, (Cape Ann,) 725; Salt, (*Machias Bay,*) 66, 70; Salter, 516; Sand, (*Blue Hill Bay,*) 234; Sand, (*Casco Bay,*) 597, 600; Sand, (*Meduncook River,*) 416; Sand, (*Merchant Row,*) 268; Sand, (*Passamaquoddy Bay,*) 24; Sandy, 25; Sawyer, (*Moos-a-bec Reach,*) 103; Sawyer, (*Sheepscot River,*) 498; Scabby, 74, 87, 93; Schoodic, 183; Scotch, 64; Scrag, 597, 601; Scraggy, 258, 269; Seal, (*Newburyport,*) 708; Seal, (off *Machias,*) 71–72; Seal, (off Matinicus,) 276–277; Seal, (Small Point,) 541; Sears, 303, 343, 348–349; Seavey, (George Islands,) 380, 382; Seavey, (*Portsmouth Harbor,*) 690; Seguin, (*Kennebec Entrance,*) 517; Seguin, (*Moos-a-bec Reach,*) 90, 103; Seven Hundred Acre, 344; Shabbit, 105, 112, 126; Shapley, 691; Shark, 397, 400; She Porcupine, 194, 200; Sheep, (*Deer Island Thoroughfare,*) 254, 263; Sheep, (*Dyer Bay,*) 170; Sheep, (*Hingham,*) 869, 875; Sheep, (*Moos-a-bec Reach,*) 102, 104, 121; Sheep, (Muscle Ridges,) 313, 320, 363; Sheep, (*New Meadows,*) 546; Sheep, (off *Blue Hill Bay,*) 231; Sheep, (*Pleasant Bay,*) 135, 136; Sheep, (*Tabbott Narrows,*) 106; Sheep and Little Sheep, (*Moos-a-bec Reach,*) 104; Shelter, 601; Ship, 231, 237; Ship-Stern, 134, 146; Shoppe, 89, 94; Shot, 88, 94; Simpson, 191; Sister, (*Maquoit Bay,*) 610; Sister, (southeast of Burnt-Coat,) 229; Slate, (*Boston Bay,*) 875; Slate, (*Moos-a-bec Reach,*) 120–121; Small's, 49, 51; Smuttynose, (*Blue Hill Bay,*) 233; Smuttynose, (Isles of Shoals,) 701, 702; Snow, 556; South Spectacle, 804, 827, 857; Southern, 375; Southport, 484, 493; Spaulding, 318; Spar, 78, 82; Spectacle, (*Boston Bay,*) 804–805, 857; Spectacle, (near *Eggemoggin Reach,*) 248; Spectacle, (off *Wheeler Bay,*) 375; Spectacle, (*Sheepscot River,*) 497; Spectacle, (*Winter Harbor of Frenchman Bay,*) 184; Spoon, (east shore of Isle au Haut,) 227, 277–278; Spruce, (*Deer Island Thoroughfare,*) 266; Spruce, (off *Gilkey Harbor,*) 344; Spruce, (*Passamaquoddy,*) 24; Spruce or Minot, 346–347; Spruce Head, (*East Penobscot Bay,*) 248, 249; Spruce Head, (Muscle Ridges,) 314–315, 372; Squash, 691; Squirrel, 461, 479, 485–486; St. Andrew, 37; St. Croix, 37, 38, 41; St. Helena, 268; Stage, (Cape Porpoise,) 668, 671; Stage, (*Kennebec Entrance,*) 516; Stage, (*Saco Bay,*) 658, 660, 661; Staples, 617; Star, 701; Starboard, 65, 75; Stave, (*Broad Sound, Casco Bay,*) 588–589, 591, 597; Stave, (*Eggemoggin Reach,*) 246; Stave, (*Frenchman Bay,*) 188; Steel-Coat or Steel Harbor, 89, 98, 100, 101; Stevens, 120; Stepping Stones, The, 598, 602–603, 613, 622; Stimpson, 281–282; Stockman, 593, 597; Stone, (George Islands,) 380, 382; Stone, (*Machias Bay,*) 65, 70, 75; Straitsmouth, 724–725; Stratten, 661; Strouts, 139, 140, 150; Sturdivant, 625, 629; Sullivan, 191; Sunken, 858; Sutton, 202, 203; Swan, 523, 524; Swan or Burnt-Coat, 224, 225, 226; Sweet's, 497; Teal, 380, 382; Ten-Pound, (*Gloucester Harbor,*) 741, 742; Ten-Pound, (*Penobscot Bay Entrance,*) 276; Thatcher, 726–727, 731; Thief, 422; Thirty Acre, 497; Thompson, (*Boston Harbor,*) 805, 856–857; Thompson, (*Davis Straits,*) 379, 380, 381, 415; Thompson, (*Jordan River,*) 198; Thorne, 522; Three, The, (*Bay of Fundy,*) 9; Three, The, (*New Meadows River,*) 547; Three Kent, The, 9; Thrumbcap, (*Eastport Entrance,*) 25; Thrumbcap, (*Eggemoggin Reach,*) 247; Thrumbcap, (*John Bay,*) 450, 451, 460, 461; Thrumbcap, (*Muscongus Bay,*) 422; Thunder, 659; Thurlow or Crotch, 257, 268; Timber, 667; Tinker, (*Blue Hill Bay,*) 234; Tinker, (off Marblehead Neck,) 770; Tommy, 315; Torry, 244–245; Trafton, 146; Treat, 28, 30, 40; Trefethen or Jamaica, 690; Trott, 668, 670, 673; Tumbler, 486; Turnip, (*Casco Bay,*) 563, 575; Turnip, (*Eggemoggin Reach,*) 249; Turnip, (*John Bay,*) 450, 452; Turtle, 184; Two-Bush, (*Deer Island Thoroughfare,*) 257; Two-Bush, (*East Penobscot Bay,*) 249; Two-Bush,

Page.

Islands—Continued.
(George Islands,) 380, 381; Two-Bush, (Muscle Ridge Islands,) 314; Two-Bush, (*Penobscot Bay Entrance,*) 276; Tyler, 537; Uncle Zeke, 579; Upper Flag, 588, 591; Upper Goose, 597, 600; Upper Green, 609; Upper Mark, 499; Vaughan, 670; Vinal Haven, 280–281; Virgin or Virgin's Breasts, 103, 109; Warren, 344; Webber, (*Damariscotta,*) 464; Webber, (*Sasanoa,*) 537; Western, 298; Westport, 496, 514; Wetmore, 350, 351; Whaleboat, (*Casco Bay,*) 594, 597; Whaleboat, (*Frenchman Bay,*) 200; Wharton, 418; White, (*Eggemoggin Reach,*) 232, 233, 243, 244; White, (*Hurricane Sound,*) 310; White, (Isles of Shoals,) 700; White, (off *Damariscotta River,*) 461–462; White, (off Eastport,) 24; White, (*Portsmouth Harbor,*) 688; White Bull, 552; Whitehead, (*Penobscot Bay,*) 274, 312; White Horse, The, 24; White's, 597, 601; Whittum, 496, 539; Widows, 282; Williams, (*Maquoit Bay,*) 609–610; Williams, (*New Meadows River,*) 547; Winter, 754; Wolsgrover, 418; Wood, (*Lower Kennebec,*) 518; Wood, (off *New Meadows River,*) 543, 544; Wood, (*Portsmouth Harbor,*) 688, 692; Wood, (*Saco Bay,*) 660; Wood, (*Upper Kennebec,*) 522; Woodbridge, 708; Wooden Ball, 276; Woody Clapboard, 625; Wreck, (*Merchant Row,*) 267–268; Wreck, (*Muscongus Bay,*) 426; Wyer, 579; Yarmouth, 554, 571; Yellow, 66, 70; Yellow Ridge, 314; York or White, 232, 233, 243, 244; York, The, 278.

Islands forming part of shores of Cape Ann 726–727

Islands in—
Approaches to *Mare Point* and *Maquoit Bays*, 608–610; *Cape Porpoise Harbor*, 668–671; *East Penobscot Bay*, 294–299; *Englishman Bay* and its approaches, 87–90; entrance to *Penobscot Bay*, 273–277; *Main Ship Channel* into Salem, 755–756; *Mericoneag* and *Harpswell Sounds*, 579; *Middle Bay*, 600–601; *Moos-a-bec Reach*, 102–107; *Passamaquoddy Bay*, 17–26; *Saco Bay*, 659–661; southern part of *Muscongus Bay*, 425–427.

Islands off south shore of Mount Desert 202–204
Islands off the entrance to *Salem* and *Manchester Harbors* 748
Islands separating *Long Cove* and *Wheeler Bay* 374–375
Islands and Points in *Main Ship Channel of Boston Harbor* 799–807
Isle au Haut 227, 259, 273, 277–280
Isle au Haut Bay 249, 280
Isle au Haut Thoroughfare 227, 278–280
Isles of Shoals 700–703
Isles of Shoals Light-House 700, 703
Islesboro', North and South 298, 343

J.

Jack Point 473, 478
Jack-Knife Ledge, (Kennebec River) 509–510, 532
Jack-Knife Ledge, (Weymouth Fore River) 871
Jackson Ledge 132, 152, 159, 161
Jamaica, or Trefethen Island 690
Jameson Point, (*Hatchet Cove*) 416, 417
Jameson Point, (*Rockland Harbor*) 327
Jameson Point Ledge 329, 330
Jameson Point Shoal 329–330
Jamison Ledge 549
Jaques Rock 880
Jaquish Cut 560, 563, 575
Jaquish Island 560, 563, 575
Jaquish Ledge 560, 571, 580
Jeffrey Bank 5–6
Jeffrey Ledge 6–7, 729–730
Jeggles Island 755
Jellison Cove 196
Jenks Ledge 398, 404, 408, 428
Jenness Point 705
Jenny Island, (*Casco Bay*) 554
Jenny Island, (White Islands) 462
Jenny Ledge 572
Jericho Bay 259, 270
Jerry Ledge 167
Jerry Point 687–688, 692, 694, 700
Jerry Point Beacon 687–688, 694
Jetteau Point 175
Jewell Island 585, 597, 599–600
Jewell Island Cove 599
Jewett Cove 498, 514
Jim Head 56
Job Island 340, 344, 346
Joe Beach Ledge 795
Joe Dyer Point 147, 157
Joe Island 494
Joe Noyes Point 710
Joe Point 37, 41
John Bay 450–460

Page

John Island:
(*Blue Hill Bay,*) 224, 231, 233, 271; (*John Bay,*) 450, 452–453; (*Merchant Row,*) 268; (near Long Island,) 229.
John Ledge 758
John River 450, 454–455, 456–457, 458–459
John Rock 759
Johnson Bay 29, 35
Johnson Cove, (Great Chebeag) 598
Johnson Cove, (near Eastport) 20, 40
Johnson Island 421
Johnson Island Rocks 421
Johnson Mountain 79, 82
Johnson Point 79, 82
Jones Cove 463
Jones' Garden 427
Jones Ledge 632
Jones Neck 418
Jones Point, (*Damariscotta*) 463
Jones Point, (*Medomak*) 418
Jones Point Ledges 449
Jones River 719
Jonesboro', Village of 92–93, 97
Jonesport, Village of 98, 107
Joppa Flats 708, 710
Jordan Bar 188
Jordan Island, (*East Penobscot Bay*) 294
Jordan Island, (*Frenchman Bay*) 188
Jordan Point 602
Jordan Reef, or *Bell Rock* 643, 644, 647, 650
Jordan River 198
Jordan's Delight 132, 146, 153
Jordan's Delight Ledge 132, 146, 153, 160
Joy Bay 173, 175
Joy Cove 175, 176
Juniper Cove 754
Juniper Point 754
Junk of Pork, (*Casco Bay*) 585
Junk of Pork, (*East Sullivan Harbor*) 191

K.

Keene Narrows 421
Kegs, The 398, 403, 428, 432
Kehail Point 499
Kelly or White Point (*Head Harbor*) 101
Kelly Point, (*Moos-a-bec Reach*) 86, 102, 107
Kelly Rock 810
Kelp Ledge 469
Kelp Ledges, The 395
Kelsey Ledge 470
Kelsey Point 466
Kemp's Folly 144, 145
Kendall Head 21, 40
Kenduskeag River 352
Kennebec Bay 81
Kennebec River 516–535
Kennebunk Point 675–676, 678
Kennebunk River 676–678
Kennebunkport, Village of 676
Kent Cove 282, 291
Kent Hill 283
Kent Ledge 286
Kettle Cove 747
Kettle Island 747
Kettlebottoms, The 776
Killick-Stone Island 422
Killwood Point 101
Kimball Head 278
Kimball Island 227, 278
Kimball Rock 279
King Beach 788
King Point 204, 207
Kittery Foreside 689
Kittery Navy-Yard 690
Kittery Point 689, 692, 700
Kittery, Village of 690, 692

Page.
Kitts Rocks 694, 702–703
Knapp Rock 761, 768, 774, 777
Knight Island, (*Head Harbor*) 90
Knight Point, (*St. Croix River*) 44
Knight Point Flats 44
Knips Point 92, 95
Knowles Rocks 456
Knubble Bay 538
Knubble, The:
(near Metinic,) 364; (*Sasanoa River,*) 538; (*South-West Harbor,*) 220.

L.

Ladle, The 106, 131–132
Lairey Island 311
Lairey Ledge 311
Lake Utopia 22
Lakeman Harbor 88, 89, 100
Lakeman Island 89
Lamp Island 233
Lane Cove 722
Lane Island, (off *Carver Harbor*) 309
Lane Island, (off *Yarmouth River*) 630
Lane Point 720
Lanesville, Village of 722, 724, 728
Lark Ledges 323
Larrabee Basin 81
Larrabee Cove 67, 71
Larrabee Point 81
Lasell Island 303, 346
Lasque Ledge 771, 779–780, 783
Lazy-Gut Channel 262
Lazy-Gut Islands 254
Lazy-Gut Ledge 259, 264
Lead Mines in *South Bay* 48
Leadbetter Island 310, 311
Leadbetter Narrows 285, 311, 312
Leadurny Point 29
Ledge off Steele Head 353, 355
Ledge, The, (*St. Croix River*) 39, 42, 43
Ledge, The, Village of 39, 42
Ledges:
Alderidge, 829, 837; *Allen,* 388, 392, 409–410; *Anderson,* 701; *Andrews,* 401; *Arey,* 307–308; *Ash Island,* 324; *Avery,* 734, 737;
Babson, 744; *Bailey* or *Fullerton,* 389; *Bald Head,* 530–531, 548, 572; *Ballast Stone,* (off *Ridley Cove,*) 555, 573; *Bantam,* 359; *Bar Island,* (*Muscongus Bay,*) 446; *Bar Island,* (*Somes Harbor,*) 215; *Bare,* 706; *Barter Island,* 268, 269–270; *Batson,* 123; *Bay,* (*Englishman Bay,*) 108–109; *Bay,* (*Penobscot Bay,*) 357, 358; *Bay* or *Mark Island,* 261; *Bayley,* (*Bayley's Mistake,*) 56; *Bayley,* (off *Nahant,*) 795; *Beach,* 456; *Beacon,* 671; *Bean Island,* 195; *Bennett,* 197; *Bibber,* 611, 615; *Big Black,* 179; *Big Pea,* 158, 165–166; *Birch Island,* 603; *Birch Point,* 507; *Black,* (Fox Islands,) 285–286; *Black,* (*Gloucester,*) 745; *Black,* (*Little Machias Bay,*) 63; *Black,* (*Merchant Row,*) 269, 270; *Black,* (near Monhegan,) 366; *Black,* (off *Cohasset,*) 878; *Blacksnake,* 557; *Boisbubert,* 159, 162; *Bold Island,* 255, 260; *Boon Island,* 699; *Boston,* 808; *Bowden,* 205, 208; *Bowditch,* 758; *Bowman Island,* 620; *Branning,* 604; *Brant,* 604; *Breakwater,* 734; *Brigadier Island,* 303–304, 343, 349, 353; *Brimstone Point,* 627, 631; *Browney Island,* 122; *Brown's Head,* 445; *Brush Island,* 878–879; *Buck,* 354; *Buck Head,* 66; *Buckles Island,* 272; *Buckman,* 51; *Buckmaster,* 255; *Bucks Harbor,* 247, 252; *Bull,* 503; *Bulldog,* 468; *Bumpkin Island Southwest,* 673, 676; *Bumpkin Island East,* 673, 676; *Bunker,* (*Prospect Harbor,*) 180; *Bunker,* (*Southwest Harbor,*) 205, 208; *Bunker's Whore,* 210–211, 219–220; *Burnt Island,* (Isle au Haut,) 280; *Burnt Island,* (*Seal Harbor,*) 322; *Busting Island,* 619; *Button Moulds,* 531, 542; *Byer's Ship,* 399, 403–404, 407–408, 428–429;
Cabbage Island, 481; *Cashe,* 1, 730; *Cat,* 502–503; *Cedar,* 550, 555, 557, 565; *Cedar Bush,* 503; *Cedar Island,* 701; *Chappel,* 766, 772, 783; *Charity,* 560, 566, 569; *Cherry,* 272; *Chest,* 852–853; *Chittenden,* 879; *Chivers,* 549, 572; *Clam,* (*Deer Island Thoroughfare,*) 255; *Clam,* (Muscle Ridges,) 322; *Clapboard Island, Lower,* 632; *Clapboard Island, Upper,* 631; *Clark,* (*Harpswell,*) 581; *Clark Point,* or *Island,* 374; *Clarke,* (Eastport,) 42; *Clarke,* (*Pembroke,*) 52, 55; *Clarke,* (*Prospect Harbor,*) 179, 181; *Closson,* 250; *Clou,* 504; *Cod,* (*Frenchman Bay,*) 189; *Colby,* 269; *Colomore,* 852; *Colt,* 307; *Columbia,* 205; *Commissioners,* 836; *Conary,* 250; *Coney,* 767, 772; *Coombs,* 441; *Cooper Island,* 47, 50, 52, 54; *Corn,* 123; *Corvette,* 456; *Cow,* 211; *Cow and Calf,* 232, 240, 241; *Cow Island,* 627, 631; *Cow Island, Dry,* 441; *Cow Island, Sunken,* 440–441; *Crab Island,* 619; *Crabtree,* 196; *Crabtree Point,* 288; *Cranberry Island,* 211; *Cranberry Marsh,* 225, 272; *Cross Island,* (*Fox Islands Thoroughfare,*) 288; *Cross Island,* (*Machias Bay,*) 72; *Crotch Island,* (*Casco Bay,*) 602, 613, 622; *Crotch Island,* (*Deer Island Thoroughfare,*) 257,

Page.

Ledges—Continued.
261; *Crotch Island*, (*Meduncook*,) 429–430; *Crow Island*, (near Burnt-Coat Island,) 225; *Crow Island*, (*Two-Bush Channel*,) 363; *Cummings*, 111; *Cutthroat*, 782;
Davis, 819; *Deadman*, 306, 309–310; *Devil's Back*, or *Devil's Limb*, 837; *Devil's Elbow*, 433–434, 439; *Devil's Limb*, 439; *Dipper Cove*, 581; *Dochet Island Sunken*, 43; *Dodge Point*, 324, 328; *Dogfish*, 289; *Douglass Island*, 167, 168; *Dow*, 256, 260; *Dread*, 790, 791; *Drisco*, 115, 118; *Drunkard*, 289–290, 301–302; *Drunker*, 559, 566, 569, 570, 583, 594, 610, 618; *Dry*, 381; *Duck*, (*Moos-a-bec Reach*,) 105, 111, 121, 123–124, 126, 127; *Dyer Bay*, or *Eastern Island*, 172, 173, 176–177; *Dyer Island*, 140, 149, 150–151; *Dyer Island Eastern*, 142, 150;
Eagle Island, 592, 595, 610–611, 618–619; *East Cod*, 643; *East Shag*, (*Gangway Passage*,) 854, 881; *Eastern*, (*Booth Bay*,) 490; *Eastern*, (*Damariscotta*,) 469; *Eastern*, (*Englishman Bay*,) 99, 114; *Eastern Head*, (*Little River*,) 60, 61; *Eastern Head*, (*Moose River*,) 57; *Eastern Island*, (*Dyer Bay*,) 171, 172; *Eastern Mark Island*, 259; *Eastern Point*, 742; *Egg Rock North*, 401–402, 406, 411, 431; *Egg Rock South*, 401, 406, 431; *Eight-Feet, The*, 504; *Elisha*, 744; *Elm Island*, 573; *Enos*, 853–854, 881;
Farrel Island, 269, 270; *Fessenden*, 111, 124; *Fiddler*, 288; *Field*, 261; *Fish-Hawk Island*, 481; *Fish Point*, 286–287; *Fishing Island*, 695; *Five-Pound Island*, 745; *Flag Island*, 549; *Flat Island*, 125, 126; *Flat* or *Temple*, 639; *Flye Point*, 240, 241; *Flying Point*, 619; *Flynn*, 211; *Fort Point*, 351, 353; *Foss*, 706; *Foster*, 359; *Foster Island*, 75; *Fox Islands*, 285–286; *Freeport Upper*, 620; *Frost*, 42; *Frost Point*, 694; *Fullerton* or *Bailey*, 389;
Gales, 749–750, 756; *Gangway*, (*Cobscook*,) 52; *Gangway*, (*Damariscotta Entrance*,) 476, 480, 487; *Gangway*, (*Moos-a-bec Reach*,) 114, 117–118; *Gangway*, (Muscle Ridges,) 322, 324; *Gangway*, (*Muscongus Bay*,) 403, 407, 432; *Garden Island*, (*Medomak River*,) 435; *Garden Island*, (*Muscle Ridge Channel*,) 323; *Garden Island South*, 435; *Garden Island Sunken*, 322–323; *Gay Cove*, 399–400; *Gilpatrick*, 215; *Godfrey*, 706; *Goose*, (*Casco Bay*,) 604, 612; *Goose*, (*Damariscotta*,) 467, 471; *Goose Island*, (*Cobscook*,) 52, 54–55; *Goose Nest*, 614, 622; *Goose River Point*, 342; *Goose Rock*, 399; *Gooseberry*, 765; *Goudy*, 549–550, 553; *Grampuses, The*, 854, 880; *Grant*, 196; *Grassy*, 604; *Great*, (*East Sullivan*,) 191; *Great Aqua Vitæ*, 760–761, 768, 774; *Great Boar's Head*, 706; *Great Harbor Cove*, 589; *Green*, (*East Penobscot Bay*,) 298; *Green*, (*New Meadows*,) 550; *Green Island*, (*Boston Bay*,) 828; *Green Island*, (*Casco Bay*,) 609, 614, 622; *Greening*, 209, 212; *Greenleaf*, 506; *Griffin*, 410–411; *Griffith Head*, 502, 511; *Grindstone*, (*Fisherman Island Channel*,) 363; *Grindstone*, (*Fox Islands Thoroughfare*,) 287; *Grindstone*, (*Frenchman Bay*,) 184, 186; *Grog Island*, 255; *Gull Island*, 881; *Gull Rock*, 368; *Gunning Rock*, 387, 409;
Haddock, (off *Lincolnville*,) 340; *Haddock*, (off *Penobscot Bay*,) 368; *Haddock Island*, 439; *Haddock Island Kelp*, 439; *Half-Tide*, (*Eggemoggin Reach*,) 249–250; *Half-Tide*, (*Gilkey Harbor*,) 344, 345; *Half-Tide*, (*Greenland Cove*,) 423, 447; *Half-Tide*, (*Little Kennebec River*,) 83; *Half-Tide*, (*Muscongus Harbor*,) 447; *Half-Tide*, (*Narraguagus*,) 149; *Half-Tide*, (*St. Croix River*,) 43; *Half-Tide*, (*Sullivan Harbor*,) 196; *Hampton*, 707; *Harbor*, (Rockport, Maine.) 333; *Harbor*, (*Tennant Harbor*,) 377; *Harbor Island*, 229; *Harbor Point*, 219, 220–221; *Harbor Shoal*, 342; *Harbor* or *White*, 337, 339; *Harding*, (*North-East Harbor*,) 205; *Harding*, (*Sheepscot*,) 504; *Hardings*, (*Boston Bay*,) 808, 819–820; *Hardwood Island*, 124; *Hardy Point*, 53; *Hart Island*, (*St. George River*,) 394; *Hart Island*, (*Tennant Harbor*,) 376; *Harvey*, 83; *Haskell*, 255, 260; *Hat Island*, 230, 239; *Hay*, (off *Herring Gut*,) 378, 379; *Haycock*, (*Deer Island Thoroughfare*,) 255, 259; *Haycock*, (*Muscle Ridge Channel*,) 322; *Hay Island*, (*Eggemoggin Reach*,) 249; *Hay Island*, (*Muscle Ridge Channel*,) 322; *Havenner*, 418–419, 437; *Hen Island*, 550; *Henderson*, 385, 389; *Heron Island*, 251; *Heron Island South*, 474; *Heron Neck*, 306; *Hersey Upper Head*, 52; *Hickey Island*, 83; *Hodgdon*, 506; *Hog Cove*, 335; *Hog Island*, (*Machias Bay*,) 67, 71; *Hog Island*, (*Medomak River*,) 441; *Hog Island*, (near Portland,) 624, 638, 641; *Holbrook*, 481; *Horse*, 110; *Hosmer*, 301; *Hough*, 402, 407, 431; *House*, 758; *Howard*, 250; *Hughes*, 303; *Hunt*, 809, 821, 859–860; *Hurricane*, 322; *Hypocrite*, (*Damariscotta River*,) 474, 480, 487;
Inner, (*Camden Entrance*,) 337, 338; *Inner*, (Isle au Haut,) 279; *Inner*, (off Muscongus Island,) 441; *Inner Bar*, 165; *Inner Bay*, 289; *Inner Grindstone*, 323–324; *Inner Heron Island*, 468, 474; *Inner Shag*, 394; *Inner Tinker*, 250; *Iron Point*, 287;
Jack-Knife, (*Kennebec Entrance*,) 509–510, 532; *Jack-Knife*, (*Weymouth Fore River*,) 871; *Jackson*, 132, 152, 159, 161; *Jameson Point*, 329, 330; *Jamison*, 549; *Jaquish*, 560, 571, 580; *Jeffrey*, 6, 729–730; *Jenks*, 398, 404, 408, 428; *Jenny*, 572; *Jerry*, 167; *Joe Beach*, 795; *John*, 758; *Jones*, 632; *Jones Point*, (*Medomak*,) 449; *Jordan's Delight*, 132, 146, 153, 160;
Kelp, (*Damariscotta River*,) 469; *Kelp, The*, (*St. George River*,) 395; *Kelsey*, 470; *Kent*, 286; *Lairey*, 311; *Lark*, 323; *Lasque*, 771, 779–780, 783; *Lazy Gut*, 259, 264; *Leighton*, 109, 118; *Liberty Point*, 31; *Lincoln*, 528; *Linekin*, 481; *Little*, 110, 116; *Little Black*, 179; *Little Bull*, 552; *Little Mark Island*, (off *Mericoneag Sound*,) 560, 566, 570, 580, 583, 594–595, 610, 618; *Little River*, (*Sheepscot Bay*,) 511; *Little Pea*, 158; *Little Spruce Island*, 88; *Little Whaleboat*, 603, 611, 614, 622; *Lobster*, 287; *Locust Island*, 437, 450; *Logey*, 696; *Long*, (*Casco Passage*,) 271, 272; *Long*, (*Gangway Passage, Boston Bay*,) 851; *Long*, (*Gilkey Harbor*,) 345; *Long*, (*Little River*,) 60, 61; *Long*, (*Moos-a-bec Reach*,) 115, 118; *Long*, (*Murr Ledges*,) 9, 10; *Long*, (*Muscongus Bay*,) 403, 407, 432; *Long*, (*New Meadows River*,) 552–553; *Long*, (*Sheepscot River*,) 505; *Long*, (*Southwest Harbor*,) 219, 220; *Long Island*, (*Medomak*,) 442; *Long Island*, (*Penobscot Bay*,) 300, 303, 355; *Long* or *Mansfield*, 259; *Long* or *Thumbcap*, 251; *Long Point*, 149; *Lowell*, 328, 330;

Page.

Ledges—Continued.
Lower Basket Island, 627; *Lower Clapboard Island*, 632; *Lower Gangway*, 322, 371; *Lumbo*, 551–552, 564, 574, 639;
Macfarling, 457; *Maffitt*, 836; *Mahoney Island*, 240, 241, 249; *Major Island*, 54; *Malcolm*, 277, 358; *Manan*, 8–9, 10; *Mansfield*, 259; *Mark Island, Little*, 560, 566, 570, 580, 583, 594–595; *Mark Island, Woody*, (*Casco Bay*,) 552, 574; *Mark Island*, (*Sheepscot River*,) 503–504; *Mark Island* or *Bay*, 261; *Marsh Cove*, 278, 279–280; *Marshall Point*, 387–388, 392, 409; *Martin*, (*Boston Bay*,) 807–808, 827–828; *Martin*, (*Frenchman Bay*,) 197; *Mason Bay*, 96; *McIntosh* or *Sunken*, 302; *Merrill*, 506; *Merriman*, (*Casco Bay*,) 581; *Merriman*, (*Eggemoggin Reach*,) 251; *Metinic Island*, 367; *Middle*, (*Entrance to Medomak*,) 441–442; *Middle*, (*Gurnet*,) 565; *Middle*, or *Strouts Island*, 140, 142; *Middle Ground*, 784–785; *Mike*, 853; *Milbury*, 683; *Mile*, 491, 508, 530; *Minot*, (*Boston Bay*,) 816–817, 819; *Minot*, (*Gilkey Harbor*,) 347; *Misery*, 758; *Morse* or *Moss*, 429; *Morse Point*, 335; *Moshier*, 619; *Mosquito Island*, 387, 409; *Moulton*, 151–152, 160–161, 163, 172, 176, 177; *Murr*, 71; *Murray*, 395;
Negro Island, 662; *New Harbor Dry*, 424, 445; *New Harbor Sunken*, 405–406, 411–412, 433; *North Blacksnake*, 549; *North Jenny*, 549; *North Point*, 150; *Northeast*, (*Camden Harbor*,) 337, 338; *Northeast*, (*Damariscotta River*,) 473–474; *Northeast Harbor*, 206; *Northeast Point*, (*Camden Harbor*,) 338; *Northeast Point*, (*Sheepscot River*,) 539; *Northern*, 469; *Northern Triangles*, 359–360; *Northwest*, (*Flag Island*,) 553; *Northwest*, (*Fisherman Island Channel*,) 324, 363; *Northwest*, (Haskell Island,) 590; *Northwest Point*, 442–443; *Norton*, 112, 133, 134, 150; *Norton Island*, (near Cape Split,) 121, 123; *Norton Island*, (*Seal Harbor*,) 373–374; *Norton Point*, 306, 308;
Ober, or *Pride*, 751; *Odom*, 351, 354; *Old Cilley*, 391, 393; *Old Horse*, 394, 410; *Old Hump*, 402, 411, 432; *Old Man*, (near George Islands,) 366, 397; *Old Man*, (off *Little Machias*,) 76; *Old Man*, (*Prospect Harbor*,) 179, 180; *Old Woman*, (near George Islands,) 366, 397; *Old Woman*, (*Prospect Harbor*,) 179, 181; *Otter Island*, (*Muscle Ridge Channel*,) 323; *Otter Island*, (*Muscongus Bay*,) 399, 403, 407, 428; *Outer*, 337, 338; *Outer Green Island*, 359; *Outer Heron Island*, 468, 474; *Outer Shag*, 394; *Outer Tinker*, 250; *Owl's Head*, 324–325, 328;
Paddy, 33, 54; *Parker*, 527; *Pea*, 158, 165–166; *Peach*, 456; *Pemaquid*, 455–456, 468; *Perkins Island North*, 526–527; *Perkins Island South*, 526; *Pig Cove*, 490; *Pilgrim*, 750, 757; *Pine Tree*, 644, 647, 649–650; *Pleasant Cove*, 470; *Pleasant Island*, (approaches to *Penobscot Bay*,) 371; *Plum Cove*, 722; *Plummer Island*, 127; *Poland North*, 446; *Poland South*, 446; *Polin*, 439–440; *Polin Dry*, 440; *Polin East*, 439; *Polin South*, 440; *Pole Island North*, 558; *Pole Island South*, 558; *Pond Island*, (*Casco Bay*,) 560, 564, 566–567; *Pond Island*, (*Narraguagus*,) 148, 153, 165; *Porcupine Dry*, 200; *Porterfield*, 332, 333; *Post Office*, 287–288; *Potts Point*, 589–590; *Powderhorn*, 504–505; *Powderhorn South*, 504; *Pulpit*, 251; *Pumpkin Cove*, 445; *Pumpkin Island*, (*East Penobscot Bay*,) 251; *Pumpkin Island Eastern*, 468, 473, 489; *Pumpkin Island Western*, 475, 482, 489;
Ram Head, 825, 829, 837; *Ram Island*, (*Harpswell*,) 580, 589; *Ram Island*, (*Moos-a-bec Reach*,) 112; *Ram Island*, (*Muscongus Sound*,) 447; *Ram Island*, (near *Rockport*,) 332; *Ram Island*, (off the *Gurnet*,) 563, 567; *Ram Island*, (*Portland Entrance*,) 584, 637, 640; *Ram Island*, (*Saco River*,) 662; *Ram Island*, (*Sheepscot River*,) 505; *Rays Point*, 143; *Ringtown Island*, 229, 230, 239; *Rising States*, 758; *Roaring Bull* or *Black*, 366; *Robinson*, 302; *Roebuck* or *Russ Island*, 260; *Round*, 402, 407, 431; *Rye*, 705, 706;
Saddleback, (*Casco Bay*,) 556, 564; *Saddleback*, (*East Penobscot Bay*,) 273–274; *Salt Pond*, 445; *Sand*, 110, 116; *Sandy*, 25; *Sandy Bay*, 735; *Sandy Point*, (Cousins Island,) 631; *Sandy Point*, (*Penobscot River*,) 354; *Sawyer*, (*Isle au Haut Thoroughfare*,) 279; *Sawyer*, (*Moos-a-bec Reach*,) 115; *Schoodic*, 183; *Scraggy Island*, 270; *Sculpin*, 859, 861, 872; *Seal*, (*Great Chebeag*,) 626, 627; *Seal*, (*Muscongus Bay*,) 397–398, 401, 411, 427–428; *Seal*, (*Rockport*,) 333; *Seal Cove*, 166, 167; *Seashore*, 72, 75; *Sequin*, (*Kennebec Entrance*,) 510, 533; *Sequin*, (*Moos-a-bec Reach*,) 114, 117; *Sellman's Berth*, 772, 775–776; *Shackford*, 51, 54; *Shag*, (*Little Kennebec River*,) 78, 81, 83, 87, 94, 95; *Shag*, (*Merchant Row*,) 269; *Shag*, (off *St. George River*,) 394; *Sheep Island*, (*New Meadows River*,) 550; *Sheppard*, 853, 880, 881–882; *Shipyard*, 333; *Sister Island*, 611; *Slate*, 813, 832–833, 841; *Sloop*, (*Casco Bay*,) 565, 567–568; *Sloop*, (*Sheepscot Bay*,) 511; *South*, 328–329, 330; *Southeast*, (*Murr Ledges*,) 10, 11; *Southeast*, (*Penobscot Bay*,) 359; *Southern Triangles, The*, 369; *Southwest*, (*Casco Bay*,) 639; *Southwest*, (Isles of Shoals,) 702; *Southwest* or *Cross Island*, (*Machias Bay*,) 72; *Spectacle Island*, 248, 251; *Spermaceti* or *Whale's Back*, 264; *Spirit*, 229; *Spring Point*, 640–641; *Spruce Cove*, 80; *Spruce Point*, 481, 488; *Squaw Point*, 349, 353; *Squiers Point*, 88, 96; *Squirrel Island*, 490; *St. Mary*, 9, 10; *Stand-In Point*, 290; *Staniford*, 635, 641; *Stanley*, 122, 127; *Staples*, (*Burnt-Coat*,) 221; *Staples*, (*Deer Island Thoroughfare*,) 260; *State*, 812, 831, 839; *Stave Island*, (*Casco Bay*,) 591, 603, 613–614, 622; *Steele*, 342; *Steele Head*, 353; *Stellwagen* 819, 852; *Stover*, 506; *Strouts Island*, 140, 142, 150; *Stump Cove*, 250, 252; *Sturdivant Island*, 631; *Sunken* or *McIntosh*, (*East Penobscot Bay*,) 302; *Sunken*, (*Gangway Passage*,) 852; *Sunken*, (*Gilkey Harbor*,) 345; *Sunken*, (*West Gouldsboro'*,) 190, 193–194; *Sunken Black*, 285–286;
Tabbott, 112; *Temple*, 639; *Ten-Pound Island*, 743; *Thieves*, 808, 820; *Thomas*, 286–287; *Thorne Island*, 529; *Thread-of-Life*, 450, 451; *Thrumbcap*, (*Eggemoggin Reach*,) 247, 251; *Thrumbcap*, (*John Bay*,) 456; *Thrumbcap*, (*Medomak River*,) 440; *Thrumbcap*, (*Potts Harbor*,) 590, 591; *Thrumbcap* or *Long*, 251; *Thurston*, 456–457; *Torry*, 250; *Trafton Island*, 148, 153; *Transport*, 60, 61; *Trefethen*, 697; *Triangles, Northern*, 359–360; *Triangles, The*, (*Eggemoggin Reach*,) 250–251; *Triangles, The*, (off *Portsmouth Entrance*,) 684, 693; *Triangles, The*, (*Salem Entrance*,) 776; *Trufant*, 528; *Tupper*, 237–238; *Turnip Island*,

Page.

Ledges—Continued.
580, 583; *Turtle Island*, 184; *Two-Bush*, (*East Penobscot Bay*,) 249, 251–252; *Two-Bush*, (off *Quohog Bay*,) 555;
Underwood, 632; *Upper Basket Island*, 627–628; *Upper Flag Island*, 591; *Upper Gangway*, 324; *Upper Harbor*, 642; *Wallace*, 9, 10; *Waterman*, 287; *Watts*, 645, 648, 655; *Weare Point*, 680; *Weaver*, 220, 221; *Webber Dry*, 445; *Webber North*, 445; *Webber Sunken*, 445; *Wellman*, 777; *West*, (Isles of Shoals,) 701; *West*, (*Murr Ledges*,) 10; *West*, (*Richmond Island Harbor*,) 655; *West Cod*, 643; *Western*, 469; *Western Deer Island*, 258; *Western Egg Rock*, 406; *Whaleboat*, 603, 611, 614, 619, 622; *Whale's Back*, 264; *Wharf*, (*Belfast*,) 342; *White*, (*Kennebec Entrance*,) 510, 525, 533; *White*, (*Salem Entrance*,) 750; *Whitehead*, (*Casco Bay*,) 650, 651; *White Island*, 701; *White* or *Harbor*, 337, 339; *Whiting*, 855; *Willey*, 696; *Wilson*, 605; *Woody Clapboard Island*, 632; *Wormell*, 31–32; *Wreck Island*, 435, 440; *Wyman*, 548, 572;
Yarmouth Island, 558; *Yellow*, (*Home Harbor*,) 372; *Yellow*, (*Murr Ledges*,) 10; *Yellow*, (*Muscle Ridge Channel*,) 314, 321; *Yellow Rock*, 257, 261; *Yo-ho*, 84; *York*, (*Casco Bay*,) 632; *York*, (approaches to *York River*,) 684, 685, 693.

Ledges between Doyle and Pomp Islands 111
Ledges near *Mill Creek* 143
Ledges, The, (*Damariscotta*) 471
Ledges south of Light-House Island, (Boston) 809
Ledges west of Matinicus Island 359
Lee Island 521
Lee Island Rock 527
Leighton Head or Point 46, 49, 50
Leighton Ledge 109, 118
Letite Passage 20
Lewis Cove, (*Linekin Bay*) 480
Lewis Cove, (*St. Croix River*) 41
Lewis Rock 205, 208
Libbey Islands 7, 64, 86
Libbey Island Light-House 64, 77, 85, 86, 101
Libbey Point 69
Liberty Point 17, 23, 27, 28
Liberty Point Ledge 31
Life-Boat Stations:
Annisquam, 724; *Bass Cove*, (near Scituate,) 864; *Boston Bay*, 863–864; Deer Island, 863; Emerson Point, 738; Fourth Cliff, 864; Glades House, 864; Gloucester, 747; Hominy Point, 863–864; Hull Beach, 863; Ipswich, 716; Lanesville, 724; Manchester, 787; Marblehead, 787; Milk Island, 738; Nahant, 792, 799, 863; *Nantasket Roads*, 863; North Scituate Beach, 864; Petit Manan Island, 155, 169; Phillips Beach, 792; Pleasant Beach, 863; Point Allerton, 863; Rockport, (Massachusets,) 738; Scituate Tower, 864; Simon's Farm Beach, 864.
Light-House Cove 740, 741
Light-House Island 800
Light-Houses:
Annisquam, 719–720, 723; Baker Island, (Mount Desert,) 202, 217; Baker Island, (*Salem Entrance*,) 746, 755–756, 786; Bass Harbor Head, 218, 223, 242; Bear Island, 204, 217; Boon Island, 681, 686, 698–699, 703; Boston, 800–801, 818, 862; Brown's Head, 284, 370; Burnt-Coat Harbor, 226, 242; Burnt Island, 486, 492;
Campobello, 17; Cape Ann, 726–727, 731, 738; Cape Elizabeth, 543, 636, 653, 657;
Deer Island Thoroughfare, 258, 262, 370; Derby Wharf, 754, 786; Dice Head, 299, 304, 350, 356, 370;
Eagle Island, 295, 370; East Quoddy Head, 17, 22, 35; Eastern Point, 726, 731, 740, 746; Egg Rock, 788, 792, 798, 862; Eggemoggin, 233, 242, 253;
Fort Pickering, 754, 786; Fort Point, 351, 356, 370; Franklin Island, 405, 413, 426, 449;
Goat Island, 669, 671, 673, 675; Grindel Point, 344, 347, 370;
Half-Way Rock, 543, 583, 635–636, 653; Head Harbor, 86–87, 101; Hendrick Head, 494, 515; Heron Neck, 305, 370; Hospital Point, 752–753, 786;
Indian Island, 332; Ipswich, 713, 715; Isles of Shoals, or White Island, 686, 700, 703;
Libbey Island, 64, 77, 85, 86, 101; Little River, 58, 59, 62; Long Island Head, 804, 862;
Machias Seal Island, 71, 77; Marblehead, 764, 769, 778, 786; Marshall Point, 380, 413; Matinicus Rock, 275, 370; Minot Ledge, 816–817, 862, 882; Monhegan, 365, 370, 449; Moose-a-bec, 86–87, 101, 129; Mount Desert Rock, 204–205, 217;
Narraguagus, 145 146, 155; Narrows, (*Boston Bay*,) 802, 862; Nash Island, 107, 128, 129, 134; Negro Island, 334, 336, 339, 370; Newburyport, 708, 712;
Owl's Head, 321, 327, 331, 370; Pemaquid, 413, 424–425, 449, 460; Petit Manan, 151, 155, 156, 168; Pond Island, (*Narraguagus*,) 158, 168; Pond Island, (off *Kennebec River*,) 517–518, 534; Portland Breakwater, 638, 653; Portland Head, 543, 636, 653; Portsmouth, 689, 692, 703; Prospect Harbor, 178, 181; Pumpkin Island, 247, 253, 370;

Page.

Light-Houses—Continued.
Saddle-Back Ledge, 274, 370; Seguin, 515, 517, 534; St. Croix River, 38, 45; Straitsmouth Island, 725, 731, 738; Ten-Pound Island, 741, 746; Tennant Harbor, 375, 377; Thatcher Island, 726–727, 731, 738; West Quoddy Head, 22, 28, 35; Whale's Back, 688, 692, 703; Whitehead, 274, 312, 326, 370; Winter Harbor, 184–185, 187; Wolves, 23; Wood Island, 660, 666.
Lilly Cove 142
Lime Island 346
Lime Rock 536
Lincoln Head 48, 50
Lincoln Ledge 528
Lincolnville Harbor 340–341
Lincolnville, Village of 340
Linekin Bay 463, 478–484
Linekin Ledge 481
Linekin Neck 461, 462–463
Lines Island 522
Lithgow Rock 528
Little Aqua Vitæ Beacon 777
Little Aqua Vitæ Rock 777
Little Babson Island 244
Little Bangs Island 593, 597
Little Birch Island, (*Middle Bay*) 601
Little Birch Island, (*Potts Harbor*) 588, 590, 593
Little Black Ledge 179
Little Boar's Head 705
Little Boisbubert Harbor 157
Little Boisbubert Island 157
Little Bull Ledge 552
Little Burnt Island 381
Little Caldwell Islands 380, 382
Little Calf Island, (*Boston Bay*) 825, 835
Little Calf Islands 190
Little Camp Island 256
Little Chebeag Island 598–599, 625
Little Cove 467
Little Cranberry Island 202, 203
Little Deer Island 246, 295
Little Dochet Island 41
Little Drisco Island 120
Little Duck Island 224
Little Duck Pond 19, 28
Little Egg Rock, (*Muscongus Bay*) 397, 425
Little Egg Rock, (off Salem) 749
Little Egg Rock Shoals 397, 427
Little Faun Bar 830, 838, 844
Little Fishing Rocks 676
Little Flying Point 608
Little Gott Island 219, 224
Little Green Island 317–318
Little Harbor:
(*John Bay*,) 451; (*Marblehead Entrance*,) 770; (Portsmouth,) 687–688, 692, 700.
Little Harbor Rock 745
Little Haste 759, 760, 767, 773
Little Haste Beacon 760, 767, 773
Little Head 59
Little Hen Island 93, 95
Little Hog Island 624
Little Hurricane Island 310
Little Iron Island 601
Little Island, (*Linekin Bay*) 480
Little Island, (*Muscongus Bay*) 424
Little Jaquish Island 560
Little Kennebec River 77–85
Little Knubble, (*Sasanoa River*) 538
Little Ledge 110, 116
Little Machias Bay 60, 62–63
Little Machias, Village of 59, 62
Little Mark Island, (*Chandler River*) 92, 95, 96
Little Mark Island, (*Casco Bay*) 575
Little Mark Island Ledge 560, 566, 570, 580, 583, 594–595, 610, 618
Little Mink Island 136
Little Misery Island 748, 755
Little Moshier Island 617
Little Nahant 788, 794

Page.
Little Nahant Beach 788, 794
Little Pea Ledge 158
Little Point 467
Little Pond Island 317
Little Porcupine Island 194
Little Ram Island 120
Little River:
(*Annisquam,*) 719; (*Damariscotta,*) 463; (*Freeport River,*) 617; (near Cape Porpoise,) 667; (near Eastport,) 57–62; (*Passamaquoddy,*) 41; (*Saco Bay,*) 658; (*Sheepscot Bay,*) 516; (Wells,) 678.
Little River Head 58, 59, 60
Little River Island 58, 60
Little River Ledges 511
Little River Light-House 58, 59, 62
Little Round Island 422
Little Sail Rock 31
Little Sally 246
Little Salvages 728, 733–734
Little Sheep Island 254, 263
Little Sheepscot River 495–496, 513, 539
Little Spoon Island 227, 277
Little Spruce Island 88, 98
Little Spruce Island Ledge 88
Little Stage Island 671
Little Thoroughfare 281
Little Thrumbcap, (*Frenchman Bay*) 194
Little Two-Bush Island 314
Little Whaleboat Island 597, 600
Little Whaleboat Ledge 603, 611, 614, 622
Little Wood Island 544
Littlejohn Island 626
Littlejohn Rock 567
Liverpool Rock 11, 72
Loblolly Cove 725
Lobster Cove 719, 720
Lobster Island 175
Lobster Ledge 287
Lobster Point 365
Lobster Rock, (*Little Kennebec River*) 84
Lobster Rock, (*Squam River*) 721, 722
Lobster Rocks:
(*Beverly Harbor,*) 785; (*East Sullivan,*) 191, 192, 193; (*Lynn Harbor,*) 796; (*Pigeon Hill Bay,*) 159, 162, 166; (*Saco Bay,*) 663.
Locke Point 705
Locust Island 419, 437
Locust Island Ledges 450
Locust Reach 218
Logey Ledge 696
Londoner, The 728, 736
Long Cove:
(*Hurricane Sound,*) 311; (*Medomak River,*) 419; (*Muscongus Bay,*) 424; (near *Tennant Harbor,*) 372, 374, 375, 376; (Orr Island,) 562, 578; (*Sheepscot River,*) 499; (*South-East Harbor,* 295.
Long Creek 107
Long Eddy Point 8, 23
Long Island:
(*Blue Hill Bay,*) 234–235; (*Boston Bay,*) 804, 835, 857–858; (*Casco Bay,*) 537; (*Cobscook,*) 50; (*Kennebec River,*) 519; (*New Meadows River,*) 547; (off *Blue Hill Bay,*) 102, 224, 229–230; (*Penobscot Bay,*) 298–299, 340, 343–348.
Long Island Head, (*Boston Bay*) 804, 811, 827, 858
Long Island Hub 235
Long Island Ledge 300, 303, 355
Long Island Ledges, (*Medomak River*) 442
Long Island Light-House 804, 862
Long Island Narrows 518–519
Long Ledge:
(*Casco Passage,*) 271, 272; (*Gangway Passage, Boston Bay,*) 851; (*Gilbey Harbor,*) 345; (*Little River,*) 60, 61; (*Moos-a-bec Beach,*) 115, 118; (*Murr Ledges,*) 9, 10; (*Muscongus Bay,*) 403, 407, 432; (off *New Meadows River,*) 552–553; (*Sheepscot River,*) 505; (*South-West Harbor,*) 210, 220.
Long Ledge Cove 60
Long or *Mansfield Ledge* 259
Long or *Thrumbcap Ledge* 251
Long Point:
(*Narraguagus Bay,*) 149; (near *Little River,*) 59; (*New Meadows River,*) 554, 555; (*Salem Harbor,*) 754.
Long Point Ledge 149

Page.
Long Pond 201
Long Pond Harbor 201
Long Pond Shoal 205–206, 208
Long Porcupine Island 194
Long Reach 578
Long Sand, The 681
Look Bay 92
Look Head 92, 95
Look Point 92
Lookout, The, (*Little River*) 58
Lookout, The, (*Middle Bay*) 602, 604
Looks Cove 137
Lord Point 236
Lovell Island 803, 819, 835
Low Place, (Wooden Ball Island) 276
Low-Water Rock 196
Lowe Cove, (*Damariscotta River*) 465
Lowe Cove, (*Sasanoa River*) 539
Lowe Point 538
Lowell Cove 562, 578
Lowell Island 752, 756, 763, 764, 769, 771
Lowell Ledges 328, 330
Lowell Rock 332, 333
Lower Basket Island Ledge 627
Lower Clapboard Island 625
Lower Clapboard Island Ledge 632
Lower Corners, Village of 352
Lower Dodge Cove 467
Lower Fitch Point 466
Lower Gangway Ledge 322
Lower Goose Island 597, 600
Lower Mark Island 493
Lower Middle, The 811, 830, 839
Lower Middle-Ground, The, (*Lubec Narrows*) 29, 32
Lower Middle-Ground, The, (*Narraguagus Bay*) 148
Lower Narrows 420, 442
Lower Neck, (*Hingham Bay*) 869
Lower Wass Cove 137
Lubec Flats 32
Lubec Narrows 19, 22, 27–28
Lubec Neck 27–28, 29
Lubec, Village of 28, 29
Luckse Sound 597, 608
Lumbo Ledge 551–552, 564, 574, 639
Lunging Island 701
Lunt Cove or *Harbor* 229
Lunt Rock 710
Lynn Beach 788, 794
Lynn, City of 788, 792, 794
Lynn Harbor 794–799

M.

Mac Cove 86
Macfarling Cove 452
Macfarling Ledges 457
Macfarling Point 454
Machias Bay 7, 63–77
Machias, City of 63, 69
Machias River 63, 68–70, 73
Machias Seal Island 11, 71–72
Machias Seal Island Light-Houses 11, 71, 77
Machiasport, Village of 63, 68
Mackerel Cove:
(Burnt-Coat Island,) 225–226, 271; (*Casco Bay,*) 563, 576; (*Salem Harbor,*) 753.
Mackey Island 624, 652
Mackey Point 652
Macmaster Island 24
Maddox Cove 513
Maffit Ledge 836
Magaguadavic River 22
Mahoney Island 222, 224, 233
Mahoney Island Ledge 240, 241, 249
Main Ship Channel of—
Boston Harbor, 799–825 *East Penobscot Bay*, 356; *Salem Harbor*, 755–763; *West Penobscot Bay*, 356, 358.

Page.
Major Island 50
Major Island Ledges 54
Malaga Island 545
Malcolm Ledges 277, 358
Man Island 90, 98, 100
Manan Channel 12–13, 15, 16
Manan Ledges 8–9, 10
Manan Island 365–366
Manchester Cove 213
Manchester Harbor 747, 749–751, 762
Manchester Point 212, 213
Manchester, Village of 749
Mansfield Ledge 259
Maple Juice Cove 385
Maquoit Bay 593, 596, 597, 608–615
Marblehead Beach 769, 778, 787
Marblehead Channel into Salem 769–775
Marblehead Harbor 770, 778–784
Marblehead Island 317, 320
Marblehead Light-House 764, 769, 778, 786
Marblehead Neck 769, 771
Marblehead Peninsula 755, 770
Marblehead Point 769, 778–779
Marblehead Rock 770, 779
Marblehead, Town of 755, 764, 770, 779
Mare Point 607
Mare Point Bay 607–615
Mare Point Neck 607
Margie Rock 33
Mark Island:
(*Deer Island Thoroughfare,*) 258, 269; (*East Penobscot Bay,*) 296, 297; (*Englishman Bay,*) 90, 94, 98, 102; (*Penobscot Bay,*) 303, 346; (*Winter Harbor of Frenchman Bay,*) 184, 185.
Mark Island, or Pope's Folly, (*Eastport Harbor*) 29
Mark Island, Woody, (*Casco Bay,*) 543, 544
Mark Island Ledge, Woody, (*Casco Bay*) 552, 574
Mark Island Ledge, (*Sheepscot River*) 503–504
Mark Island, or *Bay Ledge* 261
Mark Island Light-House 258, 262
Mark Island Monument 575
Marr Island 518, 519
Marsh Bay 352
Marsh Cove 278
Marsh Cove Head 278, 279
Marsh Cove Ledges 278, 279–280
Marsh Cove Point 175
Marsh Harbor 422, 426
Marsh Island, (*Casco Bay*) 597–598
Marsh Island, (*Muscongus Bay*) 422
Marsh River 352
Marshall Cove 384
Marshall Island 224, 227–228, 271–272
Marshall Point, (*Herring Gut*) 378, 380
Marshall Point, (*Machias River*) 69
Marshall Point Ledge 387–388, 392, 409
Marshall Point Light-House 380, 413
Marstin Mountain 79, 82
Marstin Point 79, 82
Martin Ledge, (*Boston Bay*) 807–808, 827–828
Martin Ledges, (*Frenchman Bay*) 197
Martin Point:
(*Frenchman Bay,*) 196; (*Meduncook River,*) 414, 417; (*Presumpscot River,*) 652.
Martin Rock 766, 783
Martin's Well 876
Mason Bay 89–100
Mason Bay Ledge 96
Mason Point 214
Massachusetts Bay 724, 738–882
Matinicus Island 275–276
Matinicus Roads 276
Matinicus Rock 274–275
Matinicus Rock Light-Houses 275
Matinicus Seal Island 276–277
Maxwell Point 594
Mayhew Mountain 81
McCarty Cove 499
McGee Island 380, 381, 415
McGlathery Island 243, 266

Page.
McGuire Point 465
McIntosh or *Sunken Ledge* 302
McKenzie Point 355
McKinney Point 654
McKown Point 484–485
McMahan Island 495, 496
Meadow Cove 464
Mears Cove 466
Medomak River 414, 417–421, 434–444
Meduncook Hill 416
Meduncook River 384, 414, 415–417, 427–434
Meeting-House Cove 419–420
Megunticook Mountain 332, 336
Megunticook River 335
Mehollan Point 19, 29
Merchant Harbor 267
Merchant Island 243, 266, 267
Merchant Row 222, 243, 265–270
Mericoneag and *Harpswell Sounds* 575–587
Merrill Ledge 506
Merrimac River 705–712
Merriman Cove 577
Merriman Ledge, (Casco Bay) 581
Merriman Ledge, (Eggemoggin Reach) 251
Merritt Island 547
Merry Island 466
Merrymeeting Bay 523
Meserve Head 69
Meserve Point 69
Metcalf Point 335
Metinic Green Island 364
Metinic Island 364–365
Metinic Island Ledge 367
Mid-Channel Rock 766, 782–783
Middle Bay:
(*Casco Bay,*) 593, 595–596, 597–607; (*Cobscook Bay,*) 46; (*New Meadows,*) 548.
Middle Bay Cove 602
Middle Breakers 764
Middle Brewster 800, 818, 835
Middle Channel into Cohasset, ... 878, 879–881
Middle Channel of Penobscot Bay 356, 359–361
Middle Ground, The:
(*Beverly Harbor,*) 785; (*Governor Island Passage,*) 846, 848; (*Casco Passage,*) 272; (*Castine Harbor,*) 301; (*Essex River,*) 717, 718; (*Lubec Narrows,*) 32; (*Machias River,*) 72; (*Nahant Bay,*) 789; (*New Meadows River,*) 550; (off the *Gurnet,*) 567; (*Pembroke River,*) 52; (*Portland Harbor,*) 641; (*Salem Harbor,*) 760, 767–768, 773; (*St. Croix River,*) 43; (*Wiscasset Bay,*) 507.
Middle-Ground Ledge 784
Middle-Ground Rock 557, 561, 564–565
Middle Ledge, or *Middle Rock* 565
Middle Ledges, (Medomak River) 441–442
Middle Mark Island 503
Middle or *Main Channel of St. George River* 379, 393–396
Middle River 69–70
Middle Rock 215
Middle Shoal, (Murr Ledges) 10–11
Midway Rocks 402, 406–407, 431
Mike Ledge 853
Milbury Ledge 683
Mile Ledge 491, 508, 530
Milk Island 727, 731
Mill Bridge, Town of 145, 147, 148
Mill Cove:
(*Campobello,*) 18, 27; (*Harpswell,*) 577; (*New Meadows River,*) 547; (*Penobscot River,*) 351; (*Quohog Bay,*) 556; *St. Croix River,*) 36, 37, 41; Thurlow Island, 257.
Mill Creek:
(*Chandler River,*) 93; (*Harrington River,*) 141; (*Wohoa Bay,*) 107.
Mill Point:
(*Sasanoa River,*) 536; (*St. Croix River,*) 36; (*Town's End Harbor,*) 487.
Mill River:
(*Annisquam,*) 719, 720; (*Fox Islands Thoroughfare,*) 283; (*Pleasant Bay,*) 144; (*St. George River,*) 380, 387.
Miller Creek, (Little Kennebec River) 81
Miller Creek, (Mare Point Bay) 607
Miller Island, (*Damariscotta River*) 465
Miller Island, (*Medomak River*) 418–419

Page.
Milton Mills 864, 865
Mingo Rock 702
Ministerial Island 589, 591, 593, 597
Mink Island 63, 76, 77
Mink Rocks 595
Minot or Spruce Island 346–347
Minot Ledge, (Boston Bay) 816, 819
Minot Ledge, (Gilkey Harbor) 347
Minot Ledge Light-House 816–817, 862, 878, 882
Minot Point 866
Minot Point Flats 866–867
Misery Bar 759
Misery Ledge 758
Misery Rock 759
Misery Shoal 759
Mistake Island 86–87, 89, 97, 100
Mistake Point 89, 100
Mitchell Point 40
Mitchell Rock, (approaches to Portland) 647, 649
Mitchell Rock, (Cape Ann) 734
Molasses Rock 26
Money Island 101
Money Islands, (*Gouldsboro'*) 175
Money Point 278
Monhegan Harbor 365–366
Monhegan Island 365
Monhegan Island Light-House 365
Montsecag Bay 499, 536
Monument Bar 785
Moon Head 857
Moon Head Flats 859, 872
Moon Island 857, 868
Moore Cove 278, 279
Moore Harbor 279
Moore Head 278
Moore Point, (*Freeport River*) 615, 616
Moore Point Rock, (Freeport River) 620
Moos-a-bec Bar 110
Moos-a-bec Light-House 86–87, 100, 101, 129
Moos-a-bec Reach 86, 98, 102–129
Moose Island:
(*Deer Island Thoroughfare,*) 257; (*Eastport,*) 17, 20–21; (*Indian River,*) 107, 129, 130.
Moose Neck 102, 108, 130, 131
Moose River or *Cove* 56–57
Moose Rock 115
Morgan Bay 235
Morse Cove 521
Morse Hill 541
Morse Island 414, 415
Morse Mountain 541
Morse Point, (*Camden Harbor*) 335
Morse Point, (near *Kennebec River*) 540
Morse Point Ledges 335
Morse River 540–541
Morton Rock 30–31
Mosely Point 197
Moshier Ledge 619
Moss or *Morse Ledges* 429
Mosquito Harbor, (Frenchman Bay) 185
Mosquito Harbor, (near *Herring Gut*) 378
Mosquito Head 378
Mosquito Island 378
Mosquito Island Ledge 387, 409
Mosquito Village 378
Mosquito, or *Winter Harbor* 183, 184–187
Motions, The 483, 489, 501
Moulton Ledge 151–152, 161, 163, 172, 176, 177
Mount Beattie 332, 336
Mount Bowdoin 864
Mount Darcy 340
Mount Garey 340
Mount Megunticook 332, 336
Mount Pleasant 332
Mount Pisgah 480
Mount Simpson 37, 41
Mount Washington 645
Mount Wollaston 868

Page.
Mount Desert Eastern Passage 206, 208–210, 215–216
Mount Desert Island 169, 183, 199–223
Mount Desert Rock 204–205
Mount Desert Rock Light-House 204–205, 217
Mousam or *Maguncook River* 678
Mouse Island, (*Booth Bay*) 486
Mouse Island, (*East Penobscot*) 302
Munjoy Hill 635, 639
Munjoy Observatory 635, 639, 645
Munroe Island 320, 363
Murr Ledges 9–10, 71
Murray Ledge 395
Murray Rock 684, 685, 693
Muscle Cove 655
Muscle Point 739
Muscle Ridge Channel 305, 312–326, 361
Muscle Ridge Islands 313–321
Muscongus Bay 413–450
Muscongus Harbor 423
Muscongus Hill 423
Muscongus Island 414, 421–422
Muscongus Island Bar 446
Muscongus Sound 414, 422–425, 444–448
Mussel Cove 629
Mystic River 806, 814, 815

N.

Nahant Bay 787–792
Nahant Harbor 788
Nahant Head 739, 792
Nahant, Peninsula of 787, 788
Nantasket Beach 802, 818, 869
Nantasket Gut 869
Nantasket Hills 802, 835, 858
Nantasket Roads 814–815, 816, 820–821, 822, 823
Nantasket, Village of 802, 818
Narraguagus Bay 145–155
Narraguagus Light-House 145, 146, 155, 158
Narraguagus River 145, 148, 149
Narrows:
(*Bass Harbor,*) 218; (*Benjamin River,*) 245; (*Boston Harbor,*) 802–803, 823, 824; (*Castine Harbor,*) 300; (*Chandler River,*) 92, 95; (*Cross Island,*) 63, 76–77; (*Damariscotta,*) 464; (*Gouldsboro' Bay,*) 173, 175; (*Lubec,*) 22, 27–28; (*Medomak,*) 419, 438; (*Pleasant Bay,*) 135; (*Roque Island,*) 88, 89, 100; (*Sheepscot,*) 500; (*Somes Sound,*) 213; (*Spruce Island,*) 88; (*St. George River,*) 384, 385; (*Tabbott,*) 102, 106; (*Union River,*) 236; (*Weymouth Back River,*) 874; (*York,*) 222, 273.
Narrows Island 135
Narrows Light-House 802, 862
Nash Harbor 135
Nash Harbor Island 135
Nash Harbor Point 135
Nash Island 102, 106–107, 128, 134
Nash Island Light-House 107, 128, 129, 134
Nash Point 139, 142
Nash Rock 809, 820, 860
Naskeag Harbor 233, 244
Naskeag Point 223, 232, 233, 243
Naugus Head 754, 755, 770
Naumkeag Island 524
Nautilus Island 300
Navy Island, (*Portsmouth Harbor*) 690
Navy Island, (*St. Andrew Bay*) 36–37
Navy Island Reef 37, 42–43
Navy-yard at Charlestown 806
Navy-yard at Kittery 690
Neck, The, of Andrews Island 316
Ned Island 184, 185
Negro Island:
(*Linekin Bay,*) 478, 479; (*Penobscot Bay,*) 336; (*Saco Bay,*) 660.
Negro Island Bar 663
Negro Island Ledge 662
Negro Island Light-House 334, 336, 339
Neponset River 806, 864–868
Neponset, Village of 864
New Harbor 424–425

Page.
New Harbor Dry Ledges 424, 445
New Harbor Sunken Ledges 405–406, 411–412, 433
New Meadows River 543, 544–554
Newbury Head 235
Newbury Neck 235
Newbury Point, (approaches to *New Meadows River*) 544
Newbury Point, (*Chandler River*) 92, 95
Newbury, Village of 714
Newburyport Harbor 705, 707–712
Newburyport Light-Houses 708, 712
Newburyport, Town of 707, 708
Newcastle, Village of, (*Damariscotta River*) 460, 467
Newcastle, Village of, (*Portsmouth Harbor*) 689, 700
Newcomb Landing 870
Newdick Cove 539
Newdick Point 538
Newport Mountain 199
Nigger Island 670
Night-Cap, The 136
Nipple, The 103, 109
Nix Mate 803, 810–811, 838
Nix Mate Beacon 803, 810–811, 838
No Man's Land 276
Noble Island 691
Noddles Island 806, 849
Noddles Island Shoals 849
Norman's Woe 739, 742
Norman's Woe Cove 739, 742
Norman's Woe Rock 739, 742, 743
North Beacon, (*Portsmouth Harbor*) 696
North Beacon Shoal, (*Portsmouth Harbor*) 696
North Blacksnake Ledge 549
North Breaker, (*Plum Island Sound*) 714
North Breakers, (*Newburyport Harbor*) 709
North Castine, Village of 299
North Centurion, The 809, 821
North Channel of Broad Sound, Boston Bay 799, 843–845
North Channel in President Roads 811
North Channel of St. George River 379
North Channel, or *Indian Narrows*, (*Deer Island Thoroughfare*) 257, 260–261
North Hampton, Village of 705
North Harbor, (North Haven) 294
North Haven Island 281, 327
North Haven, Village of 283
North Islesboro, Village of 298, 343
North Jenny Ledge 549
North Perry, Settlement of 41
North Pier of *Newburyport Harbor* 710
North Point Ledge 150
North point of—
Cape Ann, 724; *Governor Island Flats*, 848–849; *Massachusetts Bay*, 738.
North River, (*Beverly Harbor*) 753
North Rock 11–12, 24
North Scituate Beach 864
North Shoal 11, 12
North shores of—
Frenchman Bay, 194–196, 197–199; North Haven Island, 293–294; *Penobscot Bay*, 348–350.
North Spectacle 804, 827
Northeast Graves 807, 827, 835–836
Northeast Harbor 199, 202, 204–207
Northeast Harbor Ledge 206
Northeast Head 20, 41
Northeast Ledge, (*Damariscotta*) 473–474
Northeast Ledges, (*Camden Entrance*) 337
Northeast or Morse Point, (*Camden Entrance*) 335
Northeast Point, (Matinicus Island) 276, 277
Northeast Point, (McMahan Island) 496, 539
Northeast Point Ledge, (*Camden Entrance*) 338
Northeast Point Ledge, (near McMahan Island) 539
Northeast Point Reef 429
Northern Bay 299
Northern Harbor 64
Northern Island 375
Northern Ledge 469
Northern Spit of Essex River 717
Northern Triangles 359–360
Northwest end of *Lower Middle* 812, 831, 839

Page.
Northwest Harbor, (Deer Island, *Passamaquoddy*) 20, 41
Northwest Harbor, (Deer Isle) 263, 294–295
Northwest Head 20, 41
Northwest Ledge, (*Casco Bay,*) 553, 590
Northwest Ledge, (*Fisherman Island Channel*) 324, 363
Northwest Point, (Wooden Ball) 276
Northwest Point Ledges 442–443
Northwest Slue 245–246
Northwest Spit of Nix Mate 811
Norton Island:
(*Moos-a-bec Reach,*) 102, 104, 121; (Muscle Ridges,) 315, 372; (off *Pleasant Bay,*) 112, 134.
Norton Island Ledges, (*Moos-a-bec Reach*) 121, 123
Norton Island Ledges, (off *Wheeler Bay*) 373–374
Norton Ledge or *Reef* 112, 133, 134, 139, 150
Norton Point 306, 308
Norton Point Ledge 306, 308
Norwood Cove 213
Nova Rock 109, 116
Nub, The 237
Number of Islands in *Casco Bay* 542
Nut Island 868

O.

Oak Bay 36, 38, 42
Oak Hill 294
Oak Island, (*Casco Bay*) 565
Oak Island, (Muscle Ridges) 317
Oak Point:
(*Penobscot River,*) 352; (*St. Croix River,*) 39, 42; (*Trenton River,*) 198, 232, 235.
Oak Rock 727, 737
Oaks Point 144
Oar Island 420, 421
Obed Rock 598
Ober Ledge 751
Ocean House, (Hunniwell Point) 519
Ocean House, (Rye Beach) 705
Oceanville, Settlement of 254, 263–264
Odiorne Point 687
Odom Ledge 351, 354
Odom Ledge Monument 351, 354
Ogunquit, Settlement of 679
Ojier Point 335, 336
Old Anthony, or *Vapor Rock* 646, 648
Old Bull, The 165, 171, 172
Old Cellar Rock 707
Old Cilley Ledge 391, 393
Old Cove 601
Old Fort Point 454
Old Harbor, (*Boston Bay*) 817, 864
Old Harbor, (*Hurricane Sound*) 310, 311
Old Harbor Flats 866
Old Harbor Point 864
Old Harbor Shoal 865
Old Harry Rock 796
Old Horse Ledge 394, 410
Old House Point 111
Old Hump Channel into St. George River 400–404
Old Hump Ledge 379, 402, 411, 432
Old Man, The:
(Near George Islands,) 366, 397; (off *Little Machias,*) 63; (*Prospect Harbor,*) 179, 180.
Old Orchard Beach 658, 661
Old Point 198
Old Prince, The 672, 674
Old Proprietor, The, (*Manan Ledges*) 8–9, 10, 13
Old Proprietor, The, (*Richmond Island Harbor*) 656
Old Sheriff, The 227, 229
Old Sow, The 503
Old Spain, Village of 870
Old Sunken Rock 795
Old Woman, The, (near George Islands) 366, 397
Old Woman, The, (*Prospect Harbor*) 179, 181
Old York, Village of 682
Oliver Island 691
Oliver Lord Point 142
One Bush Island 104

Page.
One Tree Island 691
Orcutt Harbor 247
Orland, Village of 351
Orne Island 770
Orono Island 224, 230, 270–271
Orr Cove 556
Orr Island 555, 562, 577–578
Orrington, Village of 352
Osher Rocks 852
Otis Cove 385
Otis Hill 875
Otter Creek 199, 201
Otter Creek Harbor 201
Otter Creek Point 183, 199, 201
Otter Head 59
Otter Island:
(*East Penobscot Bay,*) 307; (*Muscle Ridge Channel,*) 317, 318; (*Muscongus Bay,*) 399, 405, 427.
Otter Island Ledge, (Muscle Ridge Channel) 323
Otter Island Ledge, (Muscongus Bay) 399, 403, 407, 428
Otter Island Passage 399
Otter Point 318
Otter Rock Shoal 300, 303, 304
Outer Bar of Petit Manan 151, 154–155, 163
Outer Breakers, (off *Swampscott*) 790
Outer Brewster 800, 818, 825
Outer Endeavors 776–777
Outer Green Island 585, 637
Outer Green Island Ledges 359
Outer Harbor of Camden 335
Outer Heron Island 462
Outer Heron Island Ledge 468, 474
Outer, or *Northeast Ledges* 337, 338
Outer Minot, The 816, 819, 878
Outer, or *Southeast Breakers, (Salem Entrance)* 765
Outer Petit Manan Bar 151, 154–155, 163–164
Outer Point Rock 776
Outer Sand Island 119, 125–126
Outer Shag Ledge 394
Outer Thompson Rock 428
Outer Tinker Ledge, (Eggemoggin Reach) 250
Oven's Mouth 500
Over Cove 170
Overset Island 597
Owen Head 18
Owl's Head 320–321, 327
Owl's Head Bay 320, 328
Owl's Head Harbor 320
Owl's Head Ledge 324–325, 328
Owl's Head Light-House 321, 326, 327, 331

P.

Paddy Ledge 33, 54
Page Rocks 33
Painted Rocks at Little River Entrance 58, 59, 61
Palmer Cove 754
Palmer Point 754
Parker Bar 93, 99
Parker Cove 298, 355
Parker Flats 527
Parker Head, (*Englishman Bay.*) 89, 93, 99
Parker Head, (*Kennebec River*) 520
Parker Ledge 527
Parker Point, (*Casco Bay*) 628, 629, 630
Parker Point, (*Dyer Bay*) 170
Parker River 714
Parker's Head, Village of 520
Partridge Island 144
Partridge Point 453
Passagassawakeag River 341
Passages—
Among the Islands in *Boston Harbor* and *Bay,* 860–862; between Damiscove and Outer Heron Island, 474–475; between Haskell and Upper Flag Island, 592–593; between Linekin Neck and Fisherman Island, 476–477; between the White Islands and Outer Heron Island, 473–474; connecting *Penobscot* and *Blue Hill Bays,* 243.
Passamaquoddy Bay 7, 17–46

Page.
Patten Bay 236
Patterson or Ficketts Point 148
Pea Island 795
Pea Ledges 158, 165–166
Peabow Island 455
Peach Point 766, 770, 771
Peaks Island 637, 650
Peddock Island 869
Peirce Island 691, 692
Pell Island 267
Pemaquan Bay 46
Pemaquan River 55
Pemaquid Falls, Village of 453
Pemaquid Harbor 450, 453–454
Pemaquid Ledge 455–456, 468
Pemaquid Neck 422, 424–425
Pemaquid Point 405, 424, 450
Pemaquid Point Light-House 413, 424–425, 449, 460
Pemaquid River 450, 453–454, 456–457, 458, 459
Pembroke Iron Works 46, 49, 51
Pembroke River 21, 46–55
Pembroke, Village of 21, 46, 49, 51
Pen or Prince Head 869
Pendleton Island 20, 41
Pennell's Wharf 605
Penobscot Bay 227, 273–372
Penobscot River 273, 299, 350–356
Penobscot, Village of 299, 351
Pepperell Cove 689, 692, 696, 697
Perkins Island 519–520
Perkins Island North Ledge 526–527
Perkins Island South Ledge 526
Perkins Point 467
Perry Cove 283
Perry Harbor 41
Perry, Village of 21, 41
Peters Cove, (Damariscotta River) 465
Peters Cove, (Harpswell Harbor) 601–602
Peters Island 465
Petit Manan Bar 155, 163–164
Petit Manan Inner Bar 151, 154–155, 163
Petit Manan Island 12, 97, 151, 156
Petit Manan Light-House 151, 156
Petit Manan Neck 156, 169, 173
Petit Manan Outer Bar 151, 154–155, 163
Petit Manan Point 156, 169
Petit Manan Reef 152, 162, 167, 176
Pettingill Island 609
Pettis Rocks 521, 527
Petty Point 178
Phœbe Island 266
Philip Rocks 693
Phillips Beach 787
Phillips Head 871
Phillips Point 787
Phipps Point 537
Phipsburg Centre 520
Pickering Island 296
Pickering Point 755
Pierce Point 78, 82
Pig Cove 486
Pig Cove Ledge 490
Pig Island, (*Booth Bay*) 486
Pig Island, (*Moos-a-bec Reach*) 103
Pig Rocks 869–870, 871, 873
Pigeon Cove 724, 731–732
Pigeon Cove, Village of 724
Pigeon Ground, The 359
Pigeon Hill 146, 155–156
Pigeon Hill Bay 147, 155–169
Pilgrim Ledge 750, 757
Pilot Point 174
Pilots' Beacon at Cape Porpoise 671
Pine-Tree Ledge 644, 647, 649–650
Pines Point 792, 793, 794–795
Pinkham Bay 171
Pinnacle Rock, or *Nine-Feet Rock* 744

Page.
Pinneo Point 141, 143
Piscataqua River 687–704
Pitch Pine Point 543
Pitcher Cove 419
Pitcher Point 419
Pitcher Pond 340
Placentia Bay 224
Placentia Island 219, 224–225
Planter's Hill 875
Pleasant Bay and *River* 133–145
Pleasant Cove, (*Damariscotta*) 465
Pleasant Cove, (*Sasanoa River*) 535–536
Pleasant Cove Ledges 470
Pleasant Island 313
Pleasant Island Ledge 371
Pleasant Mountain 332
Pleasant Point, (*Passamaquoddy Bay*) 40
Pleasant Point, (*St. George River*) 380, 384
Pleasant Point Gut 380, 384, 415
Pleasant River 133, 137–139
Pleasant River, (Vinal Haven) 283, 293
Plum Cove 722
Plum Cove Ledge 722
Plum Island 707–708, 709, 712, 713
Plum Island Point 707–708
Plum Island River 707, 713, 714
Plum Island Sand-Spit 709–710
Plum Island Sound 707, 712–716
Plummer Island 126
Plummer Island Ledge 127
Plummer Islands, (*Damariscotta*) 464
Plummer Point 465
Plymouth Harbor 739
Poets Harbor 136
Poets Island 136
Point Allerton 799, 801–802, 818, 869
Point Allerton Bar 808–809, 820
Point Allerton Beacon 809, 820
Point Francis 175
Point Lepreau 23
Point Neck 716, 717, 718
Point Neck Rock 717, 718
Point Neck Rock Beacon 717, 718
Point of Main 65, 77, 81
Point Shirley 793, 826, 835
Points:

Abagadusset, 523; Ackley, 58, 59; Allerton, 14, 15, 17, 799, 801–802, 818; Ames, 283; Amesbury, 284; Andrews, (Cape Ann,) 724, 728; Ash, (*Potts Harbor*,) 587; Ash, (*Frenchman Bay*,) 189, 191; Ash, (*Muscle Ridge Channel*,) 319, 324; Atlantic, 327;

Babson, 719, 720;

Bailey, 385; Baker, 176; Bald, 176; Barn, (Cape Neddick,) 679; Barn, (*Squam River*,) 719, 720; Barnes, 602; Bartlett, (*Blue Hill Bay*,) 198; Bartlett, (*Casco Bay*,) 629; Bartol, 617, 618; Basin, (*New Meadows*,) 546; Basin, (*Potts Harbor*,) 587, 590; Bass, (Nahant,) 794; Bass, (southeast Point of Long Island,) 860; Bass Harbor, 218; Beal, 103; Bean, 189, 195; Beauchamp, 332; Bent, 870; Bickford, 107, 130; Bigger, 185; Birch, (*Cobscook Bay*,) 47–48, 50; Birch, (Cousins Island,) 626, 653; Birch, (*Machias Bay*,) 67, 71; Birch, (*New Meadows River*,) 546; Birch, (*Sheepscot River*,) 501; Birch, (*Weskeag River*,) 319; Bird, 385; Black Bess, 740; Black Rock, 794; Blake, 539; Blaney, (*Casco Bay*,) 626; Blaney, (*Nahant Bay*,) 788; Blasket, 143–144; Block-House, (*St. Croix River*,) 37, 41; Board, 92; Bradford, 385; Brick-Yard, 37, 41; Brimstone, 627, 631; Brooks, 538; Brown's, 629; Buchanan, 147; Burnt, (Burnt-Coat Island,) 225; Burnt, (*Steuben*,) 176; Burton, 385; Buttermilk, 579; Byard or Roberts, 246;

Calderwood, 282; Calf, (*Fox Islands Thoroughfare*,) 283; Calf, (near *Little Kennebec River*,) 85; Calton, 92; Carlisle, 465; Cat, 544; Cates, 59; Chandler, 658; Charley, 19, 29; Chatman, 866; Chebeag, 598, 622, 626; Chitman, 147, 157; Chops, 523; Clarke, (*John River*,) 455; Clarke, (*Southwest Harbor*,) 207–208, 213; Clarke, (*Wheeler Bay*,) 373, 374; Clough, 500; Coffin, (*Harrington River*,) 141; Coffin, (*Merrimac River*,) 711; Coles or Hardwood, 139, 142; Commercial, 864; Comstock, 47, 50; Condon, 247; Conway, 311; Cornfield, 626; Cow, 78, 82, 94; Crabtree, (*Flanders Bay*,) 195; Crabtree, (*Fox Islands Thoroughfare*,) 285; Cranberry, (Campobello,) 19, 29; Cranberry, (*Prospect Harbor*,) 178; Cranberry Marsh, 225, 271; Crocker, 69; Crockett, (*Fox Islands Thoroughfare*,) 285; Crockett, (*Rockland Harbor*,) 327; Crow, 875; Curtis, 752; Cushing, (*Weskeag River*,) 319; Cushing, (*Portland Harbor*,) 639;

Damiscove, 485;

Davis, 62; Day, 68; Deadman, (Cranberry Islands,) 203; Deadman, (*Rockport Entrance*,) 335; Deep Hole, 92; Deer, (*Casco Bay*,) 598; Deer, (*Passamaquoddy Bay*,) 19; Deer Island, *Boston Bay*,) 803, 811, 830, 838, 844; Deer Island, (*Passamaquoddy Bay*,) 20; Denbow, 48,

Page.

Points—Continued.
50; Dennison, 62; Dodge, (*Carver Harbor,*) 309; Dodge, (*Damariscotta River,*) 467; Dodge, (*Muscle Ridge Channel,*) 320, 324, 328; Dog, 310; Dorchester, 806, 864; Doubling, 521; Doughty, 578, 579; Doyle, 626; Drachm, 354; Drinkwater, 628, 630; Duck, 19; Dyer, (Cape Elizabeth,) 638; Dyer, (*Dyer Bay,*) 169, 174;
Eagle Island, 610–611, 619; East, (*Cobscook Bay,*) 48, 51; East, (Little Nahant,) 788; East, (Richmond Island,) 655; East, (*York River,*) 682; East Cundiz, 545; Eastern, (Cape Ann,) 724, 726, 739, 740; Eastern, (*East Sullivan Harbor,*) 190; Eaton, 335; Ellis, 658; Elwell, 372; Emerson, 724, 725, 731, 739; Estes, 30;
Farm, 865; Farnsworth, (*Mason Bay,*) 93, 95; Farnsworth, (*Medomak River,*) 419; Farnum, 463; Fellows, 92; Fernald, 213; Fifield, 294; Fish, (*John Bay,*) 450, 456; Fish, (North Haven Island,) 286–287; Fisherman Island, 476, 480, 487; Fishing, 788; Fitch, 466; Flat, (Cape Ann,) 725; Fluent, 777; Flye, 233; Flying, (*Maquoit Bay,*) 608, 609; Flying, (Marblehead Neck,) 770, 787; Flynn, 218; Fogg, (*Casco Bay,*) 628; Fogg, (western approach to *Penobscot Bay,*) 318, 372; Folly Island, 669, 672, 674; Fort, (*Castine Harbor,*) 300; Fort, (*Damariscotta,*) 464; Fort, (*Gloucester Harbor,*) 731, 740; Fort, (*Marblehead Harbor,*) 778; Fort, (off *New Meadows River,*) 545; Fort, (*Penobscot River,*) 350–351; Fort (*Portsmouth Harbor,*) 688, 689; Fort, (Salem,) 754; Fort, (*York River,*) 683, 684; Foss, 80; Foster, (*New Meadows River,*) 547; Foster, (Rutherford Island,) 463; Foster Island, 75; Fowle, 499; Francis, 175; Fraser, 185; French or Sandy, 351; Frohawk, 340; Frost, 687, 700; Frye House, or Harbor, 219;
Gales, 747, 748; Garden, 175; Gelaspas, 678; Gilpatrick, 204, 213; Goat Island, 672; Goldsmith, 747; Good, 171; Gooseberry, (Burnt-Coat Island,) 228; Goose Cove, 80; Goose River, 342; Gove, 47, 50; Governor Island, 812, 831, 840, 846; Grant, 195–196; Gray, 246; Green, 365; Grindel, 344; Grindstone, 184, 185; Guards, 136; Gull, 870, 872;
Half-Way, 328; Halibut, 724, 728; Hall, 467; Harbor, 219; Hardwood or Coles, 139, 142; Hardwood, Lower, 141; Hardy, 49, 51; Haskell Island, 592; Havenner, 418; Hayden, 319; Haynes, 198; Heath, 421; Heckman, 36, 39; Henry, 300; Heron Island, 228; Herriman, 234; Hersey, 49, 51; Hilton, 500, 506; Hockomock, (*Medomak River,*) 414, 421; Hockomock, (*Sasanoa River,*) 536; Hodgkins, 196; Hoffse, 420; Hollis, 419; Holman, 659; Holmes, 68; Holway, 80; Hooper, (*Machias Bay,*) 68; Hooper, (*St. George River,*) 383–384; Hopkins, (*Blue Hill Bay,*) 234–235; Hopkins, (*Fox Islands Thoroughfare,*) 283; Hopkins, (*Moos-a-bec Reach,*) 104, 105, 107, 129; Hopkins, (*Union River,*) 235–236; Hospital, (*Beverly Entrance,*) 753; Hospital, (*Kennebec River,*) 521; Hospital, (*Salem Entrance,*) 752–753; Hospital, (*St. George River,*) 386; Howard, (*Machias Bay,*) 65; Howard, (*New Meadows River,*) 548; Howard, (*St. George River,*) 384; Hubbard, 537; Hunniwell, 516;
Indian, (Arrowsic Island,) 521; Indian, (Georgetown Island,) 516; Indian, (Great Chebeag,) 598, 626; Indian, (*New Meadows River,*) 547; Indian, (North Haven Island,) 286; Iron, 283;
Jack, 473, 478; Jameson, (*Friendship Harbor,*) 416, 417; Jameson, (*Rockland Harbor,*) 327; Jenness, 705; Jerry, 687–688, 692, 700; Jetteau, 175; Joe, 37, 41; Joe Dyer, 147, 157; Joe Noyes, 710; Johnson, 79, 82; Jones, (*Damariscotta,*) 463; Jones, (*Medomak,*) 418; Jordan, 602; Juniper, 754;
Kehail, 499; Kelly, 86, 102, 107; Kelly or White, 101; Kelsey, 466; Kennebunk, 675–676, 678; Killwood, 101; King, 207; Kittery, 689, 692, 700; Knight, 44; Knips, 92, 95;
Lake or Farnsworth, 96; Lane, 720; Larrabee, (*Eastern Branch, Little Kennebec,*) 81; Leadurny, 29; Leighton, 48, 49, 50; Lepreau, 23; Libbey, 69; Liberty, 17, 23, 27, 28; Little, (*Damariscotta,*) 467; Little Flying, 608; Lobster, 365; Locke, 705; Long, (*Narraguagus,*) 149; Long, (near *Little River,*) 59; Long, (Great Island,) 554, 555; Long, (*Salem Harbor,*) 754; Long Eddy, 23; Look, 92; Lord, 236; Lowe, 538; Lower Fitch, 466;
Macfarling, 454; Mackey, 652; Manchester, 212, 213; Marblehead, 769, 778; Mare, 607; Marsh Cove, 175; Marshall, (*Herring Gut,*) 378, 380; Marshall, (*Machias River,*) 69; Marstin, 79, 82; Martin, (*Frenchman Bay,*) 196; Martin, (*Meduncook River,*) 414, 416, 417; Martin, (*Presumpscot River,*) 652; Mason, 214; Maxwell, 524; McGuire, 465; McKenzie, 355; McKenney, 654; McKown, 484; Mehollan, 19, 29; Meserve, 69; Metcalf, 335; Mill, (*Sasanoa River,*) 536; Mill, (*St. Croix River,*) 36; Mill, (*Town's End Harbor,*) 487; Minot, 866; Mistake, 89, 100; Mitchell, 40; Money, 278; Moore, 616; Morse, 540; Mosely, 197; Muscle, 739;
Nash, 139, 142; Nash Harbor, 135; Naskeag, 223, 233, 243; Newbury, (*Chandler River,*) 92, 95; Newbury, (*Small Point Harbor,*) 544; Newdick, 538; Northeast, (Matinicus Island,) 276; Northeast, (McMahan Island,) 496, 539; Northeast or Morse, (*Camden Entrance,*) 335; Northwest, (Wooden Ball,) 276; Norton, 306, 308;
Oak, (*Penobscot River,*) 352; Oak, (*St. Croix River,*) 39; Oak, (*Trenton River,*) 198, 232, 235; Oaks, (*Mill River,*) 144; Odiorne, 687; Ojier, 335, 336; Old, 198; Old Fort, 350–351; Old Harbor, 864; Old House, 111; Oliver Lord, 142; Otter, 318; Otter Creek, or Young, 201;
Palmer, 754; Parker, (*Yarmouth River,*) 628, 629, 630; Parker, (*Dyer Bay,*) 170; Partridge, 453; Patterson or Ficketts, 148; Peach, 766, 770, 771; Pemaquid, 414, 424–425, 450; Perkins, 467; Petit Manan, 155, 156, 169; Petty, 178; Phillips, 787; Phipps, 537; Pickering, 755; Pierce, 78, 82; Pilot, 174; Pines,

Page

Points—Continued.
792, 793, 794–795; Pinneo, 141, 143; Pitch Pine, 543; Pitcher, 419; Pleasant, (*Passamaquoddy Bay,*) 40; Pleasant, (*St. George River,*) 380, 384; Plum Island, 707–708; Plummer, 465; Pond Island, 240; Potts, 576; Preble, 522; Prince, (*Broad Cove, Casco Bay,*) 630; Prince, (*Casco Bay,*) 629; Prince, (*Harpswell Cove,*) 578–579; Proctor, 749; Prospect Harbor, 178; Pull-and-be-Damned, 691, 692; Purrington, 236;
Quarry, 500;
Race, (Cape Cod,)
739; Race, (Cranberry Island,) 219; Ragged Neck, 704; Railway, 487; Randall, 68; Red Rock, 91; Rays, 140, 144; Reef, 137; Reynolds, 138; Rich, 278, 280; Richards, 137; Rim, 69; Ripley, 135, 140; Roaring Rock, 681; Roberts, 246; Robinson, 278; Rodgers, 93, 95; Rodgers Island, 96; Rogers, 175;
Salisbury, 709; Sanborn, 68; Sand, 38; Sand Cove, (*Gouldsboro' Bay,*) 174; Sand Cove, (*Winter Harbor of Frenchman Bay,*) 186; Sand Island, 613, 622; Sandy, (Cousins Island,) 628; Sandy, (near *Little River,*) 57; Sandy or French, (*Penobscot River,*) 351, 354; Sargent, 214; Saunders, 294; Savin, 864; Sawyer, 341–342; Schoodic, 182, 183; Schooner, 171; Seavey, 137; Sea-Wall (*Little Kennebec River,*) 78, 82, 83; Sea-Wall or Flynn, (*Cranberry Island Passage,*) 211, 218; Sherman, (*Gilkey Harbor,*) 345; Shoppe, 89, 91, 94; Smalls, 47; Smith, (*Little Kennebec River,*) 80; Smith, (Salem,) 752; Soldier, 495, 539; South, (Matinicus Island,) 276; Southeast, 192; Sperlin, 203, 211; Spring, 638; Spruce, (Cousins Island,) 626; Spruce, (*Linekin Bay,*) 478, 479; Spruce, (near Schoodic,) 182; Spruce Cove, 80; Squaw or Sandy, 349, 350; Squiers, 88, 95; Squirrel, 520; St. Andrew, 36, 37, 41; Stage Island, 662–663; Stand-in, 290; Stanel, 21; Stanley, (Burnt-Coat Island,) 226; Stanley, (Schoodic,) 170; Staples, (Burnt-Coat Island,) 221; Staples, (*Freeport River,*) 617; Stimpson, 294; Stockbridge, 617; Stone, 384–385; Stover, 577; Strawberry, 739, 817, 878; Strout, 617; Strouts, 145; Swan Island, 524; Sweat, 682; Telegraph, 522; Thorndike, 315, 318; Thurston, 452; Tilston, 866; Todd, 39; Towesic, 522; Transport, 60; Tree, 794; Trenton, 197, 198; Treworgy, 236; Tuck, 753; Turkey, 384;
Vaughan Island, 670, 673; Verrill, 704;
Wass, 138; Watts, (*St. George River,*) 386;
Watts, (Richmond Island,) 655; Weasel, 520; Weare, 679; West Cundiz, 545, 571; Weymouth, 235, 236; White, 537; White's, (*Casco Bay,*) 602; White's, (*Pleasant River,*) 138; Whitey, 466; Wigwam, 719–720, 728; Willis, 538; Windmill, (*Boston Harbor,*) 869; Windmill, (Campobello,) 18, 25; Winter Harbor, or Sand Cove, 186; Woltz, 419; Wood, 867; Woodberry, 753; Woods Pond, 157, 159, 161, 162, 164; Woodward, 547, 548;
Yeaton, 170;
Yo-ho, 79, 82; Young, (*Fox Islands Thoroughfare,*) 284; Young, (*Gouldsboro' Bay,*) 174; Young, (*Montseag Bay,*) 501; Young, (Mount Desert,) 201;
Zeke, 283.

Poland North Ledges 444
Poland South Ledges 466
Pole Island, (*Casco Bay*) 555
Pole Island, (*Hurricane Sound*) 311
Pole Island North Ledges 558
Pole Island South Ledges 558
Polin Dry Ledge 440
Polin East Ledge 439
Polin Ledges 439–440
Polin South Ledge 439–440
Pollock Rock, (*John Bay*) 456
Pollock Rock, (*Portsmouth Entrance*) 699
Pomeroy Rock 652
Pomp Island 104, 121
Pond Cove:
(Cape Elizabeth,) 638; (*Englishman Bay,*) 91, 94; (Wells,) 679.
Pond Cove Island 91, 94
Pond Cove Rocks 679
Pond Island:
(*Casco Bay,*) 560, 563; (*East Penobscot Bay,*) 248, 297; (*Frenchman Bay,*) 183–184; (*Jericho Bay,*) 224, 231, 233, 271; (*Kennebec River,*) 517–518; (off *Pigeon Hill Bay,*) 145–146, 158.
Pond or Ross Island 425–426
Pond Island Bar 510, 532
Pond Island Cove 183–184
Pond Island Ledge, (*Narraguagus*) 148, 153, 165
Pond Island Ledges, (*Casco Bay*) 560, 564, 566–567
Pond Island Light-House, (*Kennebec Entrance*) 517–518, 534
Pond Island Light-House, (*Narraguagus Entrance*) 145, 146, 155, 158
Pond Island Point 240, 241
Pond Islands, The, (*Muscle Ridge Channel*) 317
Pool, The, (*Biddeford*) 659, 661, 673
Pool, The, (*Cranberry Island Harbor*) 203
Pope Shoal 26
Pope's Folly, (*Lubec Narrows*) 28, 29–30
Pope's Folly, (*Main Entrance to Eastport*) 25
Pope's Head 782
Pope's Head Shoal 782

Page.
Porcupine Dry Ledge 200
Porcupine Island 79, 82
Porpoise Cove 670
Porter Rock 784–785
Porterfield Ledge 332, 333
Porterfield Ledge Beacon 333
Portland Breakwater 635, 638, 641
Portland Breakwater Light-House 638, 653
Portland Bridge 635, 639
Portland, City of 634–635
Portland Harbor 634–654
Portland Head 636
Portland Head Light-House 543, 636, 653
Portsmouth, City of 691
Portsmouth Harbor 687–704
Portsmouth Light-House 689, 692, 700, 703
Post-Office Ledge 287
Pot Head 68
Pot, The 106, 133
Pot, The Big 106, 132–133
Potato Island, (*Carver Harbor*) 307
Potato Island, (*Pleasant Bay*) 135
Pottle Cove 501
Potts Harbor 576, 587–592
Potts Point 576, 587
Potts Point Ledge 589
Pound of Tea 620
Powderhorn Island 497, 504
Powderhorn Ledge 504–505
Powderhorn Mountain 794
Powderhorn South Ledges 504
Powers Rock 757
Preble Cove 211
Preble Island 190, 195
Preble Point 522
Prentiss Cove 466
President Roads 800, 804, 806
Presumpscott River 624, 652
Pride Rock 751
Prince Cove 30
Prince Head Shoals 871
Prince Point:
(*Broad Cove, Casco Bay,*) 630; (*Casco Bay,*) 629; (*Harpswell Cove,*) 578–579.
Prince Point Shoal 632
Prince's Gurnet 578, 579
Proctor Point 749
Proprietor, The 8
Prospect Harbor 178–181
Prospect Harbor Light-House 178, 181
Prospect Harbor Point 178
Prospect, Village of 352
Prout Neck 657–658, 661
Pudding Island 276
Pull-and-be-damned Point 691, 692
Pulpit Cove 294
Pulpit Ledge 251
Pulpit Rock, (*Machias Bay*) 74
Pulpit Rock, (*Penobscot Bay*) 294
Pumpkin Cove 445
Pumpkin Cove Ledge 445
Pumpkin Island:
(*Damariscotta River,*) 462; (*Eggemoggin Reach,*) 246, 247; (*Portsmouth Harbor,*) 691.
Pumpkin Island Eastern Ledge 468, 473, 489
Pumpkin Island Ledge 251
Pumpkin Island Light-House 247, 253
Pumpkin Island Western Ledges 475, 482, 489
Pumpkin Nob, (*Broad Cove, Casco Bay*) 632
Pumpkin Nob, (Peaks Island) 633, 637
Punch-bowl, The 246
Purrington Point 236

Q.

Quaker Head 64, 71
Quamino Rock 879
Quarantine Rocks 858, 859
Quarantine Station on Rainsford Island 858

Page.
Quarry Point 500
Quincy Bay 858, 868–869
Quincy Great Hill 858, 868, 869
Quincy, Village of 868
Quoddy Roads 27, 28
Quohog Bay 554–562

R.

Raccoon Cove 198
Raccoon Island, (*Hingham Bay*) 870
Raccoon Island, (*Skillings River*) 198
Race Point, (Cape Cod) 739
Race Point, (Great Cranberry) 219
Rackliff Bay 315, 372, 373, 374
Rackliff Island 315, 372, 373
Ragged Island:
(*Casco Bay,*) 543, 545, 554–555; (*Hingham Bay,*) 876; (*Penobscot Entrance,*) 275.
Ragged Island Roads 276
Ragged Mountain 332
Ragged Neck Point 704
Railway Point 487
Railway Village 865
Rainsford Island 858
Ram Head 825, 829, 837
Ram Island:
(Between Marblehead Neck and Swampscott,) 789; (*Damariscotta Entrance,*) 461; (*Englishman Bay,*) 91, 93, 94; (*Greenland Cove,*) 423; (*Harpswell,*) 579; (*Lower Kennebec,*) 521; (*Machias Bay,*) 74; (*Meduncook River,*) 416; (*Merchant Row,*) 268; (near George Islands.) 382; (near Rockport, Maine,) 331; (*Newburyport Harbor,*) 708; (off the *Gurnet,*) 563; (off *Salem Entrance,*) 751; (*Portland Entrance,*) 584, 637; (*Richmond Island Harbor,*) 656; (*Saco Bay,*) 661; (*Sheepscot River,*) 498; (*Tabbott Narrows,*) 102, 106, 126; (*Upper Kennebec,*) 522; (*West Gouldsboro',*) 190, 195.
Ram Island Ledge:
(*Harpswell,*) 580, 589; (near Rockport,) 332; (*Portland Entrance,*) 584, 637, 640; (*Saco Bay,*) 662; (*Tabbott Narrows,*) 112.
Ram Island Ledges:
(Off the *Gurnet,*) 563; (*Muscongus Sound,*) 447; (*Sheepscot River,*) 505.
Ram Island Rock 527–528
Ram Islands, (*Moos-a-bec Reach*) 120
Ram Islands, (off Salem) 748
Ram's-Horn Rocks 785
Rams, The 8
Ramsdell Cove 137
Ranges for different channels in *Boston Bay* 823–824, 834
Randall Point 68
Raspberry Island, (*Herring Gut*) 383, 388
Raspberry Island, (*Pleasant Bay*) 136
Raven Head 39, 42
Rays Point 140, 144
Rays Point Ledges 143
Razor Island 48, 50
Rebo Mountain 199
Red Beach 38, 41
Red Head 48, 51
Red Island 48, 50
Red Rock 788
Red Rock Point 91
Redding Island 668
Reed Cove 562, 578
Reed Island 463
Reef Point 137
Reynolds Bay 108
Reynolds Point 138
Rich Cove 556
Rich Mountain 547
Rich Point 278
Richards Point 137
Richmond Island 645, 654–655
Richmond Island Harbor 654–657
Ridley Cove 554, 571–575
Riggs Cove 538
Riggsville, Settlement of 538
Rim Point 69
Ringtown Island 228
Ringtown Island Ledge 229, 230, 233
Ripley Cove 141

Page.
Ripley Islands 140
Ripley Neck 133, 135, 140
Ripley Point 135, 140
Rising States Ledge 758
Rivers:
Abagadusset, 523; *Androscroggin*, 523;
Back, (between Georgetown and Arrowsic Islands,) 520, 536; *Back*, (between Westport and the Main,) 536; *Back*, (*Medomak River*,) 418; *Back*, (*Meduncook River*,) 416; *Back*, (*Sheepscot River*,) 499, 505, 514; *Bagaduce*, 299–304; *Belfast*, 341; *Benjamin*, 245, 252, 253;
Cathanse or *Cathance*, 523; *Chandler*, 86, 91–93, 95, 97, 99; *Charles*, 806; *Chelsea*, 806; *Cobscook*, 46, 48, 50; *Cousin River*, 628, 629; *Cross*, 499–500; *Damariscotta*, 461–478; *Duck-Trap*, 340; *Dunstan*, 658;
Eastern, (*Kennebec River*,) 524; *Eastern Branch*, (*Kennebec River*,) 524; *Eastern Kennebec* or *Eastern Branch*, 81; *Englishman*, 91; *Essex*, 712, 716–719;
Fore, 635, 639; *Forest*, 755; *Freeport*, 615–628;
Goose, (*Belfast Bay*,) 342; *Goose*, (*Medomak River*,) 418;
Hampton, 705; *Harrington*, 139–143;
Indian, (*Moosa-bec Reach*,) 105, 107, 129–130; *Indian*, (*Passamaquoddy Bay*,) 22; *Ipswich*, 712, 713;
John, 450, 454–455, 457, 458–459; *Jones*, 719; *Jordan*, 198;
Kenduskeag, 352–353; *Kennebec*, 516–535; *Kennebunk*, 675, 676–678;
Little, (*Annisquam*,) 719; *Little* (*Damariscotta River*,) 463; *Little*, (*Freeport River*,) 617; *Little*, (near Cape Porpoise,) 667; *Little*, (near Eastport,) 57–62; *Little*, (*Passamaquoddy Bay*,) 41; *Little*, (*Saco Bay*,) 658; *Little*, (*Sheepscot Bay*,) 516; *Little*, (*Wells*,) 678; *Little Kennebec*, 77–85; *Little Sheepscot*, 495–496, 513;
Machias, 63, 68–70, 73; *Magaguadavic*, 22; *Marsh*, 352; *Medomak*, 414, 417–422, 434–444; *Meduncook*, 414, 415–417, 427–434; *Megunticook*, 335; *Merrimac*, 705, 707–712; *Middle*, 69–70; *Mill*, (*Annisquam*,) 719, 720; *Mill*, (*Flat Bay*,) 144; *Mill*, (*Fox Islands Thoroughfare*,) 283; *Mill*, (*St. George River*,) 380, 387; *Moose*, 56–57; *Morse*, 540–541; *Mousam* or *Maguncook*, 678; *Mystic*, 806, 814;
Narraguagus, 145, 148, 149; *Neponset*, 806, 864–868; *New Meadows*, 543, 544–554; *North*, (*Beverly Harbor*,) 753, 784;
Parker, 714; *Passagassawakeag*, 341; *Pemaquan*, 46–55; *Pemaquid*, 450, 453–454, 458, 459–460; *Pembroke*, 46–55; *Penobscot*, 273, 350–356; *Piscataqua*, 687–704; *Pleasant*, 133, 137–139; *Pleasant*, (Vinal Haven,) 283, 293; *Plum Island*, 707, 713, 714; *Presumpscott*, 624, 652;
Rowley, 714; *Saco*, 657, 658–659, 661–664; *Sasanoa*, 495, 522, 535–540; *Saugus*, 793, 794–795, 798; *Sheepscot*, 493–515; *Skillings*, 183, 195, 197–198; *Sprague*, 541; *Squam*, 712, 719–724; *St. Croix*, 7, 17, 36–46; *St. George*, 326, 379–413; *Stover*, 575, 577; *Sullivan*, 183, 194;
Town, 870, 871; *Trenton*, 183, 198–199, 232; *Union*, 224, 235–236, 237–238, 241, 242;
Warren, 380, 387; *Webhannet* or *Wells*, 678; *Weir*, 875, 878; *Weskeag*, 315, 318–319; *West*, 107, 129, 130; *Western Branch*, (*Kennebec River*,) 523; *Weymouth Back*, 869, 874–875; *Weymouth Fore*, 869–874;
Yarmouth, 628, 629–634;
York, 681–686.
Roaring Bull, The:
(Isle au Haut,) 228; (*Manan Ledges*,) 9; (*Marblehead Entrance*,) 771, 779, 789.
Roaring Bull, or *Black Ledge*, (*Penobscot Bay Entrance*) 366
Roaring Bulls, The, (*Boston Bay*) 828, 836
Roaring Rock Point 681
Robbinston, Village of 37, 41
Roberts Island 307
Roberts Point 246
Robin Hood Cove 494, 538
Robinson Cove 455
Robinson Ledges 302
Robinson Mountain 199, 212, 214
Robinson Point 278
Robinson Rock 302, 345
Rock Island Cove 870
Rock Island Head 870
Rockland Harbor 327–331
Rockland Hills 818
Rockland shore of *Blue Hill Bay* 235
Rockland, City of 273, 327
Rockport Harbor, (Maine) 331–335
Rockport Harbor, (Massachusetts) 724, 732–738
Rockport, Town of, (Maine) 273, 331, 332
Rockport, Town of, (Massachusetts) 724, 728

Page.

Rocks :

Abbott, 760, 768, 773; *Alden*, (off Portland,) 643, 646, 649; *Alden* or *Bud*, (off *Penobscot Bay*,) 369–370; *Ammen*, 1, 15–16, 732; *Andrew*, 431; *Archer*, 771–772, 780, 783; *Avery* or *Channel*, 67;

Bache, 644; *Badger*, 710; *Bald*, 340; *Bantam*, (off Damiscove Island,) 475, 483, 489, 501, 525; *Bar Island*, 446; *Barn*, 720, 721; *Barn Point*, 680; *Barrel*, 879; *Bartlett*, 734–735; *Bass*, or *Old Sunken*, 795; *Bell*, 643, 644, 647, 650; *Bibber*, 611, 615; *Black*, (*Black Rock Channel*,) 856; *Black*, (*Boston Bay*,) 817; *Black*, (*Essex River*,) 718; *Black*, (*Gloucester*,) 744; *Black*, (*Lynn Harbor*,) 796; *Black*, (*Manan Ledges*,) 8, 26, 27; *Black*, (*Middle Bay*,) 604; *Black*, (near Metinic Island,) 365, 367; *Black*, (*Newburyport Harbor*,) 710; *Black*, (off *St. George River*,) 391–392; *Black*, (*Passamaquoddy Bay*,) 26; *Black*, (*Sheepscot Bay*,) 502, 508–509, 510–511; *Black*, (*York River Entrance*,) 683; *Black Bess*, 740; *Black-Jack*, 526; *Blaney*, 788; *Boat* or *Channel*, 259, 264; *Boden*, 780, 783; *Boiler, The*, (*Upper Hell Gate*,) 536; *Boiler, The*, (*Goose Rock Passage*,) 539; *Boilers, The*, (*Newburyport*,) 711; *Boilers, The*, (*Great Hell Gate*,) 537; *Bold Dick*, (approach to *Kennebec River*,) 531, 541; *Bold Dick*, (*Casco Bay*,) 552, 556, 564; *Bradstreet*, 286; *Bragdon*, 550; *Brimbles, The*, 766, 782; *Broad Cove*, 647, 649; *Brothers, The*, (off *St. George River*,) 379; *Brothers, The*, (*Richmond Island Harbor*,) 656; *Brown Cow*, (*East Penobscot Bay*,) 259; *Bud*, 369–370; *Bull*, 10; *Bulldog, The*, 468; *Bunganuc*, 611; *Bunkers Slippery*, 255, 259–260; *Button Moulds*, 531, 542;

Calderwood, 288; *Card*, 477, 480–481, 487–488; *Carey*, 394; *Castle*, 811–812, 831, 839; *Caswell*, 777; *Catfish*, 640; *Centurion*, 809–810, 821; *Channel*, (*Blue Hill Bay*,) 234, 240; *Channel*, (*Carver Harbor*,) 306, 308; *Channel*, (*Deer Island Thoroughfare*,) 255; *Channel*, (*Essex River*,) 718; *Channel*, (*Fox Islands Thoroughfare*,) 282, 286; *Channel*, (*Hingham*,) 877; *Channel*, (*Machias Bay*,) 67, 70, 72; *Channel*, (*Moos-a-bec Reach*,) 115; *Channel*, (*Muscle Ridge Channel*,) 323; *Channel*, (*St. George River*,) 388–389, 395; *Channel*, (*Weymouth Fore River*,) 872; *Chimney*, 655–656; *Clam*, 745; *Cod*, 695; *Cohasset*, 816, 817, 853–854, 878; *Coney Island*, 767, 772; *Coot*, 541; *Corwin*, 646; *Cowen*, 851–852; *Cuckolds, The*, 476, 483, 484, 485, 489, 502;

David's Castle, 572; *Deer Point*, 634; *Dobbin*, 287; *Dodge*, 735; *Dogfish*, (*Little Kennebec River*,) 83; *Dolphin*, 789, 791; *Dry Salvages*, 728, 733–734; *Duck*, 366;

East, 24; *East Cod Ledge*, 643; *East Halibut*, (*Merchant Row*,) 269; *East Hogshead*, 854; *East Hue and Cry*, 646; *East Sister*, 693; *East Willies*, 853; *Eastern*, 702; *Eastern Duck*, 366; *Eastern Egg*, 400–401, 406, 425; *Eastern Goose*, 667; *Eastern Half-Tide*, 249–250; *Eastern Point*, 742; *Eastern Yellow*, 259–260; *Eastman*, 565, 568; *Egg*, (*Burnt-Coat Harbor*,) 230; *Egg*, (*Nahant Bay*,) 788; *Egg*, (near North Haven,) 302; *Egg*, (*Pigeon Hill Bay*,) 152–153, 156, 159, 161, 164; *Egg* or *Shag*, 800; *Ellingwood*, 510, 532; *Endeavor*, 776–777; *Emm*, 109;

Fernald, 215; *Field*, 743–744; *Fishing*, 676; *Five-Fathom*, 228; *Four-Fathom*, 525; *Four-Feet*, (*Freeport River*,) 620; *Fox's Ears*, 288; *Fuller* or *Glover*, 531, 542;

Gangway, (*Deer Island Thoroughfare*,) 260–261; *Gangway*, (*Newburyport Harbor*,) 710; *Gangway*, (*Portsmouth Harbor*,) 696; *Gannet*, 9–10; *George Island*, (*Boston Bay*,) 810; *George Island*, (*Casco Bay*,) 573; *Gig*, 410; *Gilchrist*, 109; *Glover* or *Fuller*, 531, 542; *Goat Island*, 527; *Goose*, (*Blue Hill Bay*,) 237; *Goose*, (*Damariscotta River*,) 471; *Goose*, (*Entrance to St. George River*,) 399; *Goose*, (*Fox Islands Thoroughfare*,) 286; *Goose*, (*Little Kennebec River*,) 80, 84; *Goose*, (Long Island,) 346; *Goose*, (near Cape Porpoise,) 637; *Goose*, (off *Camden*,) 335; *Goose*, (*Sasanoa River*,) 539; *Gordon*, 780, 783; *Grace*, 529; *Graves, The*, (*Boston Bay*,) 807, 827, 835–836; *Gray*, 770, 772, 776; *Great Egg*, 747, 749; *Great Haste*, 759–760, 767, 773; *Great Pig*, 789; *Gull*, (*Eastport Entrance*,) 24, 26, 33; *Gull*, (*Medomak River*,) 435; *Gull*, (*Southwest Passage into Eastport*,) 54; *Gunning*, 379;

Haddock, (*Broad Sound, Casco Bay*,) 588, 592; *Half-Tide*, (*Boston Entrance*,) 829; *Half-Tide*, (*Cobscook*,) 48; *Half-Tide*, (*East Sullivan*,) 191–192, 193; *Half-Tide*, (*Neponset River*,) 866; *Half-Tide*, (*Newburyport*,) 711; *Half-Tide*, (*Pigeon Hill Bay*,) 160, 163, 166; *Half-Tide*, (*Salem Harbor*,) 761, 768, 774, 777–778; *Half-Tide*, (*Winter Harbor of Saco*,) 663; *Half-Way*, (*Casco Bay*,) 582–583, 635–636; *Half-Way*, (Isles of Shoals,) 701; *Half-Way*, (near Portland,) 624, 627, 630; *Half-Way*, (off *Marblehead*,) 764, 765, 771, 779; *Halibut*, (approach to *Home Harbor*,) 371; *Halibut*, (off Cape Small Point,) 531; *Halibut, West*, (*Merchant Row*,) 269; *Harbor*, 745; *Harbor Island*, 435; *Hardy*, 757, 781, 782; *Harridan*, 721, 722; *Haste*, 759, 767, 773; *Hewell Island*, 371; *Hicks*, 697; *High*, 541; *Hogshead*, 854, 880; *Hooper Island*, 394–395, 410; *Horton*, 238; *Hospital Point*, 389; *Hussey*, (south of Fletcher Neck,) 664; *Hussey, The*, (*Casco Bay*,) 585, 602, 613, 622;

Inner Duck, 366; *Inner Endeavors*, 777; *Inner Shag*, 394;

Jaques, 880; *John*, 759; *Johnson Island*, 421; *Junk of Pork*, 585, 640;

Kegs, The, 398, 403, 428, 432; *Kelly*, 810; *Kettlebottom, The*, 770; *Kimball*, 279; *Kitts*, 694, 702–703; *Knapp*, 761, 768, 774, 777; *Knowles*, 456;

Lee Island, 527; *Lewis*, 205, 208; *Lime*, 536; *Lithgow*, 528; *Little Aqua Vitæ*, 777; *Little Egg*, (*Muscongus Bay*,) 397, 425; *Little Egg*, (off *Salem*,) 749; *Little Fishing*, or *Lord*, 676; *Little Harbor*, 745; *Little Haste*, 759, 760, 767, 773; *Little Sail*, 31; *Little Salvages*, 728, 733–734; *Littlejohn*, 567; *Liverpool*, 72; *Lobster*, (*Annisquam*,) 721, 722; *Lobster*, (*Beverly Harbor*,) 785; *Lobster*, (*East Sullivan*,) 191, 192, 193; *Lobster*, (*Little Kennebec River*,) 84; *Lobster*, (*Lynn Harbor*,) 796; *Lobster*, (*Pigeon Hill Bay*,) 159, 162, 166; *Lobster*, (*Saco Bay*,) 663;

Page.

Rocks—Continued.
Lobster or *Half-Tide*, 344; *Londoner, The*, 736–737; *Low-Water*, 196; *Lowell*, 332, 333; *Lunt*, 710;
Marblehead, 770, 779; *Margie*, 33; *Martin*, 766, 783; *Matinicus*, 274–275; *Mid-Channel*, 766, 782–783; *Middle*, 215; *Middle*, or *Middle Ledge*, 565; *Middle Ground*, 557, 561, 564–565; *Midway*, 402, 406–407, 431–432; *Mingo*, 702; *Mink*, 595; *Misery*, 759; *Mitchell*, (*Portland Entrance*,) 647, 649; *Mitchell*, (off Rockport, Massachusetts,) 734; *Molasses*, 26; *Moore Point*, 620; *Moose*, 115; *Morton*, 30–31; *Motions, The*, 483, 489, 501; *Mount Desert*, 204–205; *Murray*, 684, 685, 693;
Nash, 809, 820, 860; *Nine-Feet*, (*Gloucester Harbor*,) 744; *Norman's Woe*, 739, 742, 743; *North*, 24; *North Centurion, The*, 809, 821; *Northeast Grave*, 807, 827, 835–836; *Nova*, 109, 116; *Nub, The*, 237;
Oak, 727, 737; *Obed*, 598; *Old Anthony* or *Vapor*, 646, 648; *Old Bull, The*, 165, 171, 172; *Old Cellar*, 707; *Old Harry*, 796; *Old Man*, (near George Islands,) 397; *Old Prince*, 672, 674; *Old Proprietor*, (*Manan Ledges*,) 8–9, 10, 13; *Old Proprietor*, (*Richmond Island Harbor*,) 656; *Old Sheriff*, 227, 229; *Old Sow*, 503; *Old Sunken*, 795; *Old Woman*, (near George Islands,) 397; *Osher*, 852; *Outer Endeavors*, 776–777; *Outer Point*, 776; *Outer Thompson*, 428;
Page, 33; *Pettis*, 521, 527; *Phillip*, 693–694; *Pig*, (*Hingham Bay*,) 869–870, 871, 873; *Pinnacle*, 744; *Point Neck*, 718, 719; *Pollock*, (*John Bay*,) 456; *Pollock*, (*Portsmouth Entrance*,) 699; *Pomeroy*, 652; *Pond Cove*, (near Cape Neddick,) 679; *Porter*, 784–785; *Pot, The*, 106, 133; *Powers*, (*Salem Entrance*,) 757; *Pride*, 751; *Proprietor, The*, 8; *Pulpit*, (off *Machias Bay*,) 74, 87; *Pulpit*, (*Penobscot Bay*,) 294; *Pumpkin Nob*, (*Broad Cove, Casco Bay*,) 632; *Pumpkin Nob*, (*Hussey Sound*,) 633, 637;
Quamino, 879; *Quarantine*, 858, 859;
Ram Island, 527–528; *Ram's Horn*, 785; *Red*, 788; *Roaring Bull*, (Isle au Haut,) 228; *Roaring Bull*, (*Manan Ledges*,) 9; *Roaring Bull*, (*Marblehead Entrance*,) 771, 779, 789; *Roaring Bulls, The*, (*Boston Bay*,) 828, 836; *Robinson*, 302, 345; *Round*, (*Cohasset Entrance*,) 878; *Round*, (*Muscongus Bay*,) 440; *Round*, (*Quoddy Roads*,) 31; *Round*, (*Quohog Bay*,) 556–557, 560, 564; *Rudder*, 240, 242;

Sail, 28, 31; *Salt*, 749; *Salvages, The*, 728, 733–734; *Sammy*, 789; *Satan*, 764, 765–766; *Sauli*, 750; *Sea-Duck*, 120, 123; *Sea-Horse*, 122; *Seal*, (Coast of New Hampshire,) 706; *Seal*, (*Kennebec River*,) 527; *Seal*, (*Linekin Bay*,) 481; *Seal*, (*Mason Bay*,) 93, 95, 96; *Seal*, (*Neponset River*,) 867; *Seal*, (*Sheepscot River*,) 506–507; *Searle*, 764; *Seven Feet*, 676–677; *Seward*, 696; *Shag*, (Isles of Shoals,) 702; *Shag*, (*Kennebec River*,) 526; *Shag*, (*Lynn Harbor*,) 795; *Shag* or *Egg*, 800; *Sharpe*, 662; *Sheep*, (*Deer Island Thoroughfare*,) 255; *Sheldrake* or *Eastern Yellow*, 255; *Ship and Barges*, 231, 237; *Simms*, 99, 152, 162, 167, 176; *Sisters, The*, (off *St. George River*,) 394, 410; *Sisters, The*, (*Sheepscot Bay*,) 502, 508, 510; *Smith*, 852; *Snow*, 110, 116; *South Centurion*, 809–810, 821, 859; *Southeast*, 152, 162, 168, 176; *Southern Shoal*, 790; *Sow and Pigs*, (*Casco Bay*,) 609; *Sow and Pigs*, (*Newburyport*,) 711; *Spear*, 328, 330; *Speedwell*, 701; *Square*, 701; *Stallion*, 321; *Stetson*, 528; *Stielman*, 694; *Stimpson*, 286; *Stone*, (*Salem Harbor*,) 777; *Stone*, (*York River*,) 684, 685, 693; *Sunken*, or *Roaring Bulls*, 828, 836; *Sunken Duck*, 366; *Sunken Egg*, 230, 239; *Sunken Sister*, or *Tom*, 491–492, 501, 508, 525; *Sutton*, 879;
Tewkesbury, 828; *Thompson Island*, 398; *Three-Fathom*, 72; *Tobias*, 853; *Toddy*, 809, 820, 860; *Tom*, 491–492, 501–502, 508, 525; *Tom Moore*, 771, 779; *Torry*, 590; *Town*, 707; *Trott*, (*Castine Harbor*,) 301; *Trott*, (*Kennebec River*,) 529; *Trott*, (*White Head Passage, Casco Bay*,) 650, 651; *Twelve-Feet*, (*Booth Bay*,) 488; *Twelve-Feet*, (*Hypocrite Channel of Boston Bay*,) 829, 837; *Twelve-Feet*, (off Rockport, Massachusetts,) 734, 737; *Two-Hour*, 52;
Vapor, or *Old Anthony*, 646, 648;
Washman, 664–665; *Webber*, 742; *Webster*, 559, 569, 639–640; *West Cod Ledge*, 644, 646; *West Halibut*, 269; *West Hogshead*, 854, 880; *West Hue and Cry*, 646; *West Shag*, 854, 880; *West Sister*, or *Branscomb*, 693; *West Willies*, 853, 881; *Western Duck*, 366; *Western Egg*, (*Moos-a-bec Reach*,) 122; *Western Egg*, (*Muscongus Bay*,) 406, 425; *Western Goose*, 667; *Whale* or *Whale's Back*, (*Casco Bay*,) 570, 583, 592, 595; *Whale's Back*, (*Kennebec Entrance*,) 510, 517, 525; *Whale's Back*, (off Fletcher Neck,) 664, 692; *Whale's Back*, (*Salem Entrance*,) 750, 757; *Whale, The*, (off *Pigeon Hill Bay*,) 153, 159, 161, 162, 164; *Wharf*, (near Long Island, *Boston Bay*,) 861; *Wharf*, (*Portsmouth Harbor*,) 696; *Wheeler*, 367; *Wheeler Big*, 367; *White*, (approaches to *Lynn Harbor*,) 796; *White*, (*Deer Island Thoroughfare*,) 260; *Wiggins*, 323; *Willard*, 644, 647, 649; *Williams*, 772, 776; *Wilson*, 859; *Winslow*, 528; *Witch*, 585, 640, 643; *Wreck*, 873;
Yellow, (*Deer Island Thoroughfare*,) 257, 261; *Yellow*, (*Quohog Bay*,) 557.

Rocks Northeast of Western Egg Rock 433–434
Rock's Nose, The 683
Rocky Neck 731, 741, 742
Rocky Neck Island 741, 742
Rodgers Bar 93, 99
Rodgers Island, (*Eastport*) 50
Rodgers Island, (*Englishman Bay*) 93, 94, 95
Rodgers Island Point 96
Rodgers Point 93, 95
Roebuck*, or *Russ Island Ledge 260
Rogers Point 175

Page.
Rogue Island, (*New Meadows River*) 545
Rogue Island, (off Hope Island, *Casco Bay*) 599
Roque Island 88–89, 94, 98
Roque Island Harbor 88, 89
Roque Island Narrows 88, 100
Ross or Pond Island 425–426
Rouen Island 25
Round Island:
(*Deer Island Thoroughfare,*) 256; (*Machias Bay,*) 67, 70; (*Merchant Row,*) 266–267.
Round Island Flats 72
Round Ledge 402, 431
Round Pond Harbor 423
Round Pond, Village of 423
Round Porcupine Island 195, 200
Round Rock:
(*Casco Bay,*) 556–557, 560, 564; (*Cohasset Entrance,*) 878; (*Medomak River,*) 440; (*Quoddy Roads,*) 31.
Round Rock Shoal 743
Round Shoal 643
Rowley River 714
Rudder Rock 240, 242
Ruggles Creek 870
Rum Cove 500
Rum Key 194
Russ Island 257
Rutherford Island 451–452
Rye Beach 705
Rye Harbor 704
Rye Ledge 705, 706
Rye, Village of 704

S.

Sabbath Day Cove or *Harbor* 298
Sabino Head 518, 540
Saco Bay 657–666
Saco River 657, 658–659, 661–664
Saco, Town of 657, 659, 661
Saddle-Back Island 265, 266
Saddle-Back Ledge, (*Casco Bay*) 556, 564
Saddle-Back Ledge, (off *Penobscot Bay*) 273–274
Saddle-Back Ledge Light-House 274
Sagadahoc Bay 494, 516
Sagamore Head 818
Sailing Courses from *Kennebec River* to the eastward and westward 540

Sailing Directions for—

Anchorage on south side of Cape Neddick, 681; *Annisquam Harbor,* 721–722, 722–723; Approaching and entering *Penobscot Bay,* 325–326, 356–370;

Back Way, (*Boston Bay,*) 860; *Bar Harbor,* 200; *Bass Harbor,* 221–223; *Bayley's Mistake,* 56; *Belfast Bay* and *Harbor,* 342, 343; *Benjamin River,* 253; *Beverly Harbor,* 785–786; *Billings Cove,* 253; *Black Rock Channel of Boston Bay,* 856; *Blue Hill Bay* and *Union River,* 238–239, 240–241, 242; *Booth Bay* and *Town's End Harbor,* 488–489, 490–491, 492; *Boston Harbor,* 814–816, 821–825, 833–834, 841–843, 844–845, 847, 850–851, 854–855, 856, 860; *Broad Sound,* (*Casco Bay,*) 595–597; *Broad Sound Channels of Boston Bay,* 841–843, 844–845; *Bucks Harbor,* 253; *Burnt-Coat Harbor,* 229, 230;

Camden Harbor, 337–338, 339; *Cape Neddick Roads,* 680, 681; *Cape Porpoise Harbor,* 672–673, 674–675; *Cape Split Harbor,* 131, 132, 133; *Carver Harbor,* 307, 308–309; *Casco Passage,* 272–273; *Castine Harbor,* 301, 303, 304; *Cohasset Harbor,* 879, 880–881, 882; *Damariscotta River,* 472–473, 474, 475, 476, 477; *Davis Straits Passage,* 412–413; *Deer Island Thoroughfare,* 261–262; *Douglass Island Harbor,* 167, 168; *Dyer Bay,* 172, 173; *East Channel* into *Penobscot Bay,* 357–358; *East Sullivan Harbor,* or *Bass Cove,* 192, 193; *Eastport Harbor,* 26–27, 33–35; *Eggemoggin Reach,* 252–253; *Englishman Bay,* 96–97, 99–100; *Essex River,* 718–719;

Flanders Bay, or *Sullivan Harbor,* 197; *Fisherman Island Channel,* 364; *Fisherman Island Passage,* 482, 488; *Fox Islands Thoroughfare,* 290–293; *Freeport River,* 620–622, 622–623, 628; *Friendship Harbor,* 431, 438;

Gangway Passage into *Boston,* 854–855; *Gilkey Harbor,* 345, 347; *Gloucester Harbor,* 745–746; *Gouldsboro' Bay,* 177–178; *Governor Island Channel* in *Boston Bay,* 850–851; *Gurnet,* in *Casco Bay,* 566, 568, 569, 570, 571;

Harpswell Harbor, 582, 584, 586; *Harrington River,* 143; *Head Harbor,* 101; *Herring Gut Harbor,* 390, 392–393; *Hingham Harbor,* 877–878; *Home Harbor,* 371–372; *Horse Island Harbor,* 551, 553; *Hull Cove,* 201; *Hurricane Sound,* 311–312; *Hypocrite Channel of Boston Bay,* 833–834;

Inside Passage from Portland to Freeport, 628; *Inside Passage* from Small Point to Portland, 634; *Isle au Haut Thoroughfare,* 279, 280;

Page.

Sailing Directions for—Continued.

John Bay and *River*, 458–460; *Kennebec River*, 529–530, 533–534; *Kennebunk River*, 677; *Kent Cove*, (*Fox Islands Thoroughfare*,) 291;

Lincolnville, or *Duck-trap Harbor*, 340–341; *Linekin Bay*, 482, 483–484; *Little Kennebec River*, 84–85; *Little River*, 60, 61–62; *Long Cove*, (*Muscongus Sound*,) 447, 448; *Lynn Harbor*, 797–798;

Machias Bay and *River*, 73–74, 76–77; *Mackerel Cove*, (Burnt-Coat Island,) 225–226; *Mackerel Cove*, (*Casco Bay*,) 584, 586; *Main Channel of East Penobscot Bay*, 356; *Main Ship Channel of Boston Bay*, 814–816, 821–825; *Manchester Harbor*, 751; *Marblehead Harbor*, 780–781, 784; *Mare Point* and *Maquoit Bays*, 612, 613, 615; *Medomak River*, 437–439, 443–444; *Meduncook River*, 430–431, 432–433, 434; *Merchant Row*, 270; *Mericoneag* and *Harpswell Sounds*, 582, 584, 586–587; *Middle Bay*, (*Casco Bay*,) 605–607; *Middle Channel of Penobscot Bay*, 360–361; *Middle Channel of St. George River*, 395–396; *Moos-a-bec Reach*, 113–114, 116–117, 118, 124–125, 127–128; *Moose River*, 57; *Muscle Ridge Channel*, 325–326; *Muscongus Sound*, 447–448;

Nahant Bay, 790, 791; *Nahant Roads*, 797–798; *Narraguagus Bay*, 149–150, 151, 153–155; *Neponset River*, 867–868; *Newburyport Harbor*, 711; *New Harbor*, 447–448; *New Meadows River*, 551, 553–554; *North Channel of Boston Harbor*, 844–845; *Northeast Harbor*, 206–207;

Old Hump Channel of St. George River, 404; *Passage* between Metinic Island and *Southern Triangles*, 369–370; *Pembroke River*, 53, 55; *Penobscot Bay*, 325–326, 356–370; *Penobscot River*, 354–355; *Pigeon Cove*, 732; *Pigeon Hill Bay*, 160, 161, 163, 164, 165, 166, 167, 168; *Plum Island Sound* and *Ipswich River*, 715; *Portland Harbor*, 642–, 643, 645, 647–648, 650, 651–652; *Portsmouth Harbor*, 697–698, 699, 703; *Potts Harbor*, 590, 591–592; *Prospect Harbor*, 180–181;

Quohog Bay, 558–559, 561–562; *Richmond Island Harbor*, 656, 656–657; *Ridley Cove*, 573–574, 574–575; *Rockland Harbor*, 329, 330–331; *Rockport Harbor*, (Cape Ann,) 735–736, 737–738; *Rockport Harbor*, (*Penobscot Bay*,) 333–334; *Round Pond Harbor*, 447, 448;

Salem Harbor, 761–763, 768–769, 774–775, 778; *Sculpin Ledge Channel in Boston Bay*, 862; *Seal Cove*, (*Fox Islands Thoroughfare*,) 291–292; *Seal Harbor*, (Long Island, *Penobscot Bay*,) 348; *Seal Harbor*, (near *Muscle Ridge Channel*,) 325–326; *Searsport Harbor*, 349; *Sedgwick Harbor*, 253; *Sheepscot River*, 507–508, 509, 511; *Shirley Gut*, 847; *Somes Sound*, 215–217; *South Channel of Boston Bay*, 841–843; *South Channel of Penobscot Bay*, 358; *South Channel of St. George River*, 400; *Southeast Harbor*, 264–265; *Southern Harbor*, (Fox Islands,) 292; *Southwest Harbor*, 209–210, 212; *Stage Island Harbor*, 674–675; *St. Croix River*, 44–45; *St. George River*, 390–391, 392–393, 395–396, 400, 404, 408, 412–413; *Stockton Harbor*, 349–350; *Sullivan Harbor*, or *Flanders Bay*, 197; *Swampscott Harbor*, 790, 791;

Tennant Harbor, 377; *The Gurnet*, 566, 568, 569, 570, 571; *Two-Bush Channel into Penobscot Bay*, 362–363;

Vessels bound from *Bay of Fundy to* Cape Ann, 6–7; from Cape Sable to Cape Ann, 7; from Eastport to Cape Ann, 6; from Seguin to Cape Ann, 6;

Vessels bound to Cape Ann;—from Boston, 729; from *Kennebec River*, 728; from Monhegan, 728; from Portland, 728; from Portsmouth, 729; from Saco, 728–729; from Salem, 729;

Waterman Cove, 291; *Webb Cove*, 265; *Western Harbor*, or *Sandy Bay*, 736; *Western Passage into St. George River*, 408; *Weymouth Fore River*, 872, 873–874; *Wheeler* and *Rackliff Bays*, 374; *Winter Harbor of Frenchman Bay*, 186–187; *Winter Harbor of Saco Bay*, 663–664, 665–666;

Yarmouth River, 633–634; *York River* and *Harbor*, 683–684, 684–685, 685–686.

Sailing Directions, General, from—

Bay of Fundy to Boston, 15; to Cape Ann, 15; to Cape Cod, 15; to *Penobscot Bay*, 14–15; **Cape Sable** to Boston, 17; to Cape Ann, 16; to Cape Cod, 17; to Cape Elizabeth, 16; to East Quoddy Head, 16; to *Penobscot Bay*, 16; to West Quoddy Head, 16;

Matinicus to West Quoddy Head, 35;

West Quoddy Head to Boston, 14; to Cape Ann, 14; to Cape Cod, 14; to Cape Elizabeth, 14; to *Penobscot Bay*, 13.

Sailor Island 876
Sailors' Snug Harbor 871
Sail Rock 28, 31
Salem Harbor 751–778
Salem Neck 753
Salisbury Beach 707
Salisbury Cove 198, 199
Salisbury Point 707, 709
Sally Islands 171, 173
Salt Island, (Cape Ann) 725
Salt Island, (*Machias Bay*) 66, 70
Salt Marsh Cove 466
Salt Pond Ledge 445
Salt Rock 749
Salter Island 516, 517

Page.
Salvages, The 728, 733–734
Sammy Rock 789
Sampson Cove, (Cape Porpoise Harbor) 670
Sampson Cove, (Medomak River) 419
Sanborn Cove 68, 71
Sanborn Point 68
Sand Cove, (Gouldsboro' Bay) 174
Sand Cove, (Winter Harbor of Frenchman Bay) 186
Sand Cove Point, (*Gouldsboro' Bay*) 174
Sand Cove Point, (*Winter Harbor of Frenchman Bay*) 186
Sand Island:
(*Blue Hill Bay,*) 234; (*Casco Bay,*) 597, 600; (near Thurlow Island,) 268; (*Passamaquoddy Bay,*) 24.
Sand Island Point 613, 622
Sand Islands, (*Meduncook River*) 416
Sand Islands, (*Merchant Row*) 268
Sand Ledge 110, 116
Sand Point 38
Sand Point Shoal 43
Sandy Bay 724, 728, 732, 736
Sandy Bay Ledge 735
Sandy Cove, (Harrington River) 141
Sandy Cove, (New Meadows River) 545
Sandy Island 24, 25
Sandy Ledge 25
Sandy or French Point, (*Penobscot River*) 351, 354
Sandy Point, (near *Little River*) 57
Sandy Point, (on Cousins Island) 628, 630
Sandy Point Ledge, (Cousins Island) 631
Sandy Point Ledge (*Penobscot River*) 354
Sargent Cove, (Eggemoggin Reach) 245
Sargent Cove, (Somes Sound) 214
Sargent Mountain 199
Sargent Point 214
Sasanoa River 495, 522, 535–540
Satan Rock 764, 765–766
Saturday Cove 341
Saugus River 793, 794–795, 798
Sauli Rock 750
Saunders Point 294
Savin Hill 864
Savin Point 864
Sawyer Cove 92, 107
Sawyer Creek 107
Sawyer Island, (*Moos-a-bec Reach*) 103
Sawyer Island, (*Sheepscot River*) 498
Sawyer Ledge, (Isle au Haut Thoroughfare) 279
Sawyer Ledge, (Moos-a-bec Reach) 115
Sawyer Point 341
Scabby Islands 74, 81, 87, 93
Schoodic Harbor 182
Schoodic Head 169, 173, 182
Schoodic Hills, The 12, 190
Schoodic Island 183
Schoodic Ledge 183
Schoodic Neck 169
Schoodic, Peninsula of 182
Schoodic Point 182, 183
Schooner Brook 58, 59
Schooner Brook Head 59
Schooner Cove 18, 27
Schooner Head 199
Schooner Point 171
Scituate Tower 851
Scotch Island 64
Scott Head 18, 27
Scrag Island 597, 601
Scraggy Island 258, 269
Scraggy Island Ledges 270
Sculpin Ledge 859, 861, 872
Sculpin Ledge Channel in *Boston Bay* 861–862
Sea-Duck Rock 120, 123
Sea-Horse Rock 122
Seal Bay 293
Seal Cove:
(Boisbubert Island,) 166, 167; (*Burnt-Coat Harbor,*) 226; (Cape Elizabeth,) 654; (*Damariscotta River,*) 464; (*Fox Islands Thoroughfare,*) 283; (Mount Desert, south shore,) 199, 201; (Mount Desert, west shore,) 199, 232; (Small Point,) 542.

Page.
Seal Cove Head 226
Seal Cove Ledge 166, 167
Seal Cove Pond, (Mount Desert, western shore) 232
Seal Harbor, (Islesboro') 298, 341, 347–348
Seal Harbor, (*Muscle Ridge Channel*) 314–315, 325–326
Seal Island:
(Newburyport,) 708; (off *Machias*,) 71–72; (off Matinicus,) 71, 276–277; (Small Point,) 541.
Seal Island Passage 13
Seal Ledge, (Great Chebeag) 626, 627
Seal Ledge, (Rockport, Maine) 333
Seal Ledges, (*Muscongus Bay*) 397–398, 401, 411, 427–428
Seal Rock, (*Neponset River*) 867
Seal Rock, (*Western Branch, Mason Bay*) 93, 95, 96
Seal Rocks:
(Coast of New Hampshire,) 706; (*Kennebec River*,) 527; (*Linekin Bay*,) 481; (*Sheepscot River*,) 506–507.
Searle Rock 764
Sears Island 303, 343, 348–349
Searsport Harbor 349
Searsport, Village of 299, 348, 349
Sea-Shore Ledge 72, 75
Seavey Cove 137
Seavey Island, (George Islands) 380, 382
Seavey Island, (*Portsmouth Harbor*) 690
Seavey Point 137
Sea-Wall Point, (*Little Kennebec River*) 78, 82, 83
Sea-Wall, or Flynn Point, (*Cranberry Island Passage*) 211, 218
Sedgwick, Village of 245, 299
Seguin Island, (*Kennebec Entrance*) 517
Seguin Island, (*Moos-a-bec Reach*) 90, 103
Seguin Ledge, (*Moos-a-bec Reach*) 114, 117
Seguin Ledges, (*Kennebec Entrance*) 510, 533
Seguin Light-House 515, 517, 534
Seguin Passage, (*Moos-a-bec Reach*) 90, 102, 113–118
Sellman's Berth 772, 775–776
Set of *Tidal-Current* in *Main Ship Channel* of *Boston Bay* 823–824
Seven-Feet Rock 676–677
Seven Hundred Acre Island 340, 344
Seventy-four Bar 810, 838
Seward Neck 29, 50
Seward Rocks 696
Shabbit Island 105, 126
Shackford Cove 33
Shackford Head 21, 30, 47, 50
Shackford Ledge 51, 54
Shag Ledge, (*Merchant Row*) 269
Shag Ledge, (off *Little Kennebec River*) 78, 81, 83, 87, 94, 95
Shag Ledges, (off *St. George River*) 394
Shag or *Egg Rocks*, (*Boston Bay*) 800
Shag Rock, (*Kennebec River*) 526
Shag Rock, (Isles of Shoals) 702
Shag Rocks, (*Lynn Harbor*) 795
Shapley Island 691
Shark Island 397
Shark Island Shoals 401
Sharkeyville Creek 319
Sharpe Rocks 662
She Porcupine Island 194, 200
Sheep and Little Sheep Islands 104
Sheep Island:
(*Hingham Bay*,) 869, 875; (*Jericho Bay*,) 231; (*Muscle Ridge Channel*,) 320, 363; (*New Meadows River*,) 546; (*Pleasant Bay*,) 135, 136; (*Tabbott Narrows*,) 102, 106.
Sheep Island Bar 324
Sheep Island Flats 876–877
Sheep Island Ledge 550
Sheep Island Shoal, (*Fisherman Island Channel*) 324, 364
Sheep Island Shoals, (*Hingham Bay*) 871
Sheep Islands:
(*Deer Island Thoroughfare*,) 254, 263; (*Dyer Bay*,) 170; (*Moos-a-bec Reach*,) 102, 104, 121.
Sheep Rock 255
Sheepscot Bay 492, 516
Sheepscot River 492–515
Sheldrake, or *Eastern Yellow Rock* 255
Shelter Island 601
Sheppard Ledge 853, 880, 881–882
Sheriff, The Old 227, 229
Sherman Cove 335, 336

Page.
Sherman Point 345
Ship and Barges, The 231, 237
Ship Cove 638
Ship Harbor 218
Ship Island, or The Ship 231
Ship-Stern Island 134, 146
Ship-yard Ledge 333
Shirley Gut 793, 803, 826, 845–847
Shoal Ground north of Flag Island 549, 553
Shoal Ground, The, of Beverly Harbor 785
Shoal off Otter Island 434
Shoal off Turtle Head 304
Shoal Spot north of Slate Ledge 833, 841
Shoal Spots north of Old Cilley Ledge 391
Shoal Water north of House Island, (*Portland Harbor*) 641
Shoal Water surrounding Ram Island, (*Saco Bay*) 662
Shoal Water west of Hog Island, (*Portland Harbor*) 630
Shoals at Junction of Charles and Mystic Rivers 814
Shoals east of Lovell Island, (*Boston Bay*) 856
Shoals north of Slate Ledge, (*Boston Bay*) 813–814
Shoals off Little Island, (*Meduncook River*) 434
Shoals off north end of Metinic Island 367–368
Shoals west of Little Whaleboat Island 614
Shoppe Island 89, 94
Shoppe Point 89, 91, 94
Shores of—
Boston Bay, from Dorchester Point to *Neponset River*, 864; *Freeport River*, 615–618; Great Island, *Casco Bay*, 545, 546, 563; *Mare Point Bay*, 607–608; *Union River*, 235–236.
Shorey Cove 88–89, 95
Shot Islands 88, 94
Simms Rock 99, 152, 162, 167, 176
Simon's Farm Beach 864
Simon's Gurnet 546-547, 579
Simonton Cove 638
Simpson Head 191
Simpson Island 191
Sister Island 610
Sister Island Ledge 611
Sisters, The:
(*Entrance to St. George River*,) 394, 410; (off *Blue Hill Bay*,) 229; (*Sheepscot Bay*,) 502, 508, 510.
Sister's Ground, The 552, 574
Skillings River 183, 195, 197–198
Slate Cove 120
Slate Island, (*Boston Bay*) 875
Slate Island, (*Moos-a-bec Reach*) 120–121
Slate Ledge, (*Boston Harbor*) 813, 832–833, 841
Sloop Ledge, (*Sheepscot Bay*) 511
Sloop Ledges, (*Casco Bay*) 565, 567–568
Small Cove, (*Fox Islands Thoroughfare*) 294
Small Point Harbor 543–544
Small's Cove, (*Pembroke River*) 47, 50
Small's Head 49, 51
Small's Island 49, 51
Smith Cove, (*Bagaduce River*) 300
Smith Cove, (*Gloucester Harbor*) 731, 741
Smith Point, (*Little Kennebec River*) 80
Smith Point, (*Salem Harbor*) 752
Smith Rocks 852
Smuttynose Island, (*Blue Hill Bay*) 233
Smuttynose Island, (Isles of Shoals) 701, 702
Snare Cove 130
Snare Creek 130
Snow Island 556
Snow Rock 110, 116
Snug Cove 19, 30
Soldier Point 495, 539
Somes Harbor 212–213
Somes Sound 199, 212–218
Somesville, Village of 212, 214
South Bay:
(*Bagaduce River*,) 299; (*Boston Harbor*,) 806; (*Cobscook Bay*,) 46, 48, 50.
South Beacon, (*Portsmouth Harbor*) 695
South Beacon Shoal, (*Portsmouth Harbor*) 695
South Boston Flats 807, 813, 814, 840
South Breaker:
(*Carver Harbor*,) 308; (*Entrance to Muscle Ridge Channel*,) 321; (*Ipswich Entrance*,) 715.
South Breakers, (*Newburyport Harbor*) 709

Page.
South Centurion 809, 821
South Channel into *Salem Harbor* 775–778
South Channel into *St. George River* 396–400
South Channel of Broad Sound, (*Boston Bay*) 799, 834–843
South Deer Isle, Settlement of 294
South Islesboro', Village of 298, 343
South Ledge 328, 330
South, or *Main Channel* into *Penobscot Bay* 356, 358
South Pier in *Newburyport Harbor* 711
South Point of *Massachusetts Bay* 738, 739
South Point of Matinicus Island 276
South Shore of Mount Desert Island 201–223
South Spectacle Island, (*Boston Bay*) 804, 827, 857
South Spit, (*Essex River*) 717–718
South Spit of Nix Mate 861
South St. George, Village of 383
South Thomaston, Village of 318, 319
Southeast Breaker, (*Western Entrance to Penobscot Bay*) 367
Southeast Breakers, (*Salem Entrance*) 765
Southeast Harbor, (Deer Isle) 244, 254, 263–265, 295
Southeast Harbor, (*Gloucester*) 740–741, 742, 745, 746
Southeast Ledge, (*Murr Ledges*) 10, 11
Southeast Ledge, (*Penobscot Bay*) 359
Southeast Point 192
Southeast Rock 152, 162, 168, 176
Southeast Shoal 10, 11
Southern Entrance to Eastport Harbor 19, 22, 27–28
Southern Harbor 283
Southern Island 375
Southern Shoal Rock 790
Southern Triangles 369
Southport Island 484
Southwest Breaker 790–791
Southwest Harbor, (Deer Isle) 294
Southwest Harbor, (Mount Desert) 199, 202, 207–212
Southwest Head 8, 60
Southwest Ledge, (Isles of Shoals) 702
Southwest Ledges, (*Casco Bay*) 582–583, 639
Southwest or *Cross Island Ledge* 72
Southwest Passage into *Cobscook Bay* 49, 51, 55
Sow and Pigs, (*Casco Bay*) 609
Sow and Pigs, (*Newburyport*) 711
Spar Cove 617
Spar Island 78, 82
Spaulding Island 318
Spear Rock 328, 330
Spectacle Island, (near *Eggemoggin Reach*) 248
Spectacle Island, (*Winter Harbor of Frenchman Bay*) 184
Spectacle Island Ledge 248, 251
Spectacle Islands, (*Boston Bay*) 804–805, 857
Spectacles, The, (off *Wheeler Bay*) 375
Spectacles, The, (*Sheepscot River*) 497
Speedwell Rock 701
Sperlin Point 203, 211
Spermaceti, or *Whale's Back Ledge* 264
Spirit Ledge 229
Spit, or *Brewster Bar* 801, 855
Spoon Islands, The, (East Shore of Isle au Haut) 227, 277–278
Sprague Neck 66, 67
Sprague River 541
Sprague's Pasture 541
Spring Point 638
Spring Point Ledge 640–641
Spruce Cove 80
Spruce Cove Ledge 80
Spruce Cove Point 80
Spruce Creek 689, 697, 698
Spruce Head 340
Spruce Head, or False White Head 315
Sprucehead Island, (*East Penobscot Bay*) 248, 249
Sprucehead Island, (*Muscle Ridge Channel*) 314–315, 372
Spruce Island:
(*Deer Island Thoroughfare*,) 266; (off *Gilkey Harbor*,) 344; (*Passamaquoddy Bay*,) 24.
Spruce Island Gut 88
Spruce Island Narrows 88
Spruce, or Minot Island 346–347

Page.

Spruce Point:
(Cousin Island,) 626; (*Linekin Bay,*) 478, 479; (near Schoodic,) 182.
Spruce Point Ledges 481, 488
Squiers Point 88, 95
Squiers Point Ledge 88, 96
Squam River 712, 719–724
Squantum, Peninsula of 805, 857, 865, 868
Square Rock 701
Squash Island 691
Squaw, or Sandy Point 349, 350
Squaw Point Ledge 349, 353
Squirrel Island 461, 479, 485–486
Squirrel Island Cove 479, 485–486
Squirrel Island Ledge 490
Squirrel Point 520
St. Andrew Harbor 37, 41
St. Andrew Island 36–37
St. Andrew Light-House 37
St. Andrew Point 36, 37
St. Andrew's, Village of 37, 41
St. Croix Island 37, 38, 41
St. Croix Light-House 38, 41, 45
St. Croix River 7, 17, 36–46
St. George River 326, 379–413, 414
St. Helena Island 268
St. Mary Ledge 9, 10
St. Stephen's, Town of 40, 42
Stage Head 739, 742
Stage Island:
(Cape Porpoise,) 668, 671; (*Kennebec Entrance,*) 516, 517; (*Saco Bay,*) 658, 660.
Stage Island Bay 516, 517
Stage Island Harbor 668, 669, 671, 674–675
Stage Island Monument 658, 661
Stage Island Point 662–663
Stage Neck 682
Stakes in Medomak River 437
Stallion Rock 321
Stand-In Point 290
Stand-In Point Ledge 290
Stanel Point 21
Staniford Ledge 635, 641
Stanley Cove 170
Stanley Ledge 122, 127
Stanley Point, (Burnt-Coat Island) 226
Stanley Point, (Schoodic) 170
Staples Cove 617
Staples Island 617
Staples Ledge, (Burnt-Coat Island) 221
Staples Ledge, (*Deer Island Thoroughfare*) 260
Staples Point:
(Burnt-Coat Island,) 221; (*Deer Island Thoroughfare,*) 260; (*Freeport River,*) 617.
Star Island 701
Starboard Island 65, 75
State Ledge 812, 831, 839
Stave Island:
(*Broad Sound, Casco Bay,*) 588–589, 591, 593, 597; (*Eggemoggin Reach,*) 246; (*Frenchman Bay,*) 188.
Stave Island Harbor, (*Frenchman Bay*) 189
Stave Island Head 246
Stave Island Ledge, (*Casco Bay*) 589, 591, 603, 613–614, 622
Stave Island Middle-Ground 192
Steamboat Landing, (*Narraguagus Bay*) 147
Steel-Coat Harbor 90, 98, 101
Steel-Coat, or Steel Harbor Island 89, 90, 101
Steele Head 353
Steele Head Ledge, (*Penobscot Bay*) 353
Steele Ledge, (*Belfast Bay*) 342, 343, 353
Steele Ledge Monument 342, 343
Stellwagen Bank 3
Stellwagen Ledges 819, 852
Stellwagen Shoal Ground 3
Stepping Stones, The 598, 602–603, 613, 622
Stetson Rocks 528
Steuben Harbor 173, 175–176
Steuben, Village of 175
Stevens Island 120
Stielman Rocks 694

Page.
Stimpson Island 281, 282
Stimpson Point 294
Stimpson Rock 286
Stinson Neck, or Green Island 243, 254, 263
Stockbridge Point 615, 617
Stockman Island 593, 597
Stockton Harbor 349–350
Stockton, Village of 299, 349
Stodder Cove 874
Stodder Neck 874
Stone Head 65, 70
Stone Island, (George Islands) 380, 382
Stone Island, (*Machias Bay*) 65, 75
Stone Point 384–385
Stone Rock, (Salem Harbor) 777
Stone Rock, (York River) 684, 685, 693
Stony Beach 802
Stover Cove 562, 577
Stover Ledge 506
Stover Point 577, 580
Stover Point Shoal 581
Stover River 575, 577, 579
Straight Bay 46
Straitsmouth Island 724–725
Straitsmouth Island Light-House 725, 728, 731
Stratten Island 661
Strawberry Creek 578
Strawberry Hill 802, 818
Strawberry Point 739, 817, 878
Strout Point 617
Strouts Island 139, 140
Strouts Island Ledges 140, 142, 150
Strouts Point 145
Strout's Point, Village of 616, 617
Stump Cove 250, 252
Stump Cove Ledge 250, 252
Sturdivant Island 629
Sturdivant Island Ledges 631
Sugar Loaves, The, (Fox Islands Thoroughfare) 284, 288
Sugar Loaves, The, (Kennebec River) 518, 525
Sullivan Falls 194, 196, 197
Sullivan Harbor 183, 194–197
Sullivan Island 191
Sullivan River 183
Sullivan, Village of 194, 195
Sunken Black Ledge 285–286
Sunken Duck Rock 366
Sunken Egg Rock 230, 239
Sunken Island 858, 872–873
Sunken Ledge:
(*Gangway Passage in Boston Bay,*) 852; (*Gilkey Harbor,*) 345; (*West Gouldsboro',*) 190, 193–194.
Sunken or *McIntosh Ledge, (East Penobscot Bay)* 302
Sunken Rock north of Little Calf Island, (*Boston Bay*) 829
Sunken Rocks, or *Roaring Bulls, (Boston Bay)* 828, 836
Sunken Sister, or *Tom Rock* 491–492, 501, 508, 525
Surry, Village of 236
Sutton Island 202, 203
Sutton Rocks 879
Swampscott Harbor 787–792
Swampscott, Village of 787, 788
Swan or Burnt-Coat Island 224, 225, 226
Swan Island, (*Kennebec River*) 523, 524
Swan Island Point 524
Sweat Point 682
Sweet's Island 497

T.

Tabbott Cove 131
Tabbott Ledge 112
Tabbott Narrows 102, 106, 108
Tarbox Cove, (Sasanoa River) 538
Tarbox Cove, (Sheepscot River) 499
Taylor Reef 646, 649
Teal Island 380, 382
Telegraph Point 522

Page.
Temple Ledge 639
Ten-Pound Island, (*Gloucester Harbor*) 741, 742
Ten-Pound Island, (*Penobscot Bay*) 276
Ten-Pound Island Ledge 743
Ten-Pound Island Light-House 741, 742, 746
Tennant Harbor 375–378
Tennant Harbor Light-House 375, 377
Tennant Harbor, Village of 375, 376
Tenney Cove 92, 95
Tenney Creek 92
Tewkesbury Rock 828
Thatcher Island 726–727, 731
Thatcher Island Light-Houses 726–727, 731
The Ark 512
The Back Door 537
The Balls, (*Deer Island Thoroughfare*) 257–258
The Basin, (*Hurricane Sound*) 310
The Beach, or Lincolnville 340
The Beaver Tail 341
The Big Pot 106, 132–133
The Boat, or *Channel Rock* 259, 265
The Boiler, (*Upper Hell Gate*) 536
The Boilers, (*Great Hell Gate*) 537
The Boilers, (*Newburyport*) 711
The Brimbles 766, 782
The Brothers:
(*Casco Bay*,) 625, 631; (*Herring Gut Entrance*, 379; (off *Machias Bay*,) 74, 81, 87, 94; (*Richmond Island Harbor*,) 656.
The Brown Cow 545
The Bulldog 468
The Button Moulds 531
The Castle 108, 131
The Chair 157
The Chops, (*Kennebec River*) 522–523
The Cow and Calf 238, 240, 241
The Cuckolds 476, 483, 484, 485, 489, 502
The Devil's Back, or *Devil's Limb*, (*Boston Bay*) 837
The Devil's Elbow 433–434, 439
The Devil's Head, (*Eggemoggin Reach*) 233, 240, 241, 244
The Devil's Head, (*St. Croix River*) 38, 41
The Devil's Limb 439
The Divide:
(*John River*,) 457; (*Machias River*,) 69; (*Pembroke River*,) 46, 49; (*Penobscot River*,) 351; (*St. Croix River*,) 36, 38.
The Dry Salvages 728, 733–734
The Dumplings 284
The Eddy 500
The Falls, (*Cobscook River*) 48
The Falls, (*Sullivan Harbor*) 196
The Flat Ground, (Rockport, Massachusetts) 733
The Flat Ground, or *Temple Ledge*, (*Casco Bay*) 639
The Fox's Ears 288
The Gangway, (*Boston Bay*) 851–855
The Goose-Nest 603–604, 614, 622
The Gooseberries 752, 756, 763, 764
The Goslings 597, 600
The Grampuses 854, 880
The Graves, (*Boston Bay*) 807
The Graves, (off Camden, Maine) 334, 336, 337
The Great Brewster 801, 818
The Gurnet, (*Casco Bay*) 562–571
The Gut 452, 463
The Hardings, (*Boston Bay*) 808
The Haste 759–760, 767, 773
The Head, (*Head Harbor*) 100
The Hussey 585, 602, 613, 622
The Kegs 398, 403, 428, 432
The Kettlebottom 776
The Knubble:
(Near Metinic Island,) 364; (*Sasanoa River*,) 538; (*South-West Harbor*) 220.
The Ladle 106, 131–132
The Ledge, (*St. Croix River*) 39, 42, 43
The Ledge, Settlement of 39, 42
The Ledges, (*Damariscotta River*) 471
The Little Salvages 728, 733–734
The Londoner 728, 736
The Long Sand 681

Page.
The Lookout, (*Little River*) 58
The Lookout, (*Middle Bay*) 602, 604
The Middle Brewster 800, 818
The Motions 483, 489, 501
The Narrows:
(*Bass Harbor,*) 218; (*Benjamin River,*) 245; (*Boston Harbor,*) 802–803, 823, 824; (*Castine Harbor,*) 300; (*Damariscotta River,*) 464; (*Gouldsboro' Bay,*) 173, 175; (*Medomak River,*) 419, 438; (*Pleasant Bay,*) 135; (*Sheepscot River,*) 500; (*Somes Sound,*) 213; (*St. George River,*) 384, 385; (*Union River,*) 236; (*Weymouth Back River,*) 874.
The Neck of Andrews Island 316
The Nightcap 136
The Nipple 103, 109
The Northeast Graves 807
The Northern Triangles 359–360
The Nub 237
The Old Bull 165, 171, 172
The Old Cellar 707
The Old Hump 379, 402, 411, 432
The Old Man:
(Near George Islands,) 366, 397; (off *Little Machias,*) 63; (*Prospect Harbor,*) 179, 180.
The Old Prince 672, 674
The Old Proprietor, (*Manan Ledges*) 8–9, 10, 13
The Old Proprietor, (*Richmond Island Harbor*) 656
The Old Sheriff 227, 229
The Old Sow 503
The Old Woman, (near George Islands) 366, 397
The Old Woman, (off *Prospect Harbor*) 179, 181
The Outer Brewster 800, 818
The Outer Minot 816, 819, 878
The Pigeon Ground 359
The Pool, (Biddeford) 659, 661, 673
The Pool, (*Cranberry Island Harbor*) 203
The Pot 106, 133
The Proprietor 8
The Punch Bowl 246
The Roaring Bulls 828
The Rock's Nose 683
The Salvages 728, 733–734
The Ship and Barges 231, 237
The Sisters:
(Approaches to *St. George River,*) 394, 410; (near Burnt-Coat Island,) 229; (*Sheepscot Bay,*) 502, 508, 510.
The Southern Triangles 369
The Sow and Pigs, (*Casco Bay*) 609
The Sow and Pigs, (*Newburyport Harbor*) 711
The Spectacles:
(*Boston Bay,*) 804–805; (off *Wheeler Bay,*) 375; (*Sheepscot River,*) 497.
The Stepping Stones 598, 602, 613, 622
The Sugar Loaves, (*Fox Islands Thoroughfare*) 284, 288
The Sugar Loaves, (*Kennebec River*) 518, 525
The Thieves 808
The Three Islands, (*Bay of Fundy*) 9
The Three Islands, (*New Meadows River*) 547
The Three Kent Islands 9
The Tinker, (*Manan Ledges*) 8
The Triangles:
(*Casco Passage,*) 272; (*Eggemoggin Reach,*) 250–251; (off Portsmouth,) 684, 693; (*Salem Entrance,*) 776.
The Whale, (*Pigeon Hill Bay*) 159, 161, 162, 164
The Whale's Back, (*Salem Entrance*) 750, 757
The White Bull, (*Casco Bay*) 545, 552
Thief Island 422
Thieves Ledge 808, 820
Thirteen-Feet Spot 674
Thirty-Acre Island 497
Thomaston, Town of 379, 380, 387
Thompson Cove 498
Thompson Island, (*Boston Harbor*) 805, 856–857
Thompson Island Flats 858–859, 865–866
Thompson Island Rocks 398
Thompson Islands, (*Davis Straits Passage*) 379, 380, 381, 415
Thompson Islands, (*Jordan River*) 198, 224
Thorndike Point 315, 318
Thorne Island 522
Thorne Island Ledge 528–529
Thread-of-Life Ledges 450, 451

Page.
Thread-of-Life Passage 451
Three Fathom Rock 72
Three Islands, The, (*Bay of Fundy*) 9
Three Islands, The, (*New Meadows River*) 547
Three Kent Islands, The 9
Thrumbcap Island:
(*Eastport Entrance,*) 25; (*Eggemoggin Reach,*) 247; (*John Bay,*) 450, 451, 461; (*Muscongus Bay,*) 422.
Thrumbcap Ledge:
(*Casco Bay, Potts Harbor,*) 590, 591; (*Eggemoggin Reach,*) 247, 251; (*John Bay,*) 456; (*Medomak River,*) 440.
Thrumbcap, or *Long Ledge* 251
Thrumbcap, The, (*Potts Harbor*) 590
Thunder Island, (*Saco River*) 659
Thunder Island Pier, (*Saco River*) 659
Thurlow Head 257
Thurlow Knob 257
Thurlow, or Crotch Island 257, 268
Thurston Ledges 456–457
Thurston Point 450, 452, 454
Tide Mill Creek 92
Tides:
Annisquam Harbor, 723; *Bass Harbor*, 223; *Blue Hill Bay*, 242; *Booth Bay*, 492; *Boston Bay* and *Harbor*, 862; *Camden Harbor*, 339; *Cape Porpoise Harbor*, 675; *Casco Bay*, 653; *Castine Harbor*, 304; *Damariscotta River*, 477; *Eastport Harbor*, 35; *Fox Islands Thorough fare*, 293; *Gloucester Harbor*, 747; *Harpswell Harbor*, 653; *Ipswich Harbor*, 716; *John Bay*, 460 *Kennebec River*, 535; *Little River*, 62; *Lynn* and *Nahant Harbors*, 799; *Moos-a-bec Reach*, 101–102, 129; *Muscle Ridge Channel*, 326; *Muscongus Bay*, 449; *Nantasket Gut*, 878; *Newburyport Harbor*, 712; *Pembroke River*, 55; *Penobscot Bay*, 370; *Portland Harbor*, 653; *Portsmouth Harbor*, 704; *Prospect Harbor*, 181; *Quohog Bay*, 653; *Richmond Island Harbor*, 657; *Rockland Harbor*, 331; *Rockport Harbor*, (Maine,) 334; *Rockport Harbor*, (Massachusetts,) 738; *Saco Bay*, 666; *Saco River*, 666; *Salem* and *Marblehead Harbors*, 786; *Sheepscot River*, 515; *Somes Sound*, 217; *Southwest Harbor*, 217; *St. Croix River*, 45–46; *St. George River*, 413; *Swampscott Harbor*, 792; *Tennant Harbor*, 377; *Weymouth Fore River*, 874; *Winter Harbor of Frenchman Bay*, 187; *Winter Harbor of Saco*, 666; *York River*, 686.
Tilston Flats 866
Tilston Point 866
Timber Cove 141
Timber Island 667
Tinker Island, (*Blue Hill Bay*) 234
Tinker Island, (off Marblehead Neck) 770
Tinker, The (*Manan Ledges*) 8
Tobias Rock 853
Todd Bay 518–519
Todd Head 21
Todd Point 39, 42
Toddy Rocks 809, 820, 860
Tom Moore Rocks 771, 779
Tom Rock, or *Sunken Sister* 491–492, 501, 508, 525
Tommy Island 315
Torry Islands 244
Torry Ledge 250
Torry Rock 590
Torry's Castle 244, 245
Tottman Cove 544
Tottman's Bumper 546
Towesic Point 522
Town River 871

Page.
Town River Bay 870, 871
Town Rocks 707
Town's End Gut 484
Town's End Harbor 478, 484–492
Town's End, Village of 484, 487
Trafton Island 146
Trafton Island Ledge 148, 153
Transport Ledge 60, 61
Treat Island 28, 30, 40
Treatville, Village of 352
Tree Point 794
Trefethen Island 690
Trefethen Ledge 697
Tremont, Village of 218
Trenton Point 197
Trenton Point, Village of 198
Trenton River 183, 198–199, 224, 232
Trenton, Village of 195
Treworgy Hub 235
Treworgy Narrows, (Union River) 236
Treworgy Nub 237
Treworgy, or *Carrying-Place Cove* 236
Treworgy Point 236
Triangles, The:
(Between *York River* and *Portsmouth Entrance,*) 684, 693; (*Casco Passage,*) 272; (*Eggemoggin Reach,*) 250–251; (*Salem Entrance,*) 776.
Trott Island 668, 671, 673
Trott Rock:
(*Castine Harbor,*) 301; (*Kennebec River,*) 529; (*Whitehead Passage in Casco Bay,*) 650, 651.
Trufant Ledges 528
Trundy Reef 647, 649
Tuck Point 753
Tukey's Bridge 652
Tumble-Down Dick 136–137
Tumbler Island 487
Tunk Mountains 139, 144, 174, 190
Tupper Ledge 237, 238
Turburn Creek 671
Turkey Cove 384
Turkey Point 384
Turnip Island:
(*Casco Bay,*) 563, 575; (*Eggemoggin Reach,*) 249; (*John Bay,*) 450, 452.
Turnip Island Ledge, (Casco Bay) 580, 583
Turtle Head 299, 341, 343
Turtle Head Shoal 304, 343, 353
Turtle Island 184
Turtle Island Ledges 184
Twelve-Feet Rock:
(*Booth Bay,*) 488; (*Hypocrite Channel,*) 829, 837; (Rockport, Massachusetts,) 734, 737.
Two-Bush Channel 314, 356, 362–363
Two-Bush Island:
(*East Penobscot Bay*) 249; (George Islands,) 380, 381, 428; (off *Penobscot Bay,*) 276.
Two-Bush Islands, (*Deer Island Thoroughfare*) 257
Two-Bush Islands, (Muscle Ridge Islands) 314
Two-Bush Ledge, (East Penobscot Bay) 249, 251–252
Two-Bush Ledge, (Quohog Bay) 555
Two-Bush Reef, (Muscle Ridges) 314
Two-Hour Rock 52
Twopenny Loaf 716, 717
Tyler Islands 537

U.

Uncle Zeke's Island 579
Underwood Ledge 632
Union River 224
Union River Bay 198, 224
Upper Basket Island Ledge 627–628
Upper Corners, Village of 352
Upper Dodge Cove 467
Upper Flag Island 588, 591, 593
Upper Flag Island Ledge 591
Upper Gangway Ledge 324
Upper Goose Island 597, 600
Upper Green Islands 609
Upper Harbor Ledge 642

Page.
Upper Hell Gate, (Sasanoa River) 536
Upper Mark Island 499
Upper Middle, (Boston Harbor) 812–813, 832, 840
Upper Middle Ground, (Essex) 718
Upper Narrows 133, 137
Upper Neck, (*Hingham Bay*) 869
Upper Wass Cove 138

V.

Valley Cove 213
Vapor Rock, or *Old Anthony* 646, 648
Variation of the Compass—
In *Annisquam Harbor*, 723; in *Bass Harbor*, 223; at Bath, 535; in *Blue Hill Bay*, 242; in *Boston Bay*, 863; at Cape Neddick, 681; in *Casco Bay*, 654; in *Castine Harbor*, 304; in *Deer Island Thoroughfare*, 262; in *Dyer Bay*, 173; at Eastport, 36; in *Eggemoggin Reach*, 253; in *Englishman Bay*, 102; in *Frenchman Bay*, 188; in *Gloucester Harbor*, 747; in *Goulds-boro' Bay*, 178; at *Kennebec Entrance*, 535; at Kennebunkport, 678; in *Little Kennebec River*, 85; in *Little River*, 62; in *Machias Bay*, 77; in *Muscongus Bay*, 450; in *Moos-a-bec Reach*, 102, 129; at Nahant, 792; in *Narraguagus Bay*, 155; in *Newburyport Harbor*, 712; at Pemaquid Point, 450; in *Pembroke River*, 55; in *Penobscot Bay*, 370; in *Pigeon Hill Bay*, 168; in *Pleasant Bay*, 143; in *Plum Island Sound*, 716; at *Portland Entrance*, 654; in *Portsmouth Harbor*, 704; in *Prospect Harbor*, 181; in *Richmond Island Harbor*, 657; at Rockport, (Massachusetts,) 738; in *Saco Bay*, 666; in *Salem Harbor*, 787; in *Sheepscot Bay* and *River*, 515; in *Somes Sound* and *Southwest Harbor*, 218; in *St. Croix River*, 46; in *St. George River*, 413; in *Swampscott Harbor*, 792; in *Tennant Harbor*, 378; in *Western Entrance to Penobscot Bay*, 370; in *Winter Harbor of Frenchman Bay*, 188; in *York River*, 686.
Vaughan Island 670
Vaughan Island Point 670, 673–674
Verrill Point 704
Villages:
Addison, 133, 138–139; Annisquam, 719, 724; Bartol's Point, 617, 618; Belleville, 708; Beverly Farms, 752, 756; Biddeford Pool, 657, 659, 673; Blue Hill, 234, 235; Bowdoinham, 523; Brewer, 352; Bristol, 452; Brooklin, 234; Brooksville, 299; Bucksport, 351–352; Cape Harbor, 484; Cape Neddick, 679; Cape Porpoise, 670, 671; Centre, 793; Columbia, 138; Cutler, 57, 59; Damariscotta, 460, 467; Dennysville, 21, 46, 48; Dogtown, 720; East Machias, 68, 69; East Sullivan, 190; East Trenton, 198; Eden, 198; Essex, 716, 717; Falmouth Corner, 652; Ferry, (Newburyport,) 711; Ferry, (Portland,) 639; Frankfort, 352; Franklin, 194; Gardiner, 524; Germantown, 870; Gouldsboro', 174–175; Hallowell, 524; Hampton, 705; Hancock, 195; Harrington, 139, 142; Herring Gut, 383; Hingham, 875; Hodgdon's Mills, 461, 463; Hull, 802, 818; Jonesboro', 91, 92–93; Jonesport, 98, 107; Kennebunkport, 676; Kittery, 690, 692; Lanesville, 722, 724, 728; Lincolnville, 340; Little Machias, 59, 62; Lower Corners, 352; Lubec, 28, 29; Machiasport, 63, 68; Manchester, 749; Milton Mills, 864, 865; Mosquito, 378; Nantasket, 802, 818; Neponset, 864; Newbury, 714; Newcastle, (*Damariscotta River*,) 460, 467; Newcastle, (*Portsmouth Entrance*,) 689, 700; North Castine, 299; North Hampton, 705; North Haven, 283; North Ilesboro', 298, 343; Old Spain, 870; Old York, 682; Orland, 351; Orrington, 352; Parker's Head, 520; Pemaquid Falls, 453; Pembroke, 21, 46, 49, 51; Penobscot, 299, 351; Perry, 21, 41; Pigeon Cove, 724; Phipsburg Centre, 520; Prospect, 352; Railway, 865; Robbinston, 37, 41; Round Pond, 423; Rye, 704;

Page.

Villages—Continued.

Searsport, 299, 349; Sedgwick, 245, 299; Somesville, 212, 214; South Islesboro', 298, 343; South St. George, 383; South Thomaston, 318, 319; St. Andrew's, 37, 41; Steuben, 175; Stockton, 299, 349; Strout's Point, 616, 617; Sullivan, 194; Surry, 236; Swampscott, 787, 788;

Tennant Harbor, 375, 376; The Beach, 340; Town's End, 484, 487; Treatville, 352; Tremont, 218; Trenton, 195; Trenton Point, 198;

Upper Corners, 352; Welchpool, 19; Wells, 678; West Beach, 752; West Lubec, 46, 48; West Trenton, 198; Whiting, 21, 46; Winnegance, 521; Winnissimmet, 794; Woolwich, 522;

Yarmouth Falls, 629; York, 682.

Vinal Haven Island 280–281
Virgin's Breasts, or Virgin Islands 103, 109

W.

Waldoboro', Town of 414, 420
Wallace Head 543
Wallace Ledge 9, 10
Walton Cove 875
Ward Cove 174
Warren Island 344
Warren River 380, 387
Warwig Creek 38
Washman Rock 664
Wass Point 138
Waterman Cove 283
Waterman Ledge 287
Watts Cove 385, 386
Watts Ledge 645–646, 648, 655
Watts Point, (*St. George River*) 386
Watts Point, (Richmond Island) 655
Waukeag Neck 189, 191
Weare Point 679
Weare Point Ledges 680
Weasel Point 520
Weaver Ledge 220, 221
Webb Cove 255–256
Webber Dry Ledge 445
Webber Island, (*Damariscotta River*) 464
Webber Islands, (*Sasanoa River*) 537
Webber North Ledge 445
Webber Rock 742
Webber Sunken Ledge 445
Webhannet, or *Wells River* 678
Webster Rock 559, 568, 583, 639
Weir Cove 478
Weir River 875
Welchpool, Village of 19, 30
Wellman Ledge 777
Wells Beach 678
Wells Neck 678–679
Wells, Village of 678
Weskeag River 315, 318–319
West Bath, Town of 546
West Bay, or *Gouldsboro' Harbor* 174–175
West Beach, Village of 752
West Cliffs of Nahant 794
West Cod Ledge 643, 644
West Cod Ledge Rock 644, 646
West Cundiz Point 545, 571
West Gouldsboro', Harbor of 183, 189
West Halibut Rock 269
West Head and Ear, (Isle au Haut) 227
West Hogshead Rock 854, 880
West Hue and Cry 646
West Ledge:
(*Murr Ledges*,) 10; (*Richmond Island Harbor*,) 655; (Isles of Shoals,) 701.
West Lubec, Village of 46, 48
West Penobscot Bay 305–348
West Quoddy Head 22
West Quoddy Head Light-House 22–23, 28, 35
West River 107, 129
West Shag Rock 854, 880
West Shores of *Frenchman Bay* 199–201

Page.
West Sister, or *Branscomb Rock* 693
West Sullivan Harbor 183
West Trenton, Village of 198
West Willies 853, 881
Western Bar in Lubec Narrows 29, 32
Western Branch of John River 455
Western Branch of Kennebec River 522, 523–524
Western Branch of Mason Bay 93
Western Branch of Medomak River 421
Western Channel into Machias Bay 74–76
Western Channel into Salem Harbor 769–775
Western Deer Island Ledge 258
Western Duck Rock 366
Western Ear of Isle au Haut 277
Western Egg Rock 406, 425
Western Egg Rock Ledge 406
Western Entrance to Medomak River 420–422, 439–444
Western Goose Rock 667
Western Harbor of Booth Bay 485
Western Harbor of Gloucester 740, 742, 746
Western Head:
(Cross Island,) 64; (Isle au Haut,) 277; (Richmond Island,) 655; (Seal Island, Matinicus,) 277.
Western Island 298
Western Ledge 469
Western Mountain of Mount Desert 199
Western, or *Back Way into Boston Bay* 799, 856–860
Western, or *Brush Island Channel into Cohasset* 878–879
Western, or *Muscle Ridge Channel into Penobscot Bay* 356, 361–362
Western Passage into St. George River 404–408
Western Shores of *Blue Hill Bay* 232–235
Western Spit of Apple Island Flats 848
Westport Island 496, 514
Wetmore Island 350, 351
Weymouth Back River 874–875
Weymouth Fore River 869–874
Weymouth Great Hill 870
Weymouth Landing 870
Weymouth Point 235, 236
Whale Cove 725
Whale Rock, or *Whale's Back*, (*Casco Bay*) 570, 583, 592, 595
Whale, The, (*Narraguagus Bay*) 153, 159, 161, 162, 164
Whale's Back:
(*Kennebec River*,) 510, 517, 525; (off Portsmouth,) 688; (off *Winter Harbor of Saco*,) 664; (*Salem Entrance*,) 750, 757.
Whale's Back Ledge, (*Southeast Harbor*) 264
Whale's Back Light-House, (Portsmouth) 688, 692, 703
Whaleboat Island, (*Casco Bay*) 593, 594, 597
Whaleboat Island, (*Frenchman Bay*) 200
Whaleboat Ledge 603, 611, 614, 619, 622
Wharf Ledge 342
Wharf Rock, (near Long Island, *Boston Bay*) 861
Wharf Rock, (*Portsmouth*) 696
Wharton Island 418
Wheeler Bay 372, 373–374
Wheeler Big Rock 367
Wheeler Cove 464
Wheeler Rock 367
Whirls off Deer Point, (*Eastport Entrance*) 20, 42
White Bull, The 545, 552
White Head:
(*Cohasset*,) 879; (Nantasket Beach,) 818; (near Portland,) 637, 650; (*Western Point of Penobscot Bay*,) 273, 274, 312.
Whitehead Flats, (*Cohasset*) 877
Whitehead Island, (*Penobscot Bay*) 273, 274, 312
Whitehead Ledge, (*Casco Bay*) 650, 651
Whitehead Ledges 327, 377–378
Whitehead Light-House 274, 312, 326
Whitehead Passage in Casco Bay 585, 637, 650–652
White Horse, The 24
White Island:
(*Eggemoggin Reach*,) 232, 233, 243; (Isles of Shoals,) 700; (off Eastport.) 24.
White Island Channel, (off *Damariscotta River*) 473
White Island Ledge 701
White Island Light-House, (Isles of Shoals) 686, 700, 703
White Island Reef, (*Portsmouth Entrance*) 694
White Islands:
(*Hurricane Sound*,) 310; (off *Damariscotta River*,) 461–462; (*Portsmouth Entrance*,) 688, 692.

Page.
White Ledge, (Kennebec Entrance) 510, 525, 533
White Ledge, (Salem Entrance) 750
White Mountains, The 645
White, or *Harbor Ledge, (Camden)* 337, 339
White Point, (*Sasanoa River*) 537
White Rock, (Deer Island Thoroughfare) 260
White Rocks, (Approaches to *Lynn Harbor*) 796
White's Cove 630
White's Island 597, 601
White's Point, (*Casco Bay*) 602
White's Point, (*Pleasant River*) 138
Whitey Cove 466
Whitey Point 466
Whiting Ledge 855
Whiting Passage 105, 129
Whiting, Village of 21, 46
Whitmore Neck 263
Whittum Island 539
Widgeon Cove 577
Widows Island 282
Wiggins Rock 323
Wigwam Point 719–720
Willard Cove 59
Willard Rock 644, 647, 649
Willey Ledge 696
Williams Island, (*Maquoit Bay*) 609–610
Williams Island, (*New Meadows River*) 547
Williams Rock 772, 776
Willis Point 538
Will's Straits 562, 563, 576
Wilson Cove, (Harpswell) 602, 604–605
Wilson Cove, (Ragged Island, off *Penobscot Bay*) 276
Wilson Harbor 25
Wilson Head 25
Wilson Ledges 605
Wilson Rock 859
Winches Mountain 246
Windmill Point, (*Boston Bay*) 869
Windmill Point, (Campobello) 18, 25
Winnegance Bay 546
Winnegance Creek 521, 546
Winnegance, Village of 521
Winnissimmet, Village of 794
Winslow Rocks 528
Winter Harbor:
(*Frenchman Bay,*) 183, 184–187; (*Saco Bay,*) 659–666; (Vinal Haven Island,) 293.
Winter Harbor Cove 185–186
Winter Harbor Light-House 184–185, 187
Winter Harbor Point 186
Winter Harbor, Settlement of 185
Winter Island 754
Winthrop Bar 845
Winthrop Head 793, 826, 835
Wiscasset Bay 501
Wiscasset, Town of 501
Witch Rock 585, 640, 643
Wohoa Bay 107
Wolf Neck 615, 616, 617
Wolsgrover Island 418
Woltz Point 419
Wolves, The 23
Wood End of Damiscove 485
Wood Island:
(*Lower Kennebec,*) 518; (off *New Meadows River,*) 543, 544; (*Portsmouth Harbor,*) 688, 692; (*Saco Bay,*) 660; (*Upper Kennebec,*) 522.
Wood Island Light-House, (*Saco Bay*) 660, 673
Wood Point, (*Neponset River*) 867
Wood Point Flats 867
Woodberry Point 753
Woodbridge Island 708
Wooden Ball Island 276
Woodruff Dike 68
Woods Pond Point 157, 159, 161, 162, 164
Woodward Point 547, 548
Woody Clapboard Island 625
Woolwich, Village of 522
Wooster Cove 293

Page.
World's End 875
Wormell Ledges 31–32
Wreck Island, (*Merchant Row*) 267–268
Wreck Island, (*Muscongus Bay*) 426, 435
Wreck Island Ledges 435, 440
Wreck Rock 873
Wyer Island 579
Wyman Bay 519
Wyman Ledge 548, 572

Y.

Yarmouth Falls, Village of 629
Yarmouth Island 554, 571
Yarmouth Island Ledges 558
Yarmouth River 628, 629–634
Yeaton Cove 170
Yeaton Point 170
Yellow Birch Head 169
Yellow Birch Reef 172–173
Yellow Head, (*Machias Bay*) 66, 70
Yellow Head, (Pemaquid Neck) 424
Yellow Island 66, 70
Yellow Ledge, (*Home Harbor*, Muscle Ridges) 314, 321
Yellow Ledge, (*Murr Ledges*) 10
Yellow Ridge Island 314, 321
Yellow Rock, (*Deer Island Thoroughfare*) 257, 261
Yellow Rock, (off *Quohog Bay*) 557
Yellow Rock Ledge, (*Deer Island Thoroughfare*) 257, 261
Yo-ho Cove 79
Yo-ho Ledge 84
Yo-ho Point 79, 82, 83
York or White Island 243, 244
York Islands, The 278
York Ledge, (*Casco Bay*) 632
York Ledge, (off Cape Neddick) 684, 685, 693
York Narrows 222, 243, 273
York River 681–686
York, Village of 682
York's Landing 629
Young Point:
(*Fox Islands Thoroughfare*,) 284; (*Gouldsboro' Bay*,) 174; (Mount Desert Island,) 201; (*Sheepscot*,) 501.

Z.

Zeb Cove 638
Zeke Point 283