

Notes by  
W. W. Welsh

STUDENT

Gloucester, Mass., etc

# FILING COVER

To Bind Completed Matter



Course given by

SUBJECT:

For the  
**NATIONAL SEPARATE-LEAF NOTEBOOK**

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

Gloucester, April 17<sup>th</sup>

Capt. Carlo Young, states.

Herring exceedingly scarce, even to the Eastward, where only a few small herring have been taken. The vessels are using frozen alewives for bait, and today he is sending a vessel to Portland for these.

---

A short run of large spawn <sup>shore (?)</sup> herring is expected any day now at Provincetown - the run usually lasts five days or a week. These are taken in traps, and are anxiously awaited for bait purposes. Arranged with him to save me a sample of the first to come in. None of these so-called shore herring are taken any-where on the North Shore of Mass, or anywhere

on the Cape except Provincetown

Sea herring (large, fat) are reported now as being 8 to 15 miles off Gloucester. 5 bbls have been brought in, but none now on the market

According to Capt. Young, this school is a different one from the "shore herring" at Provincetown. They appear off shore 10 to 20 miles

(off Gloucester in the latter part of April), and work east, keeping off shore, past Sequin (May & June), to Mount Desert Rock. Described as

large, weighing about a pound, and very fat. Described also as nearly ripe (off Gloucester) and supposed to spawn off-shore. <sup>Arranged with Capt</sup> Young to save a sample,   
→ all taken in Purse-seines.

In summer very small herring are found in the canal to Squam River

and thorough about Ipswich Bay  
and Essex river.

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Places of inquiry —

Capt. George Nelson, Booth-bay freezer.

— Stanley, S.W. Harbor

McKinley freezer (near Bass Hbr.?)

Portland Cold Storage + Freezer Co.

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Wm F. Stickney, 10 Chapel St. Gloucester,  
(works on Fort Point Fish-wharves) Confirms  
Capt. Young's statements, except that  
he thinks the Sea Herring referred to  
are fat, but not approaching spawning.

---

Purse-seining has not yet begun,  
but many of the little fellows are fitting  
out. Gill netters are still operating,  
but claim to have had a poor season.  
The big run of haddock has not  
arrived so far!

Capt Young,



Who is emphatic in his disapproval of the "Beam Trawl" Report, states it as his opinion that the Trawlers have killed or broken up the schools of both cod & haddock that used to come to the inshore spawning-grounds. Also believes that the said report is unjust to the line fishermen.

Apr. 18<sup>th</sup> Sunday. No receipts of herring, and no new information

Apr. 19<sup>th</sup> (Legal holiday). Left Gloucester <sup>8.20 AM</sup> for Boothbay, arriving at Booth-bay 5.30 P.M. Called up Capt. Hahn, but he was out, & all fish places closed.

Apr. 20<sup>th</sup> 7 to 8.30 AM spent talking round the fish wharves.

A very few small herring (about 5 in. long), are being taken in the few traps now operating. None now on hand. Schools of a smaller size (about 3 inches?) have also been seen. Large Sea-herring not yet reported, but arrived here last year on May 14<sup>th</sup>. Opinion differs as to whether they are spawn herring or not. All agree that they only get as far as Mt. Desert Rock. Here they are reported as coming right ~~out~~ up to the rocks of the outer islands, but are not reported inside.

Saw Capt. Hahn from 9 to 11 Am  
In P.M. had a long talk with  
Capt. George Nelson, who runs the  
Booth-bay freezer. He states that  
the Sea Herring have only been  
a factor here since

about 6 or 7 years ago, when the big run of fall spawn herring stopped. Also that the sea herring arrive about May 12<sup>th</sup> and are abundant not much over a month. The Casco Bay catch is, <sup>mainly</sup> small herring, and are taken to Portland. Very few of the large herring run inside the islands here, although at times a few are taken. He thinks that over fishing (traps) for small herring inside has ruined the industry. Also makes the common complaint of old traps & gurry ruining the ground & frightening fish. Sure that motor-boats <sup>drive</sup> ~~scare~~ them away with noise & oil. — A few ground-fish are being brought in by small trawlers, but do not amount to much

Not many shad last season (offshore).  
None to speak of in the rivers. Sea-  
run shad fishing best off sandy  
beaches. A few salmon are taken  
in traps at Small Point, but none to  
amount to anything.

Capt. Hahn thinks that the  
most important places to stop are  
Millbridge, Jonesport, Prospect, S.W. Hbr.  
Rockland, Boothbay Port Clyde,  
Boothbay.

Finney's fish wharf a good place  
to get information.

David Greenlaw — for trap fish.

Capt Hahn says alewife run at  
Damariscotta Mills, 1<sup>st</sup> week in May,  
is worth seeing + photographing,  
privilege belongs to one Nickerson.

— Note: What really is a Kyak?

Apr. 21<sup>st</sup> Got herring sample in  
Am. (Sample A), and left at 1 P.M.  
for Portland — next to impossible  
to get to Eastport any other way.  
Took 11 P.M. train for Eastport,  
arriving

Apr. 22 at noon. Spent P.M.  
talking things over and getting  
acquainted. Mr <sup>W.S.</sup> Hume and his son  
were fine — the latter took me around.  
Saw Capt. Mitchell (Seasort Packing  
Co) — the best man in these parts

He says. No large herring now  
anywhere. In May go to Griffin's  
Cove etc, St Mary's Bay, also  
Margaretville N.S.

Says also, E end of Fox Island  
therefore ± NW of Goose Rock light  
& see R.C. & A. G. Gillis, after May  
1<sup>st</sup> have weir — + are good men.



Says also - Be sure to see Mr. Stanley who has freezer at Bass Harbor - a good man & good fisherman

No herring here until tomorrow at 1 P.M. (which puts out the schedule again).

The canneries started Apr. 15<sup>th</sup> & there is an unusually large run for this time of year. No netting & no large hauling expected till June or July. Capt Mitchell expects "too many" sardine herring this season

$$\begin{array}{r} 73 \\ 14 \\ \hline 87 \end{array}$$

$$\begin{array}{r} 182.8 \\ 36.0 \\ \hline 232.1 \end{array}$$

Sta 10273 May 10 - 6<sup>30</sup> P.M.

Depth, fath - 127 meters 232

0 let out 75 = 75

50 .. .. 50 = 125

100 " . 50 = 175

150 " 50 = 225

225

---

Sta 10274 May 10<sup>th</sup> - 11 P.M.

Depth 48 fath = 87. meters —

0 let out 40 = 40

40 " .. 40 = 80

80

$$\begin{array}{r}
 1360 \\
 \underline{740} \\
 620 \\
 \\
 2240 \\
 \underline{740} \\
 500
 \end{array}$$

$$\begin{array}{r}
 1520 \\
 \underline{740} \\
 780
 \end{array}$$

$$\begin{array}{r}
 1010 \\
 \underline{740} \\
 270
 \end{array}$$

$$\begin{array}{r}
 860 \\
 \underline{740} \\
 120
 \end{array}$$

$$\begin{array}{r}
 1240 \\
 \underline{740} \\
 500
 \end{array}$$

Can. 740

$$\begin{array}{r}
 950 \\
 \underline{740} \\
 210
 \end{array}$$

$$\begin{array}{r}
 1100 \\
 \underline{740} \\
 360
 \end{array}$$

Set 2. Blue Hill Bay  
May 10. trap. - extras'

15

14

16

15

14

15

15

15

16

15

15

15

15

15

14

14

~~7 14 cm weigh 120 g.~~

~~22 15 " " 500 "~~

~~13 16 " " 360 "~~

~~7 17 " " 210 "~~

~~28 15 cm = 620~~

~~29 16 " 780~~

~~16 17 " 500~~

~~15 14 " 270~~



16	14	15	16	15
16	15	15	16	15
15	15	15	15	16
17	15	17	17	15
16	15	17	15	15
17	15	17	16	15
15	15	17	16	16
17	13	17	16	15
16	15	17	16	15
16	14	15	14	15
15	15	15	15	15
15	13	16	16	15
15	15	16	15	16
14	14	14	15	16
16	15	16	13	17
14	18	17	14	16
16	15	14	16	17
15	15	16	14	14
15	16	16	15	15

16 15

16 14

16 15

15 16

15 16

15 16

16 15

14 14

16 15

14 16

16 15

14 16

17 15

16 15

15 15

15 14

15

15

16

Sample F. = 6. Weir Sheepscot R.  
May 13 1914 (1 Branch being 9 cm<sup>1/2</sup>)

7	14	16	17	16
8	14	17	15	17
6	15	17	17	15
17	15	16	16	14
16	15	17	16	16
16	14	7	14	17
17	15	15	14	15
17	8	18	15	16
16	8	16	14	16
16	8	15	14	17
16	8	15	16	17
17	8	17	15	16
16	8	16	14	16
16	8	17	7	16
16	17	17	17	16
16	17	14	17	17
16	18	16	17	14
15				

15	16	17	15	16
14	16	16	18	17
16	15	13	16	16
15	14	12	16	15
17	17	7	16	16
16	16	8	15	16
17	16	8	16	15
15	14	7	17	17
16	15	6	15	17
16	17	7	17	16
16	16	8	15	15
15	14	8	16	15
16	14	8	18	14
16	17	7	15	13
17	16	17	16	16
8	16	17	18	14
15	16	17	15	13
14	13	16	14	15
16	7	15	16	15
17				

16

17 cm

50 fish

gross 2450  
 tax 740  
 1710

16

14

16

16 cm

67 fish

gross 2500  
740  
 1760

14

16

16

15

15 cm

46 fish

gross 1850  
740  
 1110

14

17

14

14 cm

31 fish

gross 1320  
740  
 580

15

8

7

15

14

15

15

7

7



Feeding on young  $3\frac{1}{2}$  - 5 cm.

7	16	15	17	17
7	5	16	16	17
7	16	16	16	16
7	14	16	7	15
7	6	16	15	17
7	7	16	13	15
18	8	16	15	17
17	8	16	14	15
17	9	16	8	16
16	9	7	7	15
15	15	15	7	16
16	14	15	8	15
7	16	13	7	15
7	15	14	9	14
8	14	17	8	19
7	16	8	7	17
7	17	14	7	17
16	14	14	17	14
18	15	9	8	16

17 15 13

16 15 14

17 15 8

16 16 7

14 17 8

16 13 7

16 15 6

15 15 7

16 15 8

15 14 8

14 14 16

14 15 15

15 15 16

16 14 16

17 14 17

14 14 16

17 15

17 14

16 12

14

18 cm.

27 fish

gross	1700
tax	650
<hr/>	
	1050

17 cm.

27 fish

gross	1660
	760
<hr/>	
	900

19 cm.

11 fish

	1170
tax	640
<hr/>	
	530

20 cm.

3 fish

	20
	640
<hr/>	
	180

21 cm, 2 fish 780

640

140

22 cm 1 fish 80

23 " 1 " 95

16 cm. 33 fish 1540

640

900

15 cm. 30 " 1340

640

1740

14 cm 32 " 1250

640

710

1 B2 Herring 14 cm

(1) (1) (1)



~~7~~

~~7~~ 7

~~8~~ 8

~~9~~ 9

10

11

~~12~~ 12

~~13~~ 13

14

15

16

17

18

19

20

21

22

23

~~16~~ 16

~~17~~ 17

~~18~~ 18

~~14~~ 14

~~15~~ 15

6 ✓

~~|||||  

7 ✓

~~|||||  
|||||~~

8 ✓

15  
~~|||||  
|||||  
|||||  
|||||~~

~~|||||  
|||||~~

9 ✓

16  
~~|||||  
|||||  
|||||~~

10  
10  
10

11

17  
~~|||||  
|||||~~

12

18  
|||

13 ✓  
|||||  
|||||

19  
1

14  

20  
21  
22  
23

Sample 7 Boon Id

May 14-15 Seine.

Purchased frozen at Gloucester

May 20. (good beam scales.)

$$37 = 32$$

$$32 - 36$$

$$36 = 31$$

$$32 = 37$$

$$31 = 27$$

$$28 = 32$$

$$34 = 30$$

$$33 = 38$$

$$35 = 40$$

$$30 = 30$$

Sample 9  
May 20, 1941  
Savannah, Ga.  
Seined. Beach off

Sample 8 May 21<sup>st</sup> 10 miles  
off Thatchers, seine, purchased  
frozen May 22<sup>nd</sup>

Pure red-lead, - pretty full

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Sample 9. May 20. Ipswich  
Bay Seine purchased frozen  
May 22

---

pure red-lead

$$\begin{array}{r} 75 \\ \underline{31} \\ 75 \\ \underline{225} \\ 2325 \end{array}$$



Nightingale sent check: (Capt. says for  $\$6.00$ ) to Capt. Hansen. He gave  $\$5.00$  to the Steward.

Capt. Hansen owes the mess. 6 days @ 42 cents  $\$2.52$ , for meals while vessel was repairing engine in Boston. This makes a balance due the cook of  $\$3.52$ . When the cook tried to collect, Capt Hansen told him to collect at the grocery store where the vessel had been getting supplies. When the cook went to the grocery store, ~~the~~ he was told that they would pay it and add it to next month's bill.

73

10279 May 26, 1915  
10 AM.

41 fath = 75 m,

Surface put on = 30

40 m " " 40

70 m.

0 50

40 ~~5.25~~ <sup>5.25</sup> @ 9.5

70 5.33 @ 12

Quant. 65-0 1/2 meter

Helgoland 60-0

20 net Surface

#5 " "

7 6

7 3

8 6

5 1

18 6

4 3

4

7 7

6 5

5 7

12

---

79 48

79

---

2 | 127  
63.

May 28. Herring sample  
11. Trap. Sheepscot River

Many smelt among them.

Stomachs of smelt full of young  
herring (kept)

Extra numbers Herring

~~14  
HHH HHH HHH  
HHH~~

~~15  
HHH HHH HHH  
HHH HHH HHH  
HHH HHH HHH  
HHH HHH HHH~~

~~16  
HHH HHH HHH  
HHH HHH HHH HHH  
HHH HHH HHH HHH  
HHH HHH HHH~~

~~17  
HHH HHH HHH  
HHH HHH HHH  
HHH HHH~~

~~18  
HHH HHH HHH  
HHH~~

~~19  
HHH~~

20

21

22

---

7

1

13

1

Smelt

15: ~~||||~~

16

17

~~18~~

~~||||~~

~~||||~~

1

~~||||~~ ~~||||~~

1

~~14~~

~~1X~~

---

Gill nets 3, 3 sizes, set  
in cove back of Hatching Booth  
bay May 27<sup>th</sup>, for 1 night,

— Alewives (seals)

1 herring, 19 cm. (small mesh)

Silver hake.



Sample 12, fresh 124 fish  
to the bushie.

Sample 12 - Off Pumpkin Ledges  
Boothbay, May 30. Seine.

Purchased fresh. Very little red-  
extras in stomachs.

34 ✓	315	♂	1	2
33 ✓	270	♂	1	2
33 ✓	300	♂	+	2
34 ✓	320	♀	+	3
34 ✓	310	♂	+	2
31 ✓	250	♂	m	2
33 ✓	275	♀	1	3
31 ✓	250	♀	+	2
33 ✓	270	♂	1	2
34 ✓	320	♀	1	2
32 ✓	290	♀	+	2
32 ✓	270	♂	1	2
33 ✓	290	♀	1	3
33 ✓	290	♂	1	2
32 ✓	270	♀	+	2

33✓	270	♂	+	2
35✓	325	♀	1	2
33✓	280	♀	1	2
32✓	275	♀	1	2
33✓	285	♂	+	2
32✓	260	♂	+	2
32✓	245	♂	1	2

~~24~~ fish to 1st bucket.

33✓	320	♂	+	2
34✓	300	♂	0	2
33✓	300	♂	+	2
34✓	305	♀	+	2
31✓	275	♂	1	2
34✓	315	♀	+	2
34✓	320	♀	+	2
34✓	310	♀	+	2

~~31 - 3~~

~~32 - 6~~

~~33 - 11~~

~~34 - 9~~

~~35 - 1~~

$$\begin{array}{r} 182 \\ 2 \\ \hline 194 \end{array}$$

W.S. g. manan bank 46°

Sta 10282 June 10<sup>th</sup>

107 fath. 194 meters

8 Am. 10 Am

0	<del>333</del> 43	W.S.
50	n. n. y. 5.75 @ 7.25	W.S.
100	<del>R. n. y.</del> 5.33 5.75 @ 6.5	W.S.
180	5.33 5.30 @ 7	W.S.

1/2 meter 180 - 0 m vertical  
very little, mostly Calanus

20 surface } practically nothing  
5 " }

Hel. 175 - 0 Abundant Cal.

Meter ~~180~~ 75 - 0 Scant Cal.

44.25  
06.32  
13 miles W from  
Petrel Passage U.S.

*[Faint, illegible handwriting]*

*[Faint, illegible handwriting]*

185  
281  
18  
9  
602



Sta 10283 June 10<sup>th</sup>

7.40 Pm. - 9.30 Pm

115 fath = 209 meters to  
uneven bottom. 180 m.

0 42 W 3

50 <sup>533</sup> / 5-30 @ 6

100 407.5-12 @ 6

180 533 364 @ 6

1/2 m net vert. 180-0 struck bottom  
colony foods + red feed good quantity

# 20 surface scant

# 5 " "

Helgeland 100-0 m.

1/2 quarts colony foods +

~~red~~ much red feed  
several large sagitta

Clear smooth fresh W.

$$\begin{array}{r} 11.0 \\ 2\frac{1}{2} \overline{) 27.5} \\ \underline{5.0} \\ 22.5 \\ \underline{22.5} \\ 0.0 \end{array}$$

9 kilos = 9 liter  
capacities of paper bucket

Sta 10284 June 11<sup>th</sup>

5.35 A.M. 6.30 A.M.

Clear ~~by~~ hazy smooth, calm.

50 fath = 91 m, but shoaling

0	42		WS
40	71 + η.	5.15 @ 7	WS
80	533	5.25 @ 9	WS

1/2 m. vertical 80-0 m. <sup>fair amount</sup> redfeed  
20 <sup>pair diatom</sup> + 5 on surface scant

meter net 70-0  
2 qts solid redfeed

1 chione 1 Sagitta

Sta 10285 June 14<sup>th</sup>

6.30 Am. Calm, cloudy, smooth

fath = meters.

Surface temp.

W.S. ✓

46.5

20 net 0, 10 min.

1/2 meter net 0, 15 min

15-

A few minutes tow clogged  
the nets with diatoms.

1/2 meter net, some fish eggs  
also.



Sta 10286 June 14  
~~9:30~~ 9:30 AM.

52 fath = 95 meters.

Seeg South. Smooth  
light

0	45.5		WS.
40	7.04	5.44 @ 7	WS
80	5.20	@ 7	WS,

Vertical	80-0	fair- redfeed
Water	70-0	fair haul <sup>mostly calanias</sup> + eggs.
1/2 m	Surface	Some calanias + eggs
20	"	micro abundant <u>Red</u>



$$\frac{735.4}{78}$$

$$\frac{735}{78}$$

10287 June 14<sup>th</sup>  
Off Matineus, 4.15 PM - 5.15 PM

S. light, smooth clear

43 fath = 78 meters

0	46	WS
35	N+7 170233	5.95 @ 12 WS
70	S+V. 5-33	4.90 @ 13 WS

1/2 meter vertical 80-0

meter net 50-0

20 m " surface

1/2 m " "

USE THIS IN THE BOOK  
AS AN

# INDEX SHEET

To divide off the work  
in different studies

— OR —

as a

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To bind, with the fasteners,  
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## National Notebook

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

SUBJECT OF STUDY:

Handwritten notes in the margin:

$$\frac{227}{36} = 6.281$$

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



10288

June 19, 195  
2.30 Am.

125 fath = 227 meters.

0 = 49.5°

50 = 5.7 no. 533 at 9.

~~100 = 10.0 no. N2 at 9~~

150 = 5.7 no. 12233 at 9.

220 = 6.3 no. 533 at 9.

~~100 rep = 4.96 533 at 8~~

WJ. at 0, 50, 100, 150, 220.

$\frac{1}{2}$  m  
# 20 + north on my.

$\frac{1}{2}$  m: 200 - 0 vert.

meter, 85 - 0

1 kel. 185 - 0

196  
23  

---

152

10289 - 11 AM.

84 path 153 m.  
160 m.

T at 0 46°

50 5.95 No 533 at 7.

100 ~~5.78~~ No ~~577~~ at 8

~~150 1.30 No 533 at 7.5~~

150 5.85 No 533 at 7.

150 15.95 No NZ at 8.

W.S. 0, 50, 100, 150.

Hydrographer exp

2<sup>nd</sup> shot

50 m SV 5-33

150 m Noq.



$$\begin{array}{r} 54 \\ 10 \\ \hline 64 \end{array}$$

10290

June 19<sup>th</sup> 5:30 P.M.

64 meters

0 43°

25-5.92 NZ NZ at 7

60 5.88 NZ 5.23 at 6.5

1/2 m. west 60-0.

#20 + 1/2 m. on surf.

#7. at 40-0.

$$\begin{array}{r} 735 \\ \hline 78 \end{array}$$

Sta 10291 June 23, 830 AM

78 meters.

0 48°

30 3.58 m NZ at 6.5-

75 1.07 m 533 at 5.

WS - 0, 30, 75 —

1/2 m. bet, 70 - 0.

meter net 60 - 0

1/2 m } surface  
20 net }

$$\begin{array}{r} 746 \\ 11 \\ \hline 557 \end{array}$$

$$\begin{array}{r} 1.82 \\ 1.8 \\ \hline 2.10 \end{array}$$

$$\begin{array}{r} 1.82 \\ .28 \\ \hline 2.10 \end{array}$$

10292 - June 23.  
11 AM.

Depth = ~~86 feet~~ 157m

$\sigma = 47.5$

50. = .90 <sup>33.8</sup> W <sup>SW</sup> at 6.  
N. 2.

75. = .90 <sup>33.8</sup> W 233 at

150 = 4.38 <sup>39</sup> W. 533 at 6.5

(100 = 2.1? W N. 2. at 6.)

WJ at 0, 50, 100, 150.

---

1030. mg.



$$\begin{array}{r} 73 \\ 14 \\ \hline 87 \end{array}$$

10293 - June 23  
48 fath = 87 m.

0	50°	
40	81.6° at 6°	NW. 72
85	1.8° at 6°	NW. 53

---

1/2 m. bet. 75-0 m.

---

#20 + 1/2 m. on surf.  
meter at 50-0 m

---

10294 June 23

10 P.M.

97 fath.

cloudy - light E.

0 49.5° at

40 3.1° at 8 M 533

80 2.27 at 7 M

120 7.5° at 7.5 M 233

170 8.25 at 7 M 533

WS. at 0, 40, 80, 120 & 170 meters

1/2 m. vert - 170 - 0.

# 20 & 1/2 m. on surf.

meter net at

10295 June 29  
3 Am.

---

0.52°

80	3.75	at 10	no 533
200	8.2	at 10	no
300	7.3	at 10	no N2
500	5.05	at 10	no 533

---

# 20 + 1/2 m - surface  
meter 300? - 0

---

brisk N - cloudy  
fifty chuffs.

---

10296. 49 Jall

from 24 - 1 PM,

0. 50° at . 20.

40. 2.88 at . 8° 20.

80 7.45 at 9 20.

---

<sup>14</sup>  
<sub>32</sub>  
with net 50 - 0

# 20 on surf

---

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10299.

182  
54  
236

Am 25 - midnight  
130 fath ±

0 50°

40 8.6 at 10° NW 2

100 8.17 at 9 NW 533.

150 7.72 at 10 NW 533

225 7.2 at 9 NW 2

WS. 0, 40, 100, 150, 225

$$\begin{array}{r} 183 \\ 36 \\ \hline 219 \end{array}$$

10299.

---

120 path = 219,

0 56.5°

50 6.3 at 11 NW 2

100 4.7 at 10. " NW 2

210 5.8 at 10 " 533

---

1/2 m. test 200 - 0

# 20 on conf.

---

Sta.  
10301 July 15<sup>th</sup> 1915  
(re scarcity of herring) 10 AM

73 meters.  
3 miles SW by W. from Sebey Id. Pt.

0 48° W.S.

60 m. 7.20 @ 9 44.23 W.S.

meter net 60-0 m. }  
1/2 " " Surface } 1/2 hr.  
20 " " " }

Surface 20 net, rich diatom

1/2 m net. Many fish eggs - 2-3 sh.

many very young Calanus

+ a few green copepods

50-0 m, meter net Many young Calanus

Many fish eggs. A few green

copepods + larval fish

→ No feed at all.

10529

41	420	♀	6
41	450	♀	7
37	380	♀	7
38	420	♀	7
42	540	♀	6

Provincetown July 8,

Fish in 2 bushels recd from  
trap net

139 *Milvulus*

1 shad (Scales taken)

1 squirrel hake

15 kyacks (*P. pseudoharengus*).

Of these last a few were recently  
spent, and thin, but most had  
recovered and were quite fat

See over for  
merchandise



FS

22 1

23 1

~~24~~

25 ~~|||||~~  
~~|||||~~  
~~|||||~~  
~~|||||~~

39

26 ~~|||||~~  
~~|||||~~  
~~|||||~~  
~~|||||~~  
~~|||||~~

50

27 ~~|||||~~  
~~|||||~~  
~~|||||~~  
~~|||||~~

36

28 ~~||||~~  
||

7

29 ||

2

30

2

(31)

1

1  
1  
2

1

10

(10)

(44)

Score

(21)

(66)

(54)

(13)

(4)

(1)

✓ 25 - 160

(3 scale samples)

22 - 115

✓ 27 - 190

✓ 26 - 185

✓ 28 - 235

✓ 27 - 195

✓ 28 - 260

✓ 26 - 210

✓ 26 - 190

✓ 27 - 215

✓ 26 - 190

over

*Panoldus aestivalis*

Set 81 A.

Provincetown Mass. July 7<sup>th</sup>

- 27 - 215 mm. red feed.  
26 - 220 "  
29 - 245 "  
25 - 180 "  
26 - 210 "  
27 - 210 +  
27 - 205  
26 - 200  
26 - 190  
28 - 235  
27 - 220  
26 - 190  
26 - 185  
26 - 180  
25 - 180  
26 - 190  
25 - 165
- all very fat,  
but small

10300 July 7<sup>th</sup>

10 A.M.

33 fathoms = 59 meters.

0 6Z W.S.

50 m. 6.90 @ 16 W.S.  
u-y.

Bottom net, <sup>Sargassum</sup> many young  
gadoids & flounders

meternet 0 many fish eggs

20 net 0 Scant

Sample 14 extras

14

15

16

11

17

18

19

11

1

20

21

22

11

~~11~~ ~~11~~ ~~11~~

~~11~~ ~~11~~ ~~11~~

1

23

24

$$14 - 2$$

$$15 - 1$$

$$17 - 4 = 1379$$

$$18 - 5 = 2059$$

$$19 - 1 = 509$$

$$20 - 2 = 1249$$

$$21 - 16 = 1055$$

$$22 - 13 = 9909$$

$$23 - 1 = 85$$

$$\begin{array}{r} 54 \\ \cancel{15} 54 \\ \hline 59 \end{array}$$



Sta 10281 June 4, 12.30 PM  
cloudy, S.W. ~~calm sea~~ smooth sea  
Rock was abundant

87 m.

0	40
40	* 7+7. 465 @ 6
80	533 466 a 6.5

Inant. 80-0 yielded nothing  
Meter net 50-0  
#20 surface  
#5

Cutter No. May 4. Sample 14  
From Weir (Single Heat, brush + wire)  
(at entrance to harbor. No U.S. 86)

Very poor catch of medium sized  
herring. ~~the~~ Not over 1 1/2 bushels.

Also about 2 bushels squid, 30  
flounders. 1/2 bushel smelt, 1 bushel  
small pollock + 2 or 3 cod,  
6 sculpins, 1 King Norway, +  
1 very large lumpfish, 1 large  
alewife.

Took photos. Owner says season  
very poor so far - these herring  
larger than usual at this time  
Spawn herring in late June or  
early July.

Over  
2 H.

73

14

87

~~48~~

~~14~~

62

10 net 2 qt. Calanus

8 chin 3 raggitae

Several fish-larvae

1 aspidopheroide " "

2 Cyclopterus a few fish eggs.

20 net a few diatoms - scant -

11 net " " Calanus, 1 schizopod

many fish eggs. a few larvae

fish.

Sta 10280 May 31<sup>st</sup>  
7 Am. to 8.15 Am  
~~2 fath = 44 Am~~  
16 fath.

smooth clear h. e. light.

surf - 44.5

~~20 44.14~~

40 533 5.78 @ 17  
16 fath 28 m.

meter net 15 - 0 m.

20 net 0

# 5 0

2 large fin backs  
10 or 12 seiners in company  
catching herring 3 line trawlers  
This is the place sample 12 was  
caught yesterday. open.

$$\begin{array}{r} 7.3 \\ 36 \\ \hline 44 \end{array}$$



Paovimtown May 25

Sample of Hake (Ueluccus)  
from trap. Also 2 herring  
& 1 squirrel hake

Squirrel Hake	40	♂	V	400	
Herring	33	♂	II	280	1
	25	♀	II	125	1

Sample D. Taken in purse-seine  
Apr. 23, off Isle of Shoals.  
Purchased at Gloucester freezer  
in frozen condition, May 3<sup>rd</sup>.

As 95% of the caudals were  
badly broken, these fish are measured  
only to last scale on caudal.

A few with some red feed + schijfods  
left Gloucester May 4, 10 Am.

Sample C. Taken in trap  
 at Provincetown Apr. 19-24  
 1915. Bought frozen at  
 Boston Apr. 27<sup>th</sup>  
 Contained a good deal of Calanus + Schizopoda

24 cm.	1
25 "	2
26 "	2
27 "	5
28 "	3
29	6
30	55
31	76
32	31
33	6
34	3
	<hr/>
	190

Scales + weights (by cheap  
 spring balance in ounces).

<del>14</del>	<del>13</del>	<del>15</del>	<del>12</del>
<del>15</del>	<del>16</del>	<del>14</del>	
<del>11</del>	<del>16</del>	<del>12</del>	
<del>13</del>	<del>15</del>	<del>17</del>	
<del>9</del>	<del>15</del>	<del>15</del>	
<del>13</del>	<del>14</del>	<del>13</del>	
<del>13</del>	<del>13</del>	<del>14</del>	
<del>2</del>	<del>14</del>	<del>13</del>	
<del>14</del>	<del>15</del>	<del>13</del>	
<del>14</del>	<del>13</del>	<del>14</del>	
<del>12</del>	<del>15</del>	<del>8</del>	
<del>14</del>	<del>12</del>	<del>14</del>	
<del>14</del>	<del>9</del>	<del>9</del>	
<del>13</del>	<del>15</del>	<del>8</del>	
<del>13</del>	<del>10</del>	<del>8</del>	
<del>15</del>	<del>14</del>	<del>8</del>	
<del>14</del>	<del>12</del>	<del>8</del>	
<del>10</del>	<del>8</del>	<del>9</del>	
<del>13</del>	<del>12</del>	<del>10</del>	

These fish contained almost nothing

Total  
 B.  
 16 1/4 lbs  
 3 1/2  
 -----  
 12 3/4 lbs nett.

375) 12.75 ( .034 lbs each  
 1125  
 1500  
 1500

~ about 15.5 grams

In envelopes 101  
 measured 274  
 Total 375

a fair sample, perhaps running a trifle smaller than the average

14	13	15	15	16	12
14	14	12	12	12	15
15	12	14	12	12	12
12	9	14	13	13	13
9	13	11	11	11	14
12	14	12	16	14	9
14	12	15	8	14	11
11	13	11	15	15	9
13	15	13	13	15	12
11	10	11	11	15	14
15	10	12	14	14	11
17	12	15	14	13	12
11	14	15	13	15	14
9	11	14	12	15	14
13	13	12	15	11	17
14	13	11	15	13	10
15	14	14	15	9	13
9	12	14	15	13	13
14	11	11	16	11	14

$$\begin{array}{r}
 2.2 \overline{) 12.75} \\
 \underline{110} \\
 175 \\
 \underline{176} \\
 \hline
 5.8 \text{ kg.}
 \end{array}$$

$$\begin{array}{r}
 375 \overline{) 5800} \\
 \underline{3750} \\
 2050 \\
 \underline{1875} \\
 1750 \\
 \hline
 15.5
 \end{array}$$
  

$$\begin{array}{r}
 19 \\
 \underline{38} \\
 58 \\
 \underline{216} \\
 274
 \end{array}$$



Additional lengths, lot B

Apr. 23, Deer Id. Eastport

<del>15</del>	<del>13</del>	<del>8</del>	<del>14</del>	<del>11</del>	<del>14</del>
<del>12</del>	<del>13</del>	<del>11</del>	<del>13</del>	<del>12</del>	<del>15</del>
<del>14</del>	<del>13</del>	<del>14</del>	<del>13</del>	<del>13</del>	<del>13</del>
<del>14</del>	<del>15</del>	<del>14</del>	<del>16</del>	<del>14</del>	<del>15</del>
<del>15</del>	<del>13</del>	<del>17</del>	<del>15</del>	<del>13</del>	<del>12</del>
<del>14</del>	<del>13</del>	<del>13</del>	<del>15</del>	<del>14</del>	<del>13</del>
<del>12</del>	<del>14</del>	<del>14</del>	<del>14</del>	<del>12</del>	<del>15</del>
<del>11</del>	<del>14</del>	<del>15</del>	<del>12</del>	<del>13</del>	<del>13</del>
<del>15</del>	<del>14</del>	<del>14</del>	<del>13</del>	<del>12</del>	<del>13</del>
<del>14</del>	<del>14</del>	<del>11</del>	<del>12</del>	<del>15</del>	<del>13</del>
<del>9</del>	<del>12</del>	<del>13</del>	<del>13</del>	<del>12</del>	<del>13</del>
<del>11</del>	<del>9</del>	<del>12</del>	<del>12</del>	<del>11</del>	<del>12</del>
<del>12</del>	<del>11</del>	<del>10</del>	<del>14</del>	<del>13</del>	<del>13</del>
<del>14</del>	<del>15</del>	<del>12</del>	<del>13</del>	<del>12</del>	<del>14</del>
<del>10</del>	<del>15</del>	<del>15</del>	<del>15</del>	<del>13</del>	<del>15</del>
<del>13</del>	<del>14</del>	<del>13</del>	<del>15</del>	<del>12</del>	<del>12</del>
<del>14</del>	<del>11</del>	<del>11</del>	<del>11</del>	<del>12</del>	<del>15</del>

$$\begin{array}{r} 19 \\ 6 \\ \hline 114 \\ 102 \\ \hline 216 \end{array}$$

$$\frac{17}{6} \\ \hline 102$$

Tare.  $3\frac{1}{2}$  lbs.

16

4

~~16~~

39

123

Additional lengths, lot A

Badly sealed. E.B. Bay Apr. 20.

15	18	16	17
17	17	17	15
<del>14</del>	16	16	14
19	15	15	17
18	16	18	18
17	16	18	17
16	17	16	15
16	17	18	15
18	17	16	13
17	17	15	14
17	18	19	18
18	17	14	16
14	18	17	15
18	15	16	15
17	16	16	15
18	17	18	16

These fish contained a very few copepods.

$$\begin{array}{r} 17 \\ 6 \\ \hline 102 \end{array}$$

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