

7000-7049

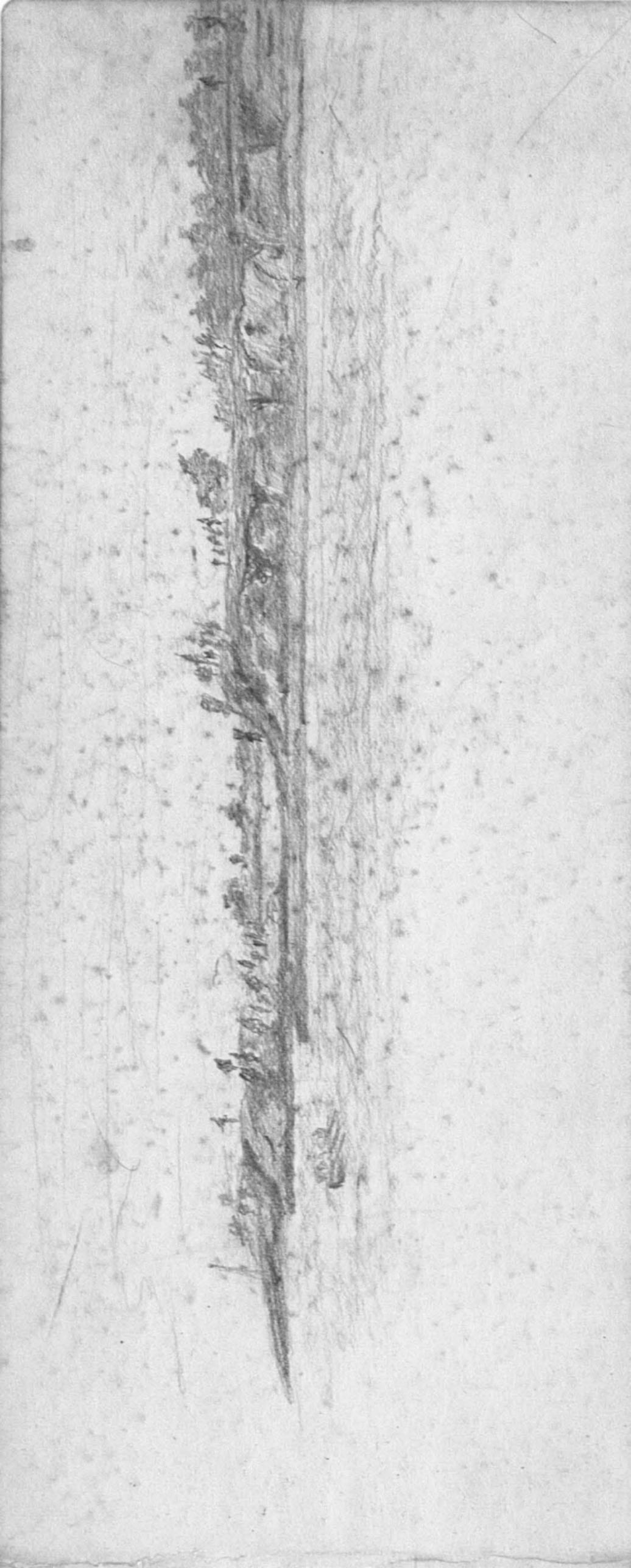
ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

1899

STATION NUMBERS

Numbers 7000 to 7049



# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7000  
 Date, June 22<sup>nd</sup> 1899.  
 Time of day, 8.10 am.; of tide, ebb. 1/3  
 Locality, Narragansett Bay  
 Exact position, Butler Sids Light  
N.E. x N. 1/2 mile  
 Depth, 6 1/2 fathoms.  
 Nature of bottom, Muddy  
 Dredging instrument used, 7 fms trawl.  
 Direction of drift, 0 1/4 E; distance, 3/8  
 Temperature of air, 61 therm. No., 1013  
 " of surface water, " 12  
 " at depth of fathoms, "  
 " at bottom, " 14.1  
 Density at surface, 1022.6 temp.,  
~~" at depth of fathoms, "~~  
 " at bottom, 1022 "  
 Number of salinometer, 7323  
 Barometer reading, 30.02  
 State of sky, Blue -  
 Direction of wind, North; force, 5  
 Rain, No  
 Direction of surface current, ; force,  
~~" of bottom " ; force,~~  
 Name of vessel, U.S.F.C.S. Fish Hawk  
 Service to which attached, Fish Com.  
 Name and rank of commanding officer, Matth-  
Jas. A. Smith U.S. Navy  
 Name and position of observer, J. D. Milligan  
Commander

NOTES RELATING TO STATION NO. 7000

About 50 common Spis  
Corns about 5 inches

1 purple stain

Spine half of the spine  
full of spaw & spore  
Large quantity of mussels

Low -

Few old Brachidonia

Great many gastropods

Several plants

Lots of cope pods

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7001*  
 Date, *June 22 1899*  
 Time of day, *8.40 am.*; of tide,  
 Locality, *Narragansett Bay*  
 Exact position, *White Rock*  
*N. E 5/8 W, 1 mile.*  
 Depth, *10 1/4 fathoms*  
 Nature of bottom, *Muddy.*  
 Dredging instrument used, *7 feet trawl*  
 Direction of drift, *S. x E.*; distance, *5/8 mile*  
 Temperature of air, *63°* therm. No., *1013*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1023.* temp., *11.2*  
 " at depth of fathoms, "  
 " at bottom, *1023.4* " *15.0 c*  
*58.0*  
 Number of salinometer, *7373*  
 Barometer reading, *30.07*  
 State of sky, *Blue*  
 Direction of wind, *North*; force, *4*  
 Rain, *no*  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U. S. F. C. S. Fish Hawk*  
 Service to which attached, *F. Com.*  
 Name and rank of commanding officer, *Matth*  
*Jas. A. Smith, USNavy*  
 Name and position of observer, *J. W. Malligan*  
*Pharmacist USNavy*

NOTES RELATING TO STATION NO. 7001

Purple stars  
Yellow sculpin (fish. tank)  
Gross fish  
1 Summer flounder  
1 Gross fish  
1/2 skate (Orinaria?)  
1 se  
Egg strings Natica Dup (?)  
Eggs of Alcyonassa.

Found  
more brachidaria than  
previous haul

Gastropods, same number  
more clams than before  
Serratum.

~~Peridinium~~

Peridinium

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7002*Date, *June 22 - 99*Time of day, *9.15* ; of tide,Locality, *Massachusetts Pier,*Exact position, *Whale Rock*Depth, *N. 3/4 E. 1/2 mile*  
*16 fathoms*Nature of bottom, *Mudry*Dredging instrument used, *Quip trawl*Direction of drift, *P. S. E.* ; distance, *1/2 mile*Temperature of air, *63° Fah*therm. No., *1013*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1023.2*temp., *11.0 C*

" at depth of fathoms, "

" at bottom, *1024.2*" *11.0 5/8 C*Number of salinometer, *7323*Barometer reading, *30.07*State of sky, *Blue*Direction of wind, *N. E* ; force, *3*Rain, *no -*

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, *U. S. F. C. S. Fish Hawk*Service to which attached, *Fish Com.*Name and rank of commanding officer, *Malet*Name and position of observer, *Jas. A. Smith*  
*Observer*

NOTES RELATING TO STATION NO. 7002

- Caprella. net alive with them  
& squirrel lake.
- 1 Phepsis tenuis
  - Several flounders (common)
  - Live tithia
  - Quasata
  - Few Mytilus.
  - " Eupa. B. & L. & S.
  - Coranion vul, few
  - Amphipods
  - Amur irrorata
  - 1 molgula
  - Uthanas a egg.
  - Lepidonotus.
  - Sternaspis.
  - Trophonina.
  - Tubularia cloth.
  - Mysids of several sizes

Low.

- x Polygordius, many
- new classes than before
- Gastropods the same
- Copepods the same
- Very few brach.

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7003  
 Date, June 22-99.  
 Time of day, 9.55 ; of tide,  
 Locality, Wilmington Reef. l. ship  
 Exact position, Brown Sail  
N. N. W. 1/2 mile  
 Depth, 16 fathoms 2 3/8 miles  
 Nature of bottom, Muddy  
 Dredging instrument used, 7 fms trawl  
 Direction of drift, N. by E ; distance, 1/2 miles  
 Temperature of air, 69 therm. No., 1013  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1023. temp., 13'-  
 " at depth of fathoms, "  
 " at bottom, 1.025 " 12.500  
 Number of salinometer, 7323  
 Barometer reading, 30.08  
 State of sky, Blue  
 Direction of wind, N. E ; force, 3  
 Rain, no  
 Direction of surface current, ; force,  
 " of bottom " : force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, Fish Com.  
 Name and rank of commanding officer, Malib  
Jac. A. Smith USNavy  
 Name and position of observer,  
J. M. Gilligan  
Pharmacist USNavy

NOTES RELATING TO STATION NO. 7003

1 force fish.  
several Echinacea.  
Purple stars, numerous.  
Few Squid-like hake.  
- Cantharopora  
Eggs of *Urosalpinx*  
" " *Natica*.  
1 *Buccinum*.  
Muss - empty - few  
*Laculpin*

1 Tow  
Very few clams  
no gastropods  
no brachiopods  
Many *Coratium*.  
1 *Caprellid*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7004*  
 Date, *June 26 - 99*  
 Time of day, *11. am*; of tide, *2/3 Flood*  
 Locality, *Midway bet Cape Poge & E. chpt*  
 Exact position, *Cape Poge D. E x S.*  
*2 3/8 miles,*  
 Depth, *5*  
 Nature of bottom, *Sandy -*  
 Dredging instrument used, *5 ft beam trawl.*  
 Direction of drift, *D. E. x E.*; distance, *1/2 mile*  
 Temperature of air, *72* therm. No., *1013*  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, *1.0225* temp., *20.0*  
 " at depth of fathoms, " "  
 " at bottom, *1.023* " *19.4*  
 Number of salinometer, *7323*  
 Barometer reading, *29.98*  
 State of sky, *Blue - light clouds.*  
 Direction of wind, *Calm*; force, *0*  
 Rain, *no -*  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S. F.C. S. Fish Hawk*  
 Service to which attached, *U.S. Fish Com.*  
 Name and rank of commanding officer, *Master*  
*Jas. A. Smith, USN*  
 Name and position of observer,  
*J. D. Milligan*  
*Pharmacist USN*

Fulgur several

" *Asper* Forbesii ✓

*Neuritta*

Euphy. *Mastra* shells

Egg string of fulgur 2

*Emmacer* } *Neris* several

*Chiton* ✓ } *Harmothoe*

*Bryozoa* - } *Panopeus* small

*Bryozoa* - *numm*

*E. pellicaris* in *Amaculenus*

*Hypodactylus* } Dead *capitata*

*Euphy* *rostr* shell } *anthropod*

*Bugula* - } *Amachis* shells with

*Amomea* } *E. anelipes*

Eggs of *Neuritta* } *Gammarus*

*Modiola* *Modiolus*

*Equat* Eggs } *E. anelipes*

*Capriola* *plana*

Dead shells of *Copridata* *formicata*

*Pelva* *mutica*

Tops of tubes of *Dopatra*

*Isopod*

Quantity of dead sea weed

*Balanus*

*Cynthia*

*Arctia* with *E. linguatula* (?)

Eggs of *Amachis*

Two *Mytilus* shells

*Cardium* *pinulatum*

*Aetyon* 1 } *live* *capitata*

*Spizantus* } *Totema* (?)

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7005  
 Date, June 26 - 99  
 Time of day, 11.40 ; of tide,  $\frac{3}{8}$  flood  
 Locality, Vineyard Sound  
 Exact position, Cape Poge S.  $\frac{3}{4}$  m.  
 $2\frac{1}{2}$  miles.  
 Depth, 11 fathoms  
 Nature of bottom, Sandy  
 Dredging instrument used, Four hand trawl  
 Direction of drift, E. S. E ; distance,  $\frac{1}{2}$  mile  
 Temperature of air, 74° therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.0226 temp., 20°  
 " at depth of fathoms, " "  
 " at bottom, 1.023 "  $\frac{19.4^{\circ}C}{67}$   
 Number of salinometer, 7373  
 Barometer reading, 29.98  
 State of sky, Blue - light - clouds.  
 Direction of wind, Calm ; force, 0  
 Rain, No  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. Fish Com.  
 Name and rank of commanding officer, Master  
Jos. A. Smith, US Navy  
 Name and position of observer,  
John J. Gannon  
Pharm. Assn.

NOTES RELATING TO STATION NO. 7005

- 1 miredon fair flower
- Fulgur. with barnacles
- Lithonia
- Squid eggs.
- Squid
- Fulgur shell with Cap. f. planum.
- by Doods, Bryozoa + barnacles
- Serpula
- Pycnostypus strong. - Anomia, rad
- Limaculum " salini
- Scaphana.
- Elmiprampus plentiful
- David Dollar.
- Few shells of scaphanae
- Craufon.
- Heterocrypta.
- Chiton obis.
- Eggs of limacinae + shells.
- Neornitta shells.
- Tritia occupied by 4. long.
- Shells of Anachis.
- Liri mastra
- Hydractinia numerous.
- Shells of Mya.
- Hypoida.
- Skate eggs, empty
- Setynis.

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7006-Date, June 26 - 99.Time of day, 12.35 ; of tide, FloodLocality, Trig and SoundExact position, Cape Pope, P. E.Depth, 3 3/8 miles  
7 fathomsNature of bottom, sandyDredging instrument used, 7 ft beam trawlDirection of drift, E. x S/8, distance, 1/2 mileTemperature of air, 70therm. No., 1,013

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0232temp., 19~~" at depth of fathoms, "~~" at bottom, 1.0023" 19.4°C  
67°Number of salinometer, 7322Barometer reading, 29.97State of sky, Blue light cloudsDirection of wind, P. N. W. ; force, 1Rain, No

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U.S.F.C. Fish HawkService to which attached, U.S. Fish Com.Name and rank of commanding officer, MaizeName and position of observer, Asst. A. Smith  
Observer

- Fulgur  
 Pycnosyllus  
 1 small snail - flamm  
 2 form oper " "  
 1 shell  
 1 Hake - squirrel  
 1 pedicel -  
 Caps. fornicat.  
 1 Murex jaw.  
 E. Long. Pollician.  
 Landaia eggs. x shells  
 Livinia.  
 Squid eggs  
 Balanus.  
 Neroutta shells with E. pollician.  
 1 young came vorosata  
 E. Long. in neroutta  
 Razor clam - empty  
 Hydroactinia  
 Bryozoa - supule -  
 Escarella. young coming  
 Tritia shells occupied by E. Long  
 Anomia shell full.  
 Panozans.  
 Gastroport eggs -  
 Sphaerostoma  
 Small group of sea urch  
 Murex shells.  
 Pycnis tenuis.  
 1 Sphaerostoma  
 Pandanus.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7007  
 Date, June 16 - 99  
 Time of day, 1.30 ; of tide, High water  
 Locality, Vineyard Sound.  
 Exact position, East chop light  
N. 80. x 1/2 N. 1 5/8 miles.  
 Depth, 6 3/4 fath  
 Nature of bottom, Sandy  
 Dredging instrument used, 7 feet beam trawl  
 Direction of drift, N. E. ; distance, 1/2 mile  
 Temperature of air, 75° therm. No., 1015  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0226 temp., 19.6°  
~~" at depth of fathoms, "~~  
 " at bottom, 1.022 " 68  
19.0°  
 Number of salinometer, 7323  
 Barometer reading, 29.97  
 State of sky, Blue, light clouds  
 Direction of wind, N. E. ; force, 2  
 Rain, No  
 Direction of surface current, ; force,  
~~" of bottom " ; force,~~  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com.  
 Name and rank of commanding officer, Major  
Jas. A. Smith, USN  
 Name and position of observer,  
J. W. Morgan  
Ph. W. W.

Perna Nutria

Tulgar.

Asellus Forbesii

A Polianis in Neritina and  
Lunocera shells

Bryozoa. Sant Dollars.

Tritia. Gulf weed.

Dwarf Eel grass.

Balanus. Bugula.

Pipe fish

E. longicauda. E. Raia

Cancer monita

Shells of Macoma.

Squid eggs. Diaphanica

Anachis occupans E. longicauda

Pectin shell.

Euryalpinus occ. by E. long.

Anpula. Panopeus

Dwarf Mya - Mya pectataMyctophidium. same shell

Dillia Coetata.

Fus hydroids

Craspedon

Apsidula formicata + plana

Rock cells.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. **7008**Date, **June 26 - 1899**Time of day, **2.00** ; of tide, **1/8 ebb.**Locality, **Vineyard Sound**Exact position, **East Chop light****N. 3/4 S.****3/4 mile.**Depth, **7 fathoms**Nature of bottom, **Sandy**Dredging instrument used, **7 feet beam trawl**Direction of drift, **N. W. 3/4 W.**; distance, **1/2 mile**Temperature of air, **68° fahr**therm. No., **1012**

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, **1.023**temp., **19° C**~~" at depth of fathoms, "~~" at bottom, **1.023****68° fahr  
19° C**Number of salinometer, **7321**Barometer reading, **29.97**State of sky, **Blue, light - clouds**Direction of wind, **N. E. W.**; force, **2**Rain, **no**

Direction of surface current, ; force,

~~" of bottom " ; force,~~Name of vessel, **U.S.F.C.S. Fish Hawk**Service to which attached, **Fish Com.**Name and rank of commanding officer, **Matth**Name and position of observer, **Jas. A. Smith, USN****Phadmont****USN**

NOTES RELATING TO STATION NO. 7005

Sulphur sponge  
Amoreum pellucidum  
1. Erinacea corallitatum.

Rocked.

Leptochloium album.

Pycnoporus

1. ornithi floridus. Bryozoa,

E. jolecaris, Cynthia.

Cap. plana, Fulgur.

Common coral

Mitilus, modiola modiolus.

Lepidonotus. E. anulipes.

Vermetis. radicula.

Cribrella - Liquor.

Serpula,

Chiton apiculata,

Stems of Panypa.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7009  
 Date, June 26-99.  
 Time of day, 2:30 ; of tide,  
 Locality, Trinidad Sound  
 Exact position, Edor Chop light  
0. 1/4 E. 5/8 mile.  
 Depth, 10 1/2 fath  
 Nature of bottom, Sandy  
 Dredging instrument used, 7 ft beam trawl  
 Direction of drift, N. x N. 1/2 W.; distance, 1/2 mile  
 Temperature of air, 73° therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.0226 temp., 19°  
 " at depth of fathoms, " "  
 " at bottom, 1.023 " 18.6° C  
 Number of salinometer, 7322  
 Barometer reading, 29.97  
 State of sky, Blue light clouds  
 Direction of wind, S. S. W.; force, 1  
 Rain, No.  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S. Fish Com. Fish Hawk  
 Service to which attached, U.S. Fish Com.  
 Name and rank of commanding officer, Malin  
Jas. A. Smith. U.S. Navy  
 Name and position of observer, J. M. McIlhenny  
R. H. Romanish U.S.N.

Common Star

Livinia

Mod, Mod. shells.

Bygonia.

Sulfur sponge. Mactra shells.

Chiton.

Arbacia, Bufula

Lus mactra

E. Poliana - Serpula -

Erinacea

Pycotopus. Lunaea heros abies

Tulgar. Rock at

Sir Skati egg. Egg of Lunaea Natica  
Few hydroids. ~~serpula~~ (?) <sup>Ortata</sup>

Pelia, Tritia

Amareum costel. & bellus

Cap. plana, Nervitta.

Scapharca shell.

Anchis "

Hydrastri & Cymathea.

Escharella.

Leptodermum.



NOTES RELATING TO STATION NO. 7010

2 *Smacra*

sw. from *inhibis*.

1 small window pane

• *Eupadron* *Bonhardi*

" *Poliana*

Eggs of *Smacra* h (P.)

• *Dea* *Spink*

*Sand* *de* *Dollan*

1 *Umbrella*

1 ~~*Umbrella*~~ *Heterocrypta*

• *Smacra* *hewe*

*E* *longicauda*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 70111  
 Date, ~~July 7~~ July 7 — 99,  
 Time of day, 11.20 ; of tide,  
 Locality, Vineyard Sound.  
 Exact position, Gay Head P. x N. 1/4 or  
3 1/2 miles  
 Depth, 17  
 Nature of bottom, Sandy  
 Dredging instrument used, Tongle  
 Direction of drift, N. S. W. ; distance, 3/4  
 Temperature of air, 71.5 therm. No., 1013  
 “ of surface water, “  
 “ at depth of fathoms, “  
 “ at bottom, “  
 Density at surface, 1.023 temp., 18.6  
 “ at depth of fathoms, “  
 “ at bottom, 1.0234 “ 61.5°F.  
17° C.  
 Number of salinometer, 7022  
 Barometer reading, 29.86  
 State of sky, Hazy  
 Direction of wind, P. O. W. ; force, 2  
 Rain, No —  
 Direction of surface current, \_\_\_\_\_ ; force, \_\_\_\_\_  
 “ of bottom “ \_\_\_\_\_ ; force, \_\_\_\_\_  
 Name of vessel, U.S. Fish Com. Fish Hawk  
 Service to which attached, U.S. Fish Com  
 Name and rank of commanding officer, Master  
J. M. W. W. W.  
 Name and position of observer, J. M. W. W. W.

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. *701*  
 Date, *July 7 - 99*  
 Time of day, *1.55 pm*; of tide,  
 Locality, *Vineyard Sound*  
 Exact position, *Westward light*  
*N. 1/2 S. 3/4 S. 3/8 mile*  
 Depth, *5 fathoms*  
 Nature of bottom,  
 Dredging instrument used, *feet beam trawl*  
 Direction of drift, *N. S. W.*; distance, *3/8*  
 Temperature of air, *70° Fahr* therm. No., *1013*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0222* temp., *21.2° C*  
 " at depth of fathoms, "  
 " at bottom, *1.0222* " *20.4° C*  
*71.5° F.*  
 Number of salinometer, *7325*  
 Barometer reading, *29.89*  
 State of sky, *Hazy, Blue*  
 Direction of wind, *S. S. W.*; force, *2*  
 Rain, *no*  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S. Fish Hawk*  
 Service to which attached, *U.S. Fish Comm.*  
 Name and rank of commanding officer, *Master*  
*J. A. Smith, Master*  
 Name and position of observer, *A. H. Milligan*  
*Pharmacist, U.S. Navy*

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7013  
 Date, July 10 - 99  
 Time of day, 12.45 ; of tide, 3/4 flood  
 Locality, Wingard Sound  
 Exact position, Gay Head Pt. x 20,  
1/2 miles  
 Depth, 17 fathoms  
 Nature of bottom, Sandy, rocky  
 Dredging instrument used, Jet beam trawl  
 Direction of drift, N. E ; distance, 1/2  
 Temperature of air, 70 therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " 60.° fahr  
 Density at surface, 1.023.2 temp., 18.2° C  
 " at depth of fathoms, " 15.3° C  
 " at bottom, 1.024 " 60.° Fahr  
 Number of salinometer, 7373  
 Barometer reading, 29.83  
 State of sky, Blue, cloudy  
 Direction of wind, P.W. ; force, 2  
 Rain, no  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S. Fish Com. Fish Hawk  
 Service to which attached, U.S. Fish Com  
 Name and rank of commanding officer, Master  
J. A. Smith, USNavy  
 Name and position of observer,  
J. A. Smith  
U.S. Fish Com

NOTES RELATING TO STATION NO. 7013

Enbrille.

1 Erinnia.

1 lady crab.

1 common flounder

• Eupatorium *puberulum*  
*paniculatum*  
*horridum*

Maroon plants

Eggs of limacina h.?

" " *Helinasa*

Two dollar

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7014*  
 Date, *July 10 99*  
 Time of day, *1.15 p.*; of tide, *near h, water*  
 Locality, *Weymouth Sound.*  
 Exact position, *May Head South 2 m*  
 Depth, *10 fathoms*  
 Nature of bottom, *Sandy, small rocks*  
 Dredging instrument used, *7 foot beam trawl*  
 Direction of drift, *E x S.*; distance, *1/2*  
 Temperature of air, *69° fahr* therm. No., *1013*  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, *1.023* temp., *19° C*  
 " at depth of fathoms, " "  
 " at bottom, *1.0236* " *60*  
 Number of salinometer, *7323*  
 Barometer reading, *29.54*  
 State of sky, *Blue, light clouds*  
 Direction of wind, *SW*; force, *2*  
 Rain, *no*  
 Direction of surface current, " ; force, "  
 " of bottom " " ; force, "  
 Name of vessel, *U.S. F.C. O. Fish Hawk*  
 Service to which attached, *U.S. F. Com.*  
 Name and rank of commanding officer, *Malib*  
*J. A. Smith, USN*  
 Name and position of observer, *J. W. Sullivan*  
*Ph. W. Bacon*

NOTES RELATING TO STATION NO. 7014

*Amiebulu*  
*Pecten* *lin.* *costata*  
*E.* *lenf.*  
" *Bronk.*  
" *Pohani*  
*Natica* *kenon.*  
*Wicodol* *pacu.*  
*Eg* *can* *ilhanero.*  
" " *Senoua* *kenon.*  
*Maron* *stai.*  
*Myozoa.*  
*Capongala* *fornicata*  
*Hydroid*  
*Solitaria* *forbesii*  
*Tritia*  
*Small* *from* *unhu*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7015*  
 Date, *July 10 - 99*  
 Time of day, *4.45* ; of tide, *High water*  
 Locality, *Miyan Sound*  
 Exact position, *Gay Head*  
*S. D. E 1 5/8*  
 Depth, *1 1/2 fathoms*  
 Nature of bottom, *muschel bed.*  
 Dredging instrument used, *7 foot beam trawl*  
 Direction of drift, *E 1/2 N* ; distance, *1/2*  
 Temperature of air, *68.0* therm. No., *1013*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0232* temp., *18.7*  
 " at depth of fathoms, " *16.5*  
 " at bottom, *1.0238* " *61.0 fahr*  
 Number of salinometer, *7223*  
 Barometer reading, *29.94*  
 State of sky, *Blue, light clouds*  
 Direction of wind, *S.W.* ; force, *2*  
 Rain, *no*  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U. S. F. C. D. Fish Hawk*  
 Service to which attached, *U. S. F. Com.*  
 Name and rank of commanding officer, *Malin*  
*J. A. Smith, ensign*  
 Name and position of observer,  
*W. J. Gilligan*  
*St. John*

Mr. a mural

NOTES RELATING TO STATION NO. 7015

Pecten linn. Costata

Echinacea Rara

Fossis (Ustina)

Can. Frovratu

Egg case of illianacea

Asfma

Natica linn. large no.

from sea bottom small

Large quantity Mytilus

Astarte

Smabulum

E. Bronhauri

Co

Egg case of skate

Capnodula fomicola

Small sulphur

Rusty flower

Monodora

Wm. "

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7016  
 Date, July 10-99  
 Time of day, 2.25; of tide, 4/4 ebb.  
 Locality, 9 miles from  
 Exact position, Gay Head  
D. 1/2 N. E. 1/8 mile  
 Depth, 14 fathoms  
 Nature of bottom, Mud & sand  
 Dredging instrument used, 7 foot beam trawl  
 Direction of drift, E. 1/2 N.; distance, 1/2  
 Temperature of air, 68° therm. No. 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.023 temp., 19.6  
 " at depth of fathoms, " "  
 " at bottom, 1.023.6 " 61.5 f.  
 Number of salinometer, 7223  
 Barometer reading, 29.80  
 State of sky, blue, light clouds  
 Direction of wind, S. W.; force, 2  
 Rain, no  
 Direction of surface current, " ; force, "  
 " of bottom " " ; force, "  
 Name of vessel, U.S.F.C.S. Fish Hawk  
 Service to which attached, U.S.F. Com.  
 Name and rank of commanding officer, Matth.  
J. A. Smith  
 Name and position of observer, J. A. Smith  
Observer

NOTES RELATING TO STATION NO. 7016

Egg case *Ulmaria*

*Sculpin*

*Immature*

Rusty *P. costata*

*Mytilus*

*Feruss (asteria)*

*Can. Ironata (same as pr)*

*Asteris (maroon)*

*Spongia*

*Astarte*

*Sand dollar*

*Eupatorium. Brouhauda*

*Prawn*

*Young hake*

*Sculpin*

*Puccinum imitatum*

*Toad fish*

*Lipidontus*

*Ganion Vulgare*

*Small green weebin*

*Caprodula formicata*

*flava*

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7017

Date, Jan. 10-99.

Time of day, 3.10 p.m., of tide,  $\frac{1}{4}$  -

Locality, Virginia Sound

Exact position, Bay Head P.  $\frac{1}{2}$  WDepth,  $\frac{1}{2}$  fath

Nature of bottom, Sandy Ropy

Dredging instrument used, 7 foot hauler

Direction of drift, E. N. E.; distance,  $\frac{5}{8}$ 

Temperature of air, 68

therm. No., 1013

" of surface water, "

" at depth of fathoms, "

" at bottom, 1.0234

Density at surface, 1.023

temp., 19°C

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7323

Barometer reading, 29.16

State of sky, Blue, cloudy

Direction of wind, S. W.; force, 1

Rain, nil

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U.S. Fish Hawk

Service to which attached, U.S. Com.

Name and rank of commanding officer, Mahi

Name and position of observer, J. A. Smith

NOTES RELATING TO STATION NO. 7017

Homarus America  
2 Minko Pan  
Penny Mussels  
Saw Dollar  
Cane, L. rosata

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7018  
 Date, July 11-99,  
 Time of day, 10.30 ; of tide, - 1/2 flood  
 Locality, Ent. to Muskeget Ch.  
 Exact position, Musk. l. bar. stat.  
N. E 1/2 E. 8 miles  
 Depth, 17 1/2 fathoms  
 Nature of bottom, Sandy  
 Dredging instrument used, Trawl beam tr.  
 Direction of drift, S.W. ; distance, 1/2  
 Temperature of air, 69.5 therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.023 temp., 19.5  
 " at depth of fathoms, " 13.7  
 " at bottom, 1.0242 " 53.8  
 Number of salinometer, 7325  
 Barometer reading, 30.09  
 State of sky, Blue  
 Direction of wind, P.W. ; force, 2  
 Rain, no x  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S.F.C. Fish Hawk  
 Service to which attached, U.S. Fish Com.  
 Name and rank of commanding officer, Maize  
J. A. Smith  
 Name and position of observer, Smith

NOTES RELATING TO STATION NO. 7018

H Spr Flounder  
Agonist haka (Physic Churo)  
Sand dollars.

Substrates.

Rusky flounder.

~~E. longirostris~~, Broomhedge  
Small crinoids.

Empty skate egg.

Red lined shrimp.

Small netia

Pedyn ten costata.

~~Sulfur sponge.~~

Cyprion Vul.

Marine murex.

Egg case illanassa

Can borealis.

Cydocardium

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7019  
 Date, July 11-99  
 Time of day, 11:20 ; of tide, 3/4 ebb  
 Locality, Entr. to Mono. Ch  
 Exact position, max. l. o. ar. star,  
N. E 10 miles.  
 Depth, 19 fathoms  
 Nature of bottom, sandy  
 Dredging instrument used, 7 fathom trawl  
 Direction of drift, S. S. W ; distance, 3/4  
 Temperature of air, 69° therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.023 ✓ temp., 19.2°  
 " at depth of fathoms, " 13.5°  
 " at bottom, 1.024 ✓ " 53° F.  
 Number of salinometer, 7320  
 Barometer reading, 30.10  
 State of sky, Blue  
 Direction of wind, S. W. ; force, —  
 Rain, No -  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S.F.C.S. Fish Hawk  
 Service to which attached, U.S.F.C.  
 Name and rank of commanding officer, Master  
J. Smith  
 Name and position of observer, W. J. Johnson

NOTES RELATING TO STATION NO.

7019

Sand dollars.

Rusty finches.

Redpolls

Hydroids.

Peck's tern

Egg case *Natica* heros.

E. *Bombardier* <sup>*tharaxia*</sup>

*Asterias forbesii*

Sand star

*Cancer* *coronatus*

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7020  
 Date, July 11-99  
 Time of day, 12.20 ; of tide, 3/8 flood  
 Locality, Entr. to Mus. Chan.  
 Exact position, Musk. l. sav. stat  
N. E x E by E 9 miles  
 Depth, 15 fathoms  
 Nature of bottom, Sandy  
 Dredging instrument used, 7 ft. b. Tr  
 Direction of drift, 0. ; distance, 1/2  
 Temperature of air, 69° F. therm. No. 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.0235 temp., 19°  
 " at depth of fathoms, " "  
 " at bottom, 1.0242 " 56.7° F.  
 Number of salinometer, 7520  
 Barometer reading, 30.10  
 State of sky, Bsh  
 Direction of wind, 0. dr. ; force, 3  
 Rain, no  
 Direction of surface current, " ; force, "  
 " of bottom " " ; force, "  
 Name of vessel, U.S. Fish Hawk  
 Service to which attached, U.S. Fish Com  
 Name and rank of commanding officer, Master  
J. A. Smith  
 Name and position of observer, W. M. ...  
Ph. ...

NOTES RELATING TO STATION NO. 7020

Rara Emma

Peter Sen

Nathia

E. Brinkman

Haka

Flower milk

" 4 spot

Egg case thickness  
Nathia

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7021  
 Date, July 11-99  
 Time of day, 1 pm ; of tide, High  
 Locality, Truck. Chain  
 Exact position,  
Truck. l. say stat. Ex 2 - 8 3/4 m  
 Depth, 5 1/2 fathom  
 Nature of bottom, gravel  
 Dredging instrument used, 7 fur beam tr.  
 Direction of drift, S. S. E ; distance, 1 1/2  
 Temperature of air, 69.6 therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.0226 temp., 20.4°C  
 " at depth of fathoms, " 18.6°C  
 " at bottom, 1023 " 64.7  
 Number of salinometer, 7323  
 Barometer reading, 30.10  
 State of sky, B. C.  
 Direction of wind, SW ; force, 2  
 Rain, no  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S. Fish Hawk  
 Service to which attached, U.S. Com.  
 Name and rank of commanding officer, Mat  
 Name and position of observer, W. Milligan

NOTES RELATING TO STATION NO. 7021

Leopold

Pecten tent. Cretata.

Raria Roman

Murex flavus

4 open  
murex "para" "

Astarte.

Hydroids

Cyprindula f.

Squid

Small shells:

E. Bourgeois

Natica

" egg shell

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7022*  
 Date, *July 12 = 99*  
 Time of day, *11 am*; of tide, *1/2 flood*  
 Locality, *Vineyard Sound*  
 Exact position, *Gay Head, D. 1/2 Dr.*  
*4/2 S. S. S. S.*  
 Depth, *12 1/2 fathoms*  
 Nature of bottom,  
 Dredging instrument used, *Turkhan tr.*  
 Direction of drift, *N. E. 1/2 E.*; distance, *3/4 mile*  
 Temperature of air, *78* fath. therm. No., *1013*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.023* temp., *16.0 C*  
 " at depth of fathoms, "  
 " at bottom, *1.023.3* " *(2.0)*  
 Number of salinometer, *7323*  
 Barometer reading, *30.02*  
 State of sky, *Blue*  
 Direction of wind, *P. W.*; force, *2*  
 Rain, *no*  
 Direction of surface current, \_\_\_\_\_; force, \_\_\_\_\_  
 " of bottom " \_\_\_\_\_; force, \_\_\_\_\_  
 Name of vessel, *U. S. F. C. S. Fish Hawk*  
 Service to which attached, *U. S. F. Com.*  
 Name and rank of commanding officer, *Master*  
*J. A. Smith, Master*  
 Name and position of observer, *J. A. Smith*  
*Ph. H. H.*

NOTES RELATING TO STATION NO. 7022

Lammara  
Hydroids  
Sandy crab.  
Sand dollar  
Rais, Emerica  
As. Forbesii  
E. Burchardus  
Cap. flava. + f.  
Natica  
Fulga  
Tridacna  
Mystelus  
Pecten lineolatus  
Orcha

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7023  
 Date, July 12 - 99  
 Time of day, 11.25 ; of tide, 1/2 flood  
 Locality, Vineyard Sound  
 Exact position, Gay Head S. 1/2 M.  
3 miles  
 Depth, 14 1/2 f  
 Nature of bottom,  
 Dredging instrument used, 7 ft. beam trawl  
 Direction of drift, E. N. E. ; distance, 1 mile  
 Temperature of air, 73 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.020 temp., 19° C  
 " at depth of fathoms, "  
 " at bottom, 1.0202 " 17.5° C  
61.7 f  
 Number of salinometer, 7520  
 Barometer reading, 30.00  
 State of sky, Blue  
 Direction of wind, P. W. ; force, 2  
 Rain, none  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com.  
 Name and rank of commanding officer, Mali  
J. A. Smith US Navy  
 Name and position of observer,  
J. W. McGee

NOTES RELATING TO STATION NO. 7023

Raja Ermanii

Panopeus

Egg case of Urania

" " Natica

1 spot flume

Asteris Forsterii

Cap. flume.

Natica

Crepidula putulana

Card. solanus

Hydrod.

Bryozoa

~~Vendo~~

Mytilus

Squid

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7024  
 Date, July 12 97  
 Time of day, 11.50 ; of tide, 3/4 flood  
 Locality, Vineyard Sound  
 Exact position, Gay Head  
P. Dr. & Swift 2 3/4 miles  
 Depth, 15 fathoms  
 Nature of bottom, \_\_\_\_\_  
 Dredging instrument used, per b. Trawl  
 Direction of drift, E. ; distance, 1/2 mile  
 Temperature of air, 74 therm. No., 1013  
 " of surface water, \_\_\_\_\_  
 " at depth of \_\_\_\_\_ fathoms, \_\_\_\_\_  
 " at bottom, \_\_\_\_\_  
 Density at surface, 1.025 temp., 19°C  
 " at depth of \_\_\_\_\_ fathoms, \_\_\_\_\_  
 " at bottom, 1.0232 " 61°F.  
 Number of salinometer, 7025  
 Barometer reading, 30.00  
 State of sky, Blue  
 Direction of wind, N.W. ; force, ↙  
 Rain, No  
 Direction of surface current, \_\_\_\_\_ ; force, \_\_\_\_\_  
 " of bottom " \_\_\_\_\_ ; force, \_\_\_\_\_  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Comm.  
 Name and rank of commanding officer, Master  
J. A. Smith, Master  
 Name and position of observer, R. W. Higgins

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7025*Date, *July 12<sup>th</sup> 99*Time of day, *12:30* ; of tide, *3/4 flood*Locality, *Vineyard Sound.*Exact position, *Hay Head*Depth, *15*Nature of bottom, *Sandy*Dredging instrument used, *7 foot S. Trawl*Direction of drift, *E 1/2 N* ; distance, *3/8*Temperature of air, *73°*therm. No., *1013*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.023*temp., *18.8° C*

" at depth of fathoms, "

" at bottom, *10235*" *17.6*Number of salinometer, *7322*Barometer reading, *29.97*State of sky, *B, C, M*Direction of wind, *D. W.* ; force, *2*Rain, *no*

Direction of surface current, \_\_\_\_\_ ; force, \_\_\_\_\_

" of bottom " \_\_\_\_\_ ; force, \_\_\_\_\_

Name of vessel, *U.S.F. C.S. Fish Hawk*Service to which attached, *U.S.F. Com.*Name and rank of commanding officer, *Malin*Name and position of observer, *J. A. Smith*

NOTES RELATING TO STATION NO. ....



# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7026*Date, *July 12 1899*Time of day, *5:30*; of tide, *9 1/2 Ebb*Locality, *Mayaw Sound*Exact position, *Near Nobsca**Nobsca Light N.E. I. 3/4 mile*Depth, *12 fath*Nature of bottom, *Small rocks.*Dredging instrument used, *7 ft h*Direction of drift, *N.S.W.*; distance, *3/8 mile*Temperature of air, *72° f*therm. No., *102*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0224*temp., *72° f*

" at depth of fathoms, "

" at bottom, *1023*" *20.5° C*" *68.5° f*Number of salinometer, *7323*Barometer reading, *29.94*State of sky, *Blue*Direction of wind, *O. N.*; force, *✓*Rain, *no*

Direction of surface current, \_\_\_\_\_; force, \_\_\_\_\_

" of bottom " \_\_\_\_\_; force, \_\_\_\_\_

Name of vessel, *U.S. F. C. S. Fish Hawk*Service to which attached, *U.S. F. Com.*Name and rank of commanding officer, *Maui*Name and position of observer, *Lt. Smith US Navy*Name and position of observer, *John H. Meyer*

NOTES RELATING TO STATION NO.

7026

Squid 3

Red sea urchin

Squid eggs.

Limula

Crab.

Algae,

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7027Date, July 12, 99Time of day, 4.00 pm. of tide, 1/2 mileLocality, Weyand Sound.Exact position, North of N. O. W.  
1 mileDepth, 6 fathomsNature of bottom, TrayleDredging instrument used, 7 fath. TrawlDirection of drift, N. by W.; distance, 1/2 mileTemperature of air, 72 fahr therm. No., 1012

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0224 temp., 21.3°

" at depth of fathoms, "

" at bottom, 1023 " 69.07<sup>20.5°</sup>Number of salinometer, 7022Barometer reading, 29.94State of sky, BlueDirection of wind, S. by E.; force, 2Rain, No

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U.S. F. C. S. Fish HawkService to which attached, U.S. F. ComName and rank of commanding officer, Maori  
J. A. Smith, USNavyName and position of observer, J. A. Smith

NOTES RELATING TO STATION NO. ....



NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7029  
 Date, July 15-99  
 Time of day, 11:40 of tide,  
 Locality, Vineyard Sound  
 Exact position, Gay Head  
 Depth, 17 1/2 fath.  
 Nature of bottom, Muddy  
 Dredging instrument used, 7 feet b. trawl  
 Direction of drift, N x S.; distance, 1/2 mile  
 Temperature of air, 75 therm. No., 1023  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 10242 temp., 20.2  
 " at depth of fathoms, "  
 " at bottom, 10244 " 15.10 C  
 Number of salinometer, 7323  
 Barometer reading, 29.95  
 State of sky, Blue, b. clouds  
 Direction of wind, E. N. E.; force, —  
 Rain, no  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel,  
 Service to which attached,  
 Name and rank of commanding officer,  
 Name and position of observer,

NOTES RELATING TO STATION NO. ....

1-2-71

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7030  
 Date, July 15-99  
 Time of day, 12.55 ; of tide,  
 Locality, Mixed Sound  
 Exact position, Ship Head  
 Depth, 12 fath 9. 1/4 m. 3/4  
 Nature of bottom, muddy  
 Dredging instrument used, 6 foot b. trawl  
 Direction of drift, E. x N. ; distance, 1/2  
 Temperature of air, 73.5 therm. No. 1013  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0221 temp., 20.6° C  
 " at depth of fathoms, "  
 " at bottom, 1.024 " 57.5° F  
 Number of salinometer, 7320  
 Barometer reading, 29.85  
 State of sky, Blue, light Cloud  
 Direction of wind, E. x S. ; force, 2  
 Rain, No  
 Direction of surface current, : force,  
 " of bottom " ; force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. Com.  
 Name and rank of commanding officer, Master  
J. A. Smith, Master  
 Name and position of observer,  
J. H. ...  
Ph. ...

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7031  
 Date, July 15 99  
 Time of day, 1.20 ; of tide,  
 Locality, Wingard Sound  
 Exact position, Gay Head D. & Jr.  
3 1/2 miles  
 Depth, 8 fath.  
 Nature of bottom, Gravelly  
 Dredging instrument used, 1/2 ft beam trawl  
 Direction of drift, E. N. E. ; distance, 1/4 m.  
 Temperature of air, 72.5° F. therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.022 temp., 20.6° C  
 " at depth of fathoms, " "  
 " at bottom, 1.023 " 53.4  
 Number of salinometer, 7323  
 Barometer reading, 29.85  
 State of sky, Blue, Cloudy  
 Direction of wind, E. N. E. ; force, 2  
 Rain, no  
 Direction of surface current, \_\_\_\_\_ ; force,  
 " of bottom " \_\_\_\_\_ ; force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com.  
 Name and rank of commanding officer, Maib  
J. A. Smith, USNA  
 Name and position of observer,  
J. M. McKeen  
Pharmacist. USN

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7032Date, July 15 - 99Time of day, 2:15 ; of tide,           Locality, Weyand SoundExact position, Gay HeadDepth, 10 fathomsNature of bottom, brassyDredging instrument used, 1 foot beam trawlDirection of drift, NE x N ; distance, 1/2 m.Temperature of air, 75° for therm. No., 1013

" of surface water, " "

" at depth of fathoms, " "

" at bottom, " "

Density at surface, 1.0216 temp., 22.0° C~~" at depth of fathoms, " "~~~~" at bottom, " "~~Number of salinometer, 7525Barometer reading, 29.86State of sky, Blue light cloudsDirection of wind, ESE ; force, —Rain, No~~Direction of surface current, " ; force, "~~~~" of bottom " ; force, "~~Name of vessel, U.S. F.C. S. Fish HawkService to which attached, U.S. F. Com.Name and rank of commanding officer, WaltName and position of observer, J. A. Smith, USNavyJ. W. Sullivan  
Pharmacist USN

NOTES RELATING TO STATION NO. \_\_\_\_\_

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7033  
 Date, July 20 - 99  
 Time of day, 9.50 ; of tide,  
 Locality, Mayan Sound  
 Exact position, Nobka Pt. 20 x N.  
3/4 mile  
 Depth, 5/4 fathom  
 Nature of bottom, Rocky, Gravelly  
 Dredging instrument used, 7 foot beam trawl  
 Direction of drift, W. ; distance, 1/2  
 Temperature of air, 72° F. therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.022 temp., 20.7° C  
 " at depth of fathoms, " "  
 " at bottom, 1.0224 " 21.0° C  
69.3° F  
 Number of salinometer, 7520  
 Barometer reading, 29.95  
 State of sky, Blue  
 Direction of wind, E. ; force, 2  
 Rain, no -  
 Direction of surface current, " ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S. F. C. S. Fish Hawk  
 Service to which attached, U.S. F. Com.  
 Name and rank of commanding officer, Master  
Jac. Smith, USN  
 Name and position of observer,  
Develigan  
Pharmacist, USN

NOTES RELATING TO STATION NO. \_\_\_\_\_

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7030

Date, July 20<sup>th</sup> 1899

Time of day, 10.20 ; of tide,

Locality, Meyers Sound

Exact position, Hoboken Pt. N. N  
1 mile

Depth, 6 fathoms

Nature of bottom, Gravelly

Dredging instrument used, 7 foot beam trawl

Direction of drift, N. ; distance, 1/2 mile

Temperature of air, 72° F.

therm. No., 1013

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.022

temp., 21° C

" at depth of fathoms, "

" at bottom, 1.022

" 20.6° C  
69.2° F

Number of salinometer, 7323

Barometer reading, 29.95

State of sky, Blue

Direction of wind, E. ; force, 2

Rain, no

Direction of surface current, 7 ; force,

" of bottom " ; force,

Name of vessel, U.S. F.C.S. Fish Hawk

Service to which attached, U.S. F. Com.

Name and rank of commanding officer, Mach

Name and position of observer, J. D. Smith, USN

J. D. Sullivan  
Commander, USN

NOTES RELATING TO STATION NO. ....

*Pecten tenu Costata,*  
**RECORD OF DREDGING,**  
**TEMPERATURE AND DENSITY.**

Station No. *7035*  
 Date, *July 20 - 99*  
 Time of day, *7.40 pm*; of tide,  
 Locality, *Vineyard Sound*  
 Exact position, *Gay Head South 3 m*  
 Depth, *15 1/2 fathoms.*  
 Nature of bottom,  
 Dredging instrument used, *9 feet beam trawl.*  
 Direction of drift, *N.W. East*; distance, *3/4 m*  
 Temperature of air, *68.5 Fahr* therm. No., *1073*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0226* temp., *19.5° C.*  
 " at depth of fathoms, "  
 " at bottom, *none taken.* " *14.4° C.*  
*58° Fahr*  
 Number of salinometer, *7320*  
 Barometer reading, *29.98.*  
 State of sky, *Bsh*  
 Direction of wind, *E. N. E.*; force, *1*  
 Rain, *no*  
 Direction of surface current, \_\_\_\_\_; force,  
 " of bottom " \_\_\_\_\_; force,  
 Name of vessel, *U. S. F. C. S. Fish Hawk*  
 Service to which attached, *U. S. F. Com.*  
 Name and rank of commanding officer, *Mal*  
*J. A. Smith, USN*  
 Name and position of observer,  
*W. M. ...*  
*Plummer, USN*

NOTES RELATING TO STATION NO. 7035-

*Pelican Lake Canada*

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. ~~7035~~ 7036  
 Date, July 20 1899  
 Time of day, 3.10 pm ; of tide,  
 Locality, Vineyard Sound.  
 Exact position, Rocky Head D.  $\frac{3}{4}$  m.  
 $\frac{2}{4}$  m.  
 Depth, 17 fath.  
 Nature of bottom,  
 Dredging instrument used, 9 feet beam trawl  
 Direction of drift, E.N.E. ; distance,  $\frac{1}{4}$  m  
 Temperature of air, 69° f. therm. No., 1013  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.023 temp., 18.8° C  
 " at depth of fathoms, " 16.5° C  
 " at bottom, 1.0234 " 61.2° f.  
 Number of salinometer, 7373  
 Barometer reading, 29.98  
 State of sky, blue light  
 Direction of wind, E.N.E. ; force, 2  
 Rain, no.  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U.S.F.C.S. Fish Hawk  
 Service to which attached,  
 Name and rank of commanding officer,  
 Name and position of observer,

NOTES RELATING TO STATION NO. 7036

Many algae  
Fav. sand dollar  
Two small rusty-dab  
1 of Spot  
2 Flounders

Large blue corner,  
if window pane

Caps. formicata with foot <sup>caps.</sup>

Euphonia

Mya - dead shells

30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121  
122  
123  
124  
125  
126  
127  
128  
129  
130  
131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144  
145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167  
168  
169  
170  
171  
172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400  
401  
402  
403  
404  
405  
406  
407  
408  
409  
410  
411  
412  
413  
414  
415  
416  
417  
418  
419  
420  
421  
422  
423  
424  
425  
426  
427  
428  
429  
430  
431  
432  
433  
434  
435  
436  
437  
438  
439  
440  
441  
442  
443  
444  
445  
446  
447  
448  
449  
450  
451  
452  
453  
454  
455  
456  
457  
458  
459  
460  
461  
462  
463  
464  
465  
466  
467  
468  
469  
470  
471  
472  
473  
474  
475  
476  
477  
478  
479  
480  
481  
482  
483  
484  
485  
486  
487  
488  
489  
490  
491  
492  
493  
494  
495  
496  
497  
498  
499  
500  
501  
502  
503  
504  
505  
506  
507  
508  
509  
510  
511  
512  
513  
514  
515  
516  
517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532  
533  
534  
535  
536  
537  
538  
539  
540  
541  
542  
543  
544  
545  
546  
547  
548  
549  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
600  
601  
602  
603  
604  
605  
606  
607  
608  
609  
610  
611  
612  
613  
614  
615  
616  
617  
618  
619  
620  
621  
622  
623  
624  
625  
626  
627  
628  
629  
630  
631  
632  
633  
634  
635  
636  
637  
638  
639  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
650  
651  
652  
653  
654  
655  
656  
657  
658  
659  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
670  
671  
672  
673  
674  
675  
676  
677  
678  
679  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
700  
701  
702  
703  
704  
705  
706  
707  
708  
709  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
750  
751  
752  
753  
754  
755  
756  
757  
758  
759  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
800  
801  
802  
803  
804  
805  
806  
807  
808  
809  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
850  
851  
852  
853  
854  
855  
856  
857  
858  
859  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
900  
901  
902  
903  
904  
905  
906  
907  
908  
909  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
950  
951  
952  
953  
954  
955  
956  
957  
958  
959  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
1000

Small flounder,

Bethus maculatus

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. *7036*Date, *July 24<sup>th</sup> 99*Time of day, *11.15 am*; of tide,Locality, *Buzzards Bay.*Exact position, *Wind Mill Light*  
*N. 3/4 E. 5 3/4 m.*Depth, *8 fathoms.*Nature of bottom, *Muddy*Dredging instrument used, *9 fms b. trawl*Direction of drift, *E x S.*; distance, *7/8 mile*Temperature of air, *68.5*therm. No., *1073*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0212*temp., *42.5° C*~~" at depth of fathoms, "~~" at bottom, *1.0218**21.4° C*  
*70.7° F.*Number of salinometer, *7026*Barometer reading, *30.16*State of sky, *Hazy*Direction of wind, *E.*; force, *3*Rain, *no*~~Direction of surface current,~~~~; force,~~~~" of bottom "~~~~; force,~~Name of vessel, *U. S. F. C. S. Fish Hawk*Service to which attached, *U. S. F. Com.*Name and rank of commanding officer, *Maize*Name and position of observer, *J. D. Milligan*  
*Pharmacist. U.S.N.*

NOTES RELATING TO STATION NO. 7037

*Totia*

*Yoldia*

*Capnodula*

*Sycotypus* Ann. E. Barnhouse

*Pandora*

*Asterias*

*Eupleria caudata*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7038Date, July 24<sup>th</sup> - 99Time of day, 11.45 am, of tide,Locality, Buzzards BayExact position, 7<sup>th</sup> Island LightDepth, 8 fathomsNature of bottom, MuddyDredging instrument used, 9 feet trawlDirection of drift, R. O. E.; distance, 3 1/2 milesTemperature of air, 70therm. No., 1013

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.021temp., 28.6° C~~" at depth of fathoms, "~~" at bottom, 1.0214" 72° F.Number of salinometer, 7025Barometer reading, 30.13State of sky, BlueDirection of wind, E; force, 3Rain, no~~Direction of surface current, ; force,~~~~" of bottom " ; force,~~Name of vessel, U.S. F. C. S. Fish HawkService to which attached, U.S. F. Com.Name and rank of commanding officer, MalinName and position of observer, J. A. Smith, USNAP. D. MearnsPh. H. New

NOTES RELATING TO STATION NO.

7038

- Spind*
- Cytenus*
- Yonf scup*
- Volynla*
- Fulgar carnea*
- Libinia*
- Notia*
- Cap.*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7039  
 Date, July 24 99  
 Time of day, 12.45 ; of tide,  
 Locality, Buzzards Bay  
 Exact position, Port Ledge Light E. x N. 1 1/2 miles  
 Depth, 3 fathoms  
 Nature of bottom, Muddy  
 Dredging instrument used, 7 feet beam trawl  
 Direction of drift, E. N. E. ; distance, 1 mile  
 Temperature of air, 70. therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.0204 temp., 24°C  
 " at depth of fathoms, " "  
 " at bottom, 1.020 " 73° F.  
 Number of salinometer, 7323  
 Barometer reading, 30.16  
 State of sky, Blue  
 Direction of wind, E ; force, 2  
 Rain, no  
 Direction of surface current, \_\_\_\_\_ ; force, \_\_\_\_\_  
 " of bottom " \_\_\_\_\_ ; force, \_\_\_\_\_  
 Name of vessel, U.S.F.C.S. Fish Hawk  
 Service to which attached, U.S.F. Com.  
 Name and rank of commanding officer, Travis  
J. A. Smith. USNavy  
 Name and position of observer, H. Milligan  
J. H. Swan

NOTES RELATING TO STATION NO. 7039

Chilton

Astarte

Libinia

Rulphium spon.

Asterias Forbesii

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7040  
 Date, July 24 - 99  
 Time of day, 2:00 pm; of tide,  
 Locality, Bingyan Bay  
 Exact position, Bin Island light  
N. E x E. 7 miles  
 Depth, 4 fathoms  
 Nature of bottom, Muddy Dredge  
 Dredging instrument used, ~~feet dredge~~  
 Direction of drift, N. E x E; distance, 1/2 mi,  
 Temperature of air, 69° f, therm. No., 1513  
 " of surface water, " "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0204 temp., 23° C  
~~" at depth of fathoms, " 23.0 C~~  
 " at bottom, 1.0206 " 73.8 f  
 Number of salinometer, 7320  
 Barometer reading, 30.16  
 State of sky, Blue, light clouds  
 Direction of wind, E; force, 4  
 Rain, no  
~~Direction of surface current, ; force,~~  
~~" of bottom " ; force,~~  
 Name of vessel, U.S. F.C.V. Fish Hawk  
 Service to which attached, U.S. Fish Com.  
 Name and rank of commanding officer, John  
Smith, USNavy  
 Name and position of observer, J. D. Milligan

NOTES RELATING TO STATION NO. 7040

Algae

Sul. sponge & red sponge

Cap. formicatu

"Y. placca

Mya, dead shell

Pecten,

Oribrella

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7041Date, July 29. 99Time of day, 10.00 am ; of tide,Locality, Long Island Sound.Exact position, Eaton's Neck light S. E  
2 milesDepth, 10 1/2 fathomsNature of bottom, MuddyDredging instrument used, Hy. Trawl + dredgeDirection of drift, S. P. W. ; distance, 5/8 mileTemperature of air, 77.86 f. therm. No., 1013

" of surface water, " "

" at depth of fathoms, " "

" at bottom, " "

Density at surface, 1.018 temp., 22.4°~~at depth of fathoms, " "~~" at bottom, 1.018.8 " 21.0°  
65.5° f.Number of salinometer, 7315Barometer reading, 29.96State of sky, Cloudy.

Direction of wind, ; force,

Rain, no~~Direction of surface current, ; force,~~~~" of bottom " ; force,~~Name of vessel, U.S. F.C.S. Fair HavenService to which attached, U.S. F. Com.Name and rank of commanding officer, MaibName and position of observer, J. A. Suck Hosmer  
D. M. B. Jan

NOTES RELATING TO STATION NO. 704

~~Mature scallops &~~

~~Scudella~~

~~Large seaweeds~~

~~of Asta~~

~~E. longipinnis~~

~~Libinia~~

Skate eggs (used)

2 small flounders

1 other " (?)

As. Forbesii - (1 spec)

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *904*Date, *July 29 - 99*Time of day, *11:45* ; of tide,Locality, *Long Island Sound*Exact position, *Keaton Rock light*Depth, *9 fathoms*Nature of bottom, *Muddy*Dredging instrument used, *fish trawl & dredge*Direction of drift, *South* ; distance, *1/2 mile*Temperature of air, *79*therm. No., *1013*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.018*temp., *73.5°*~~" at depth of fathoms, "~~" at bottom, *1.0184*" *69.7°*Number of salinometer, *7328*Barometer reading, *29.93*State of sky, *Cloudy*

Direction of wind, ; force,

Rain, *No*~~Direction of surface current, ; force,~~~~" of bottom " ; force,~~Name of vessel, *U.S.F.C.S. Fish Hawk*Service to which attached, *U.S.F. Com.*Name and rank of commanding officer, *Maib*Name and position of observer, *J. A. Smith, US Navy**J. D. Milligan  
Pharmacist, US Navy*

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7043  
 Date, July 29. 1899  
 Time of day, 1:15; of tide,  
 Locality, Long Island  
 Exact position, Eastern Neck Light  
P. W. x N. 7/2 W 6 miles  
 Depth, 18 1/2 fathoms  
 Nature of bottom, Muddy  
 Dredging instrument used, 7 feet haul & dredge  
 Direction of drift, Dr. P. W.; distance, 1 mile  
 Temperature of air, 79. therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, " "  
 " at bottom, " "  
 Density at surface, 1.008 temp., 23.5° C  
~~" at depth of fathoms, " " 19.9~~  
 " at bottom, 1.018.6 " 67.8 F  
 Number of salinometer, 7513  
 Barometer reading, 29.92  
 State of sky, Blue, Cloudy  
 Direction of wind, ; force,  
 Rain, no  
~~Direction of surface current, ; force,~~  
~~" of bottom " ; force,~~  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com.  
 Name and rank of commanding officer, Matth  
J. A. Smith, USNA  
 Name and position of observer,  
W. G. Gillfan  
Pharmacist, USNA

NOTES RELATING TO STATION NO. ....

4

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 2044  
 Date, July 29. 99  
 Time of day, ~~3:30~~ ; of tide,  
 Locality, Long Island Sound  
 Exact position, Eastern Neck Light  
S. 70° E. 1 1/2 M. 7 1/4 m.  
 Depth, 7 1/2  
 Nature of bottom, Muddy  
 Dredging instrument used, faul board dredge  
 Direction of drift, D. x N.; distance, 1/2 mile  
 Temperature of air, 77° F therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.018 temp., 73.0  
 " at depth of fathoms, "  
 " at bottom, 1.018 " 69° F.  
 Number of salinometer, 7023  
 Barometer reading, 29.90  
 State of sky, 7 blue, light clouds  
 Direction of wind, ; force,  
 Rain, No.  
 Direction of surface current, : force,  
 " of bottom " : force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com  
 Name and rank of commanding officer, Master  
J. A. Smith, USNavy  
 Name and position of observer,  
W. C. Phillips  
Plummer

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7040  
 Date, July 29  
 Time of day, 3.20 ; of tide  
 Locality, Long Island Sound  
 Exact position, Lat 41° 10' N  
Long 73° 43' W  
 Depth, 12  
 Nature of bottom, muddy  
 Dredging instrument used, 7 ft. beam & dredge  
 Direction of drift, N. by E. ; distance, 1/2  
 Temperature of air, 76° F. therm. No., 1013  
 " of surface water, " "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.018 temp., 23.2  
 " at depth of fathoms, " 21.4° C  
 " at bottom, 1.0194 " 68° F.  
 Number of salinometer,  
 Barometer reading, 29.87  
 State of sky, Blue, light clouds  
 Direction of wind, ; force,  
 Rain, no  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, U. S. F. C. S. Fish Hawk  
 Service to which attached, U. S. F. Com.  
 Name and rank of commanding officer, John  
J. A. Smith  
 Name and position of observer, Pharmacist  
W. H. Miller

NOTES RELATING TO STATION NO. ....

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 7046Date, July 29Time of day, 4:15 ; of tide.Locality, My Ind SoundExact position, Paton Neck Light  
N. + E. 1/2 E. 5 milesDepth, 13 fathoms.Nature of bottom, Mud ~~fine sand~~ tangleDredging instrument used,  ~~dredge~~Direction of drift, N. 3/4 W ; distance, 1/2 mileTemperature of air, 76.therm. No., 1019

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.018temp., 73.0

" at depth of fathoms, "

" at bottom, 1.0186" 21.8°  
" 67.8° f.Number of salinometer, 7315Barometer reading, 29.85State of sky, Blue Hazy

Direction of wind, ; force,

Rain, no

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U.S. Fish HawkService to which attached, U.S. Fish ComName and rank of commanding officer, MohrName and position of observer, J. A. Smith  
J. P. Gulligan  
Observer

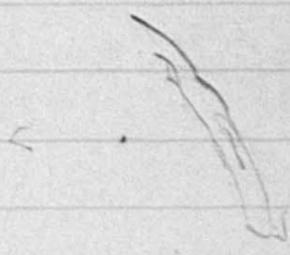
NOTES RELATING TO STATION NO. \_\_\_\_\_

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. 2047  
 Date, August 14<sup>th</sup> 1899  
 Time of day, 11 25 ; of tide,  
 Locality, Michigan Sound  
 Exact position, Key Head Lgh S.  $\frac{1}{2}$  W.,  
3 miles  
 Depth, 11 fathoms  
 Nature of bottom, Sandy mud  
 Dredging instrument used, 7 feet b. trawl  
 Direction of drift, to N. E. ; distance, 1  $\frac{1}{4}$  miles  
 Temperature of air, 72 fah. therm. No., 1013  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 10222 temp., 21° C  
 " at depth of fathoms, "  
 " at bottom, 1025 .. 63.3° f  
 Number of salinometer, 7323  
 Barometer reading, 29.83  
 State of sky, Blue, light clouds  
 Direction of wind, ; force,  
 Rain, no -  
~~Direction of surface current, ; force,~~  
~~" of bottom " ; force,~~  
 Name of vessel, U.S. Fish Hawk  
 Service to which attached, U.S. Fish Comm.  
 Name and rank of commanding officer, Maize  
J.A. Smith, ensign  
 Name and position of observer, J.D. Milligan

NOTES RELATING TO STATION NO. ....



# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7048*  
 Date, *Aug. 4<sup>th</sup> 1899*  
 Time of day, *12.00* ; of tide,  
 Locality, *Meyers Sound*  
 Exact position, *Gay Head Lgt. S. 7/8 by S.*  
*2 5/8 miles*  
 Depth, *15 fath*  
 Nature of bottom, *Sandy & Muddy*  
 Dredging instrument used, *7 foot haul & dredge*  
 Direction of drift, *East* ; distance, *1/2 mile*  
 Temperature of air, *70* therm. No., *1013*  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *10232* temp., *70.3*  
 " at depth of fathoms, "  
 " at bottom, *10236* " *70.3 f.*  
 Number of salinometer, *7323*  
 Barometer reading, *29.95*  
 State of sky, *Blue, light clear*  
 Direction of wind, ; force,  
 Rain, *no*  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, *U.S. Fish Hawk*  
 Service to which attached, *U.S. F. Com.*  
 Name and rank of commanding officer, *John Smith, Master*  
 Name and position of observer, *W. H. Sullivan*  
*Pharmacist U.S.*

NOTES RELATING TO STATION NO. ....



NOTES RELATING TO STATION NO. ....



10.  
5.  
5.  
5.

28.

5.90

1.71

60.61

\$7.00



1.85

390  
200  
590