

4

Left Gloucester 11 Am.

Sta 10399 Oct. 31st.

2.45 Pm to 3.55 Pm

42° 30' M. 70° 21' W

Cloudy, ~~to fog~~, smooth. light NE

Depth 75 fath = 137 meters.

Very lumpy bottom.

m.

w.s.

0	50		✓
30	1	R 149 9.20 @.10	✓
60	2	R 148 6.52 @.10	✓
90	3	R 151 5.51 @.10	✓
120	4	R 153 5.32 @.10	✓

20 net 0 split.

1/2 meter net 0 25 min. swarm small
copepods

1 meter net 60-0 1/2 hr Cal + 4 f

1 junco 1 ♂ Purple finch (tired)
8 siskins (fresh)

10400 Nov. 1st

5:30 AM. 6:35 AM.

42° 58' N 70° 15' W.

Fog, calm, smooth.

78 fath = 142 m.

②		49.5		WS.
30	1	R 149	8.25 @ 10	WS
60	2	148	7.15 @ 10	WS
90	3	151	4.93 @ 10	WS
130	4	153	4.52 @ 10	WS.

Several mackerel schools passed
during the night

20 net 0 25 min. Rich red micro

1/2 m net 0 1/2 hr Scanty euphausia +
water net 90-0 1/2 hr. Fairly rich cal +
some silicofuds.

$$\begin{array}{r} 182.9 \\ - 91.4 \\ \hline 274.3 \end{array}$$

$$\begin{array}{r} 182.9 \\ - 36.5 \\ \hline 249.4 \end{array}$$

10

50

100

175

275

10401 Nov. 1st,

~~H.H.A.~~ m.

2 P.M. to 3.15 P.M.
ESE light smooth ^{dark} cloudy
& rain.

120 fath = 219 meters
Position?

0	51	WS
30	1	8, 9, 2 @ 10 WS
100	2	4.37 @ 10 WS
150	3	4.62 @ 10 WS
200	4	5.09 @ 10 WR.

eel grass + rockweed.

20 net 0 $\frac{1}{2}$ m Red micro +
stemonophores
 $\frac{1}{2}$ m " " Small pods stemonophore
Bottom net 180-0 $\frac{1}{2}$ m ~~more stemonophores~~
+ ~~very many cal.~~
Outer net 90-0 20 min Scanty cal.
2 gal stemonophores - ditto slime +
very few pods. 1 ft. sample saved,

$$70 = 128 \text{ m}$$
$$75 = 137$$
$$80 = 146$$

$$\begin{array}{r} 128 \\ - 9 \\ \hline 137 \end{array}$$

$$\begin{array}{r} 128 \\ - 16 \\ \hline 144 \end{array}$$

$$\begin{array}{r} 0 \quad 0 \\ 30 \quad 3 \\ - 60 \end{array}$$

$$\begin{array}{r} 92 \\ 120 \\ 148 \end{array}$$

45

10402

Nov. 2,

~~Atn~~, dark, bright starlightOff ~~Cape~~ Manhegan.4⁰⁰ AM. to 5.10 AM.

W by N. fresh cold clear slight chop.

79 fath = 144 meters
shoaling to $\frac{70}{70}$ m.

Depth. Manhegan 4 N. 9 miles. W.S.

0	47		✓
30 25 1	8.86 @ 7.5		✓
60 55 2	8.20 @ 7.5		✓
90 85 3	6.60 @ 7.5		✓
110 135 4	5.02 @ 7.5		✓

Nets over 4.35 AM. up 5:05 AM

Meter net. 50-0 ^{fair haul Cal.} ~~silverfish + 4 f.~~

1/2 m " surface Cal. Annelacea & Schizophoda

20 net " Nothing but tobacco.

No ctenophores & practically no micro.

Nov. 3rd Left Boothbay Hr.
6.30 A.M. Arrived Gloucester
6.30 P.M.

Nov. 4. Sat. at Gloucester

" 5 Sun. " " no work.
" 6 Mon. " " taking stores
" 7 Tue. would have sailed,
but engineer failed to appear.

Nov. 8. Left Gloucester 6 AM.
Wind fresh W.S.W., cloudy.

$$\begin{array}{r} 18.2 \\ - 18 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 18.2 \\ - 14.6 \\ \hline 3.28 \end{array}$$

Sta 10403 : Nov. 8th

10 Am. to 10.40 Am.

Clear, fresh S.W. choppy,

Off Provincetown.

Depth. 18 fath = 32 meters.

0 48.5 - 10S.
30 #1. 8.40 @ 9 W.S.

10.10 Am

Water net 25 min fair cal, abundant
1/2 " " 0 25 min fish eggs (pollack)
20 net ① 20 min + y.f.
rich red micro

10404 Nov. 8th

1.45 P.M 2.35 pm S.W

Stiff S.W. choppy clear.

100 fath = 183 m.

WS.

0		50.5	✓
50	1	8.09 @ 10.5	✓
100	2	4.98 @ 10.5	✓
175	3	4.87 @ 10.	✓

Meter net 150 - 0 1/2 m

Very scanty Calanus

20 net 0 20 min

Rich red micro + Euthemisto

1/2 m net 0 20 min

Scanty Euth + Annalocera

Nov. 9th 3 AM came to S
in Vineyard Haven, Strong
SW blew continuing all day
and most of the night.

Nov. 10th Wind veered to
NW with rain in early morning
& later moderated & backed
to W.

12.30 P.M. hove up anchor
& proceeded for Cape May.

$20 \text{ fath} = 36 \text{ m.}$

~~0
15~~

Sta 10405 Nov. 10th
6.15 pm to 7⁰⁰ pm.
Bright full moon.

Clear. W. light slight chop.
20 fath = 36 meters.

W.S.

0 53.5 ✓
30 bot. 1 12.48 @ 10.5 ✓

20 net 0 25 min

Rich green micro.

1/2 hr net 0 25 min

Rich small pods, 1/2 + Euthemis

Water net 1/2 hr. 25 min -

Rich small pods + 1/2

$$\begin{array}{r} 54,8 \\ \times 146 \\ \hline 69\ 4 \end{array}$$

10406 Nov-11th
5.15 Am. to 6.15 Am.

clear, w. fresh choppy.

Bright moonlight to daylight

38 fath = 69 m.

0	53	WS.
30	# 3(151) 11.83 @ 11	WS
60	= 2(148) 10 @ 11	WS.

Bot #1 failed to trip. Could find nothing the matter with it.

Wts 5.45 sec 1/2 h

20 net 0 Rich green micro
+ young Euthimists

1/2 m net 0 Swarms small
copepods + young Euthimists
water not 50°

Small bran salps, small copepods
Euthimists & 1/4.

$$\begin{array}{r} 91.4 \\ - 1.8 \\ \hline 93.2 \end{array}$$

10407 March 11
12 m to 1.15 P.M.
 $40^{\circ}03'$ $71^{\circ}43'$

N.W. Stiff clear. high chop.

5 fath = 9.3 m.

		W.S.
0	52.3	✓
30	2 11.64 @ 10	✓
60	3 13.02 @ 10	✓
90	4 7.75 @ 10	✓

Birds, 1 junco + 1 pine siskin,
12.4 $\frac{1}{2}$ hr all

20 net o Rich red micro

$\frac{1}{2}$ m out o fair haul small
coffrods

Shuster net, 75-0 m

Scanty haul large Ectemnius
+ small coffrods, 1 Cidone,

10408 Nov. 11.

3 PM to 4.15 PM.

W. fresh choppy clear

100 fath = 183 meters.

39°52' 71°47'

0	52.5	W. S.
25	1 12.02 @ 10	"
50	2 13.95 @ 10	"
100	3 9.27 @ 10	"
180	4 10.25 @ 10	"

160 mts 3.30 PM

180

1/2 m net 0 Scanty red micro

1/2 m net 0 Scanty small copepods

35 min
meter net 75-0 Very scanty siphonophore
+ Euthemisto

40 min
Bottom net 150-0 Very scanty, 1 Didemnum

$$\begin{array}{r} 128 \\ 128 \\ \hline 1408 \end{array}$$

10.30 Pm started engine

10409 Nov. 12th Sunday.

7.25 AM to 8:45 AM.

clear ~~water~~ smooth light E breeze

77 fath = $\frac{140}{130}$ meters.

W.S.

0	55	✓
30	1 13.18 @ 11	✓
60	2 13.33 @ 11	✓
90	3 9.10 @ 11	✓
135	4 10.29 @ 11	

20 mtr 0 1/2 hr fair haul red
micro (net leaked somewhat)

1/2 mtr 0 1/2 hr fair haul small
copepods, small sagittae & small Euthemus

Mother net 80-0 40 min' small haul
small copepods small sagittae med. Euthemus
abundant pteropods, 1 siphonophore

Sled net Bottom 50 min' surface small
white copepods + small schizopods (1 1/2 qts.)
some sagittae

$$\begin{array}{r} 7315 \\ - 366 \\ \hline 7681 \end{array}$$

10410 Nov. 12th
12.20 P.M. to 1.45 P.M.

Ply cloudy E freshening smooth
42 fath = 76 meters

0 55.5 WS.

25 2 13.65 @ 13.5 WS

50 3 13.5 @ 13 WS

75 4 11.22 @ 13.5 WS

12.45

20 net surface $\frac{1}{2}$ hr Rich brown micro
scanty red cor.

$\frac{1}{2}$ m out " $\frac{1}{2}$ hr animalocera,
g. entomimida

Sled net, 35 mm mesh Rich cal, sag. salt

1.25

Scallop dredge, 15 min

Dead scallop quahog + razor shells, Stars 1 crab
35 young, 1 medi scallop 1 small quahog, 1 small mouth

abundant phalaropes + whales
between this & last sta.

Sta 10411 Nov. 16 ¹⁵
12.5⁵⁵ P.M. to 1.30 P.M.

W. fresh choppy clear.

9 fath = 16 meters

W.S.

0 54° WS

15 #4 ^{*153} 12.40 at 8 WS

~~+2.55~~ 20 min

20 net 0 Thick brown mico + small
pods

1/2 m net 0 Rich haul small pods

Bottom net. Rich haul sagittaria

44f.

Sta 10412 Nov. 16

SW light clear, smooth dark

6.55 P.M., to 7.30 P.M.

19 fath = 34 meters

ws.

0 56 ✓

30 #4 = #153 | 13.65 @ 13
= 56.5

7.10 P.M. 20 min.

20 net 0

Rich brown micro.

1/2 m net 0

Bottom net

38° 14'
74° 39'

$$\begin{array}{r} 54.8 \\ - 1.8 \\ \hline 56.6 \end{array}$$

Sta 10413 Nov. 16-17

midnight 12.45° $\frac{1}{2}$ moon.

W.W. Clear, light, smooth

31 fath = 56 meters.

W.S.

0 56 ✓

25 #3. 13.5 @ 6 ✓

50 #4. 13.52 @ 7 ✓

12.20 Am.

20 m. 20 min.

Rich dark green macro
+ some sagittaria

1/2 meter 20 min.
Scanty pods etc rich sagittaria

~~Bottom out~~ 20 min

Rich Sagittaria ^{somewhat} Euthemis +
coff. pods.

37° 44',
74° 35'

0

50

100

200

300

400

500

10414 Nov. 17 E

7.30 Am. to 9:15 Am.

clear, light W, smooth.

80 fath = 146 meters
shoaling to 135

W.S.

0 55.5

30 25° 1 13.30 @ 7 ✓

to 55° 2 13.01 @ 7 ✓

90 85° 3 9.30 @ 7 ✓

140 135° 4 9.44 @ 7 ✓

8.45 to

20 net 0 20 min $37^{\circ} 14'$
Rich red micro $74^{\circ} 31' 30''$

1/2 m net 0

Scanty small pods
+ Sagittae

Bottom net 300 m line
fouled. Bottom

Sagittae

~~Water~~ + ~~Bottom~~ eelgrass.

146 m. to overboard

25 min
3 m on bottom

Otter travel:

Sponge star shells

10415

Nov. 17th

10.40 Am. to 12 m.

WSW light smooth clear.

so fath = 9 ft. meters

us.

0 55.

30 2 13.32 @ 10 3°

60 3 13.30 @ 10 12° 4°

90 4 11.88 @ 11 37° 4° 4°

10.30 Am

20 net 0 20 min

Rich haul reddish green

1/2 m net 0 20 min

Scanty small sag + coffee beans

Bottom net 25 mm.

Fair haul Euthemisto, sag + coffee beans

After trawl. On bottom 10 min.

2 ♀ *Mophycis tenuis* 73 cm 3 1/4 Kg

spong 1 74 3 1/2 Kg
net torn

36

5
—
41

10416 Nov. 17th

2.10 P.M. 3.20 P.M.

Clear, fresh S.W. slight chop.
23 fath = 41 meters.

0	56.8	US.
20	#3 13.08 - @ 10	W.P.
40	#4 14.12 @ 10	W.S.

2.30 P.M. $37^{\circ} 0' 0''$ $30^{\circ} 30''$
 $75^{\circ} 0' 0''$

20 net 6 min
very rich dark green micro

$\frac{1}{2}$ m net 0 20 min
poor small red pods
& 4.f.

Bottom net 4 ft - 0 25 min,

Fair haul Eustheomia + Sagittaria

Other trawl, 10 min on bot
2 live scallops. Several large
dead shells + crab searching
& 2 mactra shells few stars
1 sea robin

10417

Nov. 17

8.40 P.M. 9 10 P.M.

SW. fresh slight chop char

Surface 57.5

WS.

20 net 0) 20 min

Brown micro small pods.

1/2m net 0

Rich small pods.

36° 59' 30"
75° 41'

10418

Nov 22

11:15 A.M. to 11:45

calm. sea smooth

9 fms 16 1/2 m.

Surface 54.5 ✓ws

11:25 to 11:45

20 mch 0 20 mm

scant micro

1/2 meter net 0 20 mm

Scant plankton some
larval fishes

Olive Trawl Bottom 20 mm

water haul

36° 50' 30" 75° 49' 30"

10419

Nov 22

430 PM to 5:00

sunset airs sea smooth
11½ fms 20 meters

Surface 56° K.S.

36° 23' 30"
75° 39'

#20 net o 433 - 453
20 min

Brown mero + small pods

½ m. net o 20 min
Brown pod

Otter trawl bottom 20 min

1 live clam, 2 dead 1 conch
1 Paralichthys dentatus 2 skates clear
1 Lophopsette maculata more

10420 Nov 23

3:57 AM to 4:30

14 fms 25 meters

Sout light breeze wind clear

Surface 57.2° N.S.

35° 33'

75° 18'

#20 net 0 20 m 359 - 419

Brown mero & pods

1/2 m 20 m

Small brown pods

Ottawa Bank Bottom 20 m 4:03 - 4:23

1 King crab many star fish

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>INDEX SHEET<

To divide off the work
in different studies

— OR —

as a

FILING COVER

To bind, with the fasteners,
all work worth keeping for review.

For use in the

National Notebook

Patented by E. W. Hill, July 5, 1898.

SUBJECT OF STUDY:

To index the book, write below on the margin, the name of the study



© N. N. Co., 1898.

10421 Nov 23

5:10 AM to 7:15 AM

Overcast sea smooth S. breeze
18 fms 32 meters

35° 26'

75° 08'

Surface 58 WS✓
30 meters #4 15.50 @ 11 U.S.V.

#20 net 20 min 6:23

Red-brown mure & pods

1/2 meter net 20 min 6:23

Small pods

Bottom net 20 min 6:23 - 43

Fouled.

Beam trawl bottom 20 min 6:55 - 7:15
2 star fish -

10422 Nov 23

South bush breeze
Sea choppy

8:45 to 9:00

30 fm 55 fm.

Surface	60.5	WS ✓
25 # 3	15.90 @ 12	"
50 # 4	15.83 @ 12	"

Too rough to rush
station.

35° 23'
74° 58'

10423

Nov 25

Stiff N.W winds Sea choppy
sky clear

1:20 7M

12 fm 22 m

Surfan 63 los ✓

Too rough to risk nets.

Hove too under riding sail
forsail + jib.

10424

Nov 28

10425

10426

10427



$$\begin{array}{r} 182 \\ - 55 \\ \hline 47 \end{array}$$

10428

Dec 4

Clear + warm. Sea calm.

2:23 PM to 3:11 P.M.

13 fms 2+ meters.

Surface 69.8 WS ✓

#20 net 20 min

Micro. light brown "

1/2 meter net 20 min

33° 30° 30°
33° 50°

Pods. scarce

77

Sled net 20 min

full of sand

Ottawan 20 min 2:51 - 3:11

1 small crab

36.5
16.5
53

10429

Dec 4

From 6:09 Pm to 6:42

Light Southwly breeze sea calm
29 fm 53 meters

0 74.5 WS✓

2515m R1513 # 3 24.40° @ 21 WS✓

5040 R153 4 24.38° @ 20 WS✓

#20 net 0 20 min 6:22 6:42

Scanty micro.

1/2 meter net 0 20 min 30"

33° 07' 39"
17

Other trawl bottom 20 min

1 small fish

Ogcophalidae?

~~182.9
54.9
10
248~~ 7130

182.9
54.8
146
252.3

0
50
100
150
200

0
50
100
175
250

10430 Dec 4

10 PM to 10:30

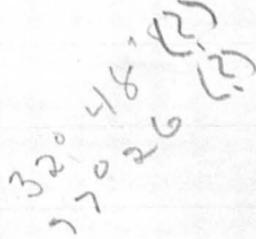
Showers. Stiff breeze.
Sea calm.

136 fms 249 meters

0	72	W.S.
50	1 23.01 @ 21	W.S.
100	2 17.28 @ 21	W.S.
175	3 12.54 @ 21	W.S.
250	4 11.82 @ 21	W.S.

#20 net 20 min

1/2 metonet 20 min



Ott trawl 20 min

Squall kicked up too
much sea to finish stations

Bottom net 20 min

Sta 10435. Jan. 4 1917

Off Shallotte Inlet N.C.

6½ fath = 11.51 meters.
1.45 P.M.

Surface temp. 52.5

Clam dredge. Rough, hard bottom, down 2 min. had to haul up.

Proceeded on course to Brunswick Ga.

Sta 10436 Jan 11th - 1917

11. Am.

Surface temp 60 W.S.

High N.W. Wind

Air temp 46

off jetties at Fernandina, Fla,
on shrimping ground.

No nets

Sta 10437 Jan 17th

2 PM P.M. to 3.45

✓ miles bearing $\frac{2}{3}^{\circ} \text{ N.W.}$ from Sand Key

70 fath = 128 meters (shoaling)

East fresh clear smooth

Air 73°

0 74° WS

25 149 23.14 @ 22 WS

50 148 23.10 @ 22 WS

75 151 22.60 @ 22 WS

100 152 15.11 @ 22 WS

2.40 PM 20 min

meter net 80-0 Many sp. fair haul gen.

$\frac{1}{2}$ m " 0 fair haul gen.

20 net 0 fair " "

Other trawl 15 min

5 crabs 5 small sea spiders yellow
1 fish a few shells tail bordered
with black + red under
trig yellow

Snapper
18 cm
Pinkish

TT 10739

$$\begin{array}{r} 18.2 \\ \underline{-} 9 \\ \hline 27 \end{array}$$

10438

Jan 17th - 11 P.M. to

12.40 AM

Tortugas N.W. 15 miles

E ~~light~~^{fresh} smooth clear - dark

15 fath = 27 m.

○ 72.5 W.S.

~~11.30~~

J

11.30 P.M. 1/2 hr.

Meter net - 20-0 Rich haul 4f + gen

1/2 m net ○ Rich " " "

20 net ○ fair haul gen.

$$\begin{array}{r} 18.29 \\ - 91 \\ \hline 19.20 \end{array}$$

Sta 10439

Jan 20 215 P.M. 3,50 fm

Clear, smooth NE, light.

20 miles N from NW Chan buoy
Key West. Air temp. 75°

10.5 fath - 19 meters
Smooth bottom

ws.

0 71.5 ✓

15m. # 153, 21.88 @ 21 ✓

Bottom sample, white sand + shells.

2.40 P.M. 1/2 hr.

20 net 0 Rich micro

1/2 m net 0 ctenophores, sagittae + 4f
fair haul.

Meter net 12-0 Sag, ctenophores pods
+ 4f.

Other trawl 15 min. very slow.

1 bat-fish	1 Platophrys,	a few humids
10742	10741	+ stars
		no sponge

~~1829~~
~~152~~
2010
•

~~429~~
144.9
~~429~~
102

10440 Sunday

Jan 21st - 2.15 Am 3.15 Am
Sawbel light NNE @ 20 miles

NE clear dark light smooth

11 fath = 20 m

Bottom sample none (too hard)

0 68 W.S.

18 #153 20.91 @ 20

2.45 Am

20 net 0 fair haul micro.

1/2 m net 0 Rich haul small
fossils sagittae,

water net 15-0, elenephares sagittae.

Jan 22 6 Am Boca Grande east
of cts, S E wind

Surf temp 68° W.S.

Sta 10441 Jan. 24th

4:00 P.M. to 4:45 P.M.

5 miles N from Tampa NW Chm. Buoy

7 fath = 12.8 meters

S.W. light, smooth clear.

Bottom sample sand ^{air 72°} shells (lost) w.s.
barren.

0 68 W.S.
153, 19.72 @ 21 W.S.

4:20 P.M.

20 net 0 20 min fair house
thick.

1/2 m net 0 20 min

Rich strophores + jellies

water net 20 min.

Rich Mf + strophores
+ jellies

Other trawl.

on small fire sponge

$$\begin{array}{r} 36.5 \\ - 36 \\ \hline 401 \end{array}$$

10442 Jan 24th 10 Pm
S. Smooth. clear, light, dark
11.05 Pm

22 fath = 40 meters

bottom sample (did not work (Hard))
water firm, brilliantly

0	68.5	WS
20	* 153	19.59 @ 21 WS
38	* 153	19.43 @ 21 WS

nets 10.35 Ph
no jellies or stenophores
1/2 hr

Water net 35-0

Rich haul 4 ft, pods ste, 1 egg
1 large shrimp

1/2 m net 0

Rich haul 4 ft, pods + eggs
Habitat:

20 net 0 very scanty micro-

$$\begin{array}{r} 36.5 \\ \underline{-} 16.4 \\ \hline 5.310 \end{array}$$

10443 Jan 25 4 AM -

smooth light W. clear. (^{lightning} in W.)

Bottom sample, Ind. - mosamp

Depth 29 fath - 53 m.
(must have been 39 (www)) WS.

0 69.5 WS

25 #. 151 ^{31.16} @ 21 WS

50 # 153 ^{20.70} @ 21 WS.

Much gulf-weed
4.35 fm.

20 net 0 Scanty micro

1/2 m net 0 fair haul gulf-weed stuff

m net 45-0 fair haul yf.
+ pods.

$$\begin{array}{r} 180 \\ - 9 \\ \hline 189 \end{array}$$

1044 f Jan 25, 12.30 P.M.

frost. N.W. choppy. cloudy (after squall)

105 fath. = 189 m.

green sand & ~~clay~~ mud Sample

0 70.5 ws

25 149 21.82 @ 19 ws

50 148 21.80 @ 19 ws

100 151 19.35 @ 19 ws.

175. 153 14.14 @ 19 ws.

Much gulf-weed.

nets 12.50 P.M.

20 net o Scanty min.

1/2m net o Small haul pods etc

meter net 170-0 fair haul

M.F., pods + general

365

10445

Jan 25

6.30 P.M.

8.30 P.M.

n.w. clear fresh choppy

off soundings (200 fath no bottom)

0 70.5 ✓ N.S.

100 #149 21.70 @ 17 WS

150 #148 18.49 @ 17 WS

250 #151 (20.90) @ 17 WS

350 #153 11.58 @ 17 WS

500 (Getting too choppy to repeat 250)

~~1/2 hr~~
20 net 0 Scanty micro.

1/2 hr net 0 1/2 hr Rich haul gen.
plankton - 1 large leptocephalus

Meter net 300-0 40 min.

Rich haul general plankton
1 large leptocephalus, Several stem sphyngid,
1 myctophid.

10446 Jan 27th 12.30 AM
clear, dark ~~E~~^E smooth light
bottom = 10.9 m. water
C.S. Blas N E 1/4 E 1/2 E 5 miles
Bottom Hrd sand + shell no sample

0 63 WS.
10. #153 17.72 @ 13.5 WS,
1 AM, 1/2 hr -
water not 8.0 m. Rich gen plankton
+ some young fish.
20 net 0 Rich micro

182.9

36.5

9.

2284

Sta 10447 Jan 30, 17

12 midnight to 2.30 AM.

SW light smooth clear.

125 fath = 228 m.

29° 38' 87° 00'

0	66	WS
50	149 19.40 @ 20	WS
100	148 18.62 @ 20	WS
150	157 12.98 @ 20	WS
200	153 10.10 C. 19	WS

19.44 @ 20

18.50 @ 20

13.33 @ 20

10.22 @ 20

nets $\frac{1}{2}$ bx Rids fads. of + gen
 $\frac{1}{2}$ hr fan unew. &
40mm. Rids of tobs & what it

200-0

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12⁴⁶
3
3.1

10448 Jan 30 ~~Auto~~

7.0 Am to 8.45 Am
fath = meters

W. fresh smooth clearly
Soft mud no samples

72 fath = 131 meters
 $29^{\circ} 53'$ $87^{\circ} 07'$

0	68	WS.	✓
20	20.04 @ 20	✓	✓
50	19.02 @ 20	✓	✓
100	18.10 @ 20	✓	✓
130	15.87 @ 20	✓	✓

25	20.13 @ 19	Bert shot
50	19.65 @ 19	
100	18.24 @ 19	
130	15.77 @ 19	

over

Nets 8.15 Am

20 net 0 fair haul mixed
25 min

$\frac{1}{2}$ m net 0 Small haul gen
30 min

Meter net 120-0

Rich haul off + gen
35 min

18.29

7.31

25.60

10449

Jan 30 10:30 AM H-30

SSW Clear light smooth

Coral - samples

14 fath = 25.5 m
30° 05' 87° 12'

0	65	WSR
20	#153	18.40 @ 19 ✓ Y
20	#157	18.38 @ 18 ✓ Y

nets 10.5⁻⁵

20 net 0 small larvae
1/2 m " 0 Scanty - few gf
water net 20-0 2 qts sag

gf. copepods + general

10450 Jan 30

2 P.M to 2.15 P.M

Pensacola light NW by N $\frac{1}{4}$ miles
SW fresh smooth cloudy

~~no~~ no nets

~~6~~ fath = 11. meters

①

62

WS

✓

10 M ~~153~~ 153

16.42 @

17

10 M ~~151~~ 151

16.42

10451 Feb. 6 9 Am.

E light clear smooth
Pensacola Bay.

5 fath = 9 m.

Air 32°

Surface 45 ✓

9 m. #153 12.42 @ 8 ✓

Taken to find conditions in bay
after a week of freezing weather

(Left Pensacola 8:30 Am.)

Passed out 10 Am

(Broken gaff bolt.)

10452 Feb. 7th 6.30 Am.

(a) off Melville Bay mud

E. Stiff Choppy litte cloudy.

9-9½ fath = meters.

Surface temp. 55-56

Shrimp trawl:

6.45 - 7.15 Hard to tow
evenly. Short tridles

1/2 bush fish no shrimp

7.40 further in - 40 min.

1 bushel large fine shrimp

1 3/4 " small fish,

8.50 Am. 15 min

3/4 bush shrimp 1/4 bush fish

75 shrimp = 1580 gr.) filled 1

75 " = 1555

75 " = 1530

75 " = 1520

} paper bucket

1045-3 Feb. 9th.

10.05 Am

{ 1 mile S from Slip Id bar outer buoy
W. light clear smooth

Surface temp. 52. WS,
4 $\frac{1}{2}$ to 3 $\frac{1}{2}$ fath.

1st haul shrimp net 15 ft wide, $\frac{1}{2}$ hr.
a few small anchovies

2nd net 0 $\frac{1}{2}$ hr rich mud, brown

$\frac{1}{2}$ m net 0 $\frac{1}{2}$ hr scanty
small foods + few young fish

Baren mud bottom

1045-4 Feb. 9

n.W. light smooth clean

12.50 P.M. $\frac{1}{2}$ hr.

$3\frac{1}{2}$ fath

Chandeleur St NE

Surf temp 54 WS

10 shrimp,

3 trunk-fish (21, 18 + 17 cm)

2 sting rays TT 10752 + 3

1 cutlass fish

6 fin fish

6 trout

1 robin

2 small flounders

a few anchovies + sardines

5 spot 17 to 14 cm.

28 croakers 21 to 12 cm

} 1 qt jar

10455 Feb 9th 1917
P.m.

Chandeleur St.

6 fath^{6 7/8} Surf 54

2.15 P.m.

Bottom trawl

10 min. #151 12.48 @ 11 WS

Shrimp net 2.30 1/2 hr.

1 trunk fish

1 small croaker

2 small shad-fish TT 10754

1 " Saumus

2 " flounder 1 anchovy.

1 " hog-choker

3 shrimp

a few squid

1 small menhaden TT 10751

1045-6 Feb. 9th 1917

4.20 - P.M. 1 hour.

5 fath ~~wave~~ calm smooth clean
surf length 5-4
(to tank bearing N W W) $4\frac{1}{2}$ fath
(Bushel basket weighs 4 kilos).

2 bushels shrimp

27 kilos Tare 8 kilos

$\frac{37}{64}$ " less tare = 56 Kilos .

Haul very clean.

10457 Feb. 10th

8 Am 5 fath, mud
wind E, fresh clear + sand
small chop.

Surf temp 52.5

1st haul

Shrimp net 8 Am
 $\sqrt{1}$ /2 hours

2nd haul further E + farther in

8.45 Am. 45 min.

1st haul 4 shrimp (all soft
1 murexidus
2 ~~Echinos~~ 4 small trout
1 small croaker 1 sea cat
1 actinus many sticklebacks
1 cutlass a few squid
1 opisthobrama

2nd haul -

~~3~~ 9 croakers

1 sea cat

1 menticirrhus

~~3~~ small spot

1 *Krohphycis*

1 small trout

1 *Etrapers*

1 cutlass

1 anchovia

3~~1~~ 4 squid

See wt & slight of
croakers

Sta 10458 Feb. 10th

Wind E

11.15 AM

Ward

Right of Ship Id.

3 1/2 fath.

1/2 hour

pt haul 15 ft

5 bushel shrimp clean haul

+ Bonnet-Head shark 38 cm

+ bonito-fish

+ sting ray, same as before

or Chelomycterus

2 Spot

+ Menticirrhus

+ small trout

2 cuttas

+ batfish

2 Squid

+ Stellifer

2nd haul 12:40 P.M.

5 1/4 fath mud.

35 min.

10 bushel (7 baskets)

Shrimp — practically
no fish & nothing else ✓

Feb. 12th 4⁰⁰ P.M.
Miss. Sound at
pt beacon outside Gulfport,

Surface temp 50.5°

Air. 60°

WS.

1829
183
201.2

Sta 18459 Feb 12.

11.15 Pm to

Am

W.E. stiff, choppy, clear.

11 fath = 20 m. Sand)

0 59 ± ws.

20 ± 15 ± 14.58 @ 10 ws.

11.35 Pm. - 12.05 Am.

20 net 0 net lost

1/2 m net 0 Rich haul of ~~for~~
forams + leptocerphalus

Sled net 20-0.

Rich haul M f. Sagittaria forams
& leptocerphalus

3 Am Struck the muddy water
off the Miss appin, temp dropped
from 64 to 50 at surface

Sta 10460 Feb 13, 17
4:45 Am 10:05 Am

NE light smooth clear

70 fath 128 mi.

Port Eads bearing N of W.

5 Am.

①	50	WS	
25	#149	19.10 @ 12	✓
50	148	19.95 @ 12	✓
100	151	17.93 @ 12	✓
125	153	17.08 @ 12	✓

nets 5-25 Am.

20 net 0 ^{30 min}
Rich micro 1ft + leptocephali'

1km net 0 ^{30 min}
Rich 1ft pods + leptocephali'
inc. Sapphirina

meter net 80-0 ^{40 min}
Rich pods & 4ft inc. macrourids
+ Sternopychidae

9.15 Am off SW pass ran from
comparatively clear water @ 50.5° surface
sharp into thick yellow muddy
water 47°

$$\begin{array}{r} 54.8 \\ 10.9 \\ \hline 75.7 \end{array}$$

9.15 A.M. to 11 A.M.

Sta 10461 Feb 13 AM

E. light smooth clear

water yellow & muddy.

36 fath = 75 meters

S W pass ^{lightship} boarby NE. + about 3 miles.

0 46 WS

25 149 16.58 @ 13 WS

50 148 19.57 @ 13 WS

75 151 failed for 1st time NS.

75 153 18.18 @ 16

20 net 0 15 min

9.30 A.M.
1/2 m net 0 20 min

meter net 50-0 20 min

Rich general + leptcephali

Crypt 10.30 A.M.

Bottom crawl 15 min

baren mud

1 stellifer
2 small
clams

16462 Feb 13 2.15 P.M.

E light smooth clear.

9 fath = 16 m wind

9 miles SE from Barataria St.

0 59.5° WS

15 m. # 153 16.42 @ 16 WS

Pelicans busy fishing.

Net 2.25 P.M.

20 net 0 20 min Diatoms
soft.

1/2 m net 0 20 min Diatoms
& scanty 4 ft

Bottum net 16-0 20 min

diatoms
& scanty 4 ft.

Shrimp trawl 2.55 P.M.

10 min slow

3 bushels large prawns 1 bucket fish

Shrimps

50 weighed	1570	gr.
51	1500	"
50	1650	"
50	1610	

Exact + fair weights

fish -	Paul	$\frac{3}{4}$ kilo	$\frac{9}{4}$ 7.25 $\frac{1}{4}$ 1.75
Trout	103	weighed kilos	5.50
Croakers	2		
Spat	1	Small flounders	11
Baifish	1	(Kept)	
Lizards	2		
Robins	4		
Bandulla	1		
Stellifer	7		
Cuttars	29		
Moon fish	2		
Spadefish	1		
Cats	14		

$$\begin{array}{r} 73 \\ \times 9 \\ \hline 82 \end{array}$$

$$\begin{array}{r} 4.50 \\ 1.75 \\ \hline 2.75 \end{array}$$

Position 11 miles S E from
Barataria St-

2nd haul, 4 P.M.

4½ fath 20 min -

2 or 3 prawns

2/3 bucket fish.

38 *Urotrygonchus* weigh 2.75 Rg.

9 small trout 42 *Stellifer*

+ *Bairdiella*

11 cutters

6 squid

1 puffer

1 sting-ray.

5 cats

2 *Moraycias*

22 small flounders

3rd haul 5:30 PM

5 fath mud.

SW 5 miles from 2nd hauls

15 min

10 shrimp

2 Mendaculus

28 Cutlass

9 small trout

3 " Bairdella

3 Stellifer

1 Hog-choker (left)

6 Squid "

11 Anchovies "

Position
5-6 miles S by W
from Barataria St.

$$\begin{array}{r} 18.29 \\ - 3658 \\ \hline 21948 \end{array}$$

34 miles SSW from outer

Alteafayala St.

$28^{\circ} 47'$ $91^{\circ} 41'$

100'

Sta 10463 Feb 14, '17.

8 Am Am to 10 AM.

S. light, slight chop.

12 fath ^{blue} mud, soft stiff

Plenty schools fish sample.

Tried pure-sein on a school of
prob. mackerel - too light + small - fish
went down.

12 fath = 22 m.

0 62° WS

20 m. [#] 153 17.10 @ 15 WS

845-9 tried to fish shrimp trawl
in mid-water

9.05 Am. Shrimp trawl on bottom.
15 min Barent, 5 robins + 6 squid,
squall.

20 net 0 9.40 Am. 10 AM.
Swarm of diatoms.

1/2 m net 0 Swarm young fish

Sled net 22 m to 0 Good haul young
fish + general

Jan 4. 1917 left Wilmington
8.20 AM & proceeded down
river.

11.45 AM passed Bell buoy
off Cape Fear R. entrance

Jan 18th Dry Tort.
am. Daylight.

Trolled Banacata Park - ind.

119	cm	9	Kg
100	"	4.5	"
85	"	2.75	
77		2	
79		2.25	
98		4.5	
102		5.500	