

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

1903  
STATION NUMBERS

Numbers 7446 to 7495

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7446

Date, Jan 30, 1903

Time of day, 10:30 A.M.; of tide,  $\frac{1}{2}$  ebb

Locality, Lower Jewfish Bush Lake, Fla

Exact position,  $2\frac{3}{4}$  mi. N.W. of Jewfish Bush

Depth, 8 feet

Nature of bottom, *barry*

Dredging instrument used, Small snape dredge

Direction of drift, East ; distance,  $\frac{1}{6}$  mi

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0221 temp., 24

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 2992

State of sky, Clear

Direction of wind, N.N.E.; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U.S.N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7446

2 species fish

1 mollusk

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7447

Date, Jan. 30, 1903

Time of day, 11:05 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Lower Jewfish Bush Lake, Fla.

Exact position,  $2\frac{3}{4}$  mi. N.W. of West

end of Lower Matecumbe Key

Depth,  $5\frac{1}{2}$  feet

Nature of bottom, Soft mud over rocks

Dredging instrument used, Small scrape dredge

Direction of drift, S. E. ; distance,  $\frac{1}{2}$  mile

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0221 temp., 24.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, N. N. E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatwain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7477

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7448

Date, Jan. 30, 1903

Time of day, 11:35 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Lower Jewfish Bush Lake, Fla.

Exact position, 1 mi. S. x W. of Southern

Little Peters Keys

Depth, 8 feet

Nature of bottom, hard

Dredging instrument used, Small scrape dredge

Direction of drift, East; distance,  $\frac{1}{6}$  mi.

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0224 temp., 24.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, N. N. E.; force, 2

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7448

2 sheeps wool sponges

2 yellow sponges

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7449*  
 Date, *Jan. 30, 1913*  
 Time of day, *1:35 P.M.*; of tide, *Low Water*  
 Locality, *Lower Jewfish Bush Lake, Fla.*  
 Exact position, *1 1/2 mi. N. E. x E. of Jewfish Bush*  
 Depth, *10 feet*  
 Nature of bottom, *barry*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *S. W.*; distance, *1/6 mi.*  
 Temperature of air, *78* therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, *1.0220* temp., *25*  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *29.96*  
 State of sky, *Clear*  
 Direction of wind, *N. N. E.*; force, *2*  
 Rain,  
 Direction of surface current, \; force,  
 " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatswain, U. S. N.*  
 Name and position of observer,  
*Vernon C. West.*



NOTES RELATING TO STATION NO. 7449

2 commercial sponges  
nabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7450

Date, Jan. 30, 1903

Time of day, 2:05 P. M.; of tide, Low Water

Locality, Lower Jewfish Bush Lake, Fla.

Exact position, 1 mi. N. W. x N. of Jewfish Bush

Depth, 8 feet

Nature of bottom, barry

Dredging instrument used, small scrape dredge

Direction of drift, West ; distance, 1/2 mi

Temperature of air, 77 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0224 temp., 25

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.98

State of sky, Clear

Direction of wind, N. W. ; force, 3

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7450

2 species of finger sponges

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7451*Date, *Feb. 4, 1903*Time of day, *8:55 A.M.*; of tide,  $\frac{3}{4}$  *ebb.*Locality, *Lignum Vitae Lake, Fla.*Exact position, *1 1/4 mi. N. 1/2 W. of northern  
end of Lignum Vitae Key.*Depth, *8 feet*Nature of bottom, *sandy*Dredging instrument used, *Small scrape dredge*Direction of drift, *North*; distance,  $\frac{1}{2}$  *mi.*Temperature of air, *76* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0232* temp., *24.5*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *29.84*State of sky, *Partly cloudy*Direction of wind, *South*; force, *4*

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, *Fish Hawk*Service to which attached, *Fish Commission*Name and rank of commanding officer *James A. Smith  
Boatswain, U. S. N.*

Name and position of observer,

*Vernon C. West*

NOTES RELATING TO STATION NO. 7751

1 wab

coral

few dead shells

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7452

Date, Feb. 4, 1903

Time of day, 9:25 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Lignum Vitae Lake, Fla.

Exact position,  $1\frac{1}{2}$  mi. S. S. W.  $\frac{1}{2}$  W. of the  
Southern Twin Key.

Depth, 8 feet

Nature of bottom, bay

Dredging instrument used, Small scrape dredge

Direction of drift, N. W. ; distance,  $\frac{1}{6}$  mi.

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0226 temp., 24.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.85

State of sky, Partly cloudy

Direction of wind, South ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7452

gorgonians  
several non-commercial sponges  
tunicates

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7453*  
 Date, *Feb. 4, 1903.*  
 Time of day, *10:30 A. M.*; of tide, *Low water*  
 Locality, *Barnes Lake, Fla.*  
 Exact position, *1 1/2 mi N. N. W. of Barnes Key.*  
 Depth, *8 feet*  
 Nature of bottom, *barry*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. W.*; distance, *1/6 mi*  
 Temperature of air, *77* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0329* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *29.86*  
 State of sky, *Clear*  
 Direction of wind, *South*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*



NOTES RELATING TO STATION NO. 2833

*a. inclina*

*gorgonian*

*non-commercial sponges*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7454*  
 Date, *Feb. 4, 1903*  
 Time of day, *11:05 A.M.*; of tide, *Low water*  
 Locality, *Barnes Lake, Fla.*  
 Exact position, *1 <sup>3</sup>/<sub>4</sub> mi. N N. E. <sup>1</sup>/<sub>4</sub> E. of  
*Little Rabbit Key.*  
 Depth, *6 feet*  
 Nature of bottom, *sand & grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. N. W.*; distance, *1/2 mi.*  
 Temperature of air, *78* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0225* temp., *25.5*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7950*  
 Barometer reading, *29.87*  
 State of sky, *Clear*  
 Direction of wind, *South*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatwain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.**

NOTES RELATING TO STATION NO. 7454

2 species of coral  
1 small fish  
grass.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7455*  
 Date, *Feb. 4, 1903*  
 Time of day, *11:40 A.M.*; of tide, *Low water*  
 Locality, *Barnes Lake, Fla.*  
 Exact position, *1<sup>3</sup>/<sub>4</sub> mi. N. W. x N. of North Twin Key*  
 Depth, *7 feet*  
 Nature of bottom, *Sand & grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *S. S. E.*; distance, *1/2 mi.*  
 Temperature of air, *78* therm. No.,  
     " of surface water, " "  
     " at depth of      fathoms, " "  
     " at bottom, " "  
 Density at surface, *1.0234* temp., *25*  
     " at depth of      fathoms, " "  
     " at bottom, " "  
 Number of salinometer, *7450*  
 Barometer reading, *29.87*  
 State of sky, *Clear*  
 Direction of wind, *South*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West*

NOTES RELATING TO STATION NO. 2958

acidim

2 small sponges

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7456*  
 Date, *Feb. 4, 1903*  
 Time of day, *1:50 P. M.*; of tide, *1/4 flood*  
 Locality, *Lignum Vitae Lake, Fla.*  
 Exact position, *1 1/4 mi. E. S. E. of Eagle  
Nest Key*  
 Depth, *8 1/2 feet*  
 Nature of bottom, *Sand & grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. E.*; distance, *1/6 mi*  
 Temperature of air, *79* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0232* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *29.85*  
 State of sky, *Partly cloudy*  
 Direction of wind, *South*; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. 2456

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7457*  
 Date, *Feb. 4, 1903*  
 Time of day, *2:15 P.M.*; of tide, *1/4 flood.*  
 Locality, *Lignum Vitae Key, Fla.*  
 Exact position, *2 3/4 mi. N. N. W. of Shell Key*  
 Depth, *9 feet.*  
 Nature of bottom, *barry*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *S W.* ; distance, *1/6 mi.*  
 Temperature of air, *78* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0217* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *29.85*  
 State of sky, *Partly cloudy*  
 Direction of wind, *South* ; force, *3*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U.S.N.*  
 Name and position of observer,  
     *Vernon E. West.*



NOTES RELATING TO STATION NO. 7412

1 small bivalve

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7458*  
 Date, *Feb. 5, 1903*  
 Time of day, *8:35 A. M.*; of tide, *Low water.*  
 Locality, *Cotton Key Lake, Fla.*  
 Exact position, *1 1/2 mi. N. E. & E. of Shell Key*  
 Depth, *8 feet*  
 Nature of bottom, *mud*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. E.*; distance, *1/2 mi.*  
 Temperature of air, *77* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0324* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *29.93*  
 State of sky, *Partly clear*  
 Direction of wind, *S. S. W.*; force, *2*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West*

NOTES RELATING TO STATION NO. 24578

1 shrimp

1

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7459  
 Date, Feb. 5, 1903  
 Time of day, 9:00 A.M.; of tide, Low water  
 Locality, Cotton Key Lake, Fla.  
 Exact position, 1 mi. S.E. 1/4 S. of West  
 Key  
 Depth, 5 1/2 feet  
 Nature of bottom, barry  
 Dredging instrument used, small scrape dredge  
 Direction of drift, North ; distance, 1/2 mi.  
 Temperature of air, 77 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0227 temp., 25  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 7950  
 Barometer reading, 29.95  
 State of sky, Partly clear  
 Direction of wind, S. S. W. ; force, 2  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James A. Smith  
 Boatswain, U. S. N.  
 Name and position of observer,  
 Vernon E. West.

NOTES RELATING TO STATION NO. 2459

1 mat

1 fish

2 small pipe fish

1 sheeps wool sponge

3 yellow sponges

18 small grass sponges

2 sea caps

1 glove sponge

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7460*Date, *Feb 5, 1903*Time of day, *9:45 A.M.*; of tide, *1/4 flood.*Locality, *Cotton Key Lake, Fla.*Exact position, *1/2 mi. S. S. E. 1/2 E. of  
East Key.*Depth, *5 feet*Nature of bottom, *barry*Dredging instrument used, *Small scrape dredge*Direction of drift, *N. E.*; distance, *1/2 mi.*Temperature of air, *77* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0210* temp., *25*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *2995*State of sky, *Cloudy*Direction of wind, *S. S. W.*; force, *2*

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, *Fish Hawk*Service to which attached, *Fish Commission*Name and rank of commanding officer, *James A. Smith**Boatswain, U. S. N.*

Name and position of observer,

*Vernon C. West.*

NOTES RELATING TO STATION NO. 2460

4 grass sponges

1 sea cap.

1 finger sponge

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7461*  
 Date, *Feb. 5, 1913*  
 Time of day, *10:05 A.M.*; of tide, *1/4 flood*  
 Locality, *Cotton Key Lake, Fla.*  
 Exact position, *2 mi. E. x S. 1/2 S. of East Key.*  
 Depth, *7 feet*  
 Nature of bottom, *Sand & rock.*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *East*; distance, *1/6 mi.*  
 Temperature of air, *78* therm. No.,  
     " of surface water, " "  
     " at depth of      fathoms, "  
     " at bottom, " "  
 Density at surface, *1.0210* temp., *25*  
     " at depth of      fathoms, "  
     " at bottom, " "  
 Number of salinometer, *7450*  
 Barometer reading, *29.97*  
 State of sky, *Cloudy*  
 Direction of wind, *S. S. W.*; force, *2*  
 Rain,  
 \* Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatwain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West*



NOTES RELATING TO STATION NO. 2461

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7462*  
 Date, *Feb. 18, 1903*  
 Time of day, *2:20 P.M.*; of tide,  $\frac{1}{2}$  ebb.  
 Locality, *Hawk Channel, Fla.*  
 Exact position, *2 mi. S.W. x W. of S.E. point of Long Key.*  
 Depth, *2  $\frac{1}{2}$  fathoms*  
 Nature of bottom, *Hard sand & grass.*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *S.W.*; distance,  $\frac{1}{4}$  mi.  
 Temperature of air, *62* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0249* temp., *20.5*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *3017*  
 State of sky, *Cloudy*  
 Direction of wind, *N.N.E.*; force, *5*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U.S.N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7462

gastropods

sea urchins

1 file fish

1 sponge

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. *7463*Date, *Feb. 18, 1903*Time of day, *2:40 P.M.*; of tide, *1/2 ebb.*Locality, *Hawk Channel, Fla.*Exact position, *1/4 mi. S. x W. of S. E.**point of Long Key.*Depth, *2 1/2 fathoms*Nature of bottom, *hard*Dredging instrument used, *Oyster dredge*Direction of drift, *S. W.*; distance, *1/4 mi.*Temperature of air, *62* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0249* temp., *21*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *3017*State of sky, *Cloudy*Direction of wind, *N. N. E.*; force, *5*

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, *Fish Hawk*Service to which attached, *Fish Commission*Name and rank of commanding officer, *James A. Smith**Boatswain, U. S. N.*

Name and position of observer,

*Vernon E. West.*

NOTES RELATING TO STATION NO. 2463

gorgonian

2 species of shrimp

several non-commercial sponges

astrophid an-basket starfish

7 large sand dollars

several small crabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7464

Date, Feb. 18, 1903

Time of day, 3:35 P.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Hawk Channel

Exact position,  $1\frac{1}{8}$  mi. E. x S. of

West end of Lower Matecumbe Key

Depth, 3 fathoms

Nature of bottom, bay

Dredging instrument used, Oyster dredge

Direction of drift, S.W.; distance,  $\frac{1}{4}$  mi.

Temperature of air, 65 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0254 temp., 20.5

" at depth of fathoms, "

" at bottom, 1.0250 " 20.5

Number of salinometer, 7450

Barometer reading, 30.12

State of sky, Cloudy

Direction of wind, N.E.; force, 5

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U.S.N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7464

acidium

gorgonian

gastropods

crabs

several varieties of sponges

1 small fish

1 astrophidian

1 shrimp

coral

bivalves

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7465

Date, Feb. 18, 1903

Time of day, 4:05 P.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Hawk Channel

Exact position,  $1\frac{1}{2}$  mi. S. S. W.  $\frac{1}{2}$  W. of  
Indian Key.Depth,  $2\frac{1}{2}$  fathoms

Nature of bottom, Hard sand, shells &amp; grass.

Dredging instrument used, Oyster dredge

Direction of drift, West ; distance,  $\frac{1}{4}$  mi.

Temperature of air, 65 , therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0252 temp., 19.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.12

State of sky, Cloudy

Direction of wind, N. E. ; force, 5

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatwain U. S. N.

Name and position of observer,

Vernon E. West.



NOTES RELATING TO STATION NO. 7465

3 small fish

1 large star fish

several sand dollars

crabs

gastropods

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7466*Date, *Feb. 19, 1903*Time of day, *8:50 A.M.*; of tide,  $\frac{1}{2}$  *flood*Locality, *Hawk Channel, Fla.*Exact position,  $\frac{1}{4}$  *mi. E. of Tea Table Key.*Depth,  $2\frac{1}{2}$  *fathoms*Nature of bottom, *barry*Dredging instrument used, *Oyster dredge*Direction of drift, *S. W.*; distance,  $\frac{1}{2}$  *mi.*Temperature of air, *61* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0250* temp., *20.5*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *3020*State of sky, *Cloudy*Direction of wind, *North*; force, *4*

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, *Fish Hawk*Service to which attached, *Fish Commission*Name and rank of commanding officer, *James A. Smith  
Boatswain, U. S. N.*

Name and position of observer,

*Vernon C. West*

NOTES RELATING TO STATION NO. 2466

1 glove sponge  
1 finger sponge  
several sand dollars  
several sea urchins  
several small crabs  
1 small fish  
bivalves  
gastropods  
Holothurian  
several brittle stars

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7467*  
 Date, *Feb. 19, 1903*  
 Time of day, *12:30 P. M.*; of tide, *High Water*  
 Locality, *Green Shoals, Hawk Channel, Fla.*  
 Exact position, *4 1/4 mi. W. x N. of Elbow Reef beacon*  
 Depth, *2 3/4 fathoms*  
 Nature of bottom, *hard corals with sand.*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *West*; distance, *1/4 mi.*  
 Temperature of air, *70* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0253* temp., *20.5*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.23*  
 State of sky, *Cloudy*  
 Direction of wind, *N. E.*; force, *5*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatwain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7467

3 species of fish  
several species of crabs  
several bivalves  
gastropods  
small star-fish  
worms  
sea-murchins  
sand-dollars  
Holothurian

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7468*  
 Date, *Feb. 19, 1903*  
 Time of day, *1:00 P. M.*; of tide, *High Water*  
 Locality, *Brechan Shoals, Hawk Channel*  
 Exact position, *2 mi. S. S. W. from Basin*  
*Hill Beacon*  
 Depth, *2 1/2 fathoms*  
 Nature of bottom, *sand & grass*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *West*; distance, *1/2 mi.*  
 Temperature of air, *70* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0253* temp., *20.5*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.23*  
 State of sky, *Cloudy*  
 Direction of wind, *N. E.*; force, *5*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatwain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 2468

several sponges

gastropods

bivalves

several sea-urchins & sand dollars

1 small file fish

several crabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7469

Date, Feb. 19, 1903

Time of day, 1:20 P.M.; of tide, High Water

Locality, Grecian Shoals, Hawk Channel <sup>Fla</sup>Exact position,  $\frac{1}{4}$  mi S W. x S. of Basin  
Hill Beacon

Depth, 2 fathoms

Nature of bottom, sand &amp; grass

Dredging instrument used, Oyster dredge

Direction of drift, West ; distance,  $\frac{1}{8}$  mi

Temperature of air, 69 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0250 temp., 20.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.20

State of sky, Cloudy

Direction of wind, N. E ; force, 5

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon C. West,



NOTES RELATING TO STATION NO. 2462

Sponges

bivalves

gastropods

several species of crabs

3 mantis shrimps

1 small file fish

1 worm

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7470  
 Date, Feb. 25, 1903  
 Time of day, 10:30 A. M. of tide,  $\frac{3}{4}$  ebb  
 Locality, West Combers, Fla.  
 Exact position,  $3\frac{1}{4}$  mi. N. W. S. of Pigeon  
 Key  
 Depth, 2 ft.  
 Nature of bottom, soft mud  
 Dredging instrument used,  
 Direction of drift, ; distance,  
 Temperature of air, 70 therm. No.,  
 " of surface water, "  
 " at depth of fathoms, "  
 " at bottom, "  
 Density at surface, 1.0209 temp., 21  
 " at depth of fathoms, "  
 " at bottom, "  
 Number of salinometer, 7450  
 Barometer reading, 30.02  
 State of sky, Partly cloudy  
 Direction of wind, E. N. E. ; force, 4  
 Rain,  
 Direction of surface current, ; force,  
 " of bottom " ; force,  
 Name of vessel, Fish Hawk  
 Service to which attached, Fish Commission  
 Name and rank of commanding officer, James A. Smith  
 Boatswain U. S. N.  
 Name and position of observer,  
 Vernon C. West

NOTES RELATING TO STATION NO. 2470

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7471*  
 Date, *Feb. 25, 1903*  
 Time of day, *10:40 A.M.*; of tide,  *$\frac{3}{4}$  ebb.*  
 Locality, *West Campens, Fla.*  
 Exact position, *4 mi S.W. & W.  $\frac{1}{2}$  W. of Pigeon Key.*  
 Depth,  *$7\frac{1}{2}$  ft.*  
 Nature of bottom, *soft mud*  
 Dredging instrument used,  
 Direction of drift, ; distance,  
 Temperature of air, *70* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0210* temp., *21*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.02*  
 State of sky, *Partly cloudy*  
 Direction of wind, *E.N.E.* ; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West,*

NOTES RELATING TO STATION NO. 2471...

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7472.

Date, Feb 25, 1913

Time of day, 11:00 A.M.; of tide, Low Water

Locality, East Croppers, Fla.

Exact position,  $1\frac{3}{4}$  mi. S.W. x S. of PigeonKey  
Depth, 6  $\frac{1}{2}$  ft.

Nature of bottom, soft mud

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air, 71 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0198 temp., 21

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7049

Barometer reading, 3002

State of sky, Partly cloudy

Direction of wind, E. N. E ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 2472



## RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7473

Date, Feb. 25, 1903

Time of day, 11:20 A.M.; of tide, Low Water

Locality, East Campers, Fla.

Exact position, 1/2 mi. S.W. of Pigeon Key

Depth, 7 ft.

Nature of bottom, soft mud

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air, 71 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0202 temp., 21

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7099

Barometer reading, 30.02

State of sky, Partly Cloudy

Direction of wind, E.N.E. ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon E. West,



NOTES RELATING TO STATION NO. 2473

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7474

Date, March 9, 1907

Time of day, 9:15 A. M.; of tide,  $\frac{1}{2}$  flood

Locality, Biscayne Bay, Fla.

Exact position,  $\frac{3}{4}$  mi. W. of Rubicon Key

Depth, 8 feet

Nature of bottom, soft sand &amp; grass

Dredging instrument used, small scrape dredge

Direction of drift, S. S. W.; distance,  $\frac{1}{6}$  mi.

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0233 temp., 27.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.04

State of sky, Partly cloudy

Direction of wind, East; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. 7474

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7475

Date, March, 6, 1903

Time of day, 11:50 A.M.; of tide,  $\frac{3}{4}$  flood

Locality, Key Biscayne Bay, Fla.

Exact position,  $1\frac{3}{4}$  mi. N. x E. of AdamsKey  
Depth,  $7\frac{1}{2}$  ft

Nature of bottom, Hard sand.

Dredging instrument used, Small scrape dredge

Direction of drift, East ; distance,  $\frac{1}{16}$  mi.

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0230 temp., 25

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.06

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatwain, U. S. N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7475

1 file fish  
several isopods  
1 dead glass sponge

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7476

Date, March 6, 1903

Time of day, 1:00 P. M. ; of tide,  $\frac{3}{4}$  flood

Locality, Key Biscayne Bay, Fla.

Exact position, 4 mi. E. N. E. of Turkey Point.

Depth,  $8\frac{1}{2}$  ft.

Nature of bottom, Hard sand.

Dredging instrument used, Small scrape dredge

Direction of drift, W. N. W. ; distance, 16 mi.

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0232 temp., 25

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.05

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatwain, U. S. N.

Name and position of observer,

Vernon E. West

NOTES RELATING TO STATION NO. 2426

- 1 large finger sponge
- 2 species of shrimp
- 2 species of crabs
- amphipods

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7477*  
 Date, *March 6, 1903*  
 Time of day, *1:45 P.M.*; of tide, *High water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *1 1/2 mi. S. W. & W. of Sands Key*  
 Depth, *10 1/2 ft.*  
 Nature of bottom, *Soft sand + grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. N. E.*; distance, *1/2 mi.*  
 Temperature of air, *76* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0232* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.05*  
 State of sky, *Partly cloudy*  
 Direction of wind, *East*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*



NOTES RELATING TO STATION NO. 2477

3 species of wats

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7478*  
 Date, *March 6, 1905*  
 Time of day, *2:15 P.M.*; of tide, *High water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position *1 1/2 mi. S of middle of*  
*Feather-bed Bank*  
 Depth, *9 1/2 ft.*  
 Nature of bottom, *Hard sand.*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *West*; distance, *1/2 mi.*  
 Temperature of air, *76* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0232* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.13*  
 State of sky, *Partly cloudy*  
 Direction of wind, *East*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. 7428

small nests  
egg rings

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7479*  
 Date, *March 6, 1903*  
 Time of day, *2:45 P. M.*; of tide, *High water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *1/2 mi. N. W. x N. of Sands Key*  
 Depth, *9 ft.*  
 Nature of bottom, *Sands & grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *N. E.*; distance, *1/10 mi.*  
 Temperature of air, *76* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0239* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.03*  
 State of sky, *Partly cloudy*  
 Direction of wind, *East*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatman, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7479

small shells.

1 pipe fish.

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7480*  
 Date, *March 6, 1903*  
 Time of day, *4:00 P. M.*; of tide, *High water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *1 3/4 mi W. N. W. 3/4 W. of N. point of Sands Key*  
 Depth, *9 ft.*  
 Nature of bottom, *Hard sand.*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *Cast*; distance, *1/6 mi.*  
 Temperature of air, *75* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0234* temp., *25*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7950*  
 Barometer reading, *3002*  
 State of sky, *Partly clear*  
 Direction of wind, *Cast*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. 7980

2 shrimps

several hirabees

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7481*  
 Date, *March 7, 1903*  
 Time of day, *7:10 a m.*; of tide,  $\frac{3}{4}$ , *ebb.*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *1 mi. N. of Feather Bed  
Bank*  
 Depth, *11 ft.*  
 Nature of bottom, *sand & grass*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *N. W.*; distance,  $\frac{1}{8}$  *mi.*  
 Temperature of air, *76* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0234* temp., *24*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.04*  
 State of sky, *Partly clear*  
 Direction of wind, *E. N. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith  
Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West,*



NOTES RELATING TO STATION NO. 781

Several birches

2 species of wabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7482*  
 Date, *March 7, 1903*  
 Time of day, *7:40 A.M.*; of tide,  *$\frac{3}{4}$  ebb.*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position,  *$3\frac{1}{2}$  m. S.W. x N.  $\frac{1}{2}$  W.*  
*of Soldier Key.*  
 Depth,  *$10\frac{1}{2}$  ft.*  
 Nature of bottom, *barry.*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *West*; distance,  *$\frac{1}{2}$  mi.*  
 Temperature of air, *76* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0236* temp., *23.5*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.04*  
 State of sky, *Partly clear*  
 Direction of wind, *C.N.E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U.S.N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 2482

- 2 species of non-commercial sponges
- 1 species of shrimp
- 1 sea-anemone
- 1 small holothurian
- 1 file fish
- several bivalves
- Hermit crabs
- gastropods
- coral

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7483

Date, March 7, 1903

Time of day, 8:00 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Key Biscayne Bay, Fla.

Exact position, 3 mi. W. &amp; S. of Soldier

Key  
Depth, 10 ft.

Nature of bottom, sand &amp; grass

Dredging instrument used, Oyster dredge

Direction of drift, West; distance,  $\frac{1}{2}$  mi.

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.1232 temp., 27

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.05

State of sky, Partly clear.

Direction of wind, E. N. E.; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7483

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7444*  
 Date, *March 7, 1903*  
 Time of day, *8:35 A.M.*; of tide,  $\frac{3}{4}$  ebb.  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *4  $\frac{1}{4}$  mi. N.  $\frac{1}{2}$  S. of Cape Florida.*  
 Depth, *11  $\frac{1}{2}$  ft.*  
 Nature of bottom, *sand & grass.*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *West*; distance,  *$\frac{1}{8}$  mi.*  
 Temperature of air, *75* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0234* temp., *24*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.05*  
 State of sky, *Partly clear*  
 Direction of wind, *E. N. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7784

1 tunicate  
brittle stars  
gastropods  
several crabs  
bivalves

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7485*  
 Date, *March 7, 1903*  
 Time of day, *9:10 A.M.*; of tide, *Low water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *3 mi. S.W. x W. of Cape  
Florida*  
 Depth, *11 1/2 ft.*  
 Nature of bottom, *sand & grass*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *N. W.*; distance, *1/8 mi.*  
 Temperature of air, *75* therm. No.,  
     " of surface water,                      "  
     " at depth of        fathoms,            "  
     " at bottom,                                "  
 Density at surface, *1.0212* temp., *24*  
     " at depth of        fathoms,            "  
     " at bottom,                                "  
 Number of salinometer, *7450*  
 Barometer reading, *30.05*  
 State of sky, *Partly cloudy*  
 Direction of wind, *E. N. E.*; force, *4*  
 Rain,  
 Direction of surface current,               ; force,  
     " of bottom        "                       ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith  
Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*



NOTES RELATING TO STATION NO. 7485

brittle stars

1 file fish

gastropods

1 small eel

# RECORD OF DREDGING,

## TEMPERATURE AND DENSITY.

Station No. *7486*  
 Date, *March 7, 1903*  
 Time of day, *9:30 A. M.*; of tide, *Low water*  
 Locality, *Key Biscayne Bay, Fla.*  
 Exact position, *3 mi. N. & S. of Cape Florida*  
 Depth, *10 1/2 ft.*  
 Nature of bottom, *sand & grass*  
 Dredging instrument used, *Oyster dredge*  
 Direction of drift, *N. W.*; distance, *1/2 mi.*  
 Temperature of air, *75* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0213* temp., *24*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.06*  
 State of sky, *Partly cloudy*  
 Direction of wind, *S. W. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. 2486

bivalves

gastropods

small file fish

hermit crabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7447

Date, March 10, 1903

Time of day, 7:25 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Key Biscayne Bay, Fla.

Exact position, 1 mi. W. of Feather-  
bed Bank.Depth,  $11\frac{1}{2}$  ft

Nature of bottom, Sand

Dredging instrument used, Small scrape dredge

Direction of drift, S. W. ; distance,  $\frac{1}{6}$  mi.

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0231 temp., 23

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.06

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7487

2 small hermit crabs

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7488*  
 Date, *March 10, 1903*  
 Time of day, *8:00 A.M.*; of tide,  $\frac{3}{4}$  *ebb.*  
 Locality, *Biscayne Bay, Fla., <sup>Lake</sup> Bithin*  
 Exact position, *2 mi. S.W. of S.W. end of Featherbed Bank.*  
 Depth, *7½ ft.*  
 Nature of bottom, *Sand*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *West* ; distance, *½ mi.*  
 Temperature of air, *74* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0230* temp., *23*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *3010*  
 State of sky, *Partly cloudy*  
 Direction of wind, *East* ; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U.S.N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. ~~7488~~

- 2 small loggerhead sponges
- crabs
- 1 pipe fish
- 1 worm

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7489

Date, March 10, 1903

Time of day, 8:25 A.M.; of tide,  $\frac{3}{4}$  ebb.

Locality, Billies Lake, Biscayne Bay, Fla.

Exact position,  $\frac{1}{2}$  m N. E. of Turkey Point.

Depth, 8 ft.

Nature of bottom, Hard sand

Dredging instrument used, small scrape dredge

Direction of drift, West ; distance, 10 mi.

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0244 temp., 25

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.10

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. West



NOTES RELATING TO STATION NO. 2489

*Nothing in dredge*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7490*  
 Date, *March 10, 1903*  
 Time of day, *8:45 A.M.*; of tide, *3/4 ebb*  
 Locality, *Cutters Bank, Biscayne Bay, Fla.*  
 Exact position, *2 1/2 mi. E. E. S. of Turkey Point.*  
 Depth, *7 ft.*  
 Nature of bottom, *Sand*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *West*; distance, *1/2 mi.*  
 Temperature of air, *74* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0246* temp., *23*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.10*  
 State of sky, *Partly cloudy*  
 Direction of wind, *East*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7491

1 small crab.

## RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7491

Date, March 10, 1903

Time of day, 10:35 A.M. of tide  $\frac{3}{4}$  ebb.

Locality, Card Sound, Fla.

Exact position, 1 mi. N. x E.  $\frac{1}{2}$  E. of Pumpkin  
Island.Depth, 10  $\frac{1}{2}$  ft.

Nature of bottom, Hard sand.

Dredging instrument used, Small scrape dredge.

Direction of drift, West ; distance,  $\frac{1}{2}$  mi.

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0222 temp., 27

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.12

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith  
Boatswain, U. S. N.

Name and position of observer,

Vernon C. West

NOTES RELATING TO STATION NO. ~~7491~~

*Nothing in dredge.*

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7492*  
 Date, *March 10, 1903*  
 Time of day, *11:00 A. M.*; of tide,  $\frac{3}{4}$  *ebb.*  
 Locality, *Cand Sound, Fla.*  
 Exact position, *1 1/2 mi. S. W. 1/2 W. of Pimpton Key.*  
 Depth, *11 1/2 ft.*  
 Nature of bottom, *Soft sand & grass*  
 Dredging instrument used, *Small snape dredge*  
 Direction of drift, *West*; distance, *16 mi.*  
 Temperature of air, *75* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0222* temp., *24*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.12*  
 State of sky, *Partly clear.*  
 Direction of wind, *East*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West.*

NOTES RELATING TO STATION NO. 7792

- 2 hermit crabs
- 1 pipe fish
- 1 small fish

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7493

Date, March 10, 1903

Time of day, 11:10 A.M.; of tide Low water

Locality, Card Sound, Fla.

Exact position, 1 1/2 mi. N. of Pumpkin Key.

Depth, 10 ft.

Nature of bottom, Barry

Dredging instrument used, Small scrape dredge

Direction of drift, West ; distance, 1/6 mi.

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0232 temp., 24

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.12

State of sky, Partly cloudy

Direction of wind, East ; force, 4

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, James A. Smith

Boatswain, U.S.N.

Name and position of observer,

Vernon E. West.



NOTES RELATING TO STATION NO. 2423

3 species of sponges

an ascidium

several species of crabs

1 pipe fish

2 species of shrimps

1 worm

## RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7494*  
 Date, *March 12, 1903*  
 Time of day, *9:20 A.M.*; of tide,  $\frac{1}{2}$  *ebb*  
 Locality, *Hawk Channel*  
 Exact position,  $\frac{1}{2}$  *mi. N. E. x E. of Southern*  
*end of Sands Key.*  
 Depth, *9 ft.*  
 Nature of bottom, *Hard sand + grass*  
 Dredging instrument used, *Small scrape dredge*  
 Direction of drift, *East*; distance,  $\frac{1}{6}$  *mi.*  
 Temperature of air, *73* therm. No.,  
     " of surface water, "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0252* temp., *23*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.01*  
 State of sky, *Partly cloudy*  
 Direction of wind, *E. N. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
     *Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon C. West.*

NOTES RELATING TO STATION NO. 7494

- 1 sand dollar
- 3 species of non-commercial sponges
- 2 univalves

# RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7495-*  
 Date, *March 12, 1903*  
 Time of day, *9:40 A.M.*; of tide,  $\frac{1}{2}$  *ebb.*  
 Locality, *Hawk Channel, Fla.*  
 Exact position,  $\frac{5}{8}$  *mi. E. x N. of Dothen*  
*Nagged Key.*  
 Depth, *12  $\frac{1}{2}$  ft*  
 Nature of bottom, *Hard sand.*  
 Dredging instrument used, *Small scrape dredge.*  
 Direction of drift, *East*; distance,  $\frac{1}{6}$  *mi.*  
 Temperature of air, *73* therm. No.,  
     " of surface water, " "  
     " at depth of fathoms, "  
     " at bottom, "  
 Density at surface, *1.0250* temp., *23*  
     " at depth of fathoms, "  
     " at bottom, "  
 Number of salinometer, *7450*  
 Barometer reading, *30.01*  
 State of sky, *Partly cloudy*  
 Direction of wind, *E. N. E.*; force, *4*  
 Rain,  
 Direction of surface current, ; force,  
     " of bottom " ; force,  
 Name of vessel, *Fish Hawk*  
 Service to which attached, *Fish Commission*  
 Name and rank of commanding officer, *James A. Smith*  
*Boatswain, U. S. N.*  
 Name and position of observer,  
     *Vernon E. West,*

NOTES RELATING TO STATION NO. 7495

*Nothing in dredge*