

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

yr. 1903 STATION NUMBERS

Numbers 7396 to 7445

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7396
 Date, Jan 5, 1903
 Time of day, 12:53 ; of tide, $\frac{3}{4}$ flood
 Locality, Bahia Honda Harbor, Fla.
 Exact position, Near P. S. buoy

 Depth, 15 feet
 Nature of bottom, rocky & dead shells
 Dredging instrument used, Small scrape dredge
 Direction of drift, N. W. ; distance, 1/2 mile
 Temperature of air, 68 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0240 temp., 21.5
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 29.87
 State of sky, Partly cloudy
 Direction of wind, 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. 7396

1 piece of coral

1 black sea urchin.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7397*
 Date, *Jan. 5, 1903*
 Time of day, *1:21* ; of tide, *High water*
 Locality, *Big Spanish Key Channel*
 Exact position, *Between Little Pine Key & No Name Key, Fla.*
 Depth, *13 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small beam trawl*
 Direction of drift, *N. W.* ; distance, *1/2 mile*
 Temperature of air, *70* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0233* temp., *21*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.86*
 State of sky, *Partly cloudy*
 Direction of wind, *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. 7392

Few small worms
amphipods
small crab
1 foot fish
1 shrimp

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7398*
 Date, *Jan. 5, 1903*
 Time of day, *1:48* ; of tide, *High water*
 Locality, *Bay of Spanish Key Ch. channel*
 Exact position, *Between Spanish Key & Crossy Key, Fla.*
 Depth, *11 feet*
 Nature of bottom, *Mud & rocks*
 Dredging instrument used, *3 ft. beam trawl & dredge*
 Direction of drift, *S. W.* ; distance, *1/2 mile*
 Temperature of air, *70* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0237* temp., *21.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.86*
 State of sky, *Partly clear*
 Direction of wind, *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 G. Smith*
Boatswain, U. S. N.
 Name and position of observer,
Vernon E. West.

NOTES RELATING TO STATION NO. 2395

Few worms

Few shrimp

2 species of fish

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7399

Date, Jan 5, 1903

Time of day, 3:12 ; of tide, $\frac{1}{4}$ ebb.

Locality, Friend Key Lake, Fla.

Exact position, Opposite south end
of Johnson's Key

Depth, 13 feet.

Nature of bottom, Rocky 3 ft beam trawls

Dredging instrument used, Small's scrape dredge.

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

Temperature of air, 69 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0241 temp., 21

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.85

State of sky, Partly clear

Direction of wind, 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

Boatsman, U. S. N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 2399

1 small sea-robin

2 small crabs

1 small conch

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7400*
 Date, *Jan 5, 1903*
 Time of day, *3:49* ; of tide, *1/4 Ebb*
 Locality, *Friend Key Lake Fla.*
 Exact position, *Southern end of Friend Key Lake Fla.*
 Depth, *11 feet*
 Nature of bottom, *Rocky*
 Dredging instrument used, *Small scrape-dredge*
 Direction of drift, *S. E.* ; distance, *1/6 mile*
 Temperature of air, *69* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0243* temp., *31*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.85*
 State of sky, *Partly clear.*
 Direction of wind, *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 H. Smith*
 Boatswain, U.S.N.
 Name and position of observer,
 Vernon E. West

NOTES RELATING TO STATION NO. 7708

Few shrimp + crabs

Few worms.

Several amphipods

1 grass sponge

A few glove and logger-
head sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7401

Date, Jan. 7, 1903

Time of day, 8:30 A.M. of tide, $\frac{1}{4}$ ebb.

Locality, Money Key Lake, Fla.

Exact position, $\frac{1}{2}$ mile north of Eastern end of Bahia Honda Key.

Depth, 8 feet.

Nature of bottom, rocky.

Dredging instrument used, small scrape-dredge

Direction of drift, N. E. ; distance, $\frac{1}{6}$ mile

Temperature of air, 62 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0253 temp., 17.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.04

State of sky, Partly clear

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

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. 7401

- 1 sheep's wool sponge
- 1 small ell.
- 2 species of shrimp
- 1 mullusk
- 3 small fish.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7402*
 Date, *Jan 7, 1903*
 Time of day, *9:02 A.M.*; of tide, *1/4 ebb*
 Locality, *Pigeon Key Lake, Fla.*
 Exact position, *heavily, 1 mile N. N. E. 1/2 E*
of Money Key.
 Depth, *9 feet.*
 Nature of bottom, *Sand & grass.*
 Dredging instrument used, *Small scoop-dredge*
 Direction of drift, *N. E.* ; distance, *1/2 mile.*
 Temperature of air, *64* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0252* temp., *17.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *3005*
 State of sky, *Partly cloudy*
 Direction of wind, *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. 7402

- 2 species of shrimp
- 2 species of worms
- amphipods
- crabs
- 2 species of fish
- 1 brittle star
- 1 new species alpheus?

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7403*
 Date, *Jan. 7, 1903*
 Time of day, *9:40* ; of tide, $\frac{1}{2}$ *ebb*
 Locality, *Pigeon Key Lake, Fla.*
 Exact position, *1 mile S. S. E. of Coconut Key*
 Depth, *7 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape-dredge*
 Direction of drift, *N. W.* ; distance, $\frac{1}{2}$ *mile*
 Temperature of air, *64* therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.0248* temp., *18.5*
 " at depth of fathoms, " "
 " at bottom, " "
 Number of salinometer, *7450*
 Barometer reading, *3005*
 State of sky, *Clear*
 Direction of wind, *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. 7403.

2 species of shrimp

1 small fish

3 species of crabs

amphipods

Several dough-heads & finger sponges

Few worms.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7404*
 Date, *Jan. 7, 1903*
 Time of day, *10:25* ; of tide, *$\frac{3}{4}$ ebb*
 Locality, *Pigeon Key Lake, Fla.*
 Exact position, *1 mile east of East Bahia Honda Key*
 Depth, *10 $\frac{1}{2}$ feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape-dredge*
 Direction of drift, *N. N. W.* ; distance, *$\frac{1}{2}$ mile*
 Temperature of air, *64* therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.0244* temp., *19*
 " at depth of fathoms, " "
 " at bottom, " "
 Number of salinometer, *7450*
 Barometer reading, *3005*
 State of sky, *Clear*
 Direction of wind, *S. 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 E. West.

NOTES RELATING TO STATION NO. 7404

- 1 star-fish
- 3 species of crabs
- 3 " " fish
- 2 " " shrimp
- Few Finger sponges
- 1 worm
- Few pieces of coral

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7405

Date, Jan. 7, 1903

Time of day, 10:50 ; of tide, Low water

Locality, Pigeon Key Lake, Fla.

Exact position, 1 mile east of Signal
Cocoa.

Depth, 10 feet.

Nature of bottom, rocky

Dredging instrument used, small scrape-dredge

Direction of drift, East ; distance, 1/2 mile

Temperature of air, 64 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0242 temp., 17.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.05

State of sky, Clear

Direction of wind, S.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 E. West

NOTES RELATING TO STATION NO. 2405

2 species of fish

several crabs

2 worms

3 small sheep's wool sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7406*Date, *Jan. 7, 1903*Time of day, *11:20* ; of tide, *Low water*Locality, *Pigeon Key Lake, Fla*Exact position, *2 1/2 miles N x E. of**Pigeon Key to westward of Big Bank*Depth, *10 1/2 feet*Nature of bottom, *rocky*Dredging instrument used, *Small scrape dredge*Direction of drift, *S. W.* ; distance, *1/2 mile*Temperature of air, *64* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0236* temp., *18.5*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *3004*State of sky, *Clear*Direction of wind, *S. 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 G. Smith*
*Boatsman, U. S. N.*Name and position of observer,
Vernon C. West

NOTES RELATING TO STATION NO. 7406

- 1 small fish
- 2 small grass sponges
- 1 worm

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7407

Date, Jan. 7, 1903

Time of day, 10:55 A.M. of tide, $\frac{1}{2}$ flood.

Locality, Pigeon Key Lake, Fla.

Exact position, $2\frac{3}{4}$ miles N. N. W. of
Molasses Key.Depth, $9\frac{1}{2}$ feet

Nature of bottom, rocky

Dredging instrument used, small scrape dredge

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

Temperature of air, 64 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0242 temp., 18

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.03

State of sky, Clear

Direction of wind, S. 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 E. West

NOTES RELATING TO STATION NO. 2702

- 1 small fish
- 1 large fish
- 1 shrimp
- 1 loggerhead sponge.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7408*
 Date, *Jan. 7, 1903*
 Time of day, *1:20 P.M.*; of tide, $\frac{1}{4}$ *flood.*
 Locality, *Pigeon Key Lake Fla.*
 Exact position, $\frac{1}{2}$ *miles N x E of*
Pigeon Key.
 Depth, *12 feet.*
 Nature of bottom, *rocky*
 Dredging instrument used, *small scrape-dredge*
 Direction of drift, *N. E.* ; distance, *1/2 mile*
 Temperature of air, *64* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0246* temp., *18.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *3003*
 State of sky, *Partly clear.*
 Direction of wind, *S. 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. 7408

2 fish

Few minnows

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7409*
 Date, *Jan 7, 1903*
 Time of day, *3:00 P.M.*; of tide, *1/2 flood*
 Locality, *Pigeon Key Lake, Fla*
 Exact position, *1 1/2 mile N. W. of Knight's
Key.*
 Depth, *10 1/2 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *N. E.* ; distance, *1/2 mile*
 Temperature of air, *65* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0248* temp., *18*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *2998*
 State of sky, *Partly cloudy*
 Direction of wind, *S. 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
Boatsman, U. S. N.*
 Name and position of observer,
 Vernon E. West.

NOTES RELATING TO STATION NO. 7409

5 small fish

1 sheep's wool sponge

several logger-head sponges

1 bivalve

several murels

several small crabs

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 7410

Date, Jan. 8, 1903

Time of day, 8:45 - A. M. of tide, $\frac{1}{2}$ ebb

Locality, North of Knight's Key Channel, Fla.

Exact position, $\frac{1}{2}$ mile to eastward of middle of Big Banks.

Depth, 9 feet

Nature of bottom, rocky

Dredging instrument used, Small scrape dredge

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

Temperature of air, 66 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0240 temp., 18.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.90

State of sky, Clear

Direction of wind, N. 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 E. West.

NOTES RELATING TO STATION NO. 2910

2 small sheep's wool sponges

1 small fish

several crabs

~~2 shrimp~~

1 grass sponge

several finger sponges

several worms

2 species of shrimp

or at

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7411*Date, *Jan. 22, 1903*Time of day, *8.40 A.M.*, of tide, $\frac{1}{2}$ *flood*Locality, *N of Knights Key Channel, Fla.*Exact position, $3\frac{1}{2}$ *mi E. x N. of East Bahia**Nonda Key.*Depth, *10 feet*Nature of bottom, *rocky*Dredging instrument used, *small scrape dredge.*Direction of drift, *N. W.* ; distance, $\frac{1}{4}$ *mile*Temperature of air, *69* therm. No.,

" of surface water, " "

" at depth of fathoms, " "

" at bottom, " "

Density at surface, *1.0229* temp., *20*

" at depth of fathoms, " "

" at bottom, " "

Number of salinometer, *7450*Barometer reading, *30.04*State of sky, *cloudy*Direction of wind, *N. W. 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. 7411

- 2 species of fish
- Several invertebrates
- 3 species worms
- 2 species crabs
- 2 species gorgonia
- 6 species of sponges
- 2 species of seripods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7412

Date, Jan 22, 1903

Time of day, 9:20 A.M.; of tide, $\frac{1}{2}$ flood

Locality, N. of Knights Key, Fla.

Exact position, 3 mi N. E. x N. of East Bahia
Honda Key

Depth, 11 feet

Nature of bottom, rocky

Dredging instrument used, Small scrape dredge

Direction of drift, N. W. ; distance, $\frac{1}{2}$ mile

Temperature of air, 70 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0236 temp., 20

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.06

State of sky, Cloudy

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

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

Several species crabs
coral.

Several univalves

Several bivalves

Several shrimps

Several worms

2 copepods & amphipods.

1 fish

Brittle stars

1 star fish

Several species of sponge

2 gorgonias

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7413

Date, Jan 22, 1903

Time of day, 10:15 A.M.; of tide, High Water

Locality, N. of Knights Key, Fla.

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

Bahia Honda Key.

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

Nature of bottom, Sand, grass & barn

Dredging instrument used, Small scrape-dredge

Direction of drift, East ; distance, $\frac{1}{4}$ mile

Temperature of air, 71 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0244 temp., 20

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 3008

State of sky, Cloudy.

Direction of wind, Calm ; force, 0

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 H. Smith

Boatswain, U. S. N.

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 2412

several crabs

a clam

1 pipe fish

few worms

few sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7414*
 Date, *Jan. 22, 1903*
 Time of day, *11:15 A.M.*; of tide, *High Water*
 Locality, *N. of Knights Key, Fla.*
 Exact position, *4 mi. N.N.E. & E. of East
Bahia Honda Key.*
 Depth, *11 feet.*
 Nature of bottom, *barry*
 Dredging instrument used, *Small scrape-dredge*
 Direction of drift, *S. E.* ; distance, *1/2 mile*
 Temperature of air, *70* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0237* temp., *20.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *3009*
 State of sky, *Partly clear*
 Direction of wind, *W. N. W.*; force, *1*
 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. 2418

few worms
sponges
ascidians
crabs

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7415
 Date, Jan. 22, 1903
 Time of day, 11.45 A.M.; of tide, $\frac{1}{2}$ ebb
 Locality, N of Knights Key, Fla.
 Exact position, 6 mi. N. E. x E. of East
 Bahia Honda Key
 Depth, 11 feet
 Nature of bottom, Hard sand & rock
 Dredging instrument used, Small scrape dredge
 Direction of drift, S. E. ; distance, $\frac{1}{2}$ mile
 Temperature of air, 70 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.1230 temp., 20.5
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 30.09
 State of sky, Partly clear
 Direction of wind, W. N. W. ; force, 1
 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. 2415

Few crabs.

Few sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7416*
 Date, *Jan. 22, 1903*
 Time of day, *1:15 P.M.*; of tide, *1/4 ebb.*
 Locality, *N. of Knights Key, Fla.*
 Exact position, *2 3/4 mi. N. of Basin Bank*
 Depth, *10 1/2 feet.*
 Nature of bottom, *rocky.*
 Dredging instrument used, *Small scrape-dredge*
 Direction of drift, *S. E.*; distance, *1/2 mi.*
 Temperature of air, *68* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0213* temp., *21*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *3007*
 State of sky, *Partly clear.*
 Direction of wind, *W. 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 E. West.

NOTES RELATING TO STATION NO. 7416

2 species shrimp

2 acedim

3 sponges

1 isopod

amphipods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7417*
 Date, *Jan. 22, 1913*
 Time of day, *1.50 P.M.*; of tide, *1/2 ebb.*
 Locality, *N. of Knights Key, Fla.*
 Exact position, *2 mi. N. E. x E. of Basin Bank*
 Depth, *8 1/2 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *South*; distance, *1/6 mile*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0210* temp., *21.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *30.06*
 State of sky, *Partly clear*
 Direction of wind, *W. 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 H. Smith*
 Boatswain, U. S. N.
 Name and position of observer,
 Vernon C. West.

NOTES RELATING TO STATION NO. 7417

5 sponges

2 ascidians

1 shrimp

several univalves

several species of water

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7418*
 Date, *Jan. 22, 1903*
 Time of day, *2:20 P.M.*; of tide, *1/2 ebb*
 Locality, *N. of Knights Key, Fla.*
 Exact position, *1/2 mi. N.W. of Starbuck Keys.*
 Depth, *9 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *S.E.*; distance, *1/2 mi.*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0210* temp., *22*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *3006*
 State of sky, *Partly clear*
 Direction of wind, *N.W.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 G. Smith*
Boatwain, U.S.N.
 Name and position of observer,
Vernon E. West.

NOTES RELATING TO STATION NO. 7918

few shells
2 species sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7419*
 Date, *Jan 22, 1913*
 Time of day, *2:45 P.M.*; of tide, *1/2 ebb*
 Locality, *N. of Knights Key, Fla.*
 Exact position, *1/2 mi. N. 1/2 E. of Hog Island.*
 Depth, *> feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *small scrape dredge*
 Direction of drift, *N.W.*; distance, *1/2 mi.*
 Temperature of air, *67* therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.0217* temp., *22*
 " at depth of fathoms, " "
 " at bottom, " "
 Number of salinometer, *2450*
 Barometer reading, *30.06*
 State of sky, *Partly clear*
 Direction of wind, *N.W.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 E. West,

NOTES RELATING TO STATION NO. 2419

- 8 sponges
- 1 bryozoan
- 3 radiolans
- 1 Holothurian
- 2 crabs
- several shrimp
- worms
- 4 gastropods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7420
 Date, Jan. 22, 1903
 Time of day, 3:25 P.M.; of tide, $\frac{3}{4}$ ebb.
 Locality, N. of Knights Key, Fla.
 Exact position, $\frac{1}{2}$ mi. N. E. & N. of Knights Key.
 Depth, $2\frac{1}{2}$ feet
 Nature of bottom, no chry.
 Dredging instrument used, Small scrape-dredge
 Direction of drift, S. W.; distance, $\frac{1}{2}$ mi.
 Temperature of air, 67 therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.0220 temp., 21
 " at depth of fathoms, " "
 " at bottom, " "
 Number of salinometer, 7450
 Barometer reading, 30.05
 State of sky, partly clear
 Direction of wind, N. W. 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 E. West.

NOTES RELATING TO STATION NO. 7420

1 blenny

1 small sea-horse

Several worms and nautes

Several gorgonian

Several species of sponges

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 7821

Date, Jan. 23, 1903

Time of day, 10:00 A.M.; of tide, $\frac{1}{2}$ flood.

Locality, Grassy Key Lake, Fla.

Exact position, $\frac{3}{4}$ mi. N. E. x N. of BambooKey
Depth, $9\frac{1}{2}$ feet.

Nature of bottom, soft.

Dredging instrument used, Small scrape dredge

Direction of drift, N. E. ; distance, $\frac{1}{6}$ mile

Temperature of air, 67 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0221 temp., 21.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.09

State of sky, Partly cloudy

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 E. West.

NOTES RELATING TO STATION NO. 2421

Nothing in dredge.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7422

Date, Jan. 23, 1903

Time of day, 11:25 A.M.; of tide, $\frac{3}{4}$ flood.

Locality, Grassy Key Lake, Fla.

Exact position, $2\frac{3}{4}$ mi. N. N. W. $\frac{1}{2}$ W. of

Bamboo Key

Depth, 9 feet.

Nature of bottom, rocky

Dredging instrument used, small scrape dredge

Direction of drift, N. E. ; distance, $\frac{1}{4}$ mile

Temperature of air, 65 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0220 temp., 21

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.09

State of sky, Partly 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. 7422

3 species sponge

20 urchins

1 tunicate

2 fresh

coral

1 gorgonia

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7423

Date, Jan 23, 1903

Time of day, 12 A. M. ; of tide, High Water

Locality, N. W. of Grassy Key Lake, Fla.

Exact position, 5 mi. N. W. & N. of Bamboo

Key
Depth, 10 feet

Nature of bottom, rocky

Dredging instrument used, small scrape dredge

Direction of drift, N. E. ; distance, 1/6 mile

Temperature of air, 72 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0222 temp., 21

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 30.09

State of sky, Partly cloudy

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. 7422

2 *vicinins*

2 *shrimps*

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7424
 Date, Jan. 23, 1903
 Time of day, 1:10 P.M.; of tide, High water
 Locality, Florida Bay, Fla.
 Exact position, $7\frac{1}{2}$ miles N. W. $\frac{1}{2}$ W. of
 Bamboo Key.
 Depth, $10\frac{1}{2}$ feet
 Nature of bottom, rocky.
 Dredging instrument used, Small scrape dredge
 Direction of drift, N. W. ; distance, $\frac{1}{2}$ mile
 Temperature of air, 69 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0230 temp., 21
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 30.03
 State of sky, Partly cloudy.
 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 Commissioner
 Name and rank of commanding officer, James A. Smith
 Boatsman, U. S. N.
 Name and position of observer,
 Vernon E. West.

NOTES RELATING TO STATION NO. 7424

3 species fish
shrimp
crabs

3 sponges
2 ascidians

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7425*
 Date, *Jan. 23, 1903*
 Time of day, *1:35 P.M.*; of tide, *High water*
 Locality, *Florida Bay, Fla.*
 Exact position, *7½ mi. N.W. ½ N. of
Bamboo Key.*
 Depth, *8 feet*
 Nature of bottom, *sand & grass*
 Dredging instrument used, *small scrape dredge*
 Direction of drift, *N.W.* ; distance, *¼ mi.*
 Temperature of air, *69* — therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0231* temp., *20*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *30.01*
 State of sky, *Partly cloudy*
 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. 7425

Very little in dredge

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7426

Date, Jan. 27, 1903

Time of day, 1:30 P.M.; of tide, $\frac{1}{4}$ flood

Locality, Hawk Channel, Fla.

Exact position, $1\frac{3}{4}$ miles S. $\frac{3}{4}$ E. of Pigeon

Key.

Depth, 3 fms.

Nature of bottom, Sand & grass.

Dredging instrument used, Oyster dredge

Direction of drift, North; distance, $\frac{1}{8}$ mile

Temperature of air, 77 therm. No.,

" of surface water, "

" " at depth of fathoms, "

" at bottom, "

Density at surface, 1.0230 temp., 23.5

" at depth of fathoms, "

" at bottom, 1.0230 " 23.5

Number of salinometer, 7450

Barometer reading, 29.96

State of sky, Clear

Direction of wind, E. S. 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 C. West,

NOTES RELATING TO STATION NO. 7426

1 bivalve

4 species of wats

1 shrimp

1 small star-fish

2 small file fish

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 7427
 Date, Jan 27, 1903
 Time of day, 2:15 P.M.; of tide, $\frac{1}{2}$ flood
 Locality, Hawk Channel, Fla.
 Exact position, $3\frac{1}{2}$ mi. N. $\frac{3}{4}$ E. of Sombra
 Light
 Depth, $1\frac{1}{2}$ feet
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, S. E. ; distance, $\frac{1}{8}$ mi.
 Temperature of air, 77 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0229 temp., 24.5
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 29.96
 State of sky, Clear
 Direction of wind, E. S. 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. 2422

Several loggerhead sponges
2 hedgehog sponges
1 sea-caps
1 large star fish
1 sea-cucumber
1 large sand dollar
1 sea-urchin
coral
several small crabs
gorgonia
2 species of shrimp
2 species of squatter
bivalves

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7428
 Date, Jan. 27, 1903
 Time of day, 2.30 P.M. of tide, $\frac{1}{2}$ flood
 Locality, Hawk Channel, Fla.
 Exact position, 1 mi. N. N. W. $\frac{1}{2}$ W. of East
 Waterwoman.
 Depth, $2\frac{3}{4}$ fms
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, S. E. x S. ; distance, $\frac{1}{2}$ mi
 Temperature of air, 78 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, 29.95
 State of sky, Clear
 Direction of wind, E. S. 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. 7428

coral

gorgonian

acidium

5 species of sponges

several species of crabs

several species of bivalves

2 species of sea-urchins

several sand dollars

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7429

Date, Jan. 27, 1903

Time of day, 4:15 P.M.; of tide, $\frac{3}{4}$ flood.

Locality, Hawk Channel

Exact position, $\frac{1}{2}$ mi. S. E. & S. of

S. E. end of Duck Key.

Depth, $2\frac{1}{4}$ fms.

Nature of bottom, rocky.

Dredging instrument used, Oyster dredge

Direction of drift, S. E. ; distance, $\frac{1}{6}$ mile.

Temperature of air, 76 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0219 temp., 24.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.95

State of sky, Partly cloudy

Direction of wind, East ; 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. 7429

4 species of sponges
several species of crabs
1 octopus
several sand dollars
104 pronged starfish
several small starfish
gorgonian
coral
bivalves

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7430*
 Date, *Jan. 28, 1903*
 Time of day, *8:40 A.M.*; of tide, $\frac{1}{2}$ *ebb*.
 Locality, *Grassy Key Lake, Fla.*
 Exact position, $\frac{7}{8}$ *mi. N.W. of east*
end of Grassy Key.
 Depth, *10 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small swape-dredge*
 Direction of drift, *N.W.*; distance, $\frac{1}{8}$ *mi.*
 Temperature of air, *75* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0224* temp., *24*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *2994*
 State of sky, *Cloudy*
 Direction of wind, *East*; 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. 7430.

- 2 species fish
- 1 large finger sponge
- 2 shrimp
- 2 crabs
- a didinium
- 1 small blenny

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7431*Date, *Jan. 28, 1903*Time of day, *10.20 A.M.* of tide, $\frac{3}{4}$ ebb.Locality, *Grassy Key, Lake*Exact position, *3 $\frac{3}{4}$ mi. N. W. $\frac{1}{2}$ N. of east
end of Grassy Key.*Depth, *8 feet*Nature of bottom, *rocky.*Dredging instrument used, *Small oyster dredge*Direction of drift, *N. E.* ; distance, *$\frac{1}{2}$ mi.*Temperature of air, *75* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0224* temp., *24*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *2996*State of sky, *Cloudy*Direction of wind, *East* ; 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. 7431

acidium

2 fish

coral

finger sponges

loggerhead sponges

gorgonian

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7432*
 Date, *Jan. 29, 1903*
 Time of day, *9:10 A. M.*; of tide, *1/2 ebb*
 Locality, *Florida Bay, Fla.*
 Exact position, *6 1/4 mi N. W. x W. of Channel Key.*
 Depth, *8 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *N. E.* ; distance, *1/6 mi.*
 Temperature of air, *74* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0218* temp., *23*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *2994*
 State of sky, *Clear*
 Direction of wind, *East* ; 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. 7432

2 shrimp

1 crab

2 miracles

amphipods

1 small garfish

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7433

Date, Jan. 29, 1903

Time of day, 9:50 A.M.; of tide, $\frac{1}{2}$ ebb

Locality, Florida Bay, Fla.

Exact position, $5\frac{3}{4}$ mi. N.W. $\frac{3}{4}$ W. of Channel

Key.

Depth, 9 feet

Nature of bottom, Sand + grass.

Dredging instrument used, Small scrape dredge

Direction of drift, N.W. ; distance, $\frac{1}{10}$ mi.

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0219 temp., 23.5

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.93

State of sky, Partly cloudy

Direction of wind, East ; 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. 7433

1 large shrimp
few amphipods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7434

Date, Jan. 29, 1903

Time of day, 10:20 A.M.; of tide, $\frac{1}{2}$ ebb.

Locality, Florida Bay, Fla.

Exact position, $7\frac{3}{4}$ mi. S. x W. $\frac{1}{2}$ W. of
Sandy Key.Depth, $10\frac{1}{2}$ feet

Nature of bottom, rocky

Dredging instrument used, Small scrape dredge

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

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0220 temp., 23

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.94

State of sky, Partly cloudy

Direction of wind, East ; 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. 2438

2 shrimps

2 crabs

1 cowfish

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *2435*
 Date, *Jan. 29, 1903*
 Time of day, *10:45 A.M.*; of tide, *Low water*
 Locality, *Florida Bay, Fla.*
 Exact position, *5 mi S. 1/2 W. of Sandy Key*
 Depth, *11 1/2 feet*
 Nature of bottom, *Sand, mud & grass*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *C. N. E.*; distance, *1/6 mi.*
 Temperature of air, *75* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0224* temp., *23*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.94*
 State of sky, *Clear*
 Direction of wind, *East*; 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. 7435

Nothing in dredge

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7436
 Date, Jan 29, 1903
 Time of day, 11.20 A.M.; of tide, Low water
 Locality, Florida Bay, Fla.
 Exact position, $7\frac{1}{2}$ mi. S. E. of Sandy Key.
 Depth, 10 feet.
 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, 1.0212 temp., 23.5
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 29.94
 State of sky, Partly cloudy
 Direction of wind, East ; 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. 7936

1 shrimp

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7437*
 Date, *Jan. 29, 1903*
 Time of day, *11:50 A.M.*, of tide, *1/4 flood*
 Locality, ^{*upper*} *Jewfish Bush Lake, Fla.*
 Exact position, *1/4 mi S.E. x E. of Sandy Key*
 Depth, *10 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *N. E.* ; distance, *1/6 mi.*
 Temperature of air, *76* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0206* temp., *24*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.94*
 State of sky, *Clear*
 Direction of wind, *East* ; 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. 7932

1 fish

1 shrimp

6 spider crabs

amphipods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7438

Date, Jan. 29, 1903

Time of day, 1:05 P.M.; of tide, $\frac{1}{4}$ floodLocality, ^{upper} Jewfish Bush Lake, Fla.Exact position, $6\frac{1}{4}$ mi. N.W. x N. of west

end of Long Key

Depth, 8 feet

Nature of bottom, barry

Dredging instrument used, Small scrape dredge

Direction of drift, S.E. ; distance, $\frac{1}{6}$ mile

Temperature of air, 77 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0206 temp., 29

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, East ; 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 H. Smith

Boatswain, U.S.N.

Name and position of observer,

Vernon C. West.

NOTES RELATING TO STATION NO. 7438

3 species fish
1 crab
a cichlid

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7439

Date, Jan. 29, 1903

Time of day, 1:30 P.M.; of tide, $\frac{1}{4}$ flood

Locality, Florida Bay, Fla.

Exact position, $5\frac{1}{2}$ mi. N. N. W. $\frac{1}{4}$ W. of
Channel Key

Depth, 7 feet

Nature of bottom, sand, mud & grass

Dredging instrument used, Small scrape dredge

Direction of drift, West ; distance, $\frac{1}{16}$ mile

Temperature of air, 77. therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0209 temp., 24

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.91

State of sky, Clear

Direction of wind, East ; 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. 7439

3 species fish

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7440*
 Date, *Jan 29, 1913*
 Time of day, *2:25 P.M.*; of tide, *1/4 flood*
 Locality, *Grassy Key Lake, Fla.*
 Exact position, *2 3/4 mi. N. 1/2 W. of*
Channel Key
 Depth, *7 1/2 feet*
 Nature of bottom, *rocky*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *West*; distance, *1/2 mile*
 Temperature of air, *77* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0205* temp., *24.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.90*
 State of sky, *Clear*
 Direction of wind, *East*; 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 H. Smith*
 Boatswain, U.S.N.
 Name and position of observer,
 Vernon E. West.

NOTES RELATING TO STATION NO. 7440

2 species fish
several crabs
hermit crabs
2 univalves
5 sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7441*Date, *Jan 29, 1903*Time of day, *2:45 P.M.*; of tide, *1/4 flood.*Locality, *Grassy Key Lake, Fla.*Exact position, *2 mi. N.W. x N. of
Channel Key.*Depth, *8 feet*Nature of bottom, *rocky*Dredging instrument used, *Small scrape dredge*Direction of drift, *S.W.*; distance, *1/2 mi.*Temperature of air, *77* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0207* temp., *24.5*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450*Barometer reading, *29.90*State of sky, *Clear*Direction of wind, *East*; 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 H. Smith**Boatswain, U.S.N.*

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 744

Several species sponges

crabs

worms

shrimps

Isopods

Amphipods

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7442*
 Date, *Jan. 29, 1902*
 Time of day, *3:15 P.M.*; of tide, $\frac{1}{2}$ flood
 Locality, *Channel Key Lake, Fla.*
 Exact position, $\frac{1}{4}$ mi. E. of Channel
Key.
 Depth, *10 feet*
 Nature of bottom, *sand, grass & little rocks*
 Dredging instrument used, *Small scrape dredge*
 Direction of drift, *E. x S.*; distance, $\frac{1}{4}$ mi.
 Temperature of air, *77* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0208* temp., *24.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.89*
 State of sky, *Clear*
 Direction of wind, *East*; 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. 7442

Several univabres
crabs.
1 squiller
2 species of fish
finger sponges
Several varieties of non-com-
mercial sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7443

Date, Jan. 30, 1903

Time of day, 8:35 A. M.; of tide, $\frac{1}{4}$ ebb.

Locality, Channel Key Lake, Fla.

Exact position, 2 mi. N. N. W. $\frac{1}{2}$ W. of West

end of Long Key

Depth, 3 feet

Nature of bottom, Hard bay

Dredging instrument used, Small scrape dredge

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

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0202 temp., 29

" at depth of fathoms, "

" at bottom, "

Number of salinometer, 7450

Barometer reading, 29.94

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 E. West.

NOTES RELATING TO STATION NO. 2443

2 fish

shrimps

a few amphipods

a few worms

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7444

Date, Jan. 30, 1903

Time of day, 9:00 A.M.; of tide, $\frac{1}{4}$ ebbLocality, ^{Lower} Jewfish Bush Lake, Fla.Exact position, $3\frac{1}{2}$ mi N. x W. $\frac{1}{2}$ W. of
West end of Long Key.

Depth, 7 feet

Nature of bottom, rocky

Dredging instrument used, Small scrape dredge

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

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0204 temp., 23.5

" 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, 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. 7449.

3 species fish

2 " wabs

2 shrimps

2 sheeps wool sponges

1 grass sponge

several non-commercial sponges

g or g onium

acridium

unicatres.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7445
 Date, Jan. 30, 1903
 Time of day, 9:35 A. M.; of tide, $\frac{1}{2}$ ebb
 Locality, ^{upper} Jewfish Bush Lake, Fla.
 Exact position, 5 mi. N. W. $\frac{3}{4}$ N. of West
 end of Long Key.
 Depth, $8\frac{1}{2}$ feet
 Nature of bottom, *barry*
 Dredging instrument used, Small scrape dredge
 Direction of drift, N. W. ; distance, $\frac{1}{4}$ mi.
 Temperature of air, 75 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0205 temp., 24
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 2996
 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
 Boatsman, U. S. N.
 Name and position of observer,
 Vernon E. West

NOTES RELATING TO STATION NO. 2445

2 shrimps

1 squiller

gorgonian

2 non-commercial sponges