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Notes on the Coast of the United States

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Sectns VI & VII.

Western Coast of Florida Peninsula
from Cape Sable on the Sth
to Ocilla River on the North.

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Note - This Memoir was prepared by Prof. A. D. Bache, Superintendent, and revised by Capt. C. P. Patterson, Hydrog: Inspector, U. S. C. Survey.

National Oceanic and Atmospheric Administration

Notes on the Coast of the United States

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is, for convenience, divided as follows—

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N.B. All bearings, courses, etc. are magnetic.
All distances are in nautical miles.
All depths are given at mean low-water.

Coast of West Florida

from Cape Sable to Ocilla River

This Coast extends from Cape Sable, the extreme southernmost point of Florida, in Lat. 25° 07' N. and Long. 81° 06' W., to the mouth of the Ocilla River, in Lat. 30° 05' N. and Long. 83° 58' W., on a direct bearing of N.N.W. ¼ W. (N. 26° W.), and with a length, on a direct line, of 330 miles — but, along the Coast, measured in steps of 5 miles, of nearly 400 miles.

This whole Coast consists almost entirely of low marshy levels, of more or less width, which are gradually lost on the land side into low boggy prairie land and occasion-al hillocks 20 or 30 feet high, covered with forests of pine, palmetto and other trees, with undergrowth of mangrove and other bushes, and on the sea-side into multitudes of small islands, flats, reefs and shoals, covered with grass and mangrove bushes, and more or less covered at high water, making the shore at many points difficult of access, even in boats, and still more difficult to determine where the land ends and water begins. This belt of marsh, islands, flats and reefs, which, in fact, are nothing but the small irregularities of the ground covered or not by

water - extends in some places 10 and 15 miles in width, and at others contracts to 1 and 2.
This Coast is broken with many large indentations, filled with islands and intricate shallow channels. These might be called bays.

Of bays proper, there are three large and important ones:- Charlotte Harbor, Tampa and Waccasassa bays, - and many smaller. It is more deficient in good harbors and anchorages than any portion of our Gulf Coast, but is better supplied than the Eastern Coast of Florida, which is so remarkably barren of these.
A great number of small rivers empty into these bays, and along the Coast, discharging from the interior marshes and everglades, in the rainy season, immense quantities of their surplus fresh water: so that, at times, in some places the sea is covered with it for many miles from the shore.

The Coast, or rather the trees, can rarely be seen over 10 miles at sea, there being but a few small mounds covered with them, visible 2 or 3 miles further.
The Coast Survey has surveyed but small portions of this Coast, and, therefore, it is but little known.
Along the whole Coast, in its bays and harbors, there is the greatest abundance of fine Oysters, fish in great variety, quantities of wild fowl, and frequently deer, etc., can be had. The finest of all these, it is said, are to be found at Charlotte Harbor.

Section 1st

From Cape Sable to Bowditch Point

1 - Remarks . . . . . Page 3
2 - Islands, Keys and Peninsulas . . . . " 4
3 - Passes and Inlets . . . . . " 7
4 - Bays . . . . . " 8
5 - Rivers . . . . . " 10.

Remarks.- Cape Sable, in Lat. 25° 07' N. and Long. 81° 05' W. on the South, and Bowditch Point, in Lat. 26° 27' N. and Long. 82° 03' W. form the limits on the west coast of the great Everglades, which here lose themselves in a great unexplored cypress swamp, called the Big Cypress, fringed with a great belt of mangrove swamps, with islands and flats, filling several large bays, and extending in places many miles to sea. Along this portion of the Coast, a distance of about 100 miles, many small rivers discharge into the Gulf the surplus waters of the Everglades, and during the rainy season this fresh water extends seaward several miles, floating on the surface of the Salt water. The whole of this portion of the Coast is as yet entirely unsurveyed by the Coast Survey, and, therefore, is scarcely even approximately known. Even the scanty information we have, is, in many cases, contradictory

and unreliable.

Bowditch Point lies at the Southern Entrance of Charlotte Harbor, on the west side of Matanzas Pass, the most northern Pass into Estero Bay, and leading from San Carlos Bay.

Islands, Peninsulas, Keys etc.–

From the best authorities the names of these are

1– Cape Sable Peninsula ..... Page 4
2– Keys in White Water Bay ..... " 5
3– Key Mc Laughlin ..... " 5
4– Thousand Islands ..... " 6
5– Pavilion Key ..... " 6
6– Chokalisca Key ..... " 6
7– Carimbas Key ..... " 6
8– White Horse Key ..... " 6
9– Coon Key ..... " 6
10– Cape Romano Keys ..... " 6
11– Estero Bay Keys ..... " 7

Cape Sable Peninsula forms the extreme southern end of Florida, and extends E. by N. and W. by S. for about 24 miles, with perhaps an average breadth of 6 or 7 miles. Its outer shore is a pretty even beach, broken by a few bayous, and bounded by a continuity of low bluffs of coral limestone. Back of these there is generally a strip of hard land covered with Oak, etc., but the swamps of the Everglades cover

a large portion, with many large ponds.— It separates Barnes' Sound, on the South, from White Water Bay on the North.— Its Western side runs from Cape Sable about N.N.W, for 10 miles, to a point called N. W. Cape. About mid-way between is another point, called Palm Point, upon which was located Fort Cross, a palisade fort and blockhouse. At Cape Sable was situated Fort Poinsett.— ½ mile back of Palm Point is White Water Lake, 4 miles long by ½ mile broad, lying parallel to the shore.—

Cape Sable prairie, upon which a Coast Survey base was measured, is some six miles in length by about two and a half in width. The surface is hard and covered with short grass and various flowering plants, the thick-ets scattered over it are very dense, the Spanish bayonet growing in great luxuriance among the trees. No good water is to be had, generally, on the prairie. On digging below the surface the soil becomes less and less firm, un-til a soft limestone mud is reached, which underlies the whole surface.

<u>The Keys of White Water Bay</u> lie between Cape Sable Peninsula and Harney's River, and form a great mass, 9 miles across N.E. from N. W. Cape, and 20 miles to the Eastward up the bay.

<u>Key Mc Laughlin</u> is a large swampy Key, just above Rodgers' river, of triangular shape, and is perhaps 3 or 4 miles across, along its shore, and 10 miles long.

The Thousand Islands lie in a great bay or extension of the Everglades, between Key Mc. Laughlin and the Tah-kah-hatchee river, supposed to be 15 or 16 miles across, and as many deep. They have never been explored, and their extent is not known.

Pavilion Key is a small key, 1 or 2 miles across, lying at the N. W. end of the Thousand Islands.

Chokalisca Key lies 2 or 3 miles off the mouth of Wahika river, and is perhaps 3 miles long by 1½ broad, and 7 miles about N.N.W. from Pavilion Key, and 17 or 18 miles east of Cape Romano.

Carimbas Key is a small Key about 3 miles north west from Chokalisca Key.

White Horse Key lies about 3 miles off the mouth of Gullivan's bay, and is about 2 miles across.

Coon Key is a small Key at the north end, or head of Gullivan's bay, and about 6 miles North East from Cape Romano.

Cape Romano Keys form a large group making out from the main land, over 10 miles to the Southward and westward, between Gullivan's river, and Carimbas bay.— The extreme southwestern of these is triangular in shape, about 2 miles across, with its point to the southward, which forms Cape Romano, in about Lat. 25° 52' N. and Long. 81° 48' W.— These Keys form the northern side of Gullivan's bay.

Estero Bay Keys are a large group, almost entirely filling up that bay.— They extend about 15 miles N. and S., and 5 or 6 E. and W.

All these Keys have the same character, and are but the slightly elevated portions of the great mud flats of the Coast, into which the Everglades gradually subside, covered with Mangrove bushes, surrounded by oyster beds, and connected with the main land by the flats, which are but slightly covered, and which the fall of the tide lays bare, leaving only narrow and shallow channels between.

Passes and Inlets.

Of the many Passes and Inlets on this portion of the coast, as well as of the Entrances of the several rivers, but little or nothing is known.— of the latter it is believed they are accessible and navigable only for Canoes — of the former, into the various bays, no surveys have ever been made, and their characters are perfectly unknown, — except perhaps Malco Inlet, 8 or 9 miles above Cape Romano, and the Entrance to Carimbas Bay, 6 or 8 miles further to the Northward. These two are said to have a few feet of water, and to lead to anchorages with 6 or 8 feet water.

Matanzas Pass is a narrow entrance of 200 yards

width and leads from San Carlos Bay, at the southern end of Charlotte Harbor, to the North end of Estero Bay, between Matanzas Key and a point of the main land.

Bays.

The names of these, beginning at the Southward, are

1. White Water Bay. - - - - - - - - - - Page 8
2. Ponce de Leon - - - - - - - - - - - - " 8
3. Thousand Islands - - - - - - - - - - - " 8
4. Gallivan's Bay - - - - - - - - - - - - - " 9
5. Carimbas Bay - - - - - - - - - - - - - " 9
6. Estero Bay - - - - - - - - - - - - - - - - " 9

White Water Bay, is the name of a large expanse of water, filled nearly with mangrove and marshy keys, lying to the Northward of Cape Sable Peninsula, pointed in shape, with its point to the Eastward, about 10 miles across at the mouth and 20 long. - But little is known of this bay, but it cannot be deep, and is thought to be only navigable for canoes at high water.

Ponce de Leon Bay - The limits of this bay are very indefinite, and the name is applied generally to the outer waters between N.W. Cape and Cape Romano.

Thousand Islands Bay is a semicircular indentation

into the Big Cypress Swamp of the marshy flat of the Coast, filled with mangrove Keys and oyster beds.— It is from 15 to 18 miles across the mouth N. by W. and S. by E., and nearly as much from E. to W.— It receives 4 or 5 rivers behind the islands.

Gallivan's Bay is the North end of Ponce de Leon bay, and is formed by the projection from the main of the Cape Romano Keys, Cape Romano forming its N. W. point.— It is open to the Southward and Southward and Westward, and is about 12 miles across.

Carimbas Bay is a small circular bay, lying in 2 or 3 miles from the Coast, about 15 miles above Cape Romano.— It connects with the Gulf through a pass running S. W., about 3 miles long.— The bay is about 3 or 4 miles across. It is not known what water can be taken in,— but it is supposed to be shallow.

Estero Bay is a very wide and shoal indentation into the main land, just to the Southward of Sanibel Island.— It is over 15 miles N. and S., and 6 or 7 E. and W., and is filled with mangrove islands. It is very shallow.

Rivers.

The names of the small Rivers running from the Everglades are

1- Shark River ..... Page 10
2- Harney's River ..... " 10
3- Rodgers' River ..... " 11
4- Chitto-hatchee River ..... " 11
5- Fah-kah-hatchoochee River ..... " 11
6- Alcotopah River ..... " 11
7- Fah-kah-hatchee River ..... " 11
8- Wahika River ..... " 11
9- Gallivan's River ..... " 11
10- False Malco River ..... " 11
11- Malco River ..... " 11
12- Corkscrew River ..... " 11
13- Estero River ..... " 12

Shark River empties on the North side of White Water Bay, about mid-way. Six feet can be carried up it for several miles.

Harney's River empties about 10 or 12 miles N.E. of N.W. Cape.

Rodgers' River empties about 10 or 12 miles N. by W. from N.W. Cape.

Chitto-hatchee River empties in the S.E. corner of the bay behind the Thousand Islands, about 5 or 6 miles N.E. of Key Mc Laughlin.

Fah-kah-hatchoochee River, about 8 miles to the North.

Alcotopah, about 5 miles W.N.W. of the last; both of them emptying into the bay behind the islands.

Fah-kah-hatchee River empties at the northern edge of the bay and islands, 8 or 9 miles W.N.W. of the last, and about 33 miles N. by W. from N.W. Cape, and over 20 from the mouth of Rodgers' river. – This is the most important of these small rivers, and flows from the Northward for 30 miles.

Wahika River and Inlet empty about 5 miles above the last, abreast Chokalisca Key, and about 20 miles East of Cape Romano.

Gallivan's River empties about 10 miles N.W. of the last, abreast of Sea Horse Key.

False Malco River empties into the head of the small bay behind Cape Romano Keys, about 11 miles N.N.E. of Cape Romano.

Malco River empties in behind the northern end of Cape Romano Keys, about 12 miles North of Cape Romano. All the foregoing streams flow in from the Northward and Eastward and Northward.

Corkscrew River empties into the Southeast corner of Estero bay behind the islands, flowing in from the Southward and

Estero River empties into the N. E. corner of the bay, flowing in from the Eastward.

Section 2nd.

From Bowditch Point to Anclote River.

1- Remarks ..... Page 12
2- Islands ..... " 13
3- Inlets, Entrances and Passes ..... " 20
4- Bays and Harbors ..... " 25
5- Rivers ..... " 33

From Bowditch Point, in about Lat. 26° 27' N. and Long. 82° 03' W., to the mouth of the Anclote River in Lat. 28° 22' N. and Long. 82° 43' W., is a distance of 135 miles, along the Coast - differing in many of its features from the rest of this Coast.

It is lined by chains of islands nearly its whole length, between which are channels leading into several harbors and two superb bays, - Charlotte Harbor and Tampa Bay.

The islands, as well as the main land, change in character, there being less swamp and more prairie and hard land, with several mounds near the shore

from 30 to 80 feet high.

Between the islands of Charlotte Harbor & those of Sarasota Bay, the shore is almost a straight line of sand beach, and the "Pine Bluff" presents the appear-ance of a dense forest.

Outer Islands and Keys

The names of these, beginning at the Southward, are,-

Charlotte Harbor Keys.

1. Sanibel ..... Page 14
2. Captiva ..... " 15
3. La Costa ..... " 16
4. Sasparilla ..... " 16
5. Bird ..... " 16
6. Buck ..... " 17

Sarasota Bay Keys.

7. Casey's ..... Page 17
8. Sarasota ..... " 17
9. Long Key ..... " 17
10. Anna Maria ..... " 18

Tampa Bay Keys

11. Palm ..... Page 18
12. Passage ..... " 18
13. Egmont ..... " 18
14. Mullet ..... " 18
15. Bird ..... " 19
16. Cabbage ..... " "
17. Arenosa ..... " "

18. Pine Key ..... " "
19. Sand Key ..... " "

Clear Water Bay Keys

20. Clear Water ..... Page 19
21. Josephis ..... " 20

22. Anclote Keys ..... " "

Sanibel Island lies at the S. end of Charlotte Harbor, separating it from the Gulf on the southward, and having San Carlos Bay on the E., and Blind Pass on the westward.- It is nearly half moon shaped, convex to the southward towards the Gulf, with its two points lying W.N.W. and E.S.E., distant 10 miles. Its most southern point is in about Lat. 26°. 26' N. and Long. 18° 13' W. It is 3 miles broad in its widest part near the middle.
On the outside is a clean fine sloping beach of sand and

shells, which extends around the East end along the inner shore 3½ miles to Middle Point. Beyond that point a number of lagoons run back some distance into the interior of the island, Mangrove and Button--wood fringing their shores as usual, in some places for ¼ mile in breadth. The middle of the island is an open prairie, with the exception of a few scattered Palmettos, 6 or 8 feet above the sea, with low ridges running lengthwise of the island. – The surface is composed of small shells, but no traces of Coral rock have been found. Water can be found by digging, but it is brackish. – There is one good well, however, near the East end, which is nearly West of, and 3 miles distant from Bowditch Point. – There are two or three peculiar Creeks or ditches on the prairie, from 40 to 60 feet wide, without outlets, filled with brackish water 2 or 3 feet deep, which neither ebbs nor flows. – The longest is upwards of 3 miles in length.

<u>Captiva Island</u> overlaps with its south end the West end of Sanibel island at Blind Pass for 1½ miles, and from that opening stretches in a N.N.W. direction up--wards of 10 miles to Captiva Pass, with an average width of scarcely ¼ mile, in one place but 100 Yards. It has a regular curving sand beach of sand and shells on the outside, while the inner shore is a ragged broken marsh, skirted with Mangroves. Just under the North--ern Point is a small fishing Village, with a wharf, and

a well ½ mile back.

La Costa Island is separated from Captiva Island by Captiva Pass, 500 Yards wide, and lies in the same general direction, N.N.W., as that island.— It is 6 miles long, with a breadth of ½ mile in its northern half, and less than ¼ mile in its southern half.— It is an open prairie, 6 or 8 feet above the sea, with a fine shell and sand beach on its outer side, which extends around the points for ½ mile. Its inner edge is irregular and ragged, sloping off to the water, and is lined with Mangrove. About ½ mile from its North end, on the inside, is a small Mound about 350 Yards long, upon and near which is a settlement called Burrough's Ranch.— There must also be fresh water.

Gasparilla Key lies to the Northward of La Costa island, and is separated from it by Boca Grande, the Main Pass into Charlotte Harbor, which is 1200 Yards wide. The direction of the Key is about N. by W. and S. by E., with a length of nearly 6 miles to the Pass called Boca Gasparilla, and a breadth varying from over a mile to ¼ mile. Its general character is the same as that of the lower islands.

Bird Key is above Gasparilla, being separated from it by Boca Gasparilla, about ¼ mile wide. Its direction of length is about N.W. by N. ½ N. from Gasparilla, and length 2½ miles, with a width of ¼ mile.— The Pass

at its North end is called Boca Nueva, about 300 or 400 Yards wide, separating it from

Buck Key, which has a length, in the same direction, of 1¼ mile – the main land closing in on it within 400 Yards, and forming between them and around the North end of the Key, a long narrow Pass into this arm of Charlotte Harbor, named Bocilla.

From Bocilla Pass, to the N.N.W., a chain of small islands with a long narrow neck of sand and shells, extends for 6 or 7 miles, separating a lagoon, about 2 miles long, filled with Mangrove islands, from the Gulf.

Casey's Key is the most southern of the Keys and islands separating Sarasota Bay from the Gulf.– It is separated from a point of the main land at Piney Bluff, by a narrow pass called Casey's Pass. Its length is about 6 miles, and direction from Casey's Pass N.W. by N. ½ N., with an average width of ½ mile. At its North end it is separated by Little Sarasota Pass ¼ mile wide from

Sarasota Island, lying in the same direction, with a length of about 5 miles, and a breadth of nearly one. This island, at its North end, is separated by Sarasota Pass, over ½ mile wide, from

Long Key, lying in a N.W. by N. direction, with a length of about 7 miles and width of ½ mile. At its North end is Long Boat Inlet, which separates it from a small

Key 1½ miles long, at the North end of which is Boca Seca, a small pass separating this Key from Anna Maria Key, which separates the North end of Sarasota Bay from the Gulf, and the entrance to Tampa Bay.– It is over 8 miles long and 1½ broad, curving from N.N.W. as it starts from Boca Seca to nearly East at its North end.

Palm Key is a small Key, 1 mile long, very low, with a few Pines and Mangrove bushes and Palmettos, lying 1 mile North from Anna Maria Key, on the south side of the Entrance to Tampa Bay.

Passage Key is nothing but a round sand bank ⅜ of a mile across, bare at low water, lying ½ mile North of Palm Key.

Egmont Key, upon the North end of which is a Light House, lies about the middle of the entrance of Tampa Bay, and between the two principal channels leading into it.– It lies nearly N. and S., with a length of 1⅜ miles, and an average width of ⅜ths. of a mile.– Its south end is 2¾ miles distant, N.W. by N. ½N., from the North end of Palm Key, and 2 miles from Passage Key.– It is nearly covered with Pine and Palmetto. The Light House is in Lat. 27° 36′ 04″ N. and Long. 82° 45′ 15″ W., approximately.

Mullet Key lies to the Northward and Eastward of Egmont Key, and is nearly an equilateral triangle

in shape, with one of its angles lying towards the north end of Egmont Key, and having its N.E. side much broken by three large bayous, which run nearly up to its S.W. point, which point bears N.E. by E. ½ E. from the north end of Egmont Key, nearly 1½ mile distant. Between these points the main channel into Tampa Bay runs.— The west and S.E. sides of this island have sandy beaches, but the edges of the lagoons are marshy, with much mangrove,— and on the island are a few Pines and Palmettos.

Bird Key is a small round island, 1½ mile N.E. of Mullet Key, ¼ mile across, and about midway between that Key and the main.

Cabbage Key and Arenosa Key are the two largest and most northern of the chain of keys which run to the northward from the North side of Mullet Key to the main land, for a distance of over 6 miles, separating that arm of Tampa Bay from the Gulf.

Pine and Sand Keys are two Keys running from the north end of Arenosa Key parallel to the Coast, which here runs about N.N.W., and distant from it from 1 to 3 miles. They are about 5 and 10 miles long, respectively.

Clear Water Island lies to the Northward of Sand Key by a Pass over 2 miles wide. It has a nearly N. and S. direction, with a length of nearly 7 miles, and width of from 1 to 2. At its north end the Coast begins to trend to the Northward and Eastward, and that end of the island is separated from

the S.E. end of Joseph's Key by a Pass about 1 mile wide.- Old Fort Harrison, a stockade fort, was situated on the main land abreast the middle of this island.

Joseph's Island lies in about a N.E. and S.W. direction, parallel to the coast, with a length of about 5 miles, and an irregular breadth of from ¼ to 1 mile.

These two last islands lie about from 1 to 3 miles from the main land, and the enclosed sheet of water is called Clear Water Bay.

Anclote Keys lie to the northward of the N.E. end of Joseph's Key, being separated from it by a Pass about 2 miles wide. These Keys lie nearly N. by E. and S. by W., 8 miles long, parallel to the coast, and distant from it 3 to 5 miles, separating St. Joseph's Bay from the Gulf.

Inlets, Passes and Entrances

1- Matanzas Pass ..... Page 21
2- Entrance to San Carlos Bay ..... " "
3- Blind Pass into Charlotte Harbor ..... " "
4- Captiva Pass into " " ..... " "
5- Boca Grande, or La Costa Pass into Charlotte Harbor .. " 22
6- Boca Pasparilla into Charlotte Harbor ..... " 23
7- Boca Nuevo and Bocilla into Charlotte Harbor ..... " "
8- Casey's Pass into Sarasota Bay ..... " "
9- Little Sarasota Pass into Sarasota Bay ..... " "

10- Sarasota Pass into Sarasota Bay ..... Page 23
11- Long Boat Inlet " " " ..... " "
12- Boca Seca " " " ..... " "
13- Entrance to Tampa Bay ..... " "
14- Entrances to Clear Water Bay ..... " 24
15- Entrances to St. Joseph's Bay ..... " "

Matanzas Pass is but 200 yards wide, and leads into the North end of Estero Bay around Bowditch Point from the Gulf and the East Corner of San Carlos Bay. It is said that 5 or 6 feet water can be taken through this Pass.

Entrance to San Carlos Bay lies between Bowditch Point on the East and Point Ybel, the East Point of Sanibel Island on the West, and is 2¾ miles wide.- 9 feet water can be carried over the bar of this Entrance.

Blind Pass is a narrow Crooked Pass 200 yards wide, winding in from the Gulf to Charlotte Harbor, between the North end of Sanibel and South end of Captiva Island for nearly 2 miles. This Pass is merely a boat Channel, and is almost entirely blocked up in the inside by extensive shoals, which are dry, or nearly so, at ordinary high water. Although deep in some places, the bars both on the inside and outside render it useless except for boats.

Captiva Pass is a passage from the Gulf into Charlotte Harbor, and lies between the North end of Captiva and south end of La Costa Island, leading in E.N.E., and is about

500 yards wide.– Vessels drawing not more than 5 feet water can pass through: yet the channel is somewhat intricate.

Boca Grande is the Main Pass into Charlotte Harbor, and lies between the north end of La Costa and the south end of Gasparilla Island, and is about ⅔ of a mile wide.

The deepest water in the Pass is close to the shoal making out to southward and westward from the south end of Gasparilla Island, and on which shoal the sea breaks in ordinary rough weather. In the Pass, and close to the shore of Gasparilla island the soundings give 10 fathoms, and from the bar to this point the average range is from 2½ fathoms to 10 fathoms. From the Pass up to Punta Gorda (near the mouth of Pease Creek) vessels can carry 2½ fathoms.

The bar is nearly 5 miles outside the pass, and shoals up very rapidly.– There are two parallel shoals running out and connecting with the bar, one from the southern point of Gasparilla Island, and the other from the north end of La Costa Island, in a general south west direction.– Inside the bar, near the pass, and just north of the La Costa Shoal, is a second small shoal, with 1½ fathoms on the shoalest part. Inside Boca Grande is an excellent harbor of refuge for vessels drawing not over 12 feet.

At anchor, under the lee of Gasparilla or La Costa Island, vessels would be safe from the destructive westerly gales which sweep this coast.

In the absence of a hydrographic survey, the following

Sailing Directions are given, as being nearly correct.

Keep in five fathoms water until the southern point of Gasparilla Island bears N.E., then steer N.E. by E. ¼ E., and cross the bar with 2½ fathoms water. The channel between the shoals generally shows quite plainly.

Boca Gasparilla is the Pass between the North end of Gasparilla Island and the North end of Bird Key.

Boca Nueva is the small Pass between the North end of Bird Key and South end of Buck Key.

Bocilla, is a little Pass between the North end of Buck Key, a group of small islands to the Northward, and the main land to the Eastward.

Casey's Pass is the most southern pass into Sarasota Bay, between the South end of Casey's Island and Piney Bluff.

Little Sarasota is a Pass between the North end of Casey's Key and the South end of Sarasota Island.

Sarasota Pass is the Main Pass from the Gulf into Sarasota Bay, and lies between the North end of Sarasota Key and the south end of Long Key.

Long Boat Inlet and Boca Seca are two small Passes between Long Key and Anna Maria Key.

There is also a Pass into Sarasota Bay from the Northward, leading in from the South corner of Tampa Bay.

Entrance to Tampa Bay (chart C.) A reconnaissance of this fine Bay and Entrance, by the Coast Survey in 1855 - gives two good channels through the Entrance into the Bay, one between Egmont Key and Passage Key, and the other between

Egmont Key and Mullet Key, which is the main channel, and known as the North channel - the first being the South channel.

The bar of the North channel lies 4 3/4 miles W. by N. from Egmont Light House, and is about 1 mile broad, with a channel of the same width. The channel is 3/4 mile wide from the North end of Egmont Key to Mullet Key shoal:- 19 feet can be taken over this bar.

From the South west point of Mullet Key a shoal runs out W. by N., with 5 feet 1 3/4 mile from the Key, and 12 feet nearly 5 miles, steep to on the south side. From the Light House a shoal makes out to the westward, with 5 feet 3/4 of a mile distant. In mid channel North of the Light House there is a depth of 12 3/4 fathoms water. The north point of Egmont, and the South point of Mullet Key are steep to, with 8 and 5 fathoms respectively.

Through the South channel, which is 3/4 of a mile wide, 17 feet can be taken.

There is good anchorage behind Egmont Key and south of Mullet Key, in from 3 to 8 fathoms water, hard bottom.

Entrances to Clear Water Bay. — Entrances to St. Joseph's Bay. Of each of these there are three, — but so little is known of them, it is impossible to give any idea of their depth or character.

Bays and Harbors

1 – San Carlos Bay ..... Page 25
2 – Charlotte Harbor ..... " 26
3 – Sarasota Bay ..... " 29
4 – Tampa Bay ..... " "
5 – Old Tampa Bay ..... " 31
6 – Hillsboro' Bay ..... " 32
7 – Clear Water Harbor ..... " "
8 – St. Joseph's Bay ..... " 33

San Carlos Bay lies between the east end of Sanibel Island on the westward, – the main shore from Bowditch Point to Punta Rosa on the Eastward and Northward and Eastward, – and the S.E. end of Pine with the little islands between it and Punta Rosa on the Northward, – on the Southward being open to the Gulf. – It is, in fact, the south end of, and approach to Charlotte Harbor, having a length, N.W. and S.E., of 4 miles and a breadth of 2 miles.

This bay forms an excellent harbor for vessels drawing less than 9 feet, and this draught can be carried up as far as Punta Rosa. – The Channel was formerly staked. The land on the main shore to the Northward and Eastward is much cut up with bayous and lagoons, is covered with wood and Mangrove, and has fine sandy beaches.

There is a settlement at Punta Rosa, with a store-house and wharf.

Between Punta Rosa and Pine Island are a group of Keys and reefs, which extend to the Northward to the mouth of the Caloosa-hatchee and Cape Blanco or Sand Point, 3 miles N.N.W.

Fisherman's Key, the largest of these, about ½ mile westward of Punta Rosa, is ¾ of a mile long, and has a settlement of several houses on its East Point, and there are scattered fishermen's huts on many of the Keys.

Charlotte Harbor is second only to Tampa Bay in extent and importance, on this Coast.— Sanibel Island lying at nearly right angles to the general trend of the coast, separates it on the South from the Gulf — and a chain of islands, consisting of Captiva, La Costa, Gasparilla, Bird and Buck, extending from the West end of Sanibel Island to the Northward nearly parallel to the Coast for 25 miles, separates it on the Westward from the Gulf. — From the upper end of La Costa, the bay stretches to the Northward and Eastward —, and has a total length, in a N. and S. direction from Sanibel Island on the south to Grassy Point on the North, at the mouth of Pease Creek, of 30 miles, — with an average breadth of 8 miles below Aguado Key, a length of 20 miles — and nearly 5 above.

The country surrounding this great bay is low, covered with forests of Pine, Palmetto, Oak, etc, with the shore much cut up with bayous and lagoons, which are lined with Mangrove bushes.

The whole lower part of the bay, for 20 miles, is filled

with groups of Keys, with great flats, and large numbers of oyster beds.

The principal of these islands is Pine Island which lies on the Eastern side of the southern point, or approach, of Charlotte Harbor. Its South end is opposite the mouth of the Caloosa-hatchee, and 1½ mile north of Middle Point on Sanibel Island.— It lies about N.N.W. and S.S.E., with a length of 13 miles, and an average width of 3 miles.— A pine barren, with the trees 60 and 70 feet high, runs through the middle nearly its entire length, and both shores are irregular and ragged, being lined with belts of Keys and islands, broken by lagoons and bayous, fringed with Mangrove.

This island is remarkable as having been a favourite burial place of the Indians.— There are several large mounds on the Keys near the shores. The largest are at "Brown's" Station, on its western shore, about 3 miles from the north end, and nearly opposite the middle of La Costa, some of which are 60 and 80 feet high and 400 yards around.

There is also here the remains of a canal, which at a former period ran quite across the island, but its site is now so overgrown with mangrove, pine and palmetto that the trace is barely discernible.

This island divides the lower bay into two parts length-wise, that to the westward having an average width of 4½ miles, and that to the Eastward about 2 miles.

The principal groups of Keys in this bay are:—

1st - the group to the Southward and Eastward of Pine Island.- 2nd - the group along the South West shore of Pine Island.- 3rd. Barras Islands, stretching across the bay for a length of 5 miles, between the North end of Pine Island and the South half of La Costa,- and 4th. the San Antonio group, to the Eastward of Gasparilla Island.- There are other scattered Keys, along the shores and towards the Northern end of the bay:- Of these Keys altogether there are several hundred,- generally covered with Mangrove.

Upon one of the Barras islands, called Usappe, upon which is a long low mound, Fort Casey is situated.

Upon the south end of a long narrow Key, which stretches to the Southward and Eastward from Burrough's ranch on the North end of La Costa Island, called Punta Blanco, is a settlement of fishermen and there are many huts on the several Keys.

The San Antonio group is cut up into hundreds of small Keys, which are entirely covered with water at spring tides, and some of them at ordinary low water. Between the Keys the water is so shallow, that at times it is impossible to pass a boat without dragging it through the mud.

The largest portion of this great bay is filled with flats, with from 1 to 3 feet water, large parts of which are bare at low water.- There are narrow and crooked channels, however, through them of some depth.

The channel between Punta Rosa and Charlotte Harbor

is narrow and winding.– After crossing the bar at the Entrance of San Carlos Bay, 12 feet can be carried to the bulkhead between Blind and Captiva Passes.– This deposit appears to be caused by the meeting of the flood tides, which enter the two Passes.– It has about 4 feet on it at low, and 6 feet at ordinary high water. The depth of water from the bulkhead to Captiva Pass is about 7 feet.

From inside of Boca Grande bar, 15 feet can be carried up 18 miles above La Costa Island to Punta Gorda.

The channels throughout Charlotte Harbor and its approaches are crooked and narrow, and generally marked with stakes and barrels.

Sarasota Bay lies along the Coast just to the southward of Tampa Bay, and is separated from the Gulf by a chain of sand and marshy islands. It is of the same character as Charlotte Harbor from Boca Grande to Boailla Pass. It is from 15 to 20 miles long, and from 1 to 4 broad, and interspersed with numerous small Mangrove Keys.– The depth of water is only 8 feet, and the sand and oyster bars running out from the Keys render the channels very crooked.

Tampa Bay is the largest, finest and deepest bay on this Coast. It lies between the Latitudes of 27° 21′ and 28° 04′ N. and Longitudes 82° 22′ and 82° 47′ W.– The main body of the bay lies in a N.E. by N. and S.W. by S. direction, with a length of nearly 24 miles, and an average width of 7 miles.– It has, besides, two large arms, one extending N.N.W.

12 miles from its N.W. Corner, called Old Tampa Bay, and the other extending N. from its N.E. Corner 7 miles, called Hillsboro' Bay.–

From Egmont Key at the Entrance, the sides of the main body of Tampa Bay are nearly parallel, the South west side being separated from the Gulf by a chain and group of small sandy and marshy islands and Keys, – the remainder of the west side is formed by the main land, being the broad end of a broad neck, separating Old Tampa Bay from the Gulf.– The East side of the bay is composed of a chain of long narrow marshy Keys, separating the bay from a long narrow lagoon, called Terrasilla Bay. On the N.E. end, the shore is formed by the end of the neck of land which separates the two main arms, from Gadsden to Passage Points.

Along the Eastern shore, the shoals extend off from 1 to 2 miles – and, along the western shore from the head of Mullet Island to Piney Point, a distance of 7 miles, they extend off from 3 to 4 miles.– To the Northward and Eastward of Piney Point, a large round middle ground extends off nearly 6 miles towards Gadsdens Point.– A fine broad channel, nowhere less than ¾ mile wide, leads from the Entrance up the bay, and around the North end of the Middle Ground, until around the N.W. side of the Middle Ground, when it gradually narrows to ½ mile, running to the S.S.W. ½ mile from the shore, and between it and the Middle Ground nearly to Piney Point, – abreast of which

it narrows to 200 yards.— The depth on the bar, 19 feet, can be taken the whole length of this channel.— Probably 15 feet can be carried through to the Southward of the Middle Ground.— 10 feet water can be taken over the Middle Ground, and 12 feet can be taken within 600 yards of the shore to the westward of it and Northward of Piney Point,— for 4 miles, where the shore comes down in a low bluff of 12 feet, the ground gradually rising back in 600 yards to 20 feet, covered with Pines and Black Jack.

The terminus of a proposed Railroad was located at a point on this bluff, 2 miles to the Northward of Piney Point, abreast of which is a fine anchorage ½ mile wide, with from 5 to 6 fathoms water.

Old Tampa Bay is the Northwest and main arm of Tampa Bay, and connects with it through a passage abreast of Passage Point, 3 miles wide, and runs about N.N.W. 12 miles.— Just above Passage Point it widens out, and has an average width of 6 miles, the shores being nearly parallel and curving to the Northward and Westward. Its broadest part is at its head, 2 miles below St. Helena, where it is 7 miles wide. Extensive flats set off from its shores. A bar, with 17 feet water, lies 4 miles S.S.W. from Passage Point, above which is a crooked channel ½ mile wide, running close in to Passage Point and 2 miles above it:— 12 feet can be carried from this for 9 miles, and 10 feet up to St. Helena at the mouth of a small river running in from the Northward.— This bay is separated from

the Gulf by a broad irregular neck of land, running N.N.W. and S.S.E., 9 miles across from the west corner of the bay, and 17 miles long to its end below Piney Point. On the S.E. it is separated from Hillsboro' Bay by an irregular neck running N. and S. nearly 7 miles, — 2 miles wide near its middle, and over 5 at its end. — 18 feet can be taken in within 200 yards of the west side of Passage Point, and 10 feet within 100 yards of Rocky Point mid-way on the N.E. side.

Hillsboro' Bay runs North from the N.E. corner of Tampa Bay, between Gadsden's Point and Bay Creek, 7 miles, with an average width of over 3 miles. This bay has many shoals, but 10 feet can be taken over the bar abreast of Gadsden's Point, which depth can be taken up within 2 miles of Fort Brooke, or Tampa City, at the mouth of Hillsboro' river, at the extreme North end of the bay. The shores of this bay are low, except at Ballast Point, a bold rocky bluff, ½ mile broad, projecting out 1 mile from the shore, about mid-way on the western shore, which bluff extends nearly 2 miles to the Northward, gradually losing itself in the marsh. Ballast Point is not covered with wood. The land around all these bays is low, and generally covered with dense forests of Cypress, Pine, Oak, and some Palmettoes, — with tracts of prairie and swamp, and much Mangrove along the Creeks, etc.

For Sailing Directions — see Chart.

Clear Water Harbor is a long, narrow Sound, lying along

the Coast, between 30 and 40 miles to the Northward of Egmont Key, and separated from the Gulf by Clear Water Island and Joseph's Key. It is supposed to be about 2 miles wide and about 12 miles long.

St. Joseph's Bay lies along the Coast just to the Northward of Clear Water Harbor, and is separated from the Gulf by the Anclote Keys.— It is about 8 miles long and 3 broad. In the bend between Joseph's Key and Anclote Keys, there is said to be a good anchorage with 12 feet water.

Rivers.

1- Caloosa-hatchee ..... Page 33
2- Pease Creek ..... " 34
3- Myakka River ..... " 35
4- Manatee River ..... " 35
5- Bullfrog River ..... " 35
6- Allafia River ..... " 35
7- Hillsboro' River ..... " 35
8- Anclote River ..... " 36

Caloosa-hatchee empties through the S.E. corner of Charlotte Harbor, into San Carlos Bay, between Sword Point on the Northward and Punta Rosa to the Southward, 2¾ miles apart, and the S.E. point of Pine Island on the Eastward, 2½ miles from Punta Rosa. This entrance to the mouth proper is filled with extensive flats, shell banks,

and Mangrove Keys, through which a channel winds past Punta Rosa, over towards Sword Point, within 1 mile of which it turns suddenly to the Northward and Eastward, and runs close in to the North point of the mouth proper of the river. The proper mouth of the river is 2 miles north of Punta Rosa, the river flowing in from the Northward and Eastward, with a width of about 1200 yards.

This river rises in some small lakes near the great Lake Okee-chobee, and runs in a general west direction for 30 miles, then turns to the S.W., and runs 25 miles to its mouth.— Up to this bend from its mouth it preserves an average width of nearly 1 mile, when it suddenly narrows to a width of 50 yards.— It is quite shallow, and, as its mouth is filled with oyster reefs, it can never be of much importance for purposes of navigation.

This river forms the Northern boundary of the Big Cypress Swamp, the western extension of the Everglades.

Pease Creek flowing from the Eastward after a direction of S.S.W., for nearly 60 miles, empties in the N.E. corner of Charlotte Harbor, between Eureka and Grassy Points. It has a width of 2 miles for nearly 9 miles, and is in this part only, in fact, an arm of the bay. At the end of 9 miles, it becomes suddenly filled with little Keys, and divides into several small branches, running to the Eastward and Southward and Eastward beside the main river.

It is said to be navigable for vessels drawing 5 feet water,

from its entrance to Whiting's Camp, a distance of 20 miles. Its banks are high, and covered with Pine trees of good size.

Myakka River empties in the N. W. corner of Charlotte Harbor, just to the Westward of Pease Creek, and flows in from the Northward and Westward, running nearly parallel to the Coast.

Manatee River runs from the Eastward, and empties into the South end of Tampa Bay, just below the S. W. end of Terrasilla Bay. It is about 30 miles long, and heads in a group of small lakes.— It is quite broad, for 10 miles to Old Fort Hamer, where it separates into several small branches, beside the main stream.

Bullfrog, or Little Manatee River empties into the middle of the East side of Tampa Bay, flowing with a general course, although very crooked, from the Eastward, with a length of about 30 miles.

Allafia River is a river of about the same size, and flowing in the same direction, as the Little Manatee, and empties into the middle of the East side of Hillsboro' Bay.

Hillsboro' River, or Live Oak River, is the principal tributary of Tampa Bay, and flows in a general direction from the Northward and Eastward.— It is very crooked, and has many large bends.— It empties in the North corner of Hillsboro' Bay, and has a length of about 30 miles. On the East point of its mouth is situated Fort

Brooke and the town of Tampa.

Anclote River empties directly into the Gulf, just above the Anclote Keys, in about Lat. 28° 22' N., 45 miles above Egmont Key, and 48 to the Southward of Cedar Keys.

Section 3rd.

From the Anclote River to the Ocilla River.

1- Remarks Page 36
2- Islands and Keys " 38
3- Bays and Harbors " 40
4- Rivers " 45

Remarks.

From the mouth of the Anclote River in Lat. 28° 22' N. and Long. 82° 43' W. to the mouth of the Ocilla River in Lat. 30° 05' N. and Long. 83° 58' W., the course is N. W. by N., and the distance 127 miles in a direct line. But the coast is very irregular, setting in to the Eastward from this direct line, as far as 30 miles at Waccasassa River. The coast between these points, measured in steps of 5 miles, is 160 miles long.

Between the Anclote and Suwaanee Rivers, this coast is but

a broad fringe of marshy country, from 1 to 10 miles wide, gradually and slowly losing itself under the waters of the Gulf, through innumerable masses of small Mangrove Keys, sandy and muddy flats, and vast numbers of Oyster and Shell reefs, the latter extending out in some places for 6 and 8 miles. Through these, a great number of small rivers find their way to the Gulf, through channels more or less navigable for small vessels.— The whole of this part of the coast is, from these causes, almost inaccessible, except at a few points.— Upon the borders of these rivers and the interior prairie lands there is much very rich land, upon which are produced sugar, rice and cotton.— Much red and White Cedar is also exported, principally for the manufacture of lead pencils.

From Cedar Keys to Anclote Keys, the whole coast, and for 10 miles into the interior, is a perfect wilderness, with the exception of a few settlements near the heads of the rivers, and one called Bayport, directly on the Gulf.

Below the Chassa-howitska River, within an area along the coast of 35 square miles, there are 236 soft marshy islands, as actually surveyed by the Coast Survey. In some places, the belt of these islands extending 5 miles beyond the main shore.— Above the river the islands are covered at high water, but the marsh of which they consist lies somewhat higher, is much less

broken than in other localities, and the zone of patches lying between the water and the firm land is narrower.

Islands, Keys and Reefs.

Of the great multitude of these, but few of the most important are named; they are

1 - St. Martin's Reefs ..... Page 38
2 - Crystal Reef ..... " 38
3 - Cedar Keys ..... " 39
4 - Suwannee Reef ..... " 40

St. Martin's Reefs - (Chart B.) are the most marked feature of the kind upon the coast of West Florida, and extend nearly in a line N. by W. and S. by E. parallel to the coast, about 5 miles distant from a point 2 or 3 miles above Homosassa River in about Lat. 28° 50', to abreast of Herring's Bluff in about Lat. 28° 38', a distance of 12 miles. - They are composed of immense beds of oysters and shells, - in many places compacted into a solid mass, and frequently covered with sand. Through this reef are several intricate channels for small vessels.

Crystal Reef lies off the mouth of Crystal river, about 2 miles from the shore, and is about 4 miles long. - It is of the same character as St. Martin's Reef.

Cedar Keys are a group of sandy and marshy islands forming the end of a point of the main land, running to the Southward and Westward, between the Waccasassa and Suwannee rivers.— The great inner portion of these keys are connected with the main land, from which they are separated only at high tides, by boat channels.

The outer body of these keys, projecting to the Southward and Westward, are islands proper, and form the harbor of Cedar Keys, one of the most important, if not the most important, as the proposed terminus of the air-line Atlantic and Gulf Railroad from Fernandina, on this Coast of Florida.

These outer Keys are North Key, Sea-Horse Key, Depot Key, Snake Key, Derrick's Key, Dog Island, and several minor ones.

North Key is wooded, has two large ponds, and is hilly on the East side.

Sea-Horse Key is the most southern Key, has a long hilly ridge on the S.W. side, 45 feet high,—with an Anchor-age close to the Eastern point.— During the war with the Indians, this island was occupied by our troops. Upon the Eastern end of the ridge is a Light House.

Depot Key is quite hilly.— On it is quite a little town, with hospitals, storehouses, cottages, etc., many overhung by tall palmetto trees.— It has two or three fine wharves,

and has quite a business appearance, as all the sugar, cotton, etc., of the neighboring rivers are taken by flat boats to this place, and here shipped to Mobile and New Orleans.

Snake Key lies to the Eastward of Sea-Horse Key, and forms a triangle with Depot Key. It is hilly, but small, and affords some protection to the harbor from S.E. and S. winds.

Derrick Key is situated to the Northward and Westward of the Main group. It is small, and separated from the others by the Steamboat channel to Suwannee River.

Dog Island, northeast of Depot Key, is small and low, and contains only Mangroves and a few Cabbage trees.

The Suwannee Reef extends nearly parallel to the shore, from near Suwannee River to Cedar Keys. – There is a Steamboat Channel, through and inside of it.

From the Suwannee to the Ocilla there are no Keys of importance, and no known reefs; the general character of the coast changing, being more regular and free from dangers. It is broken by many small streams, but not any of importance.

Bays and Harbors.

There is a small bay at the mouth of nearly each river, consisting of but the enlargement of the mouth by the spread of the Keys and Marsh, – and many smaller bays between,

formed by the ragged edges of the shore.
The more important are

1- Crystal Harbor ---------- Page 41
2- Wethloccochee Bay ---------- " 41
3- Waccasassa Bay ---------- " 42
4- Cedar Keys Harbor ---------- " 43
5- Deadman's Bay ---------- " 45

Crystal Harbor lies opposite the mouth of Crystal river, and between it and Crystal reef. Through the reef there is a channel with 10 feet water. It is very hazardous for strangers to attempt this harbor, or to enter by any directions recorded.— They should touch at Cedar Keys, and procure a pilot for all the ports of the vicinity.— This harbor could be made available for the business of the adjacent rivers. The whole western shore of this bay is a complex system of shell and coral reefs.

Wethloccochee Bay lies to the Northward, along the coast of the mouth of the river of that name, about 10 miles to the Northward of Crystal Harbor, and 6 or 7 to the Southward of Waccasassa river. The shores of this bay, like all on this coast, are low, flat and marshy, intermixed with mangrove bushes, and, a mile or two inward, very thickly wooded.— The whole bay is very shoal, Oyster reefs are spread about the bay,

and one extends a few miles from the river's mouth into the bay.

Waccasassa Bay - (Chart D.) lies in the angle of the coast, formed by the projection of the main land between Waccasassa and Suwannee rivers to the Southward and Westward, and which is terminated by the Cedar Keys. The Coast at the mouth of the river forms nearly a right angle North and South, and East and West nearly, running from the mouth of the river to Cedar Keys, nearly West for over 10 miles. — These Keys, with Sea-Horse reef, extend over 15 miles S.S.W., and give protection to an ample bay, which is well protected from all winds except those from the Southward and Westward.

The whole Coast of this bay is flat, and, for 1 or 2 miles inland, Marshy; - where the dense forest begins and stretches for miles into the country, broken only by small patches of prairie and ponds. The whole shore is a complete oyster bed, and many of the reefs run across the bay, in courses parallel to the shores.

One channel, between the Western reefs, carries 6 feet water in the bay: and another, into the Eastern reefs, 8 feet — but they are blocked off by the reefs, yet form good anchorages 200 Yards wide. — West Oyster Reef is a broad oyster and shell reef, stretching to the Southward and Eastward for 2 ½ miles from the Main shore, between 2 and 3 miles to Northward and Eastward of Depot Key.

Waccasassa Reef lies in a N.W. and S.E. direction, with a length of over 2 miles, nearly 8 miles East of Snake Key, and 4 miles S.W. from Grassy Point.

North East Oyster reef is similar to, and of the same dimensions, and parallel with Waccasassa reef, about 1 mile to the Northward and Eastward — and another reef 2½ miles long, of the same character, lies parallel to these ¾ mile inshore of North East Oyster reef.

For Sailing Directions, etc., see chart.

Cedar Keys Harbor (Chart E.) is the only good harbor between Tampa Bay and St. George's Sound. — Nine feet water can be taken over the bar to the anchorage to the South-ward and Eastward of Sea-Horse Key, which anchorage is 2 miles long and ¼ mile broad.

Two Surveys have been made of this harbor by the Coast Survey, one in 1854, and another in 1859. — Both of these give four channels — 1st. The Main Ship Channel, or Sea-Horse Channel — 2nd. A channel across the head of Sea-Horse reef, 2 miles Southward and Westward from Sea-Horse Key — 3rd. North Key Channel between Sea-Horse Key and North Key — 4th. North West channel, to the Northward of North Key.

The 1st or Main Ship Channel had changed but little, the difference being in depth only, but that of importance, being in 1859 one foot less on the bar 2 miles S.W. by S. from the Light House than in 1857. — The directions

for using this channel were the same.

The 2nd Channel had also decreased in depth one foot.

The 3rd or North Key Channel had changed its west entrance nearly ¾ mile South, and the depth of water on its bar decreased from 7 to 5½ feet.

The 4th or North West channel had also decreased in depth.

The Channel which, in 1857, led from Sea-Horse to Depot Key, with 10 feet, had filled up, in 1859, to 5 feet, and a new narrow and crooked channel had formed through the bank more to the Westward, with but 7 feet water, — and the Eastern end of the North Key and North West Channels had become in 1859 shoaler, more narrow, and more crooked.

The two Surveys show, that, with the exception of the Sea-Horse Key Anchorage, the harbor is subject to very great and, in some respects, almost vital changes from the S. W. hurricanes, which occasionally prevail. —

The character of the bottom for holding cannot be called good, yet it is sufficiently so for vessels with proper anchors and Cables in <u>all</u> winds or gales, except the hurricanes which sometimes prevail on this Coast. —

These are the occasion also, of extraordinary tides which, it is said, overflow nearly all the low islands —, the heavy Northers and North Easters, on the contrary, laying bare many flats covered at ordinary low water.

The climate is represented as healthy and pleasant as any on the coast.

For Sailing Directions, etc., etc., see chart.

Deadman's Bay is a large indentation of the coast, with the enlarged mouth of the Esteen-hatchee river, about 25 or 30 miles to the Northward of the Suwannee. It is said to be very shoal.

Rivers.

The names of the principal of these, beginning at the Southward, are

1. Wekiwatchee River ..... Page 45
2. Chassa-howitska River ..... " 46
3. Homasassa River ..... " 46
4. Crystal River ..... " 46
5. Withlocochee River ..... " 47
6. Waccasassa River ..... " 48
7. Suwannee River ..... " 49
8. Esteen-hatchee River ..... " 50
9. Fenahallawa River ..... " 50
10. Enconfinee River ..... " 50

The Wekiwatchee River is a small arm of the sea, 3 to 5 miles long, emptying into the Gulf just above Bayport. It is said to be quite shoal.

The Chassa-howitska River empties into the Gulf in about Lat. 28° 41' 30" N. and Long. 82° 42' W., behind the middle of St. Martin's reef. – It is properly an arm of the sea, 5 or 6 miles long, and runs about E.N.E. from the coast. – It has low marshy banks, with shallow, brackish water. Large quantities of cedar are exported from its vicinity.

The Homasassa River empties into the Gulf, behind the upper end of St Martin's reef, a few miles above the Chassa-howitska, in about Lat. 28° 45' N. and Long. 82° 42' W. – It is an arm of the sea, about 6 or 7 miles long, and runs in about an E.N.E. course from the Gulf. Its mouth is marked by two prominent Live-Oak trees, on a shell island at the Southern side, and a large rock projecting from the water a short distance to the north. There are numerous channels near the mouth, forming a marshy delta, but the proper channel was formerly, and may be now, staked out. At high tide, vessels drawing 6 feet ascend the river 3½ miles above its mouth, and vessels drawing 5 feet can ascend as far as the plantation of Mr. Yulee. – Nine feet can be carried up nearly to the entrance between the reefs.
In character and appearance it is precisely like Crystal River.

Crystal River empties in the Gulf directly behind Crystal reef, in Lat. 28° 55' 37" N. and Long. 82° 42' 39" W.

It is properly an arm of the sea, and the water is brackish throughout. It has two entrances, each with a narrow and crooked channel. – These are separated by Shell Island, which is the highest land found along the main shore for some distance, being 25 feet above high water mark, with a saddle shape, forming a good land-mark. Off the mouth are several lines of oyster reefs, running nearly parallel, and more or less bare, depending upon the tides. Vessels drawing 10 feet water can anchor with safety inside the first oyster reef. This entrance was formerly marked by a pole on the port-hand going in. – Vessels drawing 5 feet water can get in at high water, and after getting over the bar find 10 feet water to the head of the river. – The land on each side is low and marshy, and valuable only for its cedar, large quantities of which are exported to France & England for lead pencils. It does not extend more than 12 miles inland, and heads in a small pond, filled with very deep clear springs.

<u>Withlocoochee River</u>, is the longest river on the coast between the Caloosa-hatchee and Suwannee rivers. It empties into the bay of its own name, in Lat. 29° 01 N. and Long. 82° 46' 37" W. – It rises in a large central marsh and a chain of small lakes, and, flowing in a general N.N.W. course for over 60 miles, bends gradually

to W.N.W., then to the westward for over 30 miles more, finally emptying into the Gulf in nearly a S.W. course. It is marshy at its entrance, with many oyster bars at its mouth. Vessels drawing over 3 feet water cannot cross these bars, but above the bars the river is quite deep. There are two entrances, that to the southward being the only available one. About 2 miles above its mouth the woods and bushes overhang the bank. An oyster reef extends a few miles from the mouth into the bay.

Along this river there is much less hammock land, than along the others upon this coast, which, with the difficulties at its entrance, has caused it to be less settled than they. This river forms the Northern and Eastern boundary of Hernando County.

Waccasassa River empties into the extreme N.E. corner of Waccasassa Bay, 10 or 12 miles to the Eastward of Cedar Keys.— It is quite a narrow stream, from 15 to 20 miles long, rising in some small lakes, with deep springs, and flows to the Gulf in a general S.S.W. course. The mouth is marshy, and cut up by bayous. The entrance is filled with oyster reefs, affording a narrow boat channel only, with but 1 foot of water at low tide.— Flat-boats are employed to take the produce, etc. to Depot Key. A mile or so back the woods begin, consisting of irregular Palmetto hammocks, with some Cedar.— This river is in character similar to the Suwannee, has

very fertile hammocks on its borders, with flourishing sugar and cotton plantations. – The soil contains marl, and, it is said, clay beneath. – The depth of the river inside is quite considerable.

Suwannee River is the largest river on the west coast of Florida. – It rises, with many branches, in the southern part of Georgia, and, after a course of nearly 200 miles, in a general southerly direction, with many bends, it runs for 5 or 6 miles in a W. S. W. direction, and empties in the Gulf in about Lat. 29° 17′ N. and Long. 83°. 08′. W. Its whole valley is said to be beautiful and rich. – In some parts of its middle and lower portions it is deep, and navigable for light draught steamboats. – Its mouth is 8 miles above Cedar Keys, and has two channels, both obstructed by bars, and very shoal. – The lower channel, the mouth of which is in about Lat. 29° 16′ 30″ N. and Long. 83° 07′ W., is the best, and now generally used.

The N. W. channel, near Bradford's island, is entirely abandoned. An oyster reef runs, in a horse-shoe shape, in front of the mouth, and forms Suwannee Bay, which is equally shoal. Not more than 5 feet at high water can be carried either over the bar, into the bay, through the bay, or into the river. – Suwannee Reef extends below the river nearly to Cedar Keys, enclosing between it and the main land a channel, through which a small steamboat, with the flats carrying produce, runs between

the river and Cedar Keys. On the borders of this river is much fertile land, producing Sugar, Cotton and Corn, and many acres are cleared yearly in the hammocks. The produce of the lower part of the river is shipped mostly in flats to Depot Key.

Esteen-hatchee is a stream flowing with many branches from the interior swamps, in a S.S.W. direction 25 miles, and flows into the Gulf at the head of Deadman's Bay.

Fenahallawa River is another small river of the same character as the last. It flows from the Northward and Eastward for 25 or 30 miles, but falls into the Gulf from a North course, about 10 or 12 miles E.S.E. from the Ocilla river. At its mouth it is joined by a small stream from the Eastward, and the enlarged mouth of these two forms a small shallow bay.

Enconfinee River flows from the Northward and East-ward, with a length of from 25 to 35 miles, and empties into the Gulf about 5 miles E.S.E. of Ocilla River.

Besides these rivers there are many small rivers and creeks, with unknown names, emptying into the Gulf. — All of these streams have more or less fine fertile hammock land on their borders.

Remarks on the

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Coast and Off-shore Soundings. The soundings along this coast are more shoal than for the same extent upon any other part of the Coasts of the United States.

In many places, 10 feet cannot be taken within sight of the land. An immense bank extends to the westward, deepening at first but very slowly from the coast. From Cape Sable, this bank has but 5 fathoms water upon it nearly 20 miles to the westward. — To the southward, there is but 12 feet until passing the Florida Keys, 25 miles distant. Probably 3 fathoms can be carried in within 3 to 5 miles along the shore as far north as Cape Romano. Off this Cape a shoal is said to exist for 6 or 8 miles to the southward, with but from 5 to 10 feet water upon it. Between Cape Romano and Sanibel Island the depths are a little greater, and off Charlotte Harbor, up along the coast to Tampa Bay 3 and 4 fathoms can be carried within 2 miles of the coast, except off the Passes, where the shoals make further off. — Off Tampa Bay

5 fathoms can be taken close in to the bar. Above this the depths begin to lessen, so that, generally, between the Anclote and Cedar Keys 2 fathoms cannot be carried within 10 miles of the land, except in two or three channels. Frequently vessels run into 10 feet water, in clear weather, particularly off the St. Martin's reefs, with no land in sight.— Off Cedar Keys, 4 and 5 and even 6 fathoms can be taken within 1 mile of the end of Sea-Horse Reef, and 3 fathoms several miles to the Northward on each side of it.

Off the Suwannee, 12 feet cannot be taken within less than 5 miles of the shore, outside the reef.— From the Suwannee to the Ocilla the soundings are very shoal, as 4 fathoms cannot be taken within 8 or 9 miles of the coast, and 2 fathoms probably not within 5 or 6.

The deeper the off shore soundings, as a general rule, the more rapid is the increase of depth. FR

From Cape Sable west, the depths increase very slowly, so that at over 40 miles N.N.W. from Key West, and west from Cape Sable 60 miles, 10 fathoms is still found.

The curve of 10 fathoms, probably, as given by English and other surveys, runs within about 10 miles of Cape Romano, and continues that average distance from the coast until above Tampa Bay.— Off the Anclote Keys this curve spreads to 15 miles from the coast, and W.S.W. from the mouth of the Chassahowitska to 35 miles

distant, and 18 miles S.W. from the end of Sea-Horse reef. — On a course of S.W. ½ W. from Cape Romano there is 17 fathoms, in a distance of 42 miles, — 21 fathoms fine sand and broken shells, in a distance of 60 miles — 24½ fathoms, white mud, in a distance of 66 miles — and 25½ fathoms, white mud and fine gray sand, in a distance of 71 miles.

On a course of S.W. by S. from Boca Grande of Charlotte Harbor, there is 25 fathoms in a distance of 53 miles, — 32 fathoms in 71 miles — 40 fathoms, fine sand and broken coral, in 85 miles — 53 fathoms in 94 miles.

On a course of S.W. by S. ½ S. from Tampa Bay there is 35 fathoms in a distance of 72 miles — 100 fathoms in 103 miles — and 300 fathoms in 130 miles. — On nearly a S.W. course from Cedar Keys there is 10 fathoms in a distance of 29 miles from Sea-Horse Key — 18 fathoms in 45 miles — 20 fathoms in 57 miles — 25 fathoms in 70 miles — 39 fathoms in 94 miles — 95 fathoms in 109 miles — 100 fathoms in 118 miles — and 240 fathoms in 230 miles.

A line running W. ½ S. from a point 4 miles South of Sea-Horse reef has 5 fathoms at that point, — 10 fathoms at 20 miles from that point, — 15 fathoms at 40 miles distant — 20 fathoms at 65 miles distant — 25 fathoms at 93 miles — 30 fathoms at 108 miles distant, — and 47 miles S. ½ W. from Cape St George — 65 fathoms at 119 miles distant — 80 fathoms at 132 miles distant — 100 fathoms at 142 miles

distant — 144 fathoms at 155 miles distant — and 195 fathoms at 168 miles distant.

Tides.

The Tides of this coast are of the half-day class, with a large daily inequality. They at first decrease, then increase gradually in their rise & fall from Key West to the Northward, having their least range at Charlotte Harbor, & their greatest at Cedar Keys & St. Marks — being at Key West, 1.3. ft. Charlotte Harb. 1.1. ft. Tampa Bay 1.4., Cedar Keys and St. Marks 2.5 feet.

The highest high and lowest low waters, occur when the greatest declination of the moon happens at full or change: the least tides when the moon's declination is nothing at the first or last quarter.

The rise and fall being so small, the times and heights are both much influenced by the winds, and are thus often rendered quite irregular.

During continuous heavy Northerly weather, the water falls very greatly, particularly along the western portion of this coast.— It is reported by the pilots that, in the vicinity of Cedar Keys, it falls at times nearly 4 feet below mean low water.— During the heavy S. W. and Westerly gales, which sometimes prevail, the water rises several feet above that level, — in one case at Cedar Keys over 11 feet.

Bottoms.

Close in along the coast, in many places extending several miles, there are great numbers of oyster and shell banks. In many cases, the oysters in great masses growing together, and nearly as solid as rock. These reefs are frequently covered with sand from 1 to 3 feet deep. – Off Charlotte Harbor, along the coast above and off Tampa Bay, out to 6 or 8 fathoms, and even beyond 10 fathoms, the bottom is generally gray sand and broken shells. – The bars of the entrances to Charlotte Harbor, Sarasota Bay, Tampa Bay and Cedar Keys, are hard sand. – The bars inside these bays, being of sand, dead shells, or oyster reefs – with, frequently, channels of soft and sticky mud between.

The bars of nearly all the anchorages between Cedar Keys and Anclote Keys are composed of oyster reefs, as are the bars to the Suwannee River.

To the Northward and Westward of Egmont Key the bottom is coral, as also to the Southward and Westward and Westward in 25 fathoms.

Light Houses.

Egmont Light House — on Egmont Key, Entrance to Tampa Bay. — One fixed light — 45 feet above sea — visible twelve nautical miles — tower white.

Cedar Keys Light House — on Eastern end of the mound on Sea=Horse Key, Harbor of Cedar Keys: — the reef extends in a South-westerly direction, 12 miles from Sea=Horse Key. The light is on the keeper's dwelling — the dwelling, watch-room, and lantern are painted white. One fixed light varied by flashes — interval of flash one minute — 75 feet above sea — visible fifteen nautical miles.

Latitudes and Longitudes.

	Latitude. North			Longitude W. from Grw. Arc			Time		
Egmont Light House	27°	36′	00″	82°	45′	15″	5h	31m	01s
Cedar Keys Light House	29	05	49	83	04	46	5	32	19

Note. It is probable that these lights have been extinguished and the buoys removed.

Fresh Water.

The following notes of localities where fresh water may be procured are communicated by Assistants and Sub-Assistants of the Coast Survey.

Cape Sable (Fort Poinsett).— On the extreme southern point of the main land, about 1½ mile west of West Base Triangulation point, water is to be had, which is quite palatable, but will not keep long.

Palm Point, or Middle Cape, (Fort Cross). About 5 miles N.N.W. from Cape Sable. Is easily recognizable by two tall palm trees on the edge of the woods — about 200 Yards back from the shore. The quality of the water is similar to that at Cape Sable.

White Water Bay. Light draughted vessels can go by the Bay of Ponce de Leon, above the White Bluffs (or North West Cape) into Shark River, and penetrate to White Water Bay, and obtain excellent water from the Everglades, in quality similar to that of the Dismal Swamp of Virginia. Distance from Key West between 50 and 60 miles.

Punta Rosa, at Southern Entrance to Charlotte Harbor. At the mouth of the Caloosa-hatchee river, about 4 miles up the San Carlos Bay from the outside, the water is quite

good, and will keep longer than that usually found on this Coast.

At Punta Rosa there is a brick cistern on the N.W. side of a large store house.

Sanibel Island. Water is to be had at a fishing ranch at the south end of the island. The channel admits vessels drawing 15 feet.

Captiva Island, South of Charlotte Harbor. at the northern extremity of the island, and about 15 miles N.W. from Punta Rosa is a settlement used by fishermen during the winter season. A short distance from this settlement, a few yards back from the shore of a little cove that makes in below it, is a well of the purest water that has been found on this portion of the coast.

Charlotte Harbor. — La Costa Island. enter Boca Grande, and 3 miles S.E. find Punta Blanco, a fishing ranch of palmetto houses:— Cross nearly due west over the shallow lagoon, and, near two lone palmettos, will be found two large springs of excellent limestone water, on the narrow strip between the Harbor and the Gulf.

Tampa Bay. Water is to be found at Egmont Key, near the Light House.

On Hillsboro' River, a stream of fresh water comes in at the sawmills, about one mile above the town of Tampa.

Cedar Keys. — North Key; a moderate supply of water may be had from a well on the S. side of the Key.

Sea-Horse Key: water is to be had on the south point.

Water is also procurable on Depot Key, and from the Suwannee River, at low tide, which is accessible for small craft to the northward of North Key:– also from cisterns at Capt. Tucker's and Judge Steele's.– Also from a well at the Light House, but the water here is brackish.

Suwannee River – There is plenty of fresh water springs and creeks to be found some 2 to 4 miles up this river.

Ocilla River:– the water is fresh for one mile from the Gulf:– the coast, however, is difficult of approach, being very shoal for 8 miles from land.

List of observed Magnetic Variations on the Gulf of Mexico

The observations of the following list are all of recent date, and have been brought up to Jan. 1st., 1860, by means of the known secular change.

With a few exceptions, they were made by parties of the United States Coast Survey.

The accompanying Map shows the lines of equal Magnetic Variation for the epoch stated.

No.	Locality	Latitude		Longitude W. of Grw.		Magnetic Variation 1860	
1	Havana, Cuba	23°	09′	82°	22′	5°	11′ E.
2	Sand Key, Fla.	24	27	81	53	5	13 "
3	Key West, "	24	33	81	48	4	47 "
4	Tortugas Light, "	24	38	82	53	5	49 "
5	Cape Florida, "	25	40	80	10	4	10 "
6	Egmont Key, "	27	36	82	45	4	59 "
7	Depot Key, "	29	07	83	03	5	08 "
8	Fernandina, "	30	41	81	28	3	58 "
9	St. Mark's Light, "	30	04	84	11	5	17 "

10	Dog Island Light, Fl.	29°	47′	84°	38′	5°	42′ E.
11	Apalachicola, "	29	43	84	59	6	12 "
12	St. George's Island "	29	35	85	03	5	53 "
13	Eufala, Ala.	31	54	85	05	5	12 "
14	Cape St. Blas, Fl.	29	40	85	22	5	59 "
15	St. Joseph's Bay, "	29	52	85	23	6	04 "
16	Hurricane Island, "	30	04	85	39	6	04 "
17	Pensacola, (public square)	30	25	87	12	6	45 "
18	Pensacola, (Barkly Point)	30	25	87	12	6	43 "
19	Lower Peach Tree, Ala.	31	50	87	33	5	59 "
20	Fort Morgan, "	30	14	88	00	6	50 "
21	Mobile City, "	30	42	88	02	6	49 "
22	East Pascagoula, Miss.	30	21	88	32	7	06 "
23	Mississippi City, "	30	23	89	01	7	19 "
24	New Orleans, La.	29	57	90	03	7	52 "
25	Cubitt, Miss. delta "	29	10	89	14	7	32 "
26	Pass à L'Outre, " " "	29	11	89	01	7	30 "
27	Fort Livingston "	29	17	89	49	7	37 "
28	Isle Dernière "	29	02	90	54	8	18 "
29	Côte Blanche "	29	44	91	42	8	22 "
30	Gaines' Ferry, Sabine R.	31	28	93	45	8	41 "
31	Mouth of Sabine R.	29	44	93	51	8	40 "
32	Dollar Point, Texas	29	26	94	53	8	57 "
33	Galveston Isld. E. Base	29	13	94	55	9	05 "
34	Jupiter, Texas	28	55	95	20	9	09 "
35	Mouth of Rio Grande "	25	57	97	08	9	01 "
36	Ringgold Barracks " " "	26	23	98	43	9	15 "