

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

Nov. 1902 STATION NUMBERS

Numbers 7349 to 7395

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7349*Date, *Dec 17th 1904.*Time of day, *12:05* ; of tide,Locality, *Off Cape Sable, Fla.*Exact position, *Middle Cape signal beam**east 2½ miles*Depth, *11½ ft*Nature of bottom, *smooth sand & shells*Dredging instrument used, *Oyster dredge*Direction of drift, *S. E.* ; distance, *½ mile*Temperature of air, *75* therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.0213* temp., *23.5*

" at depth of fathoms, "

" at bottom, "

Number of salinometer, *7450.*Barometer reading, *3004*State of sky, *clear*Direction of wind, *N. N. W.* ; 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, *J. A. Smith**Boatsman, U. S. N.*

Name and position of observer,

Vernon E. West.

NOTES RELATING TO STATION NO. 7349

Starfish, shells and
one sponge

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7350
 Date, Dec. 17, 1902
 Time of day, 12:38 ; of tide, Flood
 Locality, Off Cape Sable, Fla.
 Exact position, Lat 25° 9' 37"
 Long. 81° 15' 15"
 Depth, 2½ fathoms
 Nature of bottom, rocky coral-
 Dredging instrument used, Oyster dredge
 Direction of drift, S. E. ; distance, ½ mile
 Temperature of air, 75 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0214 temp., 23.5
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 30.04
 State of sky, clear
 Direction of wind, N. N. W. ; 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. 7350

Very good sponge ground.
Lubricity of logg. head
sponge - shells - grass -
star fish - a few small
fish and small crabs.

Alpheus 2

Ascidium 4

4 sp fish.

3 " star fish.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7351
 Date, Dec. 17, 1902
 Time of day, 1:15 ; of tide, Flood
 Locality, Off Cape Sable Fl.
 Exact position, Lat. 25° 9' 45"
Long. 81° 18' 35"
 Depth, 3 1/4 fathoms
 Nature of bottom, Rocky coral
 Dredging instrument used, Oyster dredge
 Direction of drift, S. S. E. ; distance, 1/8 mile
 Temperature of air, 74 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0221 temp., 23 1/2
 " at depth of fathoms, "
 " at bottom, 1.0221 " 23 1/2
 Number of salinometer, 7450
 Barometer reading, 30.01
 State of sky, Clear
 Direction of wind, N. N. W. ; 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. 7351

Good sponge ground.
Logger-head sponges
Cap sponges
ascidians ←
grass
small fish
small crabs
shells
star fish

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7352
 Date, Dec. 17, 1902
 Time of day, 1:50 ; of tide, Flood
 Locality, Off Cape Sable Fla
 Exact position, Lat. 25° 9' 52"
Long. 81° 21' 53"
 Depth, 3³/₄ fathoms
 Nature of bottom, gray sand & shells
 Dredging instrument used, Oyster dredge
 Direction of drift, S. S. E. ; distance, 1/4 mile
 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, 1.0230 " 23 1/2
 Number of salinometer, 7450
 Barometer reading, 30.01
 State of sky, Clear
 Direction of wind, N. N. W. ; 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. 7352

Several pieces of branch coral
shells

acidium Δ

small crabs

small fish

worms

beetle.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7353
 Date, Dec. 17, 1902
 Time of day, 2.24 ; of tide, Flood
 Locality, Off Cape Sable, Fla.
 Exact position, Lat. 25° 10' 00"
 Long. 81° 25' 10"
 Depth, 4 1/4 fathoms
 Nature of bottom, Light grey sand & broken shells
 Dredging instrument used, Oyster dredge
 Direction of drift, S ; distance, 1/2 mile
 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, 1.0232 " 23 1/2
 Number of salinometer, 7450
 Barometer reading, 29.99
 State of sky, Partly cloudy
 Direction of wind, N.W. ; 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. 7353

Air dinner
shells
small crabs
small fish
several small pieces of coral
grass
octopus

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7354
 Date, Dec. 17, 1902
 Time of day, 2:55 ; of tide, Flood
 Locality, Off Cape Sable, Fla
 Exact position, Lat. 25°10'10"
Long. 81°28'30"
 Depth, 4³/₄ fathoms
 Nature of bottom, Light grey sand & shells
 Dredging instrument used, Oyster dredge
 Direction of drift, S. ; distance, 1/2 mile
 Temperature of air, 73 therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.0237 temp., 23
 " at depth of fathoms, " "
 " at bottom, 1.0239 " 23 1/2
 Number of salinometer, 7450
 Barometer reading, 29.99
 State of sky, Partly cloudy
 Direction of wind, N.W. ; 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 Eskridge West

NOTES RELATING TO STATION NO. 7354

Acidinium

small crabs

small fish

1 large sand dollar

1 large sea urchin

quantity of small shells

several pieces of branch
coral

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7355*
 Date, *Dec. 18, 1902*
 Time of day, *9:15*; of tide, *Ebb*
 Locality, *Off Cape Sable Fla*
 Exact position, *2 1/2 miles west & south
of middle cape signal*
 Depth, *9 1/2 feet*
 Nature of bottom, *light grey sand and fine broken shells*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S. E.*; distance, *1/6 mile*
 Temperature of air, *63* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0222* temp., *22*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.98*
 State of sky, *clear*
 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 H. Smith
Boatwain, U.S.N.*
 Name and position of observer, *Vernon E. West*

NOTES RELATING TO STATION NO. 7355

acidium

Three species of star fish

Several worms

Two species of fish

1 Hermit crab

NOTES RELATING TO STATION NO. 7356

acidiums

small fish

small crabs

grass

worms

star fish

several logger-head sponges

vines

octopus

holothurian

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. *7357*
 Date, *Dec. 18, 1902*
 Time of day, *10:25* ; of tide, *ebb*
 Locality, *Off Cape Sable, Fla*
 Exact position, *Lat. 25° 06' 37"*
Long. 81° 15' 50"
 Depth, *534 fathoms*
 Nature of bottom, *light gy s and broken shells*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S.* ; distance, *1/2 mile*
 Temperature of air, *65* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0232* temp., *22.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *29.98*
 State of sky, *Clear*
 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
 Name and position of observer,
Vernon E. West

NOTES RELATING TO STATION NO. 7357

1 star fish
several small shells &
hermit crabs
a few worms

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7358*
 Date, *Dec 18, 1902*
 Time of day, *10:55*; of tide, *ebb*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *Lat. 25° 06' 45"*
 Long. 81° 19' 07"
 Depth, *3 fathoms*
 Nature of bottom, *Light grey sand broken shells*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *South*; distance, *1/2 mile*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0228* temp., *22.5*
 " at depth of fathoms, "
 " at bottom, *1.0226* " *22.5*
 Number of salinometer, *7450*
 Barometer reading, *29.97*
 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. 7358

acidiums

small crabs

1 small fish

4 shrimp

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7359*
 Date, *Dec. 18, 1902*
 Time of day, *11:27* ; of tide, *ebb*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *Lat. 25° 06' 52"*
 Long. 81° 22' 25"
 Depth, *4 1/2 fathoms*
 Nature of bottom, *Light grey sand & broken shells*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S.* ; distance, *1/8 mile*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1,0229* temp., *22.5*
 " at depth of fathoms, "
 " at bottom, *1,1227* " *23*
 Number of salinometer, *7450*
 Barometer reading, *2997*
 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. 7359

small crabs
several pieces of branch coral
1 shrimp

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7360*
 Date, *Dec. 18, 1902*
 Time of day, *12:00 P.M.* of tide, $\frac{1}{4}$ *flood*
 Locality, *Off Cape Sable, Fla*
 Exact position, *Lat 25° 07' 05"*
Long. 81° 25' 50"
 Depth, *4½ fathoms*
 Nature of bottom, *gray sand & grass*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S. S. E.*; distance, $\frac{1}{8}$ *mile*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0231* temp., *22.5*
 " at depth of fathoms, "
 " at bottom, *1.0230* " *23*
 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. 736d

Many small crabs
A few small fish
1 large piece coral
1 logger head sponge
Several mudhorts
1 sand dollar

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7361*
 Date, *Dec. 18, 1912*
 Time of day, *12:30 P.M.*; of tide, *1/4 flood*
 Locality, *Off Cape Sable*
 Exact position, *Lat. 25° 07' 10"*
Long. 81° 29' 00"
 Depth, *5 fathoms*
 Nature of bottom, *rocky coral*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S.W.*; distance, *1/4 mile*
 Temperature of air, *67* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0242* temp., *22*
 " at depth of fathoms, "
 " at bottom, *1.0236* " *23*
 Number of salinometer, *7450*
 Barometer reading, *2993*
 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. 736-1

Several glove & log on head of
Many species of small crabs
grass

Several species of small fish
A few pieces of coral
starfish

sea urchins

squilla

1 sand dollar

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7362
 Date, Dec. 18, 1902
 Time of day, 1:00 P.M.; of tide, 1/2 flood
 Locality, Off Cape Sable, Fla.
 Exact position, Lat. 25° 04' 10"
Long. 81° 29' 15"
 Depth, 4³/₄ fathoms
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, S.W.; distance, 1/4 mile
 Temperature of air, 69 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0236 temp., 22.5
 " at depth of fathoms, "
 " at bottom, 1.0238 " 22.5
 Number of salinometer, 7450
 Barometer reading, 2993
 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. 7362

2 bat fish

1 large sea urchin

1 sand dollar

1 small sea horse

several pieces of coral
grass

several file fish

a few star fish

several small crabs

worms

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7363

Date, Dec. 18 1902

Time of day, 1:30 P.M.; of tide, $\frac{1}{2}$ flood

Locality, Off Cape Sable, Fla.

Exact position, Lat. $25^{\circ}04'00''$ Long. $81^{\circ}24'55''$ Depth, $3\frac{1}{2}$ fathoms

Nature of bottom, rocky coral

Dredging instrument used, Oyster dredge

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

Temperature of air, 69 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0231 temp., 22

" at depth of fathoms, "

" at bottom, 1.0235 " 22.5

Number of salinometer, 7450

Barometer reading, 2993

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. 7363

acidimms *

coral

small fish

small crabs

several sand dollars

1 large and several small ^{fish} starfish

1 basket star fish

grass

6 quantity of shells

2 loggishedd sponges

NOTES RELATING TO STATION NO. 7364

1 logger head sponge
1 cap sponge
1 large spider crab
several small crabs
grass
shells

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7365*
 Date, *Dec. 18 1902*
 Time of day, *2:32 P.M.*; of tide, *1/2 flood*
 Locality, *Off Cape Sable, Fla*
 Exact position, *Lat. 25° 03' 37"*
 Long. 81° 16' 10"
 Depth, *3 1/4 fathoms*
 Nature of bottom, *Hard sand & shells*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *S. W.*; distance, *1/4 mile*
 Temperature of air, *70* therm. No.,
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.0226* temp., *22.5*
 " at depth of fathoms, " "
 " at bottom, *1.0226* " *22.5*
 Number of salinometer, *7450*
 Barometer reading, *2991*
 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. 7365

1 file fish
2 species of crabs
4 shrimps
grass

NOTES RELATING TO STATION NO. 7366

4 small crabs

2 shrimps

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7367
 Date, Dec. 18, 1902
 Time of day, 3:43 P.M.; of tide, $\frac{3}{4}$ flood
 Locality, Off Cape Sable, Fla.
 Exact position, Lat. $25^{\circ}03'15''$
 Long. $81^{\circ}08'38''$
 Depth, $2\frac{1}{4}$ fathoms
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, S.W.; distance, $\frac{1}{8}$ mile
 Temperature of air, 70 therm. No.,
 " of surface water, 1.0230 " 22
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, temp.,
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 29.91
 State of sky, Partly cloudy
 Direction of wind, N.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. 7367

2 cal spongers
several loggishhead sponges
1 star fish
several small fish
several small crabs

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7368*
 Date, *Dec. 19, 1902*
 Time of day, *9:05 A.M.*; of tide, *Low*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *N. S. W. 1/2 W. 7 1/4 miles*
from signal sandy.
 Depth, *11 feet*
 Nature of bottom, *Grey sand & grass*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *North*; distance, *1/2 mile*
 Temperature of air, *65* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0234* temp., *22*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7451*
 Barometer reading, *29.97*
 State of sky, *Clear*
 Direction of wind, *N. W. 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. 7368

4 species of fish
Many shrimps
Several small loggers head sponges
species of small crabs
a c. dunnus

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7369
 Date, Dec. 19, 1902
 Time of day, 9:40 A.M. of tide, low
 Locality, Off Cape Sable, Fla.
 Exact position, Lat. 25° 00' 30"
Long. 81° 12' 20"
 Depth, 1 1/2 feet
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, N. E. ; distance, 1/4 mile
 Temperature of air, 68 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0245 temp., 22
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450
 Barometer reading, 30.00
 State of sky, Clear
 Direction of wind, N. 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
Boatwain U. S. N.
 Name and position of observer,
Vernon E. West.

NOTES RELATING TO STATION NO. 1369

Several cap sponges
A great many loggerhead sponges
1 glove sponge
A few small crabs
whites
grass
acidium
very rich bottom

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7370*
 Date, *Dec. 19, 1902*
 Time of day, *10:10 A.M.*; of tide, *low*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *Lat. 25° 00' 40"*
Long 81° 15' 37"
 Depth, *2 1/2 fathoms*
 Nature of bottom, *rocky*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *East*; 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., *22.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *30.01*
 State of sky, *Clear*
 Direction of wind, *N. 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. 7321

A few cap sponges
Several glove sponges
Great many loghead sponges
A few small fish
Several small crabs
Several small pieces of branch coral
A few shrimp
Several worms
Starfish

NOTES RELATING TO STATION NO. 7321

3 species of crabs

2 species of starfish

Several sea-machins

Several pieces of branch coral

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7372
 Date, Dec. 19, 1902
 Time of day, 11:10 A.M.; of tide, 1/4 flood
 Locality, off Cape Sable, Fla.
 Exact position, Lat. 25° 00' 55"
Long. 81° 22' 15"
 Depth, 4 fathoms
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, N.E.; distance, 1/4 mile
 Temperature of air, 70 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0228 temp., 23
 " at depth of fathoms, "
 " at bottom, 1.0226 " 22
 Number of salinometer, 7450
 Barometer reading, 30.00
 State of sky, Clear
 Direction of wind, N.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. 7372

a few glove sponges
Great many loggerhead sponge
1 small cup sponge
several species of small crabs
1 large & several small pieces of coral
1 small fish
acidimms
very rich bottom

NOTES RELATING TO STATION NO. 7373

several species of small fish
several species of crabs
few shrimp
few pieces of coral
sea cucumbers
1 pipe fish
2 species star fish

NOTES RELATING TO STATION NO. 7374

acidimms

several starfish

several sea urchins

several cap & glove sponges

many crabs

Very rich ground

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7375*
 Date, *Dec. 19, 1912*
 Time of day, *12:30 P.M.*; of tide, *1/2 flood*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *Lat. 24° 58' 05" N*
Long. 81° 28' 30" W
 Depth, *5 fathoms*
 Nature of bottom, *rocky*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *North*; distance, *1/2 mile*
 Temperature of air, *72*; therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0232* temp., *22.5*
 " at depth of fathoms, "
 " at bottom, *1.0232* " *22*
 Number of salinometer, *7450*
 Barometer reading, *29.99*
 State of sky, *Clear*
 Direction of wind, *N. 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. 7375

Many crabs

Several sea urchins.

a few starfish

1 octopus

Several pieces of coral

Several small fish

NOTES RELATING TO STATION NO. 7376

Nothing but dead shells

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7377
 Date, Dec 19, 1902
 Time of day, 1:30 P.M.; of tide, $\frac{1}{2}$ flood
 Locality, Off Cape Sable, Fla.
 Exact position, Lat 24° 57' 50"
 Long 81° 20' 50"
 Depth, 34 fathoms
 Nature of bottom, Hard sand & grass
 Dredging instrument used, Oyster dredge
 Direction of drift, N.W.; distance, $\frac{1}{4}$ mile
 Temperature of air, 72 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0242 temp., 22
 " at depth of fathoms, "
 " at bottom, 1.0234 " 22
 Number of salinometer, 7450
 Barometer reading, 29.95
 State of sky, Clear
 Direction of wind, N.N.W.; 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. 2377

2 small file fish
several small crabs
few sponges
few small loggerhead sponges

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7378
 Date, Dec. 19, 1902
 Time of day, 2:03 P.M.; of tide, 1/2 flood
 Locality, off Cape Sable, Fla.
 Exact position, Lat. 24° 57' 43"
Long. 81° 17' 10"
 Depth, 3 1/2 fathoms
 Nature of bottom, gray sand & grass
 Dredging instrument used, Oyster dredge
 Direction of drift, N. W.; distance, 1/4 mile
 Temperature of air, 72 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0239 temp., 21.5
 " at depth of fathoms, "
 " at bottom, 1.0246 " 22
 Number of salinometer, 7450
 Barometer reading, 29.95
 State of sky, Clear
 Direction of wind, N. N. W.; 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. 7378

Few log headed & cap sponges
1 bat fish
1 file fish
1 sea robin
many small wats
acornims
sand dollar

NOTES RELATING TO STATION NO. 7379

Several log. gopherhead & grass sponges
Several sm. all fish
Several small crabs

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. *7380*
 Date, *Dec. 19, 1902*
 Time of day, *3:43 P.M.*; of tide, *3/4 flood*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *Lat. 24° 57' 25"*
Long. 81° 09' 35"
 Depth, *2 1/4 fathoms*
 Nature of bottom, *Grey sand & grass*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *West*; distance, *1/4 mile*
 Temperature of air, *71* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0242* temp., *21.5*
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, *7450*
 Barometer reading, *2994*
 State of sky, *Clear*
 Direction of wind, *N.N.W.*; 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. 7380

2 small file fish
few longhead sponges
few small crabs

NOTES RELATING TO STATION NO. 7381

Several loggerhead sponges
a few starfish.
1 flat fish.

NOTES RELATING TO STATION NO. 7382

Many loggerhead, grass &
several large sponges
several small fish & crabs
1 starfish
a cidarian
grass
Very rich bottom

NOTES RELATING TO STATION NO. 7383

Several loggerhead sponges

1 small fish

1 starfish

2 crabs

1 shrimp

NOTES RELATING TO STATION NO. 2384

Several yellow; waf & glove sponges

A few small crabs

1 small fish

A few starfish

a cidarines

1 shrimp

rich bottom

NOTES RELATING TO STATION NO. 2385

Few cap sponges
acidim
many small fish
a few small crabs
very rich bottom

NOTES RELATING TO STATION NO. 7386

1 cup sponge.

8 pipe fish

2 pipe fish

Several small crabs.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7387
 Date, Dec 20, 1902
 Time of day, 9:00 A.M.; of tide, $\frac{1}{2}$ ebb
 Locality, Off Cape Sabbe, Fla.
 Exact position, Lat. $24^{\circ}54'55''$
 Long. $81^{\circ}23'45''$
 Depth, 3 fathoms
 Nature of bottom, Hard sand & grass
 Dredging instrument used, Oyster dredge
 Direction of drift, N. E. ; distance, $\frac{1}{4}$ mile
 Temperature of air, 74 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0244 temp., 22
 " at depth of fathoms, "
 " at bottom, 1.0249 " 22.5
 Number of salinometer, 7450
 Barometer reading, 29.94
 State of sky, Partly clear
 Direction of wind, E. 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. 7382

- 2 large starfish
- 2 basket starfish
- 2 sea-robins
- 1 burr-fish
- Several other small fish

NOTES RELATING TO STATION NO. 7348

A few starfish

Several sea urchins

A few sand dollars

A few small fish

Several crabs

many clams

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7389

Date, Dec. 20, 1902

Time of day, 9:58 A.M. ; of tide, $\frac{1}{2}$ ebb.

Locality, Off Cape Sable Fla.

Exact position, Lat. $24^{\circ}55'15''$ Long. $81^{\circ}30'20''$

Depth, 5 fathoms

Nature of bottom, rocky

Dredging instrument used, Oyster dredge

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

Temperature of air, 75 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0240 temp., 22.5-

" at depth of fathoms, "

" at bottom, 1.0238 " 22.5-

Number of salinometer, 7450

Barometer reading, 29.92

State of sky, Partly cloudy

Direction of wind, E.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. 7389

A few small fish & crabs
1 loggerhead sponge
several sea-anemones & coral rubble
a quantity of barns.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7390

Date, Dec. 22, 1902

Time of day, 11:27 A.M.; of tide, $\frac{1}{2}$ ebb.

Locality, Off Cape Sable, Fla.

Exact position, East end of Sawyer Key
bearing S $\frac{1}{4}$ W. Distance $\frac{1}{4}$ mi.Depth, $\frac{3}{4}$ fathoms

Nature of bottom, rocky

Dredging instrument used, Oyster dredge

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

Temperature of air, 74 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0244 temp., 22

" at depth of fathoms, "

" at bottom, 1.0242 " 22.5

Number of salinometer, 7450

Barometer reading, 29.92

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 H. Smith

Boatwain, U. S. N.

Name and position of observer,

Vernon E. West,

NOTES RELATING TO STATION NO. 7390

Many cap & logghead sponges
Many small crabs
A few worms
Several pieces of coral
Aridians
Sea-urchins
Good sponge ground

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *7391*
 Date, *Dec. 22, 1902*
 Time of day, *11:00 A.M.*; of tide, *1/2 ebb.*
 Locality, *Off Cape Sable, Fla.*
 Exact position, *W. end of Content Key*
bearing S x E. distance 2 1/2 miles
 Depth, *4 3/4 fathoms*
 Nature of bottom, *Hard sand & grass.*
 Dredging instrument used, *Oyster dredge*
 Direction of drift, *West*; distance, *1/4 mile*
 Temperature of air, *73* therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.0240* temp. *22.5*
 " at depth of fathoms, "
 " at bottom, *1.0241* " *22.5*
 Number of salinometer, *7950*
 Barometer reading, *2991*
 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*
Boatwain, U.S.N.
 Name and position of observer,
 Vernon C. West.

NOTES RELATING TO STATION NO. 7391

Several small fish & crabs.
Many sand-dollars & sea-urchins.
Several small pieces of coral.
Several shrimps.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7392
 Date, Dec. 22, 1902
 Time of day, 11:30 A. M.; of tide, $\frac{3}{4}$ ebb.
 Locality, Off Cape Sable Fla.
 Exact position, Lat. $24^{\circ}52'10''$
 Long. $81^{\circ}30'20''$
 Depth, 5 fathoms
 Nature of bottom, rocky
 Dredging instrument used, Oyster dredge
 Direction of drift, S. W.; distance, $\frac{1}{4}$ mile
 Temperature of air, 73 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0241 temp., 22.5
 " at depth of fathoms, "
 " at bottom, 1.0240 " 22.5
 Number of salinometer, 7450
 Barometer reading, 29.91
 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. 7392

Many small crabs of several species.

1 bat fish

Several small fish

Several pieces of coral

Many clams

Several shrimp

1 loggerhead sponge

2 starfish

Several sea-urchins.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7393

Date, Dec. 22, 1902

Time of day, 12:00 P.; of tide, $\frac{3}{4}$ ebb

Locality, Off Cape Sable, Fla.

Exact position, Lat. 24°52'00"

Long. 81°27'07"

Depth, $3\frac{1}{4}$ fathoms

Nature of bottom, Hard sand & grass

Dredging instrument used, Oyster dredge

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

Temperature of air, 73 therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.0241 temp., 22

" at depth of fathoms, "

" at bottom, 1.0240 " 22

Number of salinometer, 7450

Barometer reading, 30.89

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. 7393

Several sand dollars + sea-machine

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 7394
 Date, Dec. 22, 1902
 Time of day, 12:33 P.M.; of tide, $\frac{3}{4}$ ebb.
 Locality, Off Cape Sable, Fla.
 Exact position, Lat. $24^{\circ}51'52''$
 Long. $81^{\circ}23'50''$
 Depth, 2 fathoms
 Nature of bottom, Sand & grass
 Dredging instrument used, Oyster dredge
 Direction of drift, S. W. ; distance, $\frac{1}{2}$ mile
 Temperature of air, 73 therm. No.,
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0242 temp., 22
 " at depth of fathoms, "
 " at bottom, "
 Number of salinometer, 7450.
 Barometer reading, 29.89
 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. 7394

1 file fish

1 pipe fish

Several crabs.

1 sea-urchin.

NOTES RELATING TO STATION NO. 7395

Several file fish

1 grouper

and dinner

Several small crabs

Few small pieces of coral

1 loggerhead sponge

Several cap sponges

A few shrimp