

TI 465

APPENDIX, No. VI.

- i. Plankton collected at Irish Light Stations in 1904, by LEWIS HENRY GOUGH, Ph.D.
 - ii. Hydrographical Observations at Irish Light Stations, 1904.
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i.

PLANKTON COLLECTED AT IRISH LIGHT STATIONS
IN 1904.

BY

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INTRODUCTION.

The results of townettings taken regularly every fortnight in 1904 at Skulmartin, South Arklow and Coningbeg Lightships, and at Fastnet Lighthouse, are shown on the following tables.

All the samples were taken in the same way, and with similar apparatus. The nets used each have an opening of 18 inches diameter, the bags are 36 inches long, conical and truncated at the ends; the diameter of the cod-end is $2\frac{1}{2}$ inches. The nets themselves are made of two grades of silk, the front 18 inches are of silk with 50 meshes to the inch, the hinder 18 being of silk with 180 meshes to the inch. This arrangement enables the net to catch the zooplankton and phytoplankton equally well. The samples were taken from the Light stations, using the movement of the tide to capture the plankton. Each sample represents half an hour's tide-flow through the nets. To ensure greater comparability the samples were always taken at spring-tides, at the same state of the tides, so that, for each station, the samples are taken from water coming from the same direction.

It is perhaps too early, before another year's results have been obtained, to discuss in detail the changes, seasonal or otherwise, in the plankton at the different stations; a comparison of the stations *inter se*, however, produces interesting results.

According to the general character of the plankton, the stations under consideration can easily be arranged into two groups—
Fisheries, Ireland, Sci. Invest., 1904, VI., [Published, April, 1906].

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Fastnet and Coningbeg on the one side, Skulmartin and South Arklow on the other. The material taken at Fastnet and Coningbeg was very similar, almost always consisting nearly entirely of zooplankton, *Calanus finmarchicus* and *Metridia lucens* forming the bulk of the samples; the phytoplankton from these stations was always poor in species and in quantity. A noticeable fact is the generally discontinuous range of the species during the year. In contrast to this, the plankton taken at South Arklow and Skulmartin usually showed a smaller quantity of zooplankton, the bulk of the samples always being less than that from Coningbeg or Fastnet. At the same time, the phytoplankton was usually richer, especially in individuals, the range of several of the species being much more continuous.

It is often a noticeable fact that when the plankton is specially rich in copepods, the phytoplankton is correspondingly poor. Samples containing very large quantities of zooplankton seem further to be most often met with in positions similar to those of Coningbeg or Fastnet; as for instance, in the most western portions of the English Channel, on the border between the open ocean and the enclosed or coastal waters. In the case of the discontinuous range in time of some of the species of phytoplankton, the position again seems to be an important factor. This is especially the case with neritic diatoms, such as *Biddulphia mobiliensis*. In some places it appears to be a seasonal species, whose period of vegetation falls in the winter and early spring, for instance, at Coningbeg and Fastnet; in other localities it is found for a much longer period, and in places where the factors which go to make the plankton assume a neritic character are most evident, it becomes a perennial, as at South Arklow and Skulmartin. This is also the case to a greater or lesser degree with several other neritic organisms, such as species of *Guinardia*, *Hyalodiscus*, *Coscinodiscus*, and *Bacillaria*. In a similar way among the Copepoda neritic species which appear to be seasonal at some places, are perennial at others, for instance, *Temora longicornis*; but in this case there is a great difference. *Temora* is usually commoner during the warmer part of the year, disappearing in winter more or less at stations nearer the ocean, but being fairly constant at sheltered places far from its influence. This is specially noticeable in the English Channel, where it spreads far to the west in summer, but is restricted to the east in winter.

As will be seen from the tables, *Muggiaea atlantica* was observed first at South Arklow, then at Coningbeg, and then at Fastnet. In this connection it is interesting to observe that the shoals of *Muggiaea* probably struck the Irish Coast after having travelled through the English Channel, which they entered at Ushant in May. As I have dealt with the migrations of *Muggiaea in extenso* in another paper on the subject (*Publications de Circonstance*, No. 29, *Conseil Permanent International pour l'Exploration de la Mer*), further reference is unnecessary here.

VI. '04,

5

The *Pasiphaë* referred to in the Tables for South Arklow and Skulmartin was probably *P. sivado*, Risso.* It appears to occur there at times in great quantities, as many as 7 or 8 full-grown specimens having been taken in single townettings (in 1905).

Since these tables were printed, Professor H. H. Gran's paper "Diatomaceen" has appeared in "Nordisches Plankton." According to this paper, the *Thalassiothrix curvata* and *T. Frauenfeldi* mentioned in the following tables should be *Thalassiothrix nitzschoides*, Grun.

For the rest, I leave the Tables to speak for themselves. The signs used there are the same as are recommended by the Central Bureau of the Conseil Permanent International pour l'Exploration de la Mer: they are—

rr. very rare.

r. rare.

+ moderately numerous.

c. common.

cc. very common.

* *P. sivado* is hardly represented in published records from the seas between England and Ireland. Adults are, however, common in Lambay Deep, and the young have often been taken by the *Helga* in other parts of the Irish Sea — E. W. L. H.

STATION COLLECTED AT

IRISH LIGHT STATIONS, 1904.

Lat. 54° 32' N., Long. 5° 25' W. 20 Fathoms.

April.	May.		June.		July.		August.		September.		October.		November.		December.		Species No.	
	30. 7.40 a.m.	16. 8.0 a.m.	30. 8.30 a.m.	15. 8.15 a.m.	28. 3.10 p.m.	13. 7.30 a.m.	28. 8.45 p.m.	12. 8.10 p.m.	27. 8.25 p.m.	12. 9.0 p.m.	26. 8.45 p.m.	10. 8.10 p.m.	25. 8.0 p.m.	8. 8.15 p.m.	24. 7.40 a.m.	8. 7.55 a.m.		23. 8.15 p.m.
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	r	r	..	r	..	..	..	..	..	r	..	..	..	..	..	..	..	DIATOMACEAE.
	r	r	r	r	r	r	r	..	+	r	+	r	r	r	+	..	..	<i>Achnanthes</i> sp. 1
	..	..	+	..	+	cc	r	..	..	r	..	+	..	..	..	..	..	<i>Actinoptychus undulatus</i> , Ehb. 2
	+	r	+	r	r	r	r	..	r	r	..	..	..	..	..	..	..	<i>Asterionella glacialis</i> , Castr. 3
	..	..	..	..	..	..	..	..	..	..	..	..	..	r	..	r	..	<i>Bacillaria paradoxa</i> , (Gmel.), Gran. 4
	..	..	..	..	..	..	..	..	..	..	..	..	..	r	..	r	..	<i>Bellerochea malleus</i> , (Btw.), V. Heurck. 5
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>Biddulphia alternans</i> (Bail.), V. Heurck. 6
	r	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— aurita</i> , (Lyng.) Breb. 7
	..	r	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— favus</i> , (Ehb.), V. Heurck. 8
	c	+	c	..	r	r	r	+	r	+	+	+	+	c	c	c	c	<i>— mobiliensis</i> , Bail. 9
	..	..	+	c	c	+	r	..	..	..	..	..	..	r	..	..	..	<i>Cerataulina Bergoni</i> , Pérag. 10
	..	..	..	r	r	r	..	..	..	..	..	..	..	..	..	..	..	<i>Chaetoceras constrictum</i> , Gran. 11
	..	r	r	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— contortum</i> , Schütt. 12
	..	..	r	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— convolutum</i> , Castr. 13
	..	..	..	..	r	r	..	..	..	..	..	..	..	..	..	..	..	<i>— crinitum</i> , Schütt. 14
	..	..	c	..	..	+	..	r	..	r	..	..	..	..	..	..	..	<i>— curvisetum</i> , Cleve. 15
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— danicum</i> , Cleve. 16
	..	r	r	r	r	r	..	..	..	..	..	..	..	..	..	..	..	<i>— debile</i> , Cleve. 17
	..	+	r	r	r	+	..	r	+	+	+	+	+	+	+	r	+	<i>— decipiens</i> , Cleve. 18
	..	r	+	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— diadema</i> (Ehb.), Gran. 19
	..	..	..	..	..	..	..	..	..	..	..	..	..	r	..	..	..	<i>— didymum</i> (Ehb.), Cleve. 20
	..	..	r	..	r	..	..	..	..	..	..	..	..	..	..	..	..	<i>— Jacinosum</i> , Schütt. 21
	..	..	..	..	..	..	..	..	r	..	..	..	..	r	r	..	..	<i>— Schützi</i> , Cleve. 22
	..	r	+	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>— scolopendra</i> , Cleve. 23
	r	r	r	..	r	..	..	..	..	..	..	..	..	..	..	..	..	<i>Coscinodiscus concinnus</i> , W. Sm. 24
	c	+	..	..	r	..	..	r	r	r	r	+	+	+	c	c	c	<i>— excentricus</i> , Ehb. 25
	..	..	..	..	..	..	..	..	..	..	..	r	r	r	..	..	..	<i>— Grani</i> , Gough. 26
	..	..	..	r	r	..	..	..	r	+	+	..	..	..	..	..	..	<i>— oculus iridis</i> , Ehb. 27
	c	+	+	+	+	..	..	c	c	c	c	+	+	c	c	c	c	<i>— radiatus</i> , Ehb. 28
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	<i>Coscinosira polychorda</i> , Gran. 29
	..	..	..	..	r	r	+	+	r	c	+	+	r	r	..	r	r	<i>Ditylum Brightwelli</i> , West. 30

SKULMARTIN LIGHTSHIP—continued.

Species No.	—	Jan.	Feb.		March.			April.		May.		June.		July
		22. 10.30 a.m.	3. 8.20 a.m.	16. 8.0 a.m.	3. 8.30 a.m.	18. 8.30 a.m.	31. 7.30 a.m.	15. 6.30 a.m.	30. 7.40 a.m.	16. 8.0 a.m.	30. 8.30 a.m.	15. 8.15 a.m.	28. 3.10 p.m.	13. 7.30 a.m.
	DIATOMACEAE—con. :	I	2	3	4	5	6	7	8	9	10	11	12	13
31	<i>Eucampia zoodiacus</i> , Ehb.,	..	..	..	..	..	..	..	..	..	..	r	..	..
32	<i>Fragillaria c. f. oceanica</i> , Gran,	..	..	..	..	..	..	..	..	..	..	r	+	r
33	<i>Guinardia flaccida</i> , Pér., ..	rr	rr	..	..	r	rr	..	..	..	r	r	+	+
34	<i>Hyalodiscus stelliger</i> , Bail.,	+	+	c	c	r	r	+	r	r	r	r	r	+
35	<i>Isthmia sp.</i> , ..	r	..	r	r	..	..	+	..	rr	..	+	rr	r
36	<i>Lauderia borealis</i> , Gran, ..	..	..	..	..	r	r	+	..	..	+	rr	..	..
37	<i>Leptocylindrus danicus</i> , Cleve,	..	..	..	..	..	..	..	..	..	..	..	..	..
38	<i>Navicula membranacea</i> , Cleve,	..	..	..	..	..	..	..	..	..	..	..	..	..
39	<i>Nitzschia seriata</i> , Cleve, ..	..	..	..	..	..	..	..	..	..	..	..	..	..
40	<i>Paralia sulcata</i> (Ehb.), Cleve,	c	c	+	+	+	+	+	+	+	r	r	r	..
41	<i>Pleurosigma sp.</i> , ..	+	r	r	+	+	+	r	..	r	..	rr	..	..
42	<i>Rhizosolenia alata</i> , Btw., ..	..	..	..	..	..	..	..	..	..	..	..	..	rr
43	— <i>delicatula</i> , Cleve, ..	..	..	..	..	..	..	..	rr	..	..	..	+	c
44	— <i>semispina</i> , Hensen, ..	..	..	..	..	..	..	..	..	..	r	rr	..	rr
45	— <i>setigera</i> , Btw., ..	..	..	..	..	rr	rr	rr	rr	r	..	..	r	+
46	— <i>Shrubsolei</i> , Cleve, ..	rr	..	..	rr	r	rr	r	..	..	+	+	rr	r
47	— <i>Stolterfothi</i> , Pér., ..	..	..	..	..	..	..	..	..	..	..	rr	..	c
48	<i>Skeletonema costatum</i> (Grev.), Cleve,	..	..	rr	..	..	+	+	c	r	r	..	..	c
49	<i>Stephanopyxis turris</i> , Grev.,	..	..	..	..	..	..	..	..	..	..	..	..	..
50	<i>Streptothea tamesis</i> (Shr.). Cleve,	+	r	+	+	+	+	+	..	..	+	..	..	..
51	<i>Thalassiosira gravida</i> , Cleve,	..	..	..	..	..	..	r	r	..	r	..	..	..
52	— <i>Nordenskiöldi</i> , Cleve, ..	..	..	..	..	..	..	..	r	r	c	..	..	..
53	<i>Thalassiothrix curvata</i> , Castr.,	..	r	+	+	+	+	..	r	..	..	..	..	..
54	— <i>Frauenfeldi</i> , Grun., ..	r	r	+	+	+	+	r	+	..	..	..	r	..
	PERIDINIDAE.													
55	<i>Ceratium furca</i> , Clap. & Lachm.,	c	..	+	+	+	+	..	..	..	..	rr	..	..
56	— <i>fuscus</i> (Ehb.), Duj., ..	r	..	r	..	..	r	..	..	..	..	..	r	..
57	— <i>horridum</i> Cleve, ..	..	..	..	..	..	..	..	..	..	..	..	..	..
58	— <i>longipes</i> (Bail), Cleve,	r	..	..	..	..	..	..	..	..	..	..	..	..
59	— <i>tripos</i> (O. F. Müll., Vanhöfen,	..	..	..	..	..	..	..	..	..	..	..	..	..
60	<i>Dinophysis acuminata</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..	..	..	..	..	..
61	— <i>rotundata</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 54° 32' N., Long. 5° 25' W. 20 Fathoms.

July.		August.		September.		October.		November.		December.		Species No.
13. 7.30 a.m.	28. 8.45 p.m.	12. 8.10 p.m.	27. 8.25 p.m.	12. 9.0 p.m.	26. 8.45 p.m.	10. 8.10 p.m.	25. 8.0 p.m.	8. 8.15 p.m.	24. 7.40 a.m.	8. 7.55 a.m.	23. 8.15 p.m.	
13	14	15	16	17	18	19	20	21	22	23	24	DIATOMACEAE—con.:
..	..	..	..	..	rr	..	r	..	r	..	..	<i>Eucampia zoodiacus</i> , Ehb. 31
r	..	..	..	..	..	..	..	..	..	..	..	<i>Fragillaria c. f. oceanica</i> , Gran. 32
+	+	c	+	+	+	..	rr	..	rr	r	r	<i>Guinardia flaccida</i> , Pér. 33
+	+	+	+	c	+	c	c	c	+	r	r	<i>Hyalodiscus stelliger</i> , Bail. 34
r	..	+	+	+	r	+	r	r	+	+	r	<i>Isthmia</i> sp. 35
..	..	r	r	+	r	+	r	..	rr	..	..	<i>Lauderia borealis</i> , Gran. 36
..	..	..	rr	..	..	..	..	..	..	..	..	<i>Leptocylindrus danicus</i> , Cleve. 37
..	..	..	..	..	r	..	..	..	..	..	..	<i>Navicula membranacea</i> , Cleve. 38
..	..	r	..	..	r	..	..	..	..	..	..	<i>Nitzschia seriata</i> , Cleve. 39
..	r	+	+	+	+	+	r	+	+	r	+	<i>Paralia sulcata</i> (Ehb.), Cleve. 40
..	..	rr	+	r	rr	r	r	r	r	r	r	<i>Pleurosigma</i> sp. 41
rr	..	..	..	..	..	..	..	..	..	..	..	<i>Rhizosolenia alata</i> , Btw. 42
c	+	+	rr	..	..	..	..	..	..	..	..	— <i>delicatula</i> , Cleve. 43
rr	..	..	..	..	..	..	..	..	..	..	..	— <i>semispina</i> , Hensen. 44
+	r	rr	r	r	r	+	r	r	..	..	r	— <i>setigera</i> , Btw. 45
r	rr	r	..	..	..	..	..	rr	..	rr	..	— <i>Shrubsolei</i> , Cleve. 46
c	r	c	..	..	r	r	r	..	..	..	..	— <i>Stolteriothi</i> , Pér. 47
c	rr	rr	rr	..	..	..	..	..	..	..	..	<i>Skeletonema costatum</i> (Grev.), Cleve. 48
..	..	..	..	..	rr	..	..	..	..	..	..	<i>Stephanopyxis turris</i> , Grev. 49
..	..	..	rr	..	+	+	c	+	+	+	+	<i>Streptotheca tamesis</i> (Shr.), Cleve. 50
rr	..	rr	rr	rr	..	..	..	..	..	..	..	<i>Thalassiosira gravida</i> , Cleve. 51
..	..	..	..	..	..	..	..	..	..	..	..	— <i>Nordenskiöldi</i> , Cleve. 52
..	..	..	..	..	..	..	..	r	..	..	..	<i>Thalassiosira curvata</i> , Castr. 53
r	..	rr	r	r	r	..	r	r	..	r	..	— <i>Frauenfeldi</i> , Grun. 54
..	..	..	..	..	..	..	..	..	..	..	..	PERIDINIDAE.
..	r	r	+	+	+	+	+	r	r	..	+	<i>Ceratium furca</i> , Clap & Lachm. 55
..	..	..	..	r	r	..	r	..	r	r	r	— <i>fuscus</i> , (Ehb.), Duj. 56
..	..	..	..	..	..	..	rr	..	..	..	..	— <i>horridum</i> , Cleve. 57
..	rr	r	..	r	r	+	+	+	c	c	c	— <i>longipes</i> (Bail.), Cleve. 58
rr	..	..	..	..	..	..	..	..	..	..	..	— <i>tripos</i> (O. F. Müll.), Vanhöffen. 59
..	..	rr	..	..	..	..	..	..	..	..	..	<i>Dinophysis acuminata</i> , Clap. & Lachm. 60
..	rr	..	..	..	..	..	..	..	..	..	..	— <i>rotundata</i> , Clap. & Lachm. 61

SKULMARTIN LIGHTSHIP—continued.

Species No.	—	Jan.	Feb.			March.			April.		May.		June.		July.	
		22. 10.30 a.m.	3. 8.20 a.m.	16. 8.0 a.m.	3. 8.30 a.m.	18. 8.30 a.m.	31. 7.30 a.m.	15. 6.30 a.m.	30. 7.40 a.m.	16. 8.0 a.m.	30. 8.30 a.m.	15. 8.15 a.m.	21. 3.30 p.m.	13 7.30 a.m.	28 8.45 p.m.	
PERIDINIDAE—con. r																
62	<i>Diplopsalis lenticula</i> , Bergh,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
63	<i>Peridinium conicum</i> , Gran, ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
64	— <i>depressum</i> , Bail., ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65	— <i>globulus</i> , Stein, ..	..	..	..	..	..	..	rr?	..	..	..	..	..	..	..	..
66	— <i>ovatum</i> , (Pouch.) Schütt.,	r	r	r	rr	..	..	..	..	..	r	..	..	..	..	..
67	— <i>pallidum</i> , Ostenf., ..	r	r	..	+	..	..	..	..	..	..	rr	..	..	..	..
68	— <i>pentagonum</i> , Gran, ..	..	..	..	..	..	..	..	..	..	..	rr	..	..	..	..
69	<i>Prorocentrum micans</i> , Ehb.,	..	..	rr	..	..	rr	..	..	..	..	..	..	..	..	..
FLAGELLATAE.																
70	<i>Dinobryon pellucidum</i> , Lev.,	..	rr	r	+	?	rr	..	r	..	..	..	..	..	..	..
PROTOCOCCOIDEAE.																
71	<i>Halosphaera viridis</i> , Schmitz,	..	..	..	r	..	..	..	r	..	..	..	..	..	..	..
72	<i>Hexasterias problematica</i> , Cleve.	..	..	with 7 processes. r	..	..	with 7 processes. r	..	..	..	with 7 processes. r	..	..	..	..	..
73	<i>Trochiscia Clevei</i> , Lemm., ..	..	..	..	r	..	r	r	..	..	..	rr	..	..	..	..
74	— <i>paucispinosa</i> (Cleve), Lemm.	r	..	r	..	..	..	..	..	..	..	..	..	..	..	..
SILICOFAGELLATAE.																
75	<i>Dictyocha fibula</i> , Ehb., ..	..	..	rr	rr	..	..	r	..	..	..	..	..	..	..	..
76	<i>Distephanus speculum</i> (Ehb.) Haekkel,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
INCERTAE SEDIS.																
77	"Umrindete Cyste," Hensen,	r	..	r	..	..	..	r	..	..	..	..	..	..	..	..
78	"Barbierbeckenstatoblast," Hensen.	..	..	r	r	r	+	c	r	..	..	r	..	..	..	..
PROTOZOA.																
79	<i>Cyttarocyclus serrata</i> , (Mob.) Brandt.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80	<i>Tintinnopsis beroidea</i> , Stein,	..	rr	rr	rr	rr	rr	..	..	..	r	rr	..	..	..	..
81	— <i>campanula</i> (Ehb.), Da- day,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

LECTED IRISH LIGHT STATIONS, 1904—continued.

Lat. 54° 32' N., Long. 5° 25' W. 20 Fathoms.

June.	July.		August.		September.		October.		November.		December.		Species No.
	13 7.30 a.m.	28 8.45 p.m.	12 8.10 p.m.	27 8.25 p.m.	12 9.0 p.m.	26 8.45 p.m.	10 8.10 p.m.	25 8.0 p.m.	8 8.15 p.m.	24 7.40 a.m.	8 7.55 a.m.	23 8.15 p.m.	
15. 8.15 a.m.	13	14	15	16	17	18	19	20	21	22	23	24	PERIDINDAE—con.: Diplopsalis lenticula, Bergh. 62 Perdinium conicum, Gran. 63 — depressum, Bail. 64 — globulus, Stein. 65 — ovatum (Pouch.), Schütt. 66 — pallidum, Ostenf. 67 — pentagonum, Gran. 68 Proocentrum micans, Ehb. 69
11	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
11	11	11	11	11	11	11	11	11	11	11	11	11	
11	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	FLAGELLATAE. Dinobryon pellucidum, Lev. 70 PROTOCOCCOIDEAE. Halosphaera viridis, Schmitz. 71 Hexasterias problematica, Cleve. 72 Trochiscia Clevei, Lemm. 73 — paucispinosa, (Cleve), Lemm. 74 SILICOFAGELLATAE. Dictyocha fibula, Ehb. 75 Distephanus speculum, (Ehb.) Haeckel. 76 INCERTAE SEDIS. "Umrindete Cyste," Hensen. 77 "Barbierbeckenstatoblast," Hensen. 78 PROTOZOA. Cyttarocylis serrata. (Möb.) Brandt. 79 Tintinnopsis beroidea, Stein. 80 — campanula (Ehb.), Daday. 81
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
11	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
11	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	
..	11	11	11	11	11	11	11	11	11	11	11	11	

SKULMARTIN LIGHTSHIP—continued.

Species No.	—	Jan.	Feb.			March.			April.		May.		June.		July.	
		22. 10.30 a.m.	3. 8.20 a.m.	16. 8.0 a.m.	3. 8.30 a.m.	18. 8.30 a.m.	31. 7.30 a.m.	15. 6.30 a.m.	30. 7.40 a.m.	16. 8.0 a.m.	30. 8.30 a.m.	15. 8.15 a.m.	28. 3.10 p.m.	13. 7.30 a.m.	28. 8.45 p.m.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
COELENTERATA.																
82	<i>Corymorpha nutans</i> , Sars, ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
83	<i>Dipurena halterata</i> , Forbes,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
84	<i>Hybocodon prolifer</i> , Agassiz,	..	..	..	..	..	..	..	r	r	+	..	..	..	..
85	<i>Margellium octopunctatum</i> , Sars,	..	..	..	..	..	..	..	..	..	r	..	..	..	..
86	<i>Sarsia</i> sp., ..	..	..	..	..	..	..	..	+	+	..	..	+	..	..
87	<i>Obelia</i> sp., ..	..	..	..	..	..	..	rr	..	..	..	..	..	..	..
88	<i>Phialidium cymbalodium</i> , E. T. B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
89	— <i>temporarium</i> , E. T. B.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
90	<i>Beroe ovata</i> , Bosc.,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
91	<i>Pleurobrachia pileus</i> , Fabr.,	..	..	..	..	..	..	..	..	+	..	..	c	..	..
ECHINODERMATA.																
92	Ophiurid juv., ..	..	..	..	..	..	..	r	..	..	..	..	..	..	..
VERMES.																
93	Polychaete larvae, ..	r	..	..	..	..	..	..	r	r	r	..	..	..	..
94	<i>Sagitta bipunctata</i> , Q. et G.,	rr	+	cc	+	rr	..	..	..	..	..	rr	..	..	c
95	<i>Tomopteris helgolandica</i> Greef,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
96	Terebellid larvae, ..	..	..	..	..	..	..	..	..	..	..	r	..	..	..
COPEPODA.																
97	<i>Acartia Clausi</i> (Giesbr.), ..	+	r	+	c	c	r	..	+	r	r	c	c	..	..
98	— <i>longiremis</i> , Lillj.,	..	..	..	..	..	..	..	r	..	..	..	..	..	..
99	<i>Alteutha bopyroides</i> , Claus,	..	..	..	rr	..	..	..	..	..	..	..	rr	..	r
100	<i>Anomalocera Pattersoni</i> , R. Temp.,	..	..	..	..	..	..	..	..	..	..	cc	+	..	r
101	<i>Bradyidius armatus</i> , Vanhöffen,	..	..	..	..	..	r	..	..	r	..	..	..	..	..
102	<i>Calanus finmarchicus</i> , Gunn.,	+	+	+	+	+	..	r	+	+	r	r	c	r	+	
103	<i>Centropages hamatus</i> (Lillj.),	..	..	..	..	..	r	+	+	+	..	c	c	..	c
104	— <i>typicus</i> , Kröyer,	..	..	..	..	..	..	..	..	..	..	..	c	+	+
105	<i>Diaixis pygmaea</i> , Scott,	..	..	..	..	..	..	..	..	..	..	..	..	..	..
106	<i>Dorypygus</i> sp., ..	..	..	..	rr	..	..	..	..	..	..	..	..	..	..
107	<i>Haemocera Danae</i> , Clap., ..	..	..	..	..	..	..	..	..	rr	..	..	..	..	..
108	<i>Isias clavipes</i> (Boeck),	..	..	..	..	..	..	..	..	..	..	rr	..	..	+
109	<i>Labidocera Wollastoni</i> , (Lubb.),	..	..	..	..	..	..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 54° 32' N., Long. 5° 25' W. 20 Fathoms.

July.		August.		September.		October.		November.		December.		Species No.
13.	28.	12.	27.	12.	26.	10.	25.	8.	24.	8.	23.	
7.30 a.m.	8.45 p.m.	8.10 p.m.	8.25 p.m.	9.0 p.m.	8.45 p.m.	8.10 p.m.	8.0 p.m.	8.15 p.m.	7.40 a.m.	7.55 a.m.	8.15 p.m.	
13	14	15	16	17	18	19	20	21	22	23	24	COELENTERATA.
+	+	r	..	..	..	..	..	..	..	..	..	<i>Corymorpha nutans</i> , Sars. 82
..	..	rr	rr	..	..	..	..	..	..	..	..	<i>Dipurena halterata</i> , Forbes. 83
..	..	..	..	..	..	..	..	..	..	..	..	<i>Hybocodon prolifer</i> , Agassiz. 84
..	..	..	..	..	..	..	..	..	..	..	..	<i>Margellium octopunctatum</i> , Sars. 85
+	+	r	..	..	..	..	..	..	..	..	..	<i>Sarsia</i> sp. 86
rr	+	..	..	..	..	..	..	..	..	..	..	<i>Obelia</i> sp. 87
r	r	..	..	..	..	..	..	..	..	..	..	<i>Phialidium cymbalodium</i> , E. T. B. 88
..	..	..	..	r	r	..	..	..	..	..	..	— <i>temporarium</i> , E. T. B. 89
rr	..	..	..	rr	..	+	..	..	..	..	..	<i>Beroe ovata</i> , Bosc. 90
+	c	c	c	+	+	c	c	+	..	r	..	<i>Pleurobrachia pileus</i> , Fabr. 91
..	..	..	..	..	..	..	..	..	..	..	..	ECHINODERMATA.
..	..	..	..	..	..	..	..	..	..	..	..	<i>Ophiurid</i> juv. 92
..	..	..	r	r	r	r	..	..	..	..	..	VERMES.
..	c	cc	cc	cc	cc	cc	cc	cc	c	+	+	<i>Polychaete</i> larvae. 93
..	..	..	rr	rr	+	+	r	r	..	..	r	<i>Sagitta bipunctata</i> , Q. et G. 94
..	..	..	..	..	..	..	..	..	..	..	..	<i>Tomopteris helgolandica</i> Greef. 95
..	..	..	..	..	..	..	..	..	..	..	..	<i>Terebellid</i> larvae. 96
+	+	+	+	c	c	c	c	c	c	c	c	COPEPODA.
..	..	..	..	..	..	..	..	..	..	..	..	<i>Acartia Clausi</i> (Giesbr.). 97
..	..	..	..	..	..	..	..	..	..	..	..	— <i>longiremis</i> , Lillj. 98
..	r	+	+	r	..	..	..	..	..	..	..	<i>Alteutha bopyroides</i> , Claus. 99
..	r	c	+	+	+	..	..	..	..	..	..	<i>Anomalocera Pattersoni</i> , R. Temp. 100
..	..	..	..	..	..	r	r	..	..	..	..	<i>Bradyidius armatus</i> , Vanhøffen. 101
r	+	c	cc	cc	c	cc	c	+	c	c	c	<i>Calanus finmarchicus</i> , Gunn. 102
..	c	c	..	rr	r	+	..	..	..	..	..	<i>Centropages hamatus</i> (Lillj.) 103
+	+	..	..	..	r	+	..	..	..	..	..	— <i>typicus</i> , Krøyer. 104
..	..	..	..	..	..	..	..	..	rr	..	..	<i>Diaixis pygmaea</i> , Scott. 105
..	..	..	..	..	..	..	..	..	..	..	..	<i>Dorypygus</i> sp. 106
..	..	..	..	..	..	..	..	..	..	..	..	<i>Haemocera Danae</i> , Clap. 107
..	+	c	c	c	c	+	r	..	..	..	..	<i>Isias clavipes</i> (Boeck). 108
..	..	..	rr	..	+	..	..	..	..	..	..	<i>Labidocera Wollastoni</i> , (Lubb.). 109

SKULMARTIN LIGHTSHIP—continued.

Species No.	—	Jan.	February.			March.			April.		May.		June.	
		22. 10.30 a.m.	3. 8.20 a.m.	16. 8.0 a.m.	3. 8.30 a.m.	18. 8.30 a.m.	31. 7.30 a.m.	15. 6.30 a.m.	30. 7.40 a.m.	16. 8.0 a.m.	30. 8.30 a.m.	15. 8.15 a.m.	28. 3.10 p.m.	
	COPEPODA—con.:	1	2	3	4	5	6	7	8	9	10	11	12	
110	<i>Longipedia coronata</i> , Claus,	..	r	..	..	..	..	r	..	..	..	..	..
111	<i>Metridia lucens</i> , Boeck, ..	..	..	..	..	..	..	..	..	..	..	..	+
112	<i>Monstrilla</i> sp., ..	..	..	..	..	..	..	..	..	..	..	..	..
113	<i>Oithona nana</i> , Giesbr., ..	r	..	..	rr	..	..	..	..	..	..	..	..
114	— <i>similis</i> , Claus, ..	..	..	..	r	r	..	..	..	..	..	..	r
115	<i>Paracalanus parvus</i> , Claus, ..	..	..	..	..	..	..	..	..	..	+	..	..
116	<i>Parapontella brevicornis</i> , Lubb., ..	..	..	..	..	..	..	..	..	..	..	..	r
117	<i>Pseudocalanus elongatus</i> , Giesbr.,	c	c	c	c	c	c	c	c	c	c	c	c	
118	<i>Temora longicornis</i> (O. F. Müller),	..	..	..	..	..	+	+	+	+	+	c	c
	CRUSTACEA (cetera).													
119	<i>Evadne Nordmanni</i> , Lovén,	..	..	..	..	..	..	..	..	..	..	r	..
120	<i>Podon intermedius</i> , Lillj., ..	..	..	..	..	..	..	..	..	..	..	r	..
121	<i>Eurydice</i> sp., ..	..	..	..	..	..	..	..	..	..	..	..	..
122	Hyperiid, juv., ..	..	..	..	..	..	..	..	..	..	..	..	..
123	<i>Anchialus agilis</i> , Sars, ..	..	..	..	..	..	..	..	..	..	..	..	..
124	<i>Schistomysis ornata</i> , Sars, ..	..	..	..	..	..	..	..	..	..	..	..	..
125	<i>Siriella crassipes</i> , Sars, ..	..	..	..	..	..	..	..	..	..	..	..	..
126	<i>Nyctiphanes Couchi</i> , Bell, ..	..	..	..	..	..	..	..	..	..	..	..	..
127	Cirriped larvae, ..	..	..	..	..	r	c	c	c	+	+	..	+
128	Cypris stage larvae, ..	..	..	..	..	rr	+	+	r	..	+	+	+
129	Nauplius and metanauplius, ..	r	r	r	r	r	r	+	+	+	+	r	r	
130	Zoea, ..	..	..	..	r	r	+	+	..	..	..	+	+
131	Megalopa, ..	..	..	..	..	..	..	..	..	..	..	..	..
132	Caridid larvae, ..	..	..	..	..	..	..	..	..	..	..	..	..
133	<i>Pasiphae</i> sp. juv., ..	..	..	..	..	..	..	..	..	..	..	..	..
	MOLLUSCA.													
134	Gastropod larvae, ..	..	..	..	+	+	r	+	+	r	r	..	..
135	Lamellibranchiate larvae, ..	r	1	..	+	+	+	+	+	r	r	..	..
	TUNICATA.													
136	<i>Oikopleura dioica</i> , Fol., ..	..	..	..	+	+	..	..	+	+	c	+	..
	VERTEBRATA.													
137	Teleostei, ova et larvae ..	..	..	..	r	+	+	c	+	c	..	+	c

IRISH LIGHT STATIONS, 1904—continued.

Lat. 54° 32' N., Long. 5° 25' W. 20 Fathoms.

July.		August.		September.		October.		November.		December.		Species No.
13. 7.30 a.m.	28. 8.45 p.m.	12. 8.10 p.m.	27. 8.25 p.m.	12. 9.0 p.m.	26. 8.45 p.m.	10. 8.10 p.m.	25. 8.0 p.m.	8. 8.15 p.m.	24. 7.40 a.m.	8. 7.55 a.m.	23. 8.15 p.m.	
13	14	15	16	17	18	19	20	21	22	23	24	COPEPODA—cont.:
..	r	r	r	r	+	..	..	..	..	..	..	Longipedia coronata, Claus. 110
..	c	c	+	+	+	c	?	..	..	..	..	Metridia lucens, Boeck. 111
..	rr	r	..	..	r	..	..	..	..	..	..	Monstrilla sp. 112
..	..	..	..	..	..	..	..	..	..	..	..	Oithona nana, Giesbr. 113
..	..	..	r	..	..	..	..	..	+	..	..	— similis, Claus. 114
..	..	..	..	..	c	r	?	..	..	..	..	Paracalanus parvus, Claus. 115
..	r	+	c	+	+	+	r	..	..	..	..	Parapontella brevicornis, Lubb. 116
r	c	cc	cc	cc	cc	c	c	c	+	c	c	Pseudocalanus elongatus, Giesbr. 117
+	c	c	c	c	c	c	+	..	..	..	..	Temora longicornis (O. F. Müller). 118
..	..	..	..	..	..	..	..	..	..	..	..	CRUSTACEA (cetera).
..	..	..	..	..	..	..	..	..	..	..	..	Evadne Nordmanni, Lovén. 119
rr	..	..	..	..	..	..	..	..	..	..	..	Podon intermedius, Lillj. 120
..	..	rr	r	..	..	..	..	..	..	..	..	Eurydice sp. 121
..	..	..	r	..	..	+	..	..	..	..	..	Hyperiid, juv. 122
..	..	..	..	r	..	r	..	..	..	..	..	Anchialus agilis, Sars. 123
..	..	..	..	r	..	r	..	..	..	..	..	Schistomysis ornata, Sars. 124
..	..	..	..	r	..	..	..	..	..	..	..	Siriella crassipes, Sars. 125
..	..	..	..	+	..	r	..	r	..	..	..	Nyctiphanes Couchi, Bell. 126
r	..	..	..	..	..	rr	..	..	..	..	..	Cirriped larvae. 127
..	r	..	..	..	..	..	..	..	..	..	..	Cypris stage larvae. 128
+	+	+	+	+	+	+	+	+	+	r	r	Nauplius and Metanauplius. 129
+	+	+	+	+	+	+	..	r	..	..	..	Zoea. 130
..	..	+	+	c	c	r	r	..	..	..	..	Megalopa. 131
..	r	+	+	+	+	+	+	..	..	..	..	Caridid larvae. 132
..	..	..	..	..	..	..	..	rr	..	..	+	Pasiphae sp. juv. 133
..	r	r	r	r	r	r	+	..	..	..	r	MOLLUSCA.
..	..	..	r	r	r	r	+	..	..	r	r	Gastropod larvae. 134
..	..	..	r	r	r	r	+	..	..	r	r	Lamellibranchiate larvae. 135
r	r	+	rr	rr	r	rr	rr	..	..	..	..	TUNICATA.
..	..	..	..	..	..	..	..	..	..	..	..	Oikopleura dioica, Fol. 136
+	+	r	r	..	..	r	..	..	..	..	..	VERTEBRATA.
..	..	..	..	..	..	..	..	..	..	..	..	Teleostei, ova et larvae. 137

SOUTH ARKLOW LIGHTSHIP.

Species No.	—	Feb.		March.		April.			May.		June.		July.	
		1. 7.30 a.m.	17. 8.45 a.m.	3. 8.23 a.m.	18. 9.35 p.m.	2. 8.30 a.m.	16. 7.50 a.m.	29. 7.0 a.m.	16. 8.30 a.m.	29. 7.0 a.m.	14. 8.30 a.m.	13. 7.0 a.m.	27. 7.0 a.m.	
	DIATOMACEAE.	1	2	3	4	5	6	7	8	9	10	11	12	
1	<i>Achnanthes</i> sp., ..	..	..	r	..	c	r	r	r	r	..	..	..
2	<i>Actinoptychus undulatus</i> , Ehbg.,	c	c	c	+	+	+	c	+	c	+	c	r	
3	<i>Asterionella glacialis</i> , Castr.,	..	rr	rr	r	rr	rr	r	r	+	..	..	..
4	<i>Bacillaria paradoxa</i> (Gmel.), Grun.,	r	+	+	..	c	c	c	r	r	r	r	r	
5	<i>Bellerophia malleus</i> , (Btw.), v. Heurck.,	..	rr	..	..	r	..	r	r	..	..	..	..
6	<i>Biddulphia alternans</i> , (Bail.), v. Heurck.,	..	..	..	..	..	..	..	..	..	..	..	..
7	— <i>aurita</i> , (Lyngb.), Bréb.,	..	..	r	r	r	+	+	r	..	..	..	..
8	— <i>favus</i> , (Ehbg.), v. Heurck.,	..	..	..	..	..	..	..	..	..	..	..	..
9	— <i>granulata</i> , Roper, ..	..	..	..	rr	..	..	r	r	rr	..	..	..
10	— <i>mobiliensis</i> , Bail, ..	+	+	+	r	+	+	c	r	c	+	r	rr	
11	<i>Cerataulina Bergoni</i> , Pérég.,	..	..	..	..	..	r	..	..	..	..	..	..
12	<i>Chaetoceras curvisetum</i> , Cleve,	..	rr	..	..	..	..	..	..	..	..	..	..
13	— <i>danicum</i> , Cleve, ..	..	..	..	..	r	..	..	..	rr	..	..	..
14	— <i>debile</i> (?), Cleve, ..	..	..	..	..	..	..	..	..	..	..	..	..
15	— <i>decipiens</i> , Cleve, ..	r	r	r	r	..	r	r	..	r	r	..	..
16	— <i>densum</i> , Cleve, ..	..	..	..	..	..	..	..	..	..	..	..	..
17	— <i>didymum</i> (Ehbg.), Cleve,	rr	..	..	..	..	..	..	..	..	..	..	..
18	— <i>laciniosum</i> , Schütt, ..	..	..	..	..	..	..	..	..	rr	..	..	..
19	— <i>Schütti</i> , Cleve, ..	..	rr	..	..	..	..	..	..	..	..	..	..
20	<i>Corethron hystrix</i> , Hensen,	..	..	..	..	..	..	r	..	..	..	..	..
21	<i>Coscinodiscus concinnus</i> , W. Sm.,	r	r	r	r	+	+	c	r	r	..	rr	..	
22	— <i>excentricus</i> , Ehbg., ..	c	c	c	c	c	c]	c	+	+	r	+	r	
23	— <i>radiatus</i> , Ehbg., ..	c	c	c	c	cc	c	c	c	c	c	c	+	
24	<i>Ditylum Brightwelli</i> , West.,	..	r	..	..	rr	..	+	+	+	+	..	..
25	<i>Fragillaria c.f. oceanica</i> , Gran,	..	rr	r	..	..	..	..	..	..	..	..	..
26	<i>Guinardia flaccida</i> , Pérég., ..	r	r	..	..	..	rr	rr	..	rr	+	+	+
27	<i>Hyalodiscus stelliger</i> , Bail.,	c	c	c	c	c	r	c	+	c	+	+	r	
28	<i>Lauderia borealis</i> , Gran, ..	..	..	..	..	..	+	r	+	c	r	..	..
29	<i>Lithodesmium undulatum</i> , Ehbg.,	..	rr	..	..	..	..	..	..	..	..	..	..
30	<i>Navicula membranacea</i> , Cleve,	..	..	..	..	..	..	..	..	..	..	..	..
31	<i>Paralia sulcata</i> , (Ehbg.), Cleve,	+	+	c	+	+	+	+	+	+	+	+	+	

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 40' N., Long. 5° 56' W. 26 Fathoms.

August.		September.		October.		November.		December.		Species No.
12.	28.	9.	24.	10.	26.	7.	23.	7.	22.	
8.0 a.m.	8.40 a.m.	7.0 a.m.	7.34 p.m.	8.0 a.m.	8.10 a.m.	6.50 p.m.	7.0 p.m.	7.10 p.m.	6.45 a.m.	
13	14	15	16	17	18	19	20	21	22	
DIATOMACEAE.										
..	..	..	..	..	..	..	..	..	..	Achnanthes sp. 1
r	..	..	rr	r	+	c	c	c	c	Actinoptychus undulatus, Ehb. 2
..	..	..	..	..	+	r	..	..	r	Asterionella glacialis, Castr. 3
r	..	..	..	r	+	+	+	r	r	Bacillaria paradoxa (Gmel.), Grun. 4
r	+	r	r	+	+	+	r	rr	..	Bellerochea malleus, (Btw.), v. Heurck. 5
..	..	..	..	..	r	r	r	r	r	Biddulphia alternans, (Bail.), v. Heurck. 6
..	..	..	..	..	..	..	..	..	..	— aurita (Lyngb.), Bréb. 7
..	..	..	..	..	..	..	rr	..	..	— *favus, (Ehbg.), v. Heurck. 8
..	..	..	..	..	r	..	..	..	..	— granulata, Roper. 9
+	+	+	r	r	+	r	+	r	+	— mobiliensis, Bail. 10
..	..	..	..	..	..	..	..	..	..	Cerataulina Bergoni, Pér. 11
..	..	..	..	..	..	..	..	..	..	Chaetoceras curvisetum, Cleve. 12
..	..	..	..	..	r	..	..	..	..	— danicum, Cleve. 13
..	..	..	..	..	..	..	..	rr	..	— debile (?), Cleve. 14
..	..	..	..	rr	r	..	..	r	..	— decipiens, Cleve. 15
r	..	..	..	..	..	..	..	..	..	— densum, Cleve. 16
..	..	..	..	..	..	..	..	..	..	— didymum, (Ehbg.), Cleve. 17
..	..	..	..	..	..	..	..	..	..	— lacinosum, Schütt. 18
..	..	..	..	..	..	..	..	..	..	— Schütt., Cleve. 19
..	..	..	..	..	..	..	..	..	..	Corethron Mystrix, Hensen. 20
..	..	..	..	..	..	..	..	..	..	Coscinodiscus concinnus, W. Sm. 21
r	rr	rr	..	r	r	+	+	+	c	— excentricus, Ehb. 22
+	c	+	+	+	c	c	+	+	+	— radiatus, Ehb. 23
..	..	..	..	r	..	..	..	..	rr	Ditylum Brightwelli, West. 24
..	..	..	..	..	..	..	..	..	..	Fragillaria c.f. oceanica, Gran. 25
+	+	+	+	+	+	+	+	rr	rr.	Guinardia flaccida Pér. 26
+	+	+	r	+	+	c	c	+	c	Hyalodiscus, stelliger, Bail. 27
..	..	..	..	r	+	+	r	r	r	Lauderia borealis, Gran. 28
..	..	..	..	..	..	..	..	..	..	Lithodesmium undulatum, Ehb. 29
..	..	..	..	r	r	r	..	..	..	Navicula membranacea, Cleve. 30
+	+	+	r	+	+	+	..	+	+	Paralia sulcata, (Ehbg.), Cleve. 31

*B. favus is not a plankton organism.

SOUTH ARKLOW LIGHTSHIP—continued.

Species No.	—											
	Feb.		March.		April.			May.		June.	July.	
	1. 7-30 a.m.	17. 8-45 a.m.	3. 8-23 a.m.	18. 9-35 p.m.	2. 8-30 a.m.	16. 7-50 a.m.	29. 7-0 a.m.	16. 8-30 a.m.	29. 7-0 a.m.	14. 8-30 a.m.	13. 7-0 a.m.	27. 7-0 a.m.
	1	2	3	4	5	6	7	8	9	10	11	12
	DIATOMACEAE—cont.											
32	r	r	+	..	r	r	+	+	r	r	r	rr
33	..	..	..	..	..	..	..	..	..	r	..	..
34	..	r	rr	..	..	..	..	..	..	r	+	..
35	..	..	..	r	..	r	r	r	+	+	..	..
36	..	..	..	..	..	..	r	r	+	+	r	..
37	..	..	..	..	..	..	rr	..	..	r	c	r
38	..	..	..	..	..	r	r	..	..	..	..	..
39	..	..	..	..	..	..	..	..	..	..	..	..
40	r	+	r	r	+	+	+	+	c	c	+	+
41	..	..	r	..	..	..	r	..	..	..	..	..
42	..	..	..	..	..	..	..	r	..	..	..	..
43	r	r	r	..	..	+	rr	r	rr	rr	..	..
44	+	+	r	r	r	r	+	+	c	r	..	rr
	PERIDINIDAE.											
45	rr	..	r	..	..	rr	r	r	r	r	r	+
46	+	..	+	..	..	..	rr	..	..	..	..	rr
47	..	..	..	r	..	..	..	..	..	r	r	..
48	+	+	+	..	r	..	..	..	..	r	..	..
49	r	r	..	..	..	..	..	..	..	..	..	..
50	..	..	..	..	..	..	..	..	..	..	..	..
51	rr	..	..	..	..	..	..	r	..	..	..	rr
52	..	..	..	..	r	rr	r	r	..	..	..	..
53	..	..	..	..	..	..	..	..	..	..	r	rr
54	..	r	..	r	..	..	..	..	..	r	+	c
55	..	..	..	..	..	..	..	..	..	..	+	r
56	..	..	..	..	..	..	rr	..	..	r	+	cc
57	..	..	..	..	..	..	..	rr	..	r	..	r
58	rr	r	r	..	..	..	..	..	..	r	+	rr
59	..	..	..	..	..	..	..	..	..	..	r	r
60	..	..	..	..	..	..	..	..	..	..	..	r
61	..	..	..	..	..	..	..	..	..	..	..	..

RISH LIGHT STATIONS, 1904—continued.

Lat. 52° 40' N., Long. 5° 56' W. 26 Fathoms.

August.		September.		October.		November.		December.		Species No.
13. 8.0 a.m.	28. 8.40 a.m.	9. 7.0 a.m.	24. 7.34 p.m.	10. 8.0 a.m.	26. 8.10 a.m.	7. 6.50 p.m.	23. 7.0 p.m.	7. 7.10 p.m.	22. 6.45 a.m.	
13	14	15	16	17	18	19	20	21	22	
..	..	rr	..	r	r	r	..	..	r	DIATOMACEAE—cont.:
..	..	..	..	..	..	..	..	..	..	Pleurosigma sp. 32
..	..	..	..	..	..	..	..	..	..	Rhizosolenia alata, Btw. 33
+	rr	..	..	..	..	..	..	..	..	— semispina, Hensen. 34
..	..	..	..	r	r	..	..	..	..	— setigera, Btw. 35
..	..	..	..	..	..	..	..	..	..	— Shrubsolei, Cleve. 36
..	..	..	..	..	..	..	..	..	rr	— Stolterfothi, Pérég. 37
..	..	..	..	..	..	..	..	..	..	Skeletonema costatum, (Grev.), Cleve. 38
..	..	..	..	rr	..	..	..	..	..	Stephanopyxis turris, (Grev.), Ralfs. 39
+	+	+	r	r	+	c	c	+	c	Streptotheca tamesis, (Shr.), Cleve. 40
..	..	..	..	..	..	..	..	..	..	Thalassiosira gravida, Cleve. 41
..	..	..	..	..	..	..	..	..	..	— Nordenskiöldi, Cleve. 42
..	..	..	..	..	r	..	..	..	rr	— curvata, Castr. 43
..	..	..	..	..	r	r	r	..	rr	— Frauenfeldi, Grun. 44
										PERIDINIDAE.
r	+	+	r	r	+	+	+	r	+	Ceratium furca, Clap. & Lachm. 45
..	rr	r	..	r	r	r	r	..	r	— fusus, (Ehbg.), Duj. 46
..	..	..	..	..	..	..	..	..	..	— horridum, Cleve. 47
r	+	r	r	r	r	r	r	..	..	— longipes, (Bail.), Cleve. 48
..	rr	r	r	..	..	..	..	..	..	— tripos, (O. F. Müll.), Vanhöffen. 49
..	..	r	..	r	..	..	..	..	..	Dinophysis rotundata, Clap. & Lachm. 50
..	rr	+	r	+	r	r	..	..	rr	Diplopsalis lenticula, Bergh. 51
..	..	..	..	r	r	rr	rr	rr	..	Peridinium conicum, Gran. 52
..	..	..	..	..	..	..	..	..	..	— decipiens, Jörg. 53
c	c	c	+	+	..	..	..	..	..	— depressum, Bail. 54
..	..	..	..	..	..	rr	..	..	rr	— globulus, Stein. 55
c	c	c	+	+	r	r	r	..	r	— ovatum, (Pouch.), Schütt. 56
..	..	..	..	..	..	..	..	..	..	— pallidum, Ostenf. 57
..	..	rr	..	..	..	..	..	..	..	— pentagonum, Gran. 58
..	..	..	..	..	..	..	..	..	..	— Steini, Jörg. 59
..	..	..	..	..	..	..	..	..	..	— n. sp. 60
r	..	..	..	r	..	..	..	..	r	Prorocentrum micans, Ehb. 61

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 40' N., Long. 5° 56' W. 26 Fathoms.

August.		September.		October.		November.		December.		Species No.
12. 8.0 a.m.	28. 8.40 a.m.	9. 7.0 a.m.	24. 7.34 p.m.	10. 8.0 a.m.	26. 8.10 a.m.	7. 6.50 p.m.	23. 7.0 p.m.	7. 7.10 p.m.	22. 6.45 a.m.	
13	14	15	16	17	18	19	20	21	22	FLAGELLATAE.
..	..	..	..	..	..	..	..	..	..	Dinobryon pellucidum, Lev.
..	..	+	..	+	+	+	+	r	r	COCOSPHAERALES.
..	..	..	..	..	..	..	..	..	..	Coccosphaera* atlantica, Ostenf.
..	..	..	rr	..	rr	..	..	..	..	PROTOCOCCOIDEAE.
..	..	..	..	..	..	..	..	..	..	Halosphaera viridis, Schmitz.
..	..	..	..	..	..	..	..	..	..	Hexasterias problematica, Cleve.
..	..	..	..	..	..	..	..	rr	..	Trochiscia Clevei, Lemm.
+	+	+	r	+	+	r	r	..	r	— paucispinosa, (Cleve), Lemm.
..	..	..	..	rr	..	rr	..	..	rr	SILICOFLAGELLATAE.
..	..	..	..	..	..	..	..	..	..	Dictyocha fibula, Ehb.
..	..	..	..	..	..	..	..	rr	rr	INCERTAE SEDIS.
..	..	..	..	..	..	..	..	..	..	"Umrindete Cyste," Hensen.
..	..	..	..	..	..	..	..	..	..	"Barbierbeckenstatoblast," Hensen.
..	..	..	..	..	..	..	..	..	..	PROTOZOA.
..	..	..	..	..	..	..	..	..	..	Amphorella subulata, (Ehb.), Daday.
rr	r	..	+	..	..	..	..	..	..	Ptychocylis urnula, (Clap. & Lachm.)
+	c	c	c	r	r	+	+	+	+	Tintinnopsis beroidea, Stein.
r	rr	..	..	..	..	r	r	..	..	— campanula (Ehb.), Dad.
r	r	c	+	..	..	..	..	..	..	Noctiluca miliaris, Suriray.
..	..	..	..	..	..	..	..	..	r?	Rhaphidophrys marina, Ostenf.
..	..	..	r	..	..	..	..	..	..	COELENTERATA.
..	..	..	..	..	..	..	..	..	..	Sarsia sp.
rr	rr	..	..	..	..	..	..	..	..	Tiara pileata, Agassiz.
c	c	+	..	..	..	..	..	..	..	Phialidium temporarium, B.T.B.
..	..	..	r	..	..	+	r	..	..	Gossea corynetes, Agassiz.
..	..	..	..	..	..	..	..	r	..	Cupulita Sarsi, Haeckel.
..	..	r	+	..	..	..	..	..	..	Muggiaea atlantica, Cunningham.

* Coccosphaera atlantica was only recorded when complete cells were observed.

SOUTH ARKLOW LIGHTSHIP—continued.

Species No.		Feb.		March.		April.			May.		June.	July.	
		1. 7.30 a.m.	17. 8.45 a.m.	3. 8.23 a.m.	18. 9.35 p.m.	2. 8.30 a.m.	16. 7.50 a.m.	29. 7.0 a.m.	16. 8.30 a.m.	29. 7.0 a.m.	14. 8.30 a.m.	13. 7.0 a.m.	27. 7.0 a.m.
	COELENTERATA—con.	1	2	3	4	5	6	7	8	9	10	11	12
83	<i>Beroe ovata</i> , Bosc., ..	..	..	..	..	..	..	..	..	..	..	..	..
84	<i>Pleurobrachia pileus</i> , Fabr., ..	..	..	..	..	..	..	..	r	r	..	r	+
	ECHINODERMATA.												
85	<i>Auricularia</i>, .. .. .	..	..	..	..	..	rr	..	..	..	..	..	..
86	<i>Bipinnaria</i>, .. .. .	..	..	..	..	..	..	..	..	..	..	rr	..
	VERMES.												
87a	<i>Autolytus prolifer</i> (Müll.), ..	..	+	+	+	+	+	..	..	..	..	..	..
87b	<i>Polychaete larvae</i>, ..	..	r	..	..	..	..	..	..	..	r	r	+
88	<i>Sagitta bipunctata</i> , Q. et G., ..	..	+	+	+	+	r	..	r	r	r	r	..
89	<i>Tomopteris helgolandica</i> , Greef.	..	rr	..	..	..	..	..	..	..	..	..	..
90	<i>Terebellid larvae</i>, ..	..	..	..	..	..	..	..	+	+	r	..	..
	BRYOZOA.												
91	<i>Cyphonautes</i>, .. .. .	..	rr	rr	r	..	..	r	..	+	..	..	..
	COPEPODA.												
92	<i>Acartia Clausi</i> (Giesbr.), ..	r	rr	..	..	r	r	+	+	+	r	r	r
93	<i>Alteutha bopyroides</i> , Claus,	..	rr	..	..	..	..	..	..	r	r	r	..
94	<i>Anomalocera Pattersoni</i> , R. Temp.,	..	..	..	..	..	..	..	..	rr	..	..	..
95	<i>Bradyidius armatus</i> , Vanhöffen.,	..	..	..	rr	..	..	..	r	..	..	..	..
96	<i>Calanus finmarchicus</i> , Gunn.,	..	c	+	c	c	r	+	+	+	+	rr	..
97	<i>Candacia pectinata</i> , Brady,	..	..	..	..	..	..	..	..	:	..	..	..
98	<i>Centropages hamatus</i> , (Lillj.),	+	r	..	?	c	c	+	c	c	+	c	c
99	— typicus, Kröyer, ..	r	..	rr	..	..	..	..	rr	..	..	..	..
100	<i>Corycaeus anglicus</i> , Lubb.,	rr	..	rr	..	..	..	..	..	..	..	..	..
101	<i>Euterpe acutifrons</i> , Dana, ..	..	..	..	..	..	..	..	..	..	..	..	..
102	<i>Isias clavipes</i> , (Boeck), ..	..	..	..	..	..	..	..	..	..	..	..	..
103	<i>Labidocera Wollastoni</i> , (Lubb.),	..	..	..	..	..	r juv.	..	..	..	..	..	..
104	<i>Longipedia coronata</i> , Claus,	..	..	..	..	..	..	..	..	..	r	..	..
105	<i>Metridia lucens</i> , Boeck, ..	..	r	+	+	+	..	..	r	+	..	..	..
106	<i>Oithona nana</i> , Giesbr., ..	..	..	..	..	..	..	..	..	..	..	..	..
107	— simillis, Claus, ..	..	..	..	..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 40' N., Long. 5° 56' W. = 26 Fathoms.

August.		September.		October.		November.		December.		Species No.
12. 8.0 a.m.	28. 8.40 a.m.	9. 7.0 a.m.	24. 7.34 p.m.	10. 8.0 a.m.	26. 8.10 a.m.	7. 6.50 p.m.	23. 7.0 p.m.	7. 7.10 p.m.	22. 6.45 a.m.	
13	14	15	16	07	18	19	20	21	22	COELENTERATA—COM.
..	..	..	r	..	..	..	..	..	..	Beroe ovata, Bosc.
+	?	+	+	..	..	+	r	r	..	Pleurobrachia pileus, Fabr.
..	..	..	..	..	..	..	..	..	..	ECHINODERMATA.
..	..	..	..	..	..	..	..	..	..	Auricularia.
..	..	..	..	..	..	..	..	..	..	Bipinnaria.
..	..	..	..	..	..	..	..	..	..	VERMES.
..	..	..	..	..	..	..	..	..	..	Autolytus prolifer (Müll.).
r	..	..	..	+	r	r	r	..	..	Polychaete larvae.
r	..	..	cc	r	r	+	cc	cc	c	Sagitta bipunctata, Q. et G.
..	..	..	+	..	rr	r	r	c	r	Tomopteris belgolandica, Greef.
..	..	..	..	..	..	..	..	..	..	Terebellid larvae.
r	rr	rr	..	..	r	..	..	..	..	BRYOZOA.
..	..	..	..	..	..	..	..	..	..	Cyphonautes.
r	..	+	+	c	c	c	c	c	c	COPEPODA.
+	r	r	r	r	r	..	..	r	r	Acartia Clausi (Giesbr.).
..	..	..	c	..	..	..	..	..	..	Alteutha bopyroides, Claus.
..	..	..	..	..	..	..	..	..	..	Anomalocera Pattersoni, R. Temp.
..	..	..	..	..	..	..	..	..	..	Bradyidius armatus, Vanhöffen.
r	..	+	c	+	r	+	+	+	+	Calanus finmarchicus, Gunn.
..	..	..	..	..	..	..	..	rr	..	Candacia pectinata, Brady.
c	c	c	+	+	c	c	+	r	r	Centropages hamatus (Lillj.).
..	r	r	r	+	r	r	..	..	..	— typicus, Kröyer.
..	..	..	..	..	..	..	..	..	..	Corycaeus anglicus, Lubb.
..	rr	+	..	r	r	r	r	..	..	Euterpe acutifrons, Dana.
..	..	r	r	..	..	..	..	..	..	Isias clavipes, (Boeck).
..	..	..	c	..	..	..	..	..	..	Labidocera Wollastoni, (Lubb.).
rr	..	..	..	..	..	..	..	..	..	Longipedia coronata, Claus.
..	..	..	c	..	..	..	..	..	..	Metridia lucens, Boeck.
..	..	r	..	..	..	..	..	..	..	Oithona nana, Giesbr.
..	..	r	..	..	..	..	..	..	..	— similis, Claus.

SOUTH ARKLOW LIGHTSHIP—continued.

Species No.	—	February.		March.		April.			May.		June.	July.	
		1.	17.	3.	18.	2.	16.	29.	16.	29.	14.	13.	27.
		7.30 a.m.	8.45 a.m.	8.23 a.m.	9.35 p.m.	8.30 a.m.	7.50 a.m.	7.0 a.m.	8.30 a.m.	7.0 a.m.	8.30 a.m.	7.0 a.m.	17.0 a.m.
	COPEPODA— <i>con.</i>	r	2	3	4	5	6	7	8	9	10	11	12
108	<i>Parapontella brevicornis</i> , Lubb.,	..	..	..	..	..	..	rr	r	r	..	..	r
109	<i>Pseudocalanus elongatus</i> , Boeck,	rr	c	+	c	c	+	cc	c	c	+	r	r
110	<i>Temora longicornis</i> (O. F. Müller),	..	..	r	+	+	+	cc	c	c	+	c	c
	CRUSTACEA (CETERA).												
111	<i>Eurydice inermis</i> Hansen, ..	..	..	..	..	..	..	..	..	..	..	..	..
112	— <i>spinigera</i> , Hansen, ..	..	..	..	..	..	..	..	..	..	..	..	..
113	Hyperiid juv., ..	..	..	..	..	..	..	..	..	..	..	..	..
114	<i>Anchialus agilis</i> , Sars, ..	..	..	..	r	..	..	..	..	..	..	..	..
115	<i>Gastrosaccus Normani</i> , Sars,	..	..	..	..	..	..	..	..	..	..	..	..
116	— <i>sanctus</i> , v. Ben., ..	..	..	..	r	..	..	..	..	..	..	..	..
117	<i>Siriella armata</i> , Sars, ..	..	..	..	..	..	..	..	..	..	..	..	..
118	<i>Schistomysis spiritus</i> ,* Norman	..	..	..	..	..	..	..	..	..	..	..	..
119	<i>Nyctiphanes Couchi</i> , Bell, ..	..	..	..	..	..	..	..	..	..	..	..	..
120	<i>Pasiphae</i> sp. juv., ..	..	..	..	..	..	..	..	..	..	..	..	..
121	Cirripedia larvae, ..	..	..	..	..	r	r	r	r	r	r	..	..
122	Cypris stage larvae, ..	..	..	..	..	..	..	+	r	r	r	..	..
123	<i>Microniscus</i>, ..	..	..	..	..	..	..	..	..	rr	..	..	..
124	Caridid larvae, ..	..	..	..	..	..	..	..	..	..	..	..	..
125	Nauplius and Metanauplius,	r	r	r	r	+	+	+	+	+	+	..	..
126	Zoea, ..	..	rr	+	+	+	..	r	..	r	..	r	r
127	Megalopa, ..	..	..	..	..	..	..	..	..	..	..	rr	..
	MOLLUSCA.												
128	Gastropod larvae, ..	..	..	..	..	..	..	r	..	r	..	+	..
129	Lamellibranchiate larvae, ..	..	..	+	..	..	..	..	..	..	+	+	+
	TUNICATA.												
130	<i>Fritillaria borealis</i> , Q. et G.	..	..	..	..	..	..	..	..	..	..	r	..
131	<i>Oikopleura dioica</i> , Fol, ..	..	..	..	..	..	rr	..	..	r	..	r	r
	VERTEBRATE.												
132	Teleostei, ova et larvae, ..	..	rr	r	r	c	+	c	+	+	r	r	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 40' N., Long. 5° 56' W. 26 Fathoms.

August.		September.		October.		November.		December.		Species No.
12. 8.0 a.m.	28. 8.40 a.m.	9. 7.0 a.m.	24. 7.34 p.m.	10. 8.0 a.m.	26. 8.10 a.m.	7. 6.50 p.m.	23. 7.0 p.m.	7. 7.10 p.m.	22. 6.45 a.m.	
13	14	15	16	17	18	19	20	21	22	
+	+	r	cc	r	r	+	r	rr	..	COPEPODA—con.
..	..	+	r	c	r	+	+	+	+	Parapontella brevicornis, Lubbock. 108
c	c	c	cc	c	+	r	r	+	r	Pseudocalanus elongatus, Boeck. 109
										Temora longicornis (O. F. Müller). 110
										CRUSTACEA (CETERA).
..	..	..	r	..	..	..	..	..	..	Eurydice inermis, Hansen. 111
..	..	..	rr	..	..	..	..	..	..	— spinigera, Hansen. 112
..	..	..	r	..	..	..	..	..	..	Hyperiid juv. 113
..	..	..	..	..	..	..	..	..	..	Anchialus agilis, Sars. 114
..	..	..	+	..	..	..	..	..	..	Gastrosaccus Normani, Sars. 115
..	..	..	r	..	..	..	..	..	..	— sanctus, v. Ben. 116
..	..	..	rr	..	..	..	..	..	..	Siriella armata, Sars. 117
..	..	..	..	..	..	cc	+	cc	r	Schistomysis spiritus,* Norman. 118
..	..	..	+	..	..	+	+	+	..	Nyctiphanes Couchi, Bell. 119
..	..	..	..	..	..	rr	..	..	..	Pasiphae sp. juv. 120
rr	r	r	..	..	..	..	..	..	..	Cirripedia larvae. 121
rr	r	..	..	..	..	..	r	..	..	Cypris stage larvae. 122
..	..	..	..	..	..	..	..	..	..	Microniscus. 123
..	r	r	r	..	..	..	..	..	..	Caridid larvae. 124
+	+	+	+	+	+	+	+	r	r	Nauplius and Metanauplius. 125
r	r	r	+	..	..	..	..	..	rr	Zoea. 126
rr	rr	r	+	..	..	..	..	..	..	Megalopa. 127
										MOLLUSCA.
..	..	..	..	..	..	..	..	..	..	Gastropod larvae. 128
+	+	+	..	..	r	..	..	..	..	Lamellibranchiate larvae. 129
										TUNICATA.
..	..	..	..	..	..	..	..	..	rr	Fritillaria borealis, Q. et G. 130
r	r	+	..	..	..	rr	rr	rr	rr	Oikopleura dioica, Fol. 131
										VERTEBRATE.
r	r	..	..	..	..	..	..	..	..	Teleostei ova et larvae. 132

* All the specimens were immature, but seem to belong to this species.

CONINGBEG LIGHTSHIP.

Species No.	—	January.		February.				March.	
		19. 7.0 a.m.	19. 7.50 p.m.	1. 5.28 p.m.	2. 5.54 a.m.	15. 7.24 a.m.	16. 7.40 p.m.	2. 2.40 a.m.	2. 3.2 p.m.
		1	2	3	4	5	6	7	8
	DIATOMACEAE.								
1	Achnanthes sp., .. ..	..	..	..	..	rr	+	r	+
2	Actinoptychus undulatus, Ehb.,	..	r	..	rr	r	..	r	..
3	Asterionella glacialis, Castr., ..	..	..	..	..	..	..	..	..
4	Bacillaria paradoxa, (Gmel.), Grun.,	..	..	..	..	..	..	..	..
5	Biddulphia mobiliensis, Bail.,	c	c	..	r	c	+	c	c
6	Cerataulina Bergoni, Pérag., ..	..	..	..	..	..	..	..	..
7	Chaetoceras boreale, Bail., ..	..	..	..	..	..	..	..	..
8	— constrictum, Gran., ..	..	..	..	..	..	..	..	..
9	— crinitum, Gran., ..	..	..	..	..	rr	..	..	..
10	— danicum, Cleve, ..	..	..	..	..	..	..	..	..
11	— decipiens, Cleve, ..	+	r	..	..	rr	..	..	..
12	— densum, Cleve, ..	..	..	..	..	..	..	..	..
13	— laciniosum, Schütt., ..	..	..	..	..	..	..	..	..
14	— Schüttii, Cleve, ..	..	..	rr	..	..	..	..	..
15	Corethron hystrix, Hensen, ..	..	..	..	..	..	..	..	..
16	Coscinodiscus concinnus, W. Sm.,	+	+	r	r	+	+	r	r
17	— excentricus, Ehb., ..	r	+	..	..	+	+	+	+
18	— oculus iridis, Ehb., ..	..	..	..	r	..	..	r	rr
19	— radiatus, Ehb., ..	+	+	r	r	..	..	..	..
20	Coscinosira polychorda, Gran.,	..	..	..	..	..	..	..	..
21	Ditylum Brightwelli, West., ..	..	..	..	..	..	..	..	..
22	Guinardia flaccida, Pérag., ..	..	..	..	..	..	..	..	..
23	Hyalodiscus stelliger, Bail., ..	c	c	+	+	cc	c	c	+
24	Lauderia borealis, Gran., ..	..	..	..	..	..	..	..	..
25	Navicula membranacea, Cleve,	..	..	..	..	..	..	..	..
26	Nitzschia seriata, Cleve, ..	..	..	..	..	..	..	rr	..
27	Paralia sulcata, (Ehb.), Cleve,	+	+	r	+	+	+	+	+
28	Pleurosigma sp.,	r	r	..	..	rr	..	..	..
29	Rhizosolenia alata, Btw., ..	..	rr	..	..	rr	r	..	..
30	— semispina, Hensen, ..	+	+	..	..	..	..	..	..
31	— setigera, Btw., ..	..	..	..	r	+	rr	..	..
32	— Shrubsolei, Cleve, ..	..	..	..	..	..	..	..	..
33	— Stolterfothi, Pérag., ..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

March.			April.		May.		Species No.
17. 2.52 a.m.	17. 3.8 p.m.	31. 2.40 p.m.	15. 2.35 a.m.	30. 2.40 a.m.	15. 2.25 a.m.	29. 2.23 a.m.	
9	10	11	12	13	14	15	
DIATOMACEAE.							
..	r	r	..	+	..	..	<i>Achnanthes</i> sp. 1
r	..	r	+	..	..	..	<i>Actinoptychus undulatus</i> , Ehb. 2
..	..	+	..	..	..	..	<i>Asterionella glacialis</i> , Ehb. 3
..	r	r	..	..	..	..	<i>Bacillaria paradoxa</i> , (Gmel.), Grun. 4
+	+	c	+	+	..	..	<i>Biddulphia mobiliensis</i> , Bail. 5
..	..	..	..	..	..	..	<i>Cerataulina Bergoni</i> , Pér. 6
..	..	..	..	..	..	..	<i>Chaetoceras boreale</i> , Bail. 7
..	..	r	..	..	..	..	— <i>constrictum</i> , Gran. 8
..	..	..	..	..	..	..	— <i>crinitum</i> , Gran. 9
..	..	rr	..	..	..	..	— <i>danicum</i> , Cleve. 10
..	..	..	..	..	..	..	— <i>deciplens</i> , Cleve. 11
..	..	..	..	..	..	..	— <i>densum</i> , Cleve. 12
..	..	..	..	..	..	..	— <i>lacinosum</i> , Schütt. 13
..	..	rr	..	..	..	..	— <i>Schüttii</i> , Cleve. 14
..	..	r	..	..	..	..	<i>Corethron hystrix</i> , Hensen. 15
..	r	r	..	..	..	..	<i>Coscinodiscus concinnus</i> , W. Sm. 16
+	r	c	r	r	..	r	— <i>excentricus</i> , Ehb. 17
..	..	..	..	..	..	..	— <i>oculus iridis</i> , Ehb. 18
..	..	r	rr	r	..	r	— <i>radiatus</i> , Ehb. 19
..	c	c	..	..	..	..	<i>Coscosira polychorda</i> , Gran. 20
..	r	+	..	..	..	..	<i>Ditylum Brightwelli</i> , West. 21
..	..	..	..	..	..	..	<i>Guinardia flaccida</i> , Pér. 22
+	+	+	c	c	+	..	<i>Hyalodiscus stelliger</i> , Bail. 23
..	..	+	..	..	..	..	<i>Lauderia borealis</i> , Gran. 24
..	..	..	..	..	..	..	<i>Navicula membranacea</i> , Cleve. 25
..	..	rr	..	..	..	..	<i>Nitzschia seriata</i> , Cleve. 26
+	r	+	+	+	..	..	<i>Paralia sulcata</i> , (Ehb.), Cleve. 27
..	..	..	..	..	..	..	<i>Pleurosigma</i> sp. 28
..	..	..	..	..	..	..	<i>Rhizosolenia alata</i> , Btw. 29
..	..	rr	..	..	..	..	— <i>semispina</i> , Hensen. 30
..	..	..	..	..	..	..	— <i>setigera</i> , Btw. 31
..	..	..	..	..	..	..	— <i>Shrubsolei</i> , Cleve. 32
..	..	..	..	..	..	..	— <i>Stolterfothi</i> , Pér. 33

CONINGBEG LIGHTSHIP—continued.

Species No.		June.		July.		August.		September.	
		13.	27.	13.	27.	12.	26.	10.	24.
		2.23 a.m.	2.29 p.m.	2.23 a.m.	2.34 a.m.	2.55 a.m.	*	2.59 d.m.	2.36 p.m.
		16	17	18	19	20	21	22	23
	DIATOMACEAE.								
1	<i>Achnanthes</i> sp. ..	..	..	..	..	..	..	..	..
2	<i>Actinoptychus undulatus</i> , Ehb.,	r	..	..	rr	..	..	..	..
3	<i>Asterionella glacialis</i> , Castr.,	rr	rr	..	..	..	..	..	..
4	<i>Bacillaria paradoxa</i> , (Gmel.), Grun,	..	..	..	..	..	..	..	..
5	<i>Biddulphia mobiliensis</i> , Bail., ..	..	..	..	..	..	..	rr	..
6	<i>Cerataulina Bergoni</i> , Pér., ..	..	..	..	..	..	..	r	..
7	<i>Chaetoceras boreale</i> , Bail., ..	..	..	..	..	..	..	+	..
8	— <i>constrictum</i> , Gran,	..	..	..	..	..	..	..	..
9	— <i>crinitum</i> , Gran,	..	..	..	..	..	..	..	..
10	— <i>danicum</i> , Cleve,	..	..	..	..	..	..	rr	..
11	— <i>decipiens</i> , Cleve,	..	..	..	..	..	..	..	..
12	— <i>densum</i> , Cleve,	..	..	..	..	..	..	..	..
13	— <i>laciniosum</i> , Schütt,	..	..	..	..	..	..	..	..
14	— <i>Schütti</i> , Cleve,	..	..	..	rr	..	..	rr	..
15	<i>Corethron hystrix</i> , Hensen, ..	..	..	..	..	..	..	rr	..
16	<i>Coscinodiscus concinnus</i> , W. Sm.,	..	..	..	..	..	..	..	..
17	— <i>excentricus</i> , Ehb.,	..	..	r	rr	..	..	..	..
18	— <i>oculus iridis</i> , Ehb.,	..	..	..	..	..	..	..	..
19	— <i>radiatus</i> , Ehb.,	..	r	..	rr	r	..	..	..
20	<i>Coscinosira polychorda</i> , Gran,	..	..	..	..	..	..	..	..
21	<i>Ditylum Brightwelli</i> , West., ..	..	..	..	..	..	..	rr	..
22	<i>Guinardia flaccida</i> , Pér., ..	..	..	..	..	..	..	+	..
23	<i>Hyalodiscus stelliger</i> , Bail., ..	c	r	..	r	r	..	r	..
24	<i>Lauderia borealis</i> , Gran,	..	..	..	..	..	..	..	..
25	<i>Navicula membranacea</i> , Cleve,	..	..	..	..	..	..	r	..
26	<i>Nitzschia seriata</i> , Cleve,	..	r	..	..	..	..	..	..
27	<i>Paralia sulcata</i> , (Ehb.), Cleve,	..	r	r	r	r	..	+	rr
28	<i>Pleurosigma</i> sp., ..	..	..	r	..	..	r	..	..
29	<i>Rhizosolenia alata</i> , Btw., ..	..	..	..	..	..	..	+	..
30	— <i>semispina</i> , Hensen,	..	c	+	+	..	..	..	..
31	— <i>setigera</i> , Btw.,	..	..	..	..	..	..	..	..
32	— <i>Shrubsolei</i> , Cleve,	..	..	rr	rr	..	..	r	rr
33	— <i>Stolterfothi</i> , Pér.,	..	..	..	..	..	..	+	..

* Both samples totally macerated.

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

October.		November.		December.		Species No.
9. 2.13 a.m.	25. 2.54 a.m.	8. 2.39 a.m.	23. 2.28 a.m.	7. 2.22 a.m.	23. 2.49 a.m.	
24	25	26	27	28	29	
..	DIATOMACEAE.
..	<i>Achnanthes</i> sp. 1
..	<i>Actinoptychus undulatus</i> , Ehb. 2
rr	<i>Asterionella glacialis</i> , Castr. 3
..	<i>Bacillaria paradoxa</i> , (Gmel.), Grun. 4
..	rr	..	+	<i>Biddulphia mobiliensis</i> , Bail. 5
..	<i>Cerataulina Bergoni</i> , Pér. 6
..	+	<i>Chaetoceras boreale</i> , Bail. 7
..	— <i>constrictum</i> , Gran. 8
..	— <i>crinitum</i> , Gran. 9
..	— <i>danicum</i> , Cleve. 10
..	— <i>deciens</i> , Cleve. 11
..	r	r	r	— <i>densum</i> , Cleve. 12
..	rr	..	— <i>laciniosum</i> , Schütt. 13
..	— <i>Schüttii</i> , Cleve. 14
..	<i>Corethron hystrix</i> , Hensen. 15
..	rr	..	<i>Coscinodiscus concinnus</i> , W. Sm. 16
r	..	r	r	r	+	— <i>excentricus</i> , Ehb. 17
..	— <i>oculus iridis</i> , Ehb. 18
..	r	r	..	— <i>radiatus</i> , Ehb. 19
..	<i>Coscosira polychorda</i> , Gran. 20
..	<i>Ditylum Brightwelli</i> , West. 21
..	<i>Guinardia flaccida</i> , Pér. 22
r	r	r	r	+	+	<i>Hyalodiscus stelliger</i> , Bail. 23
..	<i>Lauderia borealis</i> , Gran. 24
..	<i>Navicula membranacea</i> , Cleve. 25
..	<i>Nitzschia seriata</i> , Cleve. 26
r	r	r	r	r	+	<i>Paralia sulcata</i> , (Ehb.), Cleve. 27
..	rr	..	r	<i>Pleurosigma</i> sp. 28
r	r	..	+	rr	+	<i>Rhizosolenia alata</i> , Btw. 29
..	r	— <i>semispina</i> , Hensen. 30
..	— <i>setigera</i> , Btw. 31
..	rr	..	..	— <i>Shrubsolei</i> , Cleve. 32
r	— <i>Stolterfothi</i> , Pér. 33

CONINGBEG LIGHTSHIP—continued.

Species No.	—	January.		February.				March.	
		19.	19.	1.	2.	15.	16.	2.	2.
		7.0 a.m.	7.50 p.m.	5.28 p.m.	5.54 a.m.	7.24 a.m.	7.40 p.m.	2.40 a.m.	3.2 p.m.
	DIATOMACEAE—con.	r	2	3	4	5	6	7	8
34	<i>Skeletonema costatum</i> , (Grev.), Cleve,	..	..	..	..	..	..	..	..
35	<i>Streptotheca tamesis</i> , (Sht.), Cleve,	..	..	..	..	..	..	..	..
36	<i>Thalassiosira gelatinosa</i> , Hensen,	..	..	..	..	..	..	..	..
37	— <i>gravida</i> , Cleve,	..	..	..	..	..	..	..	r
38	<i>Thalassiothrix curvata</i> , Castr.,	r	r	..	..	r	+	rr	+
39	— <i>Frauenfeldi</i> , Grun.,	..	r	r	rr	..	+	+	rr
	PERIDINIDAE.								
40	<i>Ceratium fusus</i> , (Ehbg.), Duj.,	r	r	..	..	..	..	..	..
41	— <i>longipes</i> , (Bail.), Cleve,	+	r	rr	..	rr	..	..	rr
42	— <i>horridum</i> , Cleve,	..	..	..	..	..	..	..	..
43	— <i>trijos</i> , (O. F. Müll.), Van- höffen,	r	r	..	..	..	..	..	..
44	<i>Dinophysis acuminata</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..
45	— <i>rotundata</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..
46	<i>Diplopsalis lenticula</i> , Bergh,	..	rr	..	..	..	..	..	..
47	<i>Glenodinium acuminatum</i> , Ehbg.,	..	..	..	..	..	..	..	..
48	<i>Gonyaulax polygramma</i> , Stein,	..	..	..	..	..	..	..	..
49	<i>Peridinium conicum</i> , Gran, ..	..	..	..	..	..	..	..	..
50	— <i>deciens</i> , Jörg.,	..	..	..	..	..	..	..	..
51	— <i>depressum</i> , Bail.,	..	+	+	..	..	rr	r	rr
52	— <i>globulus</i> , Stein,	..	..	..	..	..	..	..	..
53	— <i>oceanicum</i> , (Vanhöffen), ..	..	r	..	r	+	..	..	..
54	— <i>ovatum</i> , (Pouchet), Schütt,	..	..	..	..	..	..	..	..
55	— <i>pallidum</i> , Ostenf.,	..	..	rr	..	rr	..	..	..
56	— <i>pentagonum</i> , Gran, ..	..	rr	rr	..	..	..	..	..
57	<i>Procentrum micans</i> , Ehbg., ..	..	..	..	..	..	..	..	..
	PROTOCOCCOIDEAE.								
58	<i>Halosphaera viridis</i> , Schmitz,	+	c	+	+	+	+	+	+
59	<i>Trochiscia Clevei</i> , Lemm., ..	..	..	..	..	..	..	..	..
60	— <i>brachiolata</i> , (Möb.), Lemm.,	..	..	..	..	..	..	..	..
61	— <i>paucispinosa</i> , (Cleve), Lemm.,	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

March.		April.			May.		Species No.
17. 2.52 a.m.	17. 3.8 p.m.	31. 2.40 p.m.	15. 2.35 a.m.	30. 2.40 a.m.	15. 2.25 a.m.	29. 2.23 a.m.	
9	10	11	12	13	14	15	
..	..	rr	..	..	..	..	DIATOMACEAE—con.
..	..	r	rr	rr	..	..	<i>Skeletonema costatum</i> , (Grev.), Cleve. 34
..	..	r	..	..	..	..	<i>Streptotheca tamesis</i> , (Shr.), Cleve. 35
..	..	r	..	..	..	..	<i>Thalassiosira gelatinosa</i> , Hensen. 36
..	r	r	..	..	..	..	— <i>gravida</i> , Cleve. 37
r	..	rr	..	..	..	..	<i>Thalassiothrix curvata</i> , Castr. 38
+	r	+	+	..	..	..	— <i>Frauenfeldi</i> , Grun. 39
..	PERIDINIDAE.
..	<i>Ceratium fusus</i> , (Ehbg.), Duj. 40
..	— <i>longipes</i> , (Bail.), Cleve. 41
..	— <i>horridum</i> , Cleve. 42
rr	— <i>tripos</i> , (O. F. Müll.), Vanhöffen. 43
..	<i>Dinophysis acuminata</i> , Clap. & Lachm. 44
..	r	..	..	..	— <i>rotundata</i> , Clap. & Lachm. 45
..	<i>Diplopsalis lenticula</i> , Bergh. 46
..	<i>Glenodinium acuminatum</i> , Ehbg. 47
..	<i>Gonyaulax polygramma</i> , Stein. 48
..	r	..	..	..	<i>Peridinium conicum</i> , Gran. 49
..	— <i>decepiens</i> , Jörg. 50
..	..	r	r	r	r	..	— <i>depressum</i> , Bail. 51
..	— <i>globulus</i> , Stein. 52
..	— <i>oceanicum</i> , (Vanhöffen.) 53
..	..	rr	..	rr	r	..	— <i>ovatum</i> , (Pouchet), Schütt. 54
..	..	rr	..	..	..	..	— <i>pallidum</i> , Ostenf. 55
..	— <i>pentagonum</i> , Gran. 56
..	<i>Proocentrum micans</i> , Ehbg. 57
..	PROTOCOCCOIDEAE.
+	+	r	..	..	+	..	<i>Halosphaera viridis</i> , Schmitz. 58
..	r	..	..	r	<i>Trochiscia Clevei</i> , Lemm. 59
..	r	..	..	..	— <i>brachiolata</i> , (Möb.), Lemm. 60
..	— <i>paucispinosa</i> , (Cleve), Lemm. 61

CONINGBEG LIGHTSHIP—continued.

Species No.	—	June.		July.		August.		September.	
		13.	27.	13.	27.	12.	26.	10.	24.
		2.23 a.m.	2.29 a.m.	2.23 a.m.	2.34 a.m.	2.55 a.m.	*	2.59 p.m.	2.36 p.m.
	DIATOMACEAE—cont.								
34	<i>Skeletonema costatum</i> , (Grev.), Cleve,	..	rr	..	..	..	..	..	..
35	<i>Streptotheca tamesis</i> , (Shr.), Cleve,	..	..	r	..	..	..	+	..
36	<i>Thalassiosira gelatinosa</i> , Hensen,	..	..	..	..	..	..	..	..
37	— <i>gravida</i> , Cleve,	..	r	..	..	..	..	..	..
38	<i>Thalassiothrix curvata</i> , Castr.,	..	..	..	..	..	..	..	..
39	— <i>Frauenfeldi</i> , Grun.,	..	rr	rr	..	..	..	rr	..
	PERIDINIDAE.								
40	<i>Ceratium fusus</i> , (Ehbg.), Duj.,	r	..	..	..	..	..	rr	..
41	— <i>longipes</i> , (Bail.), Cleve, ..	..	..	..	..	..	..	r	rr
42	— <i>horridum</i> , Cleve,	..	r	..	..	..	..	..	..
43	— <i>tripos</i> , (O. F. Müll.), Van- höffen,	r	..	..	..	..	..	r	r
44	<i>Dinophysis acuminata</i> , Clap. & Lachm.,	..	..	..	..	..	..	rr	..
45	— <i>rotundata</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..
46	<i>Diplopsalis lenticula</i> , Bergh,	..	..	rr	r	..	..	rr	..
47	<i>Glenodinium acuminatum</i> , Ehbg.,	..	..	rr	..	..	..	..	..
48	<i>Gonyaulax polygramma</i> , Stein,	..	..	rr	..	..	..	..	..
49	<i>Peridinium conicum</i> , Gran, ..	..	..	..	..	..	..	..	..
50	— <i>decepiens</i> , Jörg.,	..	..	rr	..	..	..	..	..
51	— <i>depressum</i> , Bail.,	..	c	rr	rr	..	..	..	..
52	— <i>globulus</i> , Stein,	..	+	r	rr	..	..	..	..
53	— <i>oceanicum</i> , (Vanhöffen),	..	..	..	..	..	..	..	..
54	— <i>ovatum</i> , (Pouchet), Schütt,	+	r	+	r	..	..	rr	..
55	— <i>pallidum</i> , Ostent.,	..	c	r	r	..	..	..	..
56	— <i>pentagonum</i> , Gran,	..	..	..	rr	..	..	..	..
57	<i>Protocentrum micans</i> , Ehbg., ..	..	r	r	+	r	..	+	..
	PROTOCOCCOIDEAE.								
58	<i>Halosphaera viridis</i> , Schmitz,	..	..	..	..	..	..	rr	rr
59	<i>Trochiscia Clevei</i> , Lemm., ..	..	..	..	r	r	..	..	..
60	— <i>brachiolata</i> , (Möb.), Lemm.,	..	..	..	..	..	..	..	..
61	— <i>paucispinosa</i> , (Cleve), Lemm.,	..	c	..	..	..	..	..	..

* Both samples totally macerated.

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

October.		November.		December.		Species No.
9. 2.13 a.m.	25. 2.54 a.m.	8. 2.39 a.m.	23. 2.28 a.m.	7. 2.22 a.m.	23. 2.49 a.m.	
24	25	26	27	28	29	
..	..	..	..	..	..	DIATOMACEAE—con.
..	r	..	..	..	r	<i>Skeletonema costatum</i> , (Grev.), Cleve. 34
..	..	..	..	..	..	<i>Streptotheca tamesis</i> , (Shr.), Cleve. 35
..	..	..	..	..	..	<i>Thalassiosira gelatinosa</i> , Hensen. 36
..	..	..	..	..	..	— <i>gravida</i> , Cleve. 37
..	..	..	..	..	r	<i>Thalassiothrix curvata</i> , Castr. 38
rr	..	..	..	..	r	— <i>Frauenfeldi</i> , Grun. 39
..	..	..	..	..	..	PERIDINIDAE.
..	..	..	..	..	..	<i>Ceratium fusus</i> , (Ehbg.), Duj. 40
r	r	..	..	..	r	— <i>longipes</i> , (Bail.), Cleve. 41
..	r	r	r	rr	r	— <i>horridum</i> , Cleve. 42
r	+	+	+	+	c	— <i>tripos</i> (O. F. Müll.), Vanhöffen. 43
..	..	..	..	..	..	<i>Dinophysis acuminata</i> , Clap. & Lachm. 44
..	..	..	..	..	..	— <i>rotundata</i> , Clap. & Lachm. 45
..	r	..	..	..	r	<i>Diplopsalis lenticula</i> , Bergh. 46
..	..	..	..	..	..	<i>Glenodinium acuminatum</i> , Ehbg. 47
..	..	..	..	..	..	<i>Gonyaulax polygramma</i> , Stein. 48
..	..	..	..	..	..	<i>Peridinium conicum</i> , Gran. 49
..	..	..	..	..	..	— <i>decipiens</i> , Jörg. 50
..	+	r	rr	r	+	— <i>depressum</i> , Bail. 51
..	..	..	..	..	..	— <i>globulus</i> , Stein. 52
..	..	..	..	..	..	— <i>oceanicum</i> , (Vanhöffen). 53
..	..	..	..	..	..	— <i>ovatum</i> (Pouchet), Schütt. 54
..	..	..	..	..	..	— <i>pallidum</i> , Ostenf. 55
..	r	..	..	..	..	— <i>pentagonum</i> , Gran. 56
rr	..	..	..	..	..	<i>Prorocentrum micans</i> , Ehbg. 57
..	..	..	..	..	..	PROTOCOCCOIDEAE.
rr	+	+	+	+	c	<i>Halosphaera viridis</i> , Schmitz. 58
..	..	..	rr	..	..	<i>Trochiscia Clevei</i> , Lemm. 59
..	..	..	..	..	..	— <i>brachiolata</i> (Möb.), Lemm. 60
..	..	..	..	..	..	— <i>paucispinosa</i> , (Cleve), Lemm. 61

CONINGBEG LIGHTSHIP—continued.

Species No.	—	January.		February.				March.	
		19. 7.0 a.m.	19. 7.50 p.m.	1. 5.28 p.m.	2. 5.54 a.m.	15. 7.24 a.m.	16. 7.40 p.m.	2. 2.40 a.m.	2. 3.2 p.m.
		1	2	3	4	5	6	7	8
	INCERTA SEDIS.								
62	"Umrindete Cyste," Hensen,	..	..	r	t	r	+	c	+
62a	Hexasterias problematica, Cleve,	..	..	..	..	rr	..	..	..
	PROTOZOA.								
63	Lithomelissa sp.,	rr	..	..	..	rr	..	..	..
64	Cyttarocyclus norvegica, (Daday), Jørgensen.	..	..	..	..	..	..	..	..
65	Tintinnopsis beroidea, Stein, ..	r	+	..	rr	..	..	rr	..
	COELENTERATA.								
66	Lar sabellarum, Gosse, .. ..	..	..	..	..	..	..	..	..
67	Hybocodon prolifer, Agassiz,	..	..	..	..	..	..	..	..
68	Tiara pileata, Forsk., .. ..	..	..	..	..	..	..	..	..
69	Obelia sp., .. ..	..	..	..	..	..	..	..	..
70	Phialidium cymbaloideum, E. T. B.	..	..	..	..	..	..	..	..
71	— temporarium, E. T. B., ..	..	..	..	..	..	..	..	..
72	Aglantha rosea, Forbes, .. ..	..	..	..	r	+	..	..	..
73	Muggiaea atlantica, Cunningham,	..	..	..	..	..	..	..	..
74	Arachnactis [albida, M. Sars?],	..	..	..	..	..	..	..	..
75	Pleurobrachia pileus, Fabr., ..	..	..	..	..	..	..	..	..
	ECHINODERMATA.								
76	Auricularia, .. ..	..	..	..	..	rr	..	..	..
77	Echinopluteus, .. ..	..	..	..	..	..	..	..	..
78	Ophiopluteus, .. ..	..	..	..	..	r	..	..	..
79	Ophiurid juv., .. ..	..	..	..	..	..	..	rr	..
	VERMES.								
80	Pilidium, .. ..	..	..	..	..	..	rr	..	..
81	Polychaete larvae, .. ..	..	..	..	..	+	..	r	+
82	Sagitta bipunctata, Q. & G.,	+	c	c	c	+	c	+	c
83	Tomopteris helgolandica, Greef,	..	..	c	c	+	+	r	c
84	Trochophora,	r	..	..	r	..	r	..	..
	BRYOZOA.								
85	Cyphonautes, .. ..	..	..	..	rr	r	+	+	r

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

March.			April.		May.		Species No.
17. 2.52 a.m.	17. 3.8 p.m.	31. 2.40 p.m.	15. 2.35 a.m.	30. 2.40 a.m.	15. 2.25 a.m.	29. 2.23 a.m.	
9	10	11	12	13	14	15	INCERTAE SEDIS.
..	r	..	..	..	"Umrindete Cyste," Hensen. 62
..	Hexasterias problematica, Cleve. 62a
..	PROTOZOA.
..	Lithomelissa sp. 63
..	Cyttarocylis norvegica, (Daday), Jørgensen. 64
..	rr	..	..	Tintinnopsis beroidea, Stein. 65
..	COELENTERATA.
..	Lar sabellarum, Gosse. 66
..	rr	..	Hybocodon prolifer, Agassiz. 67
..	Tiara pileata, Forsk. 68
..	r	r	r	..	..	..	Obelia sp. 69
..	Phialidium cymbaloideum, E. T. B. 70
..	— temporarium, E. T. B. 71
..	Aglantha rosea, Forbes. 72
..	Muggiaea atlantica, Cunningham. 73
..	Arachnactis [albida, M. Sars ?] 74
..	Pleurobrachia pileus, Fabr. 75
..	..	rr	..	..	..	..	ECHINODERMATA.
..	Auricularia. 76
..	Echinopluteus. 77
..	r	..	..	..	..	..	Ophiopluteus. 78
..	Ophiurid juv. 79
..	VERMES.
..	Pilidium. 80
r	Polychaete larvae. 81
e	r	..	c	..	+	+	Sagitta bipunctata, Q. & G. 82
r	rr	..	..	..	..	c	Tomopteris helgolandica, Greef. 83
..	Trochophora. 84
..	BRYOZOA.
..	Cyphonautes. 85

CONINGBEG LIGHTSHIP—continued.

Species no.		June.		July.		August.		September.	
		13. 2.23 a.m.	27. 2.29 p.m.	13. 2.23 a.m.	27. 2.34 a.m.	12. 2.55 a.m.	26. *	10. 2.59 p.m.	24. 2.36 p.m.
	INCERTAE SEDIS.	10	17	18	19	20	21	22	23
62	"Umrindete Cyste," Hensen,	..	..	..	..	..	..	..	..
62A	Hexasterias problematica, Cleve,	..	..	..	..	..	..	..	..
	PROTOZOA.								
63	Lithomelissa sp., .. ..	..	..	..	..	..	..	..	..
64	Cyttarocylis norvegica, (Daday), Jørgensen,	r	r	..	..	..	..	..	..
65	Tintinnopsis beroidea, Stein,	r	r	..	..	..	..	..	..
	COELENTERATA.								
66	Lar sabellarum Gosse,	..	..	..	..	..	..	..	rr
67	Hybocodon prolifer, Agassiz.,	..	..	..	..	..	..	..	..
68	Tiara pileata, Forsk.,	..	..	..	+	rr	..	..	..
69	Obelia sp., .. ..	..	..	..	..	..	..	r	..
70	Phialidium cymbaloideum, E. T. B.,	..	..	..	..	..	..	..	r
71	— temporarium, E. T. B.,	..	..	..	..	..	..	+	+
72	Aglantha rosea, Forbes,	..	..	..	..	..	..	..	..
73	Muggiaea atlantica, Cunningham,	..	..	..	..	..	..	cc	cc
74	Archnactis [albida, M. Sars. ?],	rr	..	..	..	..	..	..	..
75	Pleurobrachia pileus, Fabr.,	..	r	rr	..	..	..	..	..
76	Auricularia, .. ..	..	..	..	..	..	..	..	..
77	Echinopluteus, .. ..	..	..	..	..	..	..	r	..
78	Ophiopluteus, .. ..	..	..	..	..	..	..	..	r
79	Ophiurid juv., .. ..	..	..	..	..	..	..	..	..
	VERMES.								
80	Pilidium, .. ..	..	..	..	..	..	..	..	..
81	Polychaete larvae, .. ..	..	..	..	..	..	..	r	..
82	Sagitta bipunctata, Q. & G., ..	..	at night c	r	c	+	..	+	+
83	Tomopteris helgolandica, Greef.,	..	..	..	..	r	..	..	+
84	Trochophora, .. ..	..	..	..	..	..	..	..	..
	BRYOZOA.								
85	Cyphonautes, .. ..	..	..	..	..	..	..	rr	..

* Both samples totally macerated.

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

October.		November.		December.		Species No.
9. 2.13 a.m.	25. 2.54 a.m.	8. 2.39 a.m.	23. 2.28 a.m.	7. 2.22 a.m.	23. 2.49 a.m.	
24	25	26	27	28	29	INCERTAE SEDIS.
..	..	..	..	..	..	"Umrindete Cyste," Hensen. 62
..	..	..	..	..	..	Hexasterias problematica Cleve. 62a
						PROTOZOA.
..	..	..	..	..	r	Lithomelissa sp. 63
..	..	..	..	..	..	Cyttarocylis norvegica (Daday), Jørgensen. 64
..	..	..	..	..	rr	Tintinnopsis beroidea, Stein. 65
						COELENTERATA.
..	..	..	..	..	..	Lar sabellarum, Gosse. 66
..	..	..	..	..	..	Hybocodon prolifer, Agassiz. 67
..	..	..	..	..	..	Tiara pileata, Forsk. 68
..	..	..	r	..	..	Obelia sp. 69
..	..	..	..	..	..	Phialidium cymbaloideum, E. T. B. 70
..	..	..	r	..	..	— temporarium, E. T. B. 71
..	..	..	..	..	..	Aglantha rosea, Forbes. 72
c	c	r	+	+	c	Muggiaea atlantica, Cunningham. 73
..	..	..	..	..	..	Arachnactis [albida, M. Sars. ?]. 74
..	..	..	..	..	..	Pleurobrachia pileus, Fabr. 75
						ECHINODERMATA.
..	..	..	..	..	..	Auricularia. 76
..	..	..	..	..	..	Echinopluteus. 77
..	..	..	..	..	..	Ophiopluteus. 78
..	..	..	..	..	..	Ophiurid juv. 79
						VERMES.
..	..	..	..	..	..	Pilidium. 80
..	..	..	..	..	..	Polychaete larvae. 81
c	+	+	+	+	c	Sagitta bipunctata, Q. & G. 82
..	..	+	r	r	+	Tomopteris belgolandica, Greef. 83
..	..	..	..	..	..	Trochophora. 84
						BRYOZOA.
..	..	..	..	r	+	Cyphonautes. 85

CONINGBEG LIGHTSHIP—continued.

Specia No.	—	January.		February.				March.	
		19.	19.	1.	2.	15.	16.	2.	2.
		7.0 a.m.	7.50 p.m.	5.28 p.m.	5.54 a.m.	7.24 a.m.	7.40 p.m.	2.40 a.m.	3.2 p.m.
	COPEPODA.	r	2	3	4	5	6	7	8
86	Acartia Clausi, Giesbr., ..	..	r	+	+	r	+	r	r
87	Alteutha bopyroides, Claus., ..	..	..	..	..	..	..	..	..
88	Anomalocera Pattersoni, R. Temp.	..	..	..	r	..	..	..	..
89	Bradyidius armatus, Vanhöffen,	..	..	..	..	..	..	..	rr
90	Calanus finmarchicus, Gunn., ..	+	+	c	c	..	c	c	c
91	Candacia pectinata, Brady, ..	..	..	..	..	..	..	..	..
92	Centropages hamatus, Lillj., ..	..	..	..	..	..	..	..	..
93	— typicus, Kröyer, ..	+	+	+	+	r	+	r	r
94	Corycaeus anglicus, Lubb., ..	+	+	+	+	r	c	r	rr
95	Diaixis pygmaea, Scott, ..	..	..	..	..	..	..	..	r
96	Euterpe acutifrons, Dana, ..	r	..	..	..	..	..	..	..
97	Metridia lucens, Boeck, ..	..	r	+	+	..	c	..	c
98	Microsetella atlantica, Brady,	r	r	r	r	rr	r	r	rr
99	Oithona nana, Giesbr., ..	..	r	..	..	rr	..	..	..
100	— similis, Claus, ..	c	c	r	+	cc	c	+	+
101	Paracalanus parvus, Claus, ..	+	+	..	..	..	+	r	?
102	Parapontella brevicornis, Lubb.,	..	..	..	..	rr juv.	..	..	..
103	Pseudocalanus elongatus, Boeck,	..	r	+	+	+	+	+	r
104	Temora longicornis (O. F. Müller),	..	r	..	..	..	..	..	..
	CRUSTACEA (CETERA).								
105	Evadne Nordmanni, Lovén, ..	..	..	..	..	..	..	..	..
106	Podon intermedius, Lillj., ..	..	..	..	..	..	..	..	..
107	Eurydice inermis, Hansen, ..	..	..	..	..	..	..	..	..
108	Hyperiid, (Euthemisto com- pressa, Goes.?),	r	r	..	+	..	+	..	..
109	Gastrosaccus Normani, Sars, ..	..	..	..	..	..	..	..	..
110	— sanctus, Sars, ..	..	..	..	..	..	..	..	..
111	Nyctiphanes Couchi, Bell, ..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

March.			April.			May.		Species No.
17. 2.52 a.m.	17. 3.8 p.m.	31. 2.40 p.m.	15. 2.35 a.m.	30. 2.40 a.m.	15. 2.25 a.m.	29. 2.23 a.m.		
9	10	11	12	13	14	15		
..	r	..	..	..	..	r	COPEPODA.
..	r	<i>Acartia Clausi</i> , Giesbr. 86	
..	r	<i>Alteutha bopyroides</i> , Claus. 87	
..	..	juv. rr	..	..	+	+	<i>Anomalocera Pattersoni</i> , R. Temp. 88
..	<i>Bradyidius armatus</i> , Vanhöffen. 89	
c	+	cc	cc	c	cc	cc	<i>Calanus finmarchicus</i> , Gunn. 90	
..	<i>Candacia pectinata</i> , Brady. 91	
..	..	r	r	..	+	c	<i>Centropages hamatus</i> , Lillj. 92	
..	+	+	— <i>typicus</i> , Krøyer. 93	
..	<i>Corycaeus anglicus</i> , Lubb. 94	
..	<i>Diaxis pygmaea</i> , Scott. 95	
..	<i>Euterpe acutifrons</i> , Dana. 96	
c	..	+	cc	c	cc	cc	<i>Metridia lucens</i> , Boeck. 97	
..	<i>Microsetella atlantica</i> , Brady. 98	
r	<i>Oithona nana</i> , Giesbr. 99	
..	r	..	..	..	— <i>similis</i> , Claus. 100	
r	+	c	c	..	+	c	<i>Paracalanus parvus</i> , Claus. 101	
..	<i>Parapontella brevicornis</i> , Lubb. 102	
r	+	+	c	..	c	c	<i>Pseudocalanus elongatus</i> , Boeck. 103	
..	..	r	r	r	+	c	<i>Temora longicornis</i> (O. F. Müller), 104	
..	CRUSTACEA (CRERA).	
..	<i>Evadne Nordmanni</i> , Lovén. 105	
..	<i>Podon intermedius</i> , Lillj. 106	
..	<i>Eurydice inermis</i> , Hansen. 107	
..	Hyperiid (<i>Ethemisto compressa</i> , Goes. ?) 108	
..	<i>Gastrosaccus Normani</i> , Sars. 109	
..	— <i>sanctus</i> , Sars. 110	
..	<i>Nyctiphanes Couchi</i> , Bell. 111	

C. CONINGBEG LIGHTSHIP—continued.

Species No.	---	June.		July.		August.		September.	
		13.	27.	13.	27.	12.	26.	10.	24.
		2.23 a.m.	2.29 p.m.	2.23 a.m.	2.34 a.m.	2.55 a.m.	*	2.59 p.m.	2.36 p.m.
	COPEPODA.	16	17	18	19	20	21	22	23
86	Acartia Clausi, Giesbr., ..	+	c	+	r	+	..	+	+
87	Alteutha bopyroides, Claus,	..	..	..	..	..	..	..	..
88	Anomalocera Pattersoni, R. Temp.	+	+	..	+	r	..	c	..
89	Bradyidius armatus, Vanhöffen,	..	..	..	..	..	..	..	..
90	Calanus finmarchicus, Gunn.,	cc	c at night cc	cc	cc	c	..	cc	cc
91	Candacia pectinata, Brady, ..	..	..	..	..	..	..	+	+
92	Centropages hamatus, Lillj., ..	c	+	r	rr	+	..	..	..
93	— typicus, Kröyer, ..	c	+	c	c	cc	..	c	c
94	Corycaeus anglicus, Lubb., ..	..	..	..	..	..	..	+	+
95	Dialxis pygmaea, Scott, ..	..	..	..	..	..	..	..	..
96	Euterpe acutifrons, Dana, ..	..	..	..	..	..	..	..	..
97	Metridia lucens, Boeck, ..	cc	at night c	+	+	c	..	+	c
98	Microsetella atlantica, Brady,	..	..	..	..	..	..	..	..
99	Oithona nana, Giesbr., ..	..	..	..	..	..	..	..	..
100	— similis, Claus, ..	..	..	..	rr	r	..	..	..
101	Paracalanus parvus, Claus,	..	..	r	+	+	..	+	+
102	Parapontella brevicornis, Lubb.,	..	..	..	..	..	..	..	..
103	Pseudocalanus elongatus, Boeck,	c	at night c	+	+	c	..	c	c
104	Temora longicornis (O. F. Müller),	..	..	+	+	c	..	+	+
	CRUSTACEA (CETERA).								
105	Evadne Nordmanni, Lovén, ..	+	..	..	..	..	..	..	..
106	Podon intermedius, Lillj., ..	..	..	r	cc	c	..	+	r
107	Eurydice inermis, Hansen, ..	..	..	..	..	..	..	..	..
108	Hyperiid (Euthemisto com- pressa, Goes ?),	..	..	..	..	..	..	..	..
109	Gastrosaccus Normani, Sars, ..	..	..	..	..	..	..	..	..
110	— sanctus, Sars, ..	..	..	..	..	..	..	..	..
111	Nyctiphanes Couchi, Bell, ..	..	..	..	..	..	..	..	..

* Both samples totally macerated.

IRISH LIGHT STATIONS, 1904—continued

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

October.		November.		December.		Species No.
9. 2.13 a.m.	25. 2.54 a.m.	8. 2.39 a.m.	23. 2.28 a.m.	7. 2.22 a.m.	23. 2.49 a.m.	
24	25	26	27	28	29	
						COPEPODA.
+	..	..	..	..	..	Acartia Clausi, Giesbr. 86
..	..	..	..	..	..	Alteutha bopyroides, Claus. 87
..	c	..	..	..	..	Anomalocera Pattersoni, R. Temp. 88
..	..	..	..	..	..	Bradyidius armatus, Vanhöffen. 89
cc	cc	cc	cc	cc	cc	Calanus finmarchicus Gunn. 90
+	..	..	..	..	r	Candacia pectinata, Brady. 91
..	..	..	..	..	..	Centropages hamatus, Lillj. 92
c	c	..	..	..	+	— typicus Kröyer. 93
c	c	c	c	c	+	Corycaeus anglicus, Lubb. 94
..	..	..	..	..	rr	Diaixis pygmaea, Scott. 95
..	..	..	..	..	..	Euterpe acutifrons, Dana. 96
r	r	+	+	+	c	Metridia lucens, Boeck. 97
..	..	..	..	..	..	Microsetella atlantica, Brady. 98
..	..	..	..	..	..	Oithona nana, Giesbr. 99
..	..	..	+	..	+	— similis, Claus. 100
..	+	..	..	..	r	Paracalanus parvus, Claus. 101
..	..	..	..	..	..	Parapontella brevicornis, Lubb. 102
c	c	+	c	c	c	Pseudocalanus elongatus, Boeck. 103
c	c	c	c	c	+	Temora longicornis (O. F. Müller). 104
						CRUSTACEA (CETERA).
..	..	..	..	..	..	Evadne Nordmanni, Lovén. 105
..	..	..	..	..	..	Podon intermedius, Lillj. 106
..	..	r	..	..	..	Eurydice inermis, Hansen. 107
+	r	..	..	..	..	Hyperiid (Euthemisto compressa, Goes. ?). 108
..	..	r	..	..	..	Gastrosaccus Normani, Sars. 109
+	..	r	+	c	..	— sanctus, Sars. 110
+	..	..	..	..	..	Nyctiphanes Couchi, Bell. 111

CONINGBEG LIGHTSHIP—continued.

Species No.		January.		February.				March.	
		19. 7.0 a.m.	19. 7.50 p.m.	1. 5.28 p.m.	2. 5.54 a.m.	15. 7.24 a.m.	16. 7.40 p.m.	2. 2.40 a.m.	2. 8.2 p.m.
	CRUSTACEA (CETERA)— <i>con.</i>	r	2	3	4	5	6	7	8
112	Cirripedia larvae, .. ..	..	..	..	..	..	r	r	r
113	Cypris stage larvae, .. ..	..	..	..	..	..	..	..	..
114	Microniscus, .. ..	..	..	..	..	..	..	..	rr
115	Nauplius & Metanauplius, ..	+	+	r	r	r	+	+	+
116	Zoea, .. ..	..	..	..	..	+	..	+	+
117	Megalopa, .. ..	..	..	..	..	..	..	..	..
118	Caridid larvae,	r	r	..	..	r	..	r	+
119	Homarus vulgaris, M.-Edw. larva,	..	..	..	..	..	..	..	..
	MOLLUSCA.								
120	Lamellibranchiate larvae, ..	r	r	..	..	r	c	+	r
121	Gastropod larvae, .. ..	..	r	..	..	r	+	..	..
	TUNICATA.								
122	Fritillaria borealis, Q. et G., ..	..	..	..	..	..	..	..	..
123	Oikopleura dioica, Fol, ..	r	..	..	..	..	..	..	..
	VERTEBRATA.								
124	Teleostel, ova et larvae, ..	r	..	..	c	+	+	r	r

IRISH LIGHT STATIONS, 1904—*continued.*

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

March.			April.		May.		Species No.
17. 2.52 a.m.	17. 3.8 p.m.	31. 2.40 p.m.	15. 2.35 a.m.	30. 2.40 a.m.	15. 2.25 a.m.	29. 2.23 a.m.	
9	10	11	12	13	14	15	
+	r	c	r	..	..	..	CRUSTACEA (CETERA)— <i>con.</i>
..	..	..	+	..	..	..	Cirripedia larvae. 112
..	..	..	..	..	..	..	Cypris stage larvae. 113
..	..	..	..	..	..	..	Microniscus. 114
+	+	+	r	r	r	r	Nauplius and Metanauplius. 115
r	..	r	r	r	r	+	Zoea. 116
..	..	..	..	..	..	..	Megalopa. 117
r	r	r	..	..	..	+	Caridid larvae. 118
..	..	..	..	..	..	..	Homarus vulgaris, M-Edw. larva. 119
							MOLLUSCA.
r	..	r	..	..	..	..	Lamellibranchiate larvae. 120
..	..	..	..	..	..	..	Gastropod larvae. 121
							TUNICATA.
..	..	..	..	..	..	..	Fritillaria borealis, Q. & G. 122
..	..	..	..	..	..	..	Oikopleura dioica, Fol. 123
							VERTEBRATA.
r	+	+	c	..	..	r	Teleostei, ova et larvae. 124

CONINGBEG LIGHTSHIP—*continued.*

Species No.		June.		July.		August.		September.	
		13.	27.	13.	27.	12.	26.	10.	24.
		2 23 a.m.	2.29 a.m.	2.23 a.m.	2.34 a.m.	2.55 a.m.	*	2.59 p.m.	2.36 p.m.
	CRUSTACEA (CETERA)— <i>con.</i>	16	17	18	19	20	21	22	23
112	Cirripedia larvae, .. ..	..	..	..	..	..	..	..	..
113	Cypris stage larvae, .. ..	..	..	..	..	..	..	..	..
114	Microniscus, .. ..	..	..	..	..	..	..	..	+
115	Nauplius and Metanauplius,	r	r	+	+	+	..	+	+
116	Zoea,	+	at night +	cc	cc	cc	..	r	r
117	Megalopa, .. ..	..	..	..	..	..	..	..	r
118	Caridid larvae, .. ..	..	..	..	..	r	..	..	..
119	Homarus vulgaris, M.-Edw. larva,	..	..	..	(2) rr	..	..	..	..
	MOLLUSCA.								
120	Lamellibranchiate larvae, ..	..	..	r	r	..	..	r	r
121	Gastropod larvae, .. ..	..	..	..	..	r	..	r	r
	TUNICATA.								
122	Fritillaria borealis, Q. & G., ..	..	..	..	..	..	..	rr	..
123	Oikopleura dioica, Fol, .. ..	..	..	..	..	..	..	r	..
	VERTEBRATA.								
124	Teleostei, ova et larvae, .. ..	..	..	+	..	..	..	+	..

* Both samples totally macerated.

IRISH LIGHT STATIONS, 1904—continued.

Lat. 52° 2' N., Long. 6° 40' W. 29 Fathoms.

October.		November.		December.		Species No.
9.	25.	8.	23.	7.	23.	
2.13 a.m.	2.54 a.m.	2.39 a.m.	2.28 a.m.	2.22 a.m.	2.49 a.m.	
24	25	26	27	28	29	
r	..	..	..	r	..	CRUSTACEA (CETERA)—CON.
..	..	..	..	..	..	Cirripedia larvae. 112
..	..	..	..	r	..	Cypris stage larvae. 113
+	+	r	r	r	..	Microniscus. 114
r	..	r	..	..	..	Nauplius and Metanauplius. 115
r	..	r	..	..	..	Zoea. 116
r	..	..	..	..	..	Megalopa. 117
+	c	r	r	r	+	Caridid larvae. 118
..	..	..	..	..	..	Homarus vulgaris, M.-Edw. larva. 119
						120
						MOLLUSCA.
r	r	r	r	r	+	Lamellibranchiate larvae. 121
r	r	r	r	r	+	Gastropod larvae. 121
						TUNICATA.
..	..	..	..	..	..	Fritillaria borealis, Q. & G. 122
..	r	r	r	..	..	Oikopleura dioica, Fol. 123
						VERTEBRATA.
rr	..	..	..	..	..	Teleostei, ova et larvae. 124

FASTNET ROCK LIGHTHOUSE.

Species No.		February.		March.		April.		May.		June.	
		3. 3.30 p.m.	18. 3.30 p.m.	2. 1.0 p.m.	22. 4.30 p.m.	20. 6.0 p.m.	30. 12.30 p.m.	14. 12.30 p.m.	31. 3.0 p.m.	17. 3.15 p.m.	29. 12.15 p.m.
		1	2	3	4	5	6	7	8	9	10
	DIATOMACEAE.										
1	<i>Actinoptychus undulatus</i> , Ehb., ..	r	r	r	+	..	r	r	..	r	..
2	<i>Asterionella glacialis</i> , Castr., ..	..	..	..	..	..	..	..	+	..	..
3	<i>Biddulphia mobiliensis</i> , Bail., ..	c	+	+	+	..	r	..	..	r	..
4	<i>Chaetoceras boreale</i> , Bail., ..	..	..	..	..	..	..	..	..	..	..
5	— <i>constrictum</i> , Gran., ..	..	..	..	..	..	..	..	..	..	..
6	— <i>curvisetum</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
7	— <i>danicum</i> , Cleve., ..	..	..	..	..	..	r	..	..	..	..
8	— <i>decipiens</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
9	— <i>densum</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
10	— <i>didymum</i> (Ehb.), Cleve., ..	..	..	..	..	..	..	..	..	..	..
11	— <i>laciniosum</i> , Schütt., ..	..	..	..	..	..	..	..	..	..	..
12	— <i>peruvianum</i> , Btw., ..	..	..	..	..	..	frag- ments rr	..	..	..	..
13	— <i>scolopendra</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
14	<i>Coccinodiscus concinnus</i> , W. Sm., ..	r	r	..	..	..	..	..	..	..	..
15	— <i>excentricus</i> , Ehb., ..	r	r	r	r	..	..	..	r	+	r
16	— <i>oculus iridis</i> , Ehb., ..	r	+	+	..	..	..	..	..	..	..
17	— <i>radiatus</i> , Ehb., ..	r	r	r	+	..	r	..	r	r	r
18	<i>Ditylum Brightwelli</i> , West., ..	..	..	..	..	..	r	..	..	..	..
19	<i>Fragillaria</i> , c.f. <i>oceanica</i> , Gran., ..	..	..	..	..	..	..	..	r	..	rr
20	<i>Guinardia flaccida</i> , Pérag., ..	..	..	..	..	..	..	..	..	..	..
21	<i>Hyalodiscus stelliger</i> , Bail., ..	..	+	+	c	..	r	r	+	c	r
22	<i>Lauderia borealis</i> , Gran., ..	..	..	..	..	..	?	..	..	..	..
23	<i>Navicula membranacea</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
24	<i>Nitzschia seriata</i> , Cleve., ..	..	..	..	..	..	..	..	..	..	..
25	<i>Paralia sulcata</i> , Cleve., ..	..	r	r	r	..	r	..	+	r	r
26	<i>Pleurosigma</i> sp., ..	..	+	..	..	..	rr	..	r	r	rr
27	<i>Rhizosolenia alata</i> , Btw., ..	..	..	..	..	..	..	..	..	..	..
28	— <i>semispina</i> , Hensen, ..	..	..	..	..	..	..	..	..	..	r
29	— <i>setigera</i> , Btw., ..	..	..	..	..	..	..	..	..	..	..
30	— <i>Shrubsolei</i> , Cleve., ..	..	..	..	..	..	..	r	..	..	..
31	— <i>Stolterfothi</i> , Pérag., ..	..	..	..	..	..	..	..	..	..	..
32	<i>Sceletonema costatum</i> (Grev.), Cleve., ..	..	..	..	..	..	+	..	..	..	..
33	<i>Thalassiosira</i> (<i>condensata</i> , Cleve?), ..	..	..	..	..	..	..	..	+	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 51° 23' 18" N., Long. 9° 36' 25" W.

July.		August.		September.		October.		November.		Dec.	Species No.
17. 1.30 p.m.	29. 4.0 p.m.	12. 2.15 p.m.	26. 1.30 p.m.	9. 11.30 p.m.	24. 1.0 p.m.	10. 12.45 p.m.	25. 1.45 p.m.	8. 3.0 p.m.	24. 1.30 p.m.	24. 2.30 p.m.	
11	12	13	14	15	16	17	18	19	20	21	
..	r	r	..	..	..	..	..	..	..	rr	DIATOMACEAE.
..	..	cc	..	..	..	..	..	..	rr	..	<i>Actinoptychus undulatus</i> , Ehb. 1
..	rr	..	<i>Asterionella glacialis</i> , Castr. 2
..	rr	..	<i>Biddulphia mobiliensis</i> , Bail. 3
..	r	+	+	..	..	..	<i>Chaetoceras boreale</i> , Bail. 4
..	..	r	..	..	..	r	..	..	..	..	— <i>constrictum</i> , Gran. 5
..	..	+	rr	r	..	..	..	..	— <i>curvisetum</i> , Cleve. 6
..	rr	..	..	..	..	..	— <i>danicum</i> , Cleve. 7
..	..	r	..	r	r	r	..	..	..	..	— <i>decipiens</i> , Cleve. 8
..	r	+	+	r	r	rr	— <i>densum</i> , Cleve. 9
..	r	..	..	..	..	— <i>didymum</i> (Ehb.), Cleve. 10
..	rr	r	..	..	..	..	— <i>laciniosum</i> , Schütt. 11
..	— <i>peruvianum</i> , Btw. 12
..	rr	..	..	..	..	..	..	..	— <i>scolopendra</i> , Cleve. 13
..	<i>Coscinodiscus concinnus</i> , W. Sm. 14
..	rr?	..	..	..	..	r	— <i>excentricus</i> , Ehb. 15
..	+	c	c	+	..	..	..	..	— <i>oculus iridis</i> , Ehb. 16
..	?	..	r	..	r	r	r	— <i>radiatus</i> , Ehb. 17
..	c	c	r	..	..	..	<i>Ditylum Brightwelli</i> , West, 18
..	rr	..	..	..	..	..	<i>Fragillaria</i> , c.f. <i>oceanica</i> , Gran. 19
..	rr	..	..	..	..	..	<i>Guillardia flaccida</i> , Pér. 20
..	+	+	+	r	rr	r	r	+	+	c	<i>Hyalodiscus stelliger</i> , Bail. 21
..	<i>Lauderia borealis</i> , Gran. 22
..	r	..	..	..	..	..	<i>Navicula membranacea</i> , Cleve. 23
..	..	r	r	..	..	..	..	..	..	..	<i>Nitzschia seriata</i> , Cleve. 24
..	..	+	r	r	r	r	r	r	r	r	<i>Paralia sulcata</i> , Cleve. 25
..	..	r	..	..	r	..	r	rr	rr	rr	<i>Pleurosigma</i> sp. 26
..	..	+	+	+	c	r	c	+	c	r	<i>Rhizosolenia alata</i> , Btw. 27
..	..	+	rr	r	..	..	..	..	— <i>semispina</i> , Hensen. 28
..	r	..	..	..	..	— <i>setigera</i> , Btw. 29
..	..	c	c	..	rr	r	r	..	..	..	— <i>Shrubsolei</i> , Cleve. 30
..	rr	+	r	..	..	..	..	— <i>Stolterfothi</i> , Pér. 31
..	..	r	..	..	..	r	..	..	..	..	<i>Skeletonema costatum</i> (Grev.), Cleve. 32
..	<i>Thalassiosira (condensata)</i> , Cleve? 33

FASTNET ROCK LIGHTHOUSE—continued.

Species No.	—	February.		March.		April.		May.		June.	
		3. 3-30 p.m.	18. 3-30 p.m.	2. 1-0 p.m.	22. 4-30 p.m.	20. 6-0 p.m.	30. 12-30 p.m.	14. 12-30 p.m.	31. 3-0 p.m.	17. 3-15 p.m.	29. 12-10 p.m.
		r	2	3	4	5	6	7	8	9	10
	DIATOMACEAE— <i>com.</i>										
34	<i>Thalassiosira gravida</i> , Cleve, ..	..	..	..	..	..	..	..	..	..	..
35	— <i>Nordenskiöldi</i> , Cleve, ..	..	..	..	..	..	..	c	..	..	..
36	<i>Thalassiothrix curvata</i> , Castr.,	..	..	r	..	..	..	..	..	..	..
37	— <i>Frauenfeldi</i> , Grun., ..	..	..	r	r	..	r	r	r	..	..
	PERIDINIDAE.										
38	<i>Ceratium furca</i> , Clap. & Lachm.,	..	..	..	..	..	..	..	..	..	..
39	— <i>fuscus</i> (Ehbg.), Duj., ..	..	..	..	r	..	..	..	..	..	..
40	— <i>horridum</i> (Cleve), Gran,	..	..	..	..	..	..	..	..	..	..
41	— <i>longipes</i> (Bail.), Cleve, ..	..	..	..	..	..	..	..	..	..	..
42	— <i>macroceras</i> , Ehbg., ..	..	..	..	..	..	..	..	..	..	..
43	— <i>tripos</i> , (O. F. Müll.), Vanhöffen, ..	rr	rr	r	..	..	..	..	..	..	..
44	<i>Diplopsalis lenticula</i> , Bergh, ..	..	..	..	..	..	..	..	..	..	..
45	<i>Glenodinium acuminatum</i> , Ehbg.,	..	..	..	..	..	..	..	..	..	..
46	<i>Gonyaulax polygramma</i> , Stein,	..	..	..	..	..	..	..	..	..	..
47	<i>Peridinium conicum</i> , Gran, ..	..	..	..	..	..	..	r	+	..	..
48	— <i>depressum</i> , Bail., ..	..	..	..	..	..	..	..	r	+	r
49	— <i>oceanicum</i> (Vanhöffen), Jörg.,	..	..	..	..	..	..	..	..	..	..
50	— <i>ovatum</i> (Pouch.), Schütt,	..	..	..	..	..	..	..	..	..	..
51	— <i>pallidum</i> , Ostenf., ..	..	..	r	..	..	..	+	r	..	rr
52	— <i>pentagonum</i> , Gran, ..	..	..	..	..	..	..	..	r	..	..
53	<i>Prorocentrum micans</i> , Ehbg.,	..	..	..	..	..	..	..	..	..	..
	FLAGELLATAE.										
54	<i>Dinobryon pellucidum</i> , Lev.,	..	..	..	..	..	..	r	..	r	..
	PROTOCOCCOIDEAE.										
55	<i>Halosphaera viridis</i> , Schmitz,	..	r	+	+	+	..	..	..	..	..
56	<i>Trochiscia Clevei</i> , Lemm., ..	..	..	..	..	..	..	r	r	..	..
	SILICOFLAGELLATAE.										
57	<i>Dictyocha fibula</i> , Ehbg., ..	..	..	..	..	..	..	..	..	..	..
58	<i>Distephanus speculum</i> (Ehbg.), Häeckel.	..	..	..	..	..	..	..	..	..	..

RISH LIGHT STATIONS 1904—*continued*.

Lat. 51° 23' 18" N., Long. 9° 36' 25" W.

July.		August.		September.		October.		November.		Dec.	Species No.
12. 1.30 p.m.	29. 4.0 p.m.	12. 2.15 p.m.	26. 1.30 p.m.	9. 11.30 p.m.	24. 1.0 p.m.	10. 12.45 p.m.	25. 1.45 p.m.	8. 3.0 p.m.	24. 1.30 p.m.	24. 2.30 p.m.	
11	12	13	14	15	16	17	18	19	20	21	
..	r	+	..	..	..	..	DIATOMACEAE— <i>con.</i>
..	— <i>gravida</i> , Cleve 34
..	— <i>Nordenskiöldi</i> , Cleve. 35
..	<i>Thalassiothrix curvata</i> , Castr. 36
..	rr	..	rr	..	..	..	rr	— <i>Frauenfeldi</i> , Grun. 37
..	rr	..	rr	rr	..	rr	..	..	..	..	PERIDINIDAE.
..	..	+	..	r	r	r	..	..	..	..	<i>Ceratium furca</i> , Clap. & Lachm. 38
..	+	+	r	r	..	..	— <i>fuscus</i> (Ehbg.), Duj. 39
..	r	r	r	r	..	+	r	..	— <i>horridum</i> (Cleve), Gran. 40
..	+	r	..	..	..	..	— <i>longipes</i> (Bail.), Cleve, 41
..	c	c	..	c	+	r	— <i>macroceras</i> , Ehbg. 42
+	rr	r	r	+	..	r	..	..	<i>Diplopsalis lenticula</i> , Bergh. 44
..	r	..	..	..	..	..	<i>Glenodinium acuminatum</i> , Ehbg. 45
..	rr	rr	..	..	..	..	..	<i>Gonyaulax polygramma</i> , Stein, 46
..	rr	r	r	..	r	r	..	..	..	..	<i>Peridinium conicum</i> , Gran. 47
+	r	+	+	..	r	r	..	+	r	r	— <i>depressum</i> , Bail. 48
+	r	..	rr	..	..	..	..	..	— <i>oceanicum</i> (Vanhöffen), Jörg. 49
..	r	r	r	..	..	— <i>ovatum</i> (Pouch), Schütt. 50
..	+	+	r	+	..	..	..	..	— <i>pallidum</i> , Ostenf. 51
..	r	r	r	r	r	..	..	..	— <i>pentagonum</i> , Gran. 52
..	r	c	+	+	..	..	..	<i>Prorocentrum micans</i> , Ehbg. 53
..	FLAGELLATAE.
..	<i>Dinobryon pellucidum</i> , Lev. 54
..	+	..	+	+	..	r	r	+	+	..	PROTOCOCCOIDEAE.
..	<i>Halosphaera viridis</i> , Schmitz. 55
..	<i>Trochiscia Clevei</i> , Lemm. 56
..	rr	r	..	..	..	..	SILICOFLAGELLATAE.
..	rr	r	..	..	..	..	<i>Dictyocha fibula</i> , Ehbg. 57
..	rr	..	..	..	..	..	..	<i>Distephanus speculum</i> (Ehbg), Häeckel. 58

FASTNET ROCK LIGHTHOUSE—continued.

Species No.	—	February.		March.		April.		May.		June.	
		3. 3.30 p.m.	18. 3.30 p.m.	2. 1.0 p.m.	22. 4.30 p.m.	20. 6.0 p.m.	30. 12.30 p.m.	14. 12.30 p.m.	31. 3.0 p.m.	17. 3.15 p.m.	29. 12.10 p.m.
		1	2	3	4	5	6	7	8	9	10
	INCERTAE SEDIS.										
59	"Umrindete Cyste," Hensen, ..	+	+	+	+	..	..	..	..	..	..
	PROTOZOA.										
60	Amphorella subulata (Ehbg.), Dad., ..	..	..	..	..	..	..	..	..	..	..
61	Cyttarocyliis norvegica (Dad.), Jørgensen, ..	..	..	..	..	..	..	..	..	..	..
62	— serrata (Möb.), Brandt., ..	..	..	..	..	..	..	..	..	..	..
63	Ptychocyliis urnula, Clap. & Lachm., ..	..	..	..	..	..	..	..	r	..	..
64	Tintinnopsis beroidea, Stein, ..	..	..	..	..	..	..	..	..	+	r
65	— campanula (Ehbg.), Dad., ..	..	..	..	..	..	..	..	..	..	..
66	Lithomelissa sp., ..	..	..	..	..	..	..	..	..	..	..
67	Globigerina bulloides, d'Orb., ..	c	r	r	c	..	r	..	..	..	..
	COELENTERATA.										
68	Hybocodon prolifer, Agassiz, ..	..	..	..	..	..	?	..	..	..	..
69	Lizzia blondina, Forbes, ..	..	..	..	..	..	..	..	..	..	..
70	Podocoryne sp., ..	..	..	..	..	..	..	..	..	..	..
71	Sarsia gemmifera, Forbes, ..	..	..	..	..	..	..	..	..	..	..
72	— sp., ..	..	..	..	..	..	..	..	..	..	..
73	Tiara pileata, Agassiz., ..	..	..	..	..	..	..	..	..	..	..
74	Obelia nigra, E. T. B., ..	..	..	..	..	..	..	..	..	..	..
75	— sp., ..	..	..	..	..	..	..	..	+	..	..
76	Phialidium cymbalodium, E. T. B., ..	..	..	..	..	..	..	..	r	..	..
77	— temporarium, E. T. B., ..	..	..	..	..	..	..	..	..	..	..
78	Willia stellata, Forbes, ..	..	..	..	..	..	..	..	..	..	..
79	Aglantha rosea, Forbes, ..	..	..	r	..	..	..	..	..	..	..
80	Cupulita Sarsi, Haeckel, ..	..	..	..	..	..	..	..	..	..	..
81	Muggiaea atlantica, Cunningham, ..	..	..	..	..	..	..	..	..	..	..
82	Beroe ovata, Bosc., ..	..	..	rr	..	..	..	..	..	..	..
	ECHINODERMATA.										
83	Auricularia, ..	..	..	..	..	..	..	..	..	..	..
84	Bipinnaria, ..	..	..	..	..	..	..	..	..	..	..
85	Echinopluteus, ..	..	..	..	..	..	..	..	..	..	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 51° 23' 18" N., Long. 9° 36' 25" W.

July.		August.		September.		October.		November.		Dec.	Species No.
12. 1.30 p.m.	29. 4.0 p.m.	12. 2.15 p.m.	26. 1.30 p.m.	9. 11.30 p.m.	24. 1.0 p.m.	10. 12.45 p.m.	25. 1.45 p.m.	8. 3.0 p.m.	24. 1.30 p.m.	24. 2.30 p.m.	
11	12	13	14	15	16	17	18	19	20	21	
											INCERTAE SEDIS.
										r	"Umriudete Cyste," Hensen. 49
											PROTOZOA.
		rr									Amphorella subulata (Ehbg.), Ducl. 50
			rr								Cyttarocylis norvegica (Ducl., Jørgensen. 51
			rr	c	+	r					— serrata (Möb.), Brandt. 52
			rr								Ptychocylis urnula, Clap. & Lachm. 53
	r		r	r	rr	r		rr	rr	c	Tintinnopsis beroidea, Stein. 54
					rr	+					— campanula (Ehbg.), Ducl. 55
						r					Lithomelissa sp. 56
											Globigerina bulloides, d'Orb. 57
											COELENTERATA.
											Hybocodon prolifer, Agassiz. 58
		+	r	r							Lizzia blondina, Forbes. 59
		rr									Podocoryne sp. 70
		+									Sarsia gemmifera, Forbes. 71
+	r										— sp. 72
	+										Tiara pileata, Agassiz. 73
			+			r					Obelia nigra, E. T. B. 74
		+		r	r	r					— sp. 75
r											Phialidium cymbalodium, E. T. B. 76
		r	r					r	r		— temporarium, E. T. B. 77
			rr								Willia stellata, Forbes. 78
			rr	r	+	r					Aglantha rosea, Forbes. 79
	r	+	c	+	r	r					Cupulita Sarsi, Haeckel. 80
					cc	c	+	c	c		Muggiaea atlantica, Cunningham. 81
											Feroe ovata, Bosc. 82
											ECHINODERMATA.
					r						Auricularia. 83
					r	+	r				Epinnaria. 84
					+						Echinopluteus. 85

FASTNET ROCK LIGHTHOUSE—continued.

Species No.	—	February.		March.		April.		May.		June.	
		3. 3.30 p.m.	18. 3.30 p.m.	2. 1.0 p.m.	22. 4.30 p.m.	20. 6.0 p.m.	30. 12.30 p.m.	14. 12.30 p.m.	31. 3.0 p.m.	17. 3.15 p.m.	29. 12.10 p.m.
	ECHINODERMATA—con.	1	2	3	4	5	6	7	8	9	10
86	Ophiopluteus, .. ..	..	..	..	..	..	..	..	..	..	..
87	Ophiurid juv., .. ..	..	..	..	..	..	..	..	..	..	..
88	Spatangopluteus, .. ..	..	..	..	..	..	..	..	..	..	..
	VERMES.										
89	Actinotrocha, .. ..	..	..	..	..	..	..	..	..	..	..
90	Autolytus prolifer (Müll.), .. ..	..	..	..	..	..	..	..	..	..	..
91	Poecilochaetus larvae, .. ..	..	..	..	..	..	..	..	..	..	..
92	Polychaeta larvae, .. ..	..	r	r	..	..	..	..	r	..	..
93	Sagitta bipunctata, Q. et G., .. ..	..	r	r	cc	..	r	r	..	..	+
94	Tomopteris helgolandica, Greef, .. ..	..	r	r	..	..	..	..	..	..	..
95	Trochophora, .. ..	..	r	r	..	..	..	..	..	..	..
	BRYOZOA.										
96	Cyphonautes, .. ..	..	..	..	..	..	..	..	+	+	..
	COPEPODA.										
97	Acartia Clausi (Giesbr.), .. ..	..	r	r	..	r	..	..	+	c	+
98	Alteutha bopyroides, Claus, .. ..	..	..	..	..	+	..	r	..	..	r
99	Anomalocera Pattersoni, R. Temp., .. ..	..	..	..	..	..	..	..	..	..	..
100	Calanus finmarchicus, Gunn., .. ..	..	c	c	c	cc	+	c	c	c	cc
101	Candacia pectinata, Brady, .. ..	..	..	..	..	..	..	..	..	..	..
102	Centropages hamatus, Lillj., .. ..	..	..	..	..	r	..	..	+	r	r
103	— typicus, Kröyer, .. ..	..	..	..	..	..	..	..	..	..	..
104	Corycaeus anglicus, Lubbock, .. ..	..	rr	..	..	..	..	..	..	..	..
105	Dyspontius striatus, Thorell, .. ..	..	..	..	..	rr	..	..	..	..	..
106	Diaixis pygmaea, Scott, .. ..	..	..	..	..	r	..	..	..	..	..
107	Euterpe acutifrons, Dana, .. ..	..	..	..	..	r	..	..	..	..	..
108	Metridia lucens, Boeck, .. ..	..	c	c	c	cc	+	c	c	c	cc
109	Microsetella atlantica, Brady, .. ..	..	..	..	..	..	..	..	..	..	r
110	Oithona similis, Claus, .. ..	..	r	r	r	r	..	..	..	r	r
111	Paracalanus parvus, Claus, .. ..	..	..	..	..	r	..	r	..	c	+
112	Pseudocalanus elongatus, Giesbr., .. ..	..	+	+	+	+	+	+	c	c	c
113	Scutellidium fasciatum, Boeck, .. ..	..	..	..	..	..	..	..	..	..	..
114	Temora longicornis, O. F. Müller, .. ..	..	..	..	..	..	..	..	c	r	..

IRISH LIGHT STATIONS, 1904—continued.

Lat. 51° 23' 18" N., Long. 9° 36' 25" W.

July.		August.		September.		October.		November.		Dec.	Species No.
12.	29.	12.	26.	9.	24.	10.	25.	8.	24.	24.	
1.30 p.m.	4.0 p.m.	2.15 p.m.	1.30 p.m.	11.30 p.m.	1.0 p.m.	12.45 p.m.	1.45 p.m.	3.0 p.m.	1.30 p.m.	2.30 p.m.	
r	12	13	14	15	16	17	18	19	20	21	ECHINODERMATA—con.
..	..	r	r	r	c	+	r	..	..	..	Ophiopluteus. 86
..	..	..	..	r	r	..	..	..	..	..	Ophiurid juv. 87
..	..	..	..	..	+	..	..	..	..	..	Spatangopluteus. 88
..	..	..	..	..	..	..	..	..	..	..	VERMES.
..	..	..	..	..	..	r	..	..	..	..	Actinotrocha. 89
..	..	..	..	..	..	..	..	r	r	..	Autolytus prolifer (Müll.) 90
..	..	r	r	..	..	..	..	..	..	..	Poecilochaetus larvae. 91
r	r	r	r	+	+	r	..	..	..	..	Polychaeta larvae. 92
+	+	+	+	cc	c	+	r	+	+	+	Sagitta bipunctata, Q. et G. 93
..	r	r	+	c	c	+	r	+	+	+	Tomopteris helgolandica, Greef. 94
..	..	..	..	..	..	..	..	..	..	..	Trochophora. 95
..	..	..	..	..	..	..	..	..	..	..	BRYOZOA.
+	r	r	r	r	r	+	..	+	+	..	Cyphonautes. 96
..	..	..	..	..	..	..	..	..	..	..	COPEPODA.
+	c	+	+	+	+	+	r	..	..	..	Acartia Clausi (Giesbr.) 97
..	..	..	r	r	rr	..	..	..	..	..	Alteutha bopyroides, Claus. 98
..	..	..	..	rr	..	..	..	..	..	..	Anomalocera Pattersoni, R. Temp. 99
cc	cc	c	cc	cc	cc	c	c	cc	cc	c	Calanus finmarchicus, Gunn. 100
..	..	..	c	c	c	r	..	..	..	..	Candacia pectinata, Brady. 101
+	+	..	r	..	..	..	..	..	..	..	Centropages hamatus, Lillj. 102
..	r	+	+	c	c	+	r	+	r	..	— typicus, Kröyer. 103
..	..	..	..	..	r	..	..	r	r	..	Corycaeus anglicus, Lubb. 104
..	..	..	..	..	..	..	..	..	..	..	Dyspontius striatus, Thorell. 105
..	..	..	..	..	..	..	..	..	..	..	Diaixis pygmaea, Scott. 106
..	..	..	..	..	..	..	..	..	..	..	Euterpe acutifrons, Dana. 107
+	c	+	+	+	c	+	+	c	cc	c	Metridia lucens, Boeck. 108
..	..	..	..	..	..	..	..	..	..	..	Microsetella atlantica, Brady. 109
rr	r	+	+	+	+	+	+	+	r	..	Oithona similis, Claus. 110
..	..	+	r	..	r	r	r	+	+	+	Paracalanus parvus, Claus. 111
+	+	+	+	+	+	+	+	+	+	+	Pseudocalanus elongatus, Giesbr. 112
..	..	..	..	rr	..	..	..	..	..	..	Scutellidium fasciatum, Boeck. 113
r	+	..	+	+	+	+	+	r	r	r	Temora longicornis, O. F. Müller. 114

FASTNET ROCK LIGHTHOUSE—continued.

Species No.		February.		March.		April.		May.		June.	
		3. 3.30 p.m.	18. 3.30 p.m.	2. 1.0 p.m.	22. 4.30 p.m.	20. 6.0 p.m.	30. 12.30 p.m.	14. 12.30 p.m.	31. 3.0 p.m.	17. 3.15 p.m.	29. 12.10 p.m.
		1	2	3	4	5	6	7	8	9	10
—	CRUSTACEA (CETERA).										
115	Evadæ Nordmanni, Lovén, ..	..	..	..	..	..	..	..	..	..	..
116	Podon intermedius, Lillj., ..	..	..	..	..	..	..	..	..	..	..
117	Hyperiid, juv., ..	..	..	..	..	..	..	..	..	..	r
118	Nyctiphanes Couchi, Bell, ..	..	..	c	..	..	..	..	..	..	..
119	Nyctiphanes norvegica, Sars., ..	..	..	c	..	..	..	..	..	..	..
120	Cirripedia larvae, ..	..	..	π	c	..	+	r	..	..	..
121	Cypris stage larvae, ..	..	..	..	..	..	r	+	..	..	..
122	Microniscus, ..	..	..	..	..	..	..	..	..	..	..
123	Nauplius & Metanauplius, ..	..	..	r	r	..	c	+	..	..	..
124	Zoea, ..	..	..	r	..	..	+	+	+	..	..
125	Megalopa, ..	..	..	..	..	..	..	..	..	..	..
126	Caridid larvae, ..	..	..	..	..	..	..	..	..	..	..
127	Jaxea nocturna, Scott, ..	..	..	..	..	..	..	..	..	..	..
	MOLLUSCA.										
128	Clione (borealis, Brug.?) ..	..	..	..	..	..	..	..	..	..	..
129	Gastropod larvae, ..	..	..	r	r	..	+	..	r	..	r
130	Lamellibranchiate larvae, ..	..	..	r	r	..	+	..	r	..	..
131	Cephalopod larvae, ..	..	..	..	r	..	..	..	..	..	..
	TUNICATA.										
132	Ascidian larvae, ..	..	..	..	..	..	..	..	..	..	..
133	Doliolum tritonis, Herdman, ..	..	..	..	..	..	..	..	..	..	..
134	Fritillaria borealis, Q. et G., ..	..	..	..	..	..	..	..	..	..	..
135	Oikopleura dioica, Fol, ..	..	..	..	..	..	+	+	+	..	..
	VERTEBRATA.										
136	Teleostei, ova & larvae, ..	..	..	π	..	..	..	..	+	r	+

RISH LIGHT STATIONS, 1904—continued.

Lat. 51° 23' 18" N., Long. 9° 36' 25" W.

July.		August.		September.		October.		November.		Dec.	Species No.
12. 1.30 p.m.	29. 4.0 p.m.	12. 2.15 p.m.	26. 1.30 p.m.	9. 11.30 p.m.	24. 1.0 p.m.	10. 12.45 p.m.	25. 1.45 p.m.	8. 3.0 p.m.	24. 1.30 p.m.	24. 2.30 p.m.	
11	12	13	14	15	16	17	18	19	20	21	
											CRUSTACEA (CETERA).
..	..	..	..	..	+	+	..	..	..	..	Evadne Nordmanni, Lovén. 115
..	r	+	+	+	+	..	..	..	..	..	Podon intermedius, Lillj. 116
..	+	..	..	c	..	..	..	..	..	..	Hyperiid, juv. 117
..	..	..	..	..	..	..	..	..	..	..	Nyctiphanes Couchi, Bell. 118
..	..	..	..	..	..	..	..	..	..	..	Nyctiphanes norvegica, Sara. 119
r	r	+	r	r	r	..	rr	..	..	..	Cirripedia larvae. 120
r	..	..	..	..	..	..	..	..	..	..	Cypris stage larvae. 121
rr	..	..	r	..	..	..	..	..	..	..	Microniscus. 122
+	+	+	+	+	+	+	+	+	r	r	Nauplius and Metanauplius. 123
r	r	r	r	r	r	..	..	..	..	..	Zoea. 124
..	..	..	r	r	r	..	..	..	..	..	Megalopa. 125
r	r	r	+	c	c	+	..	+	r	..	Caridid larvae. 126
..	..	..	r	..	..	..	..	..	..	..	Jaxea nocturna, Scott. 127
											MOLLUSCA.
r	..	..	rr	..	..	..	..	..	..	..	Clione (borealis, Brug.?) 128
..	..	r	r	c	c	c	+	+	+	+	Gastropod larvae. 129
..	..	r	r	..	+	+	+	+	+	+	Lamellibranchiate larvae. 130
..	..	..	..	..	..	..	..	..	..	..	Cephalopod larvae. 131
											TUNICATA.
..	..	..	..	r	..	..	..	..	..	..	Ascidian larvae. 132
..	..	..	..	..	r	..	..	..	..	..	Doliolum tritonis, Herdman. 133
..	..	..	r	..	r	r	..	..	..	..	Fritillaria borealis, Q. et G. 134
rr	+	+	r	+	+	..	..	r	r	..	Oikopleura dioica, Fol. 135
											VERTEBRATA.
r	r	r	r	r	r	..	..	..	..	..	Teleostei, ova & larvae. 136

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS,
1904.

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	* S‰	1904.		°C.	S‰
Jan. 21, ..	10 15 p.m.	7.6	..	Feb. 29, ..	5 50 p.m.	6.1	..
Jan. 22, ..	10 15 a.m.	..	33.89	March 1, ..	6 30 a.m.	6.3	..
..	10 30 a.m.	7.8	..	..	7 30 p.m.	6.2	..
Jan. "23, ..	11 15 a.m.	7.8	..	March 2, ..	7 55 a.m.	6.6	..
..	11 45 p.m.	8.0	..	..	8 30 p.m.	6.4	..
Jan. 24, ..	12 10 p.m.	7.8	..	March 3, ..	8 30 a.m.	..	34.18
Jan. 25, ..	12 30 p.m.	7.8	..	..	9 0 a.m.	6.6	..
Jan. 26, ..	1 50 p.m.	7.6	33.91	..	9 30 p.m.	6.4	..
Jan. 27, ..	2 30 p.m.	7.6	..	March 4, ..	9 45 a.m.	6.6	..
Jan. 28, ..	4 0 p.m.	7.6	..	..	10 0 p.m.	6.4	..
Jan. 29, ..	5 0 p.m.	7.2	..	March 5, ..	10 15 a.m.	6.6	..
Jan. 30, ..	5 50 a.m.	7.8	..	..	10 35 p.m.	6.2	..
..	6 23 p.m.	7.6	..	March 6, ..	11 5 a.m.	6.2	..
Jan. "31, ..	7 0 a.m.	7.4	..	..	11 30 p.m.	6.0	..
..	7 15 p.m.	7.2	..	March 7, ..	11 50 a.m.	6.2	..
Feb. 1, ..	7 40 a.m.	7.2	..	March 8, ..	12 25 a.m.	6.4	..
Feb. 2, ..	8 0 a.m.	7.4	..	..	1 0 p.m.	6.2	..
Feb. 3, ..	8 20 a.m.	7.6	34.00	March 9, ..	1 20 a.m.	6.2	..
..	9 10 p.m.	7.4	..	..	1 45 p.m.	6.6	34.18
Feb. 4, ..	9 20 a.m.	7.6	..	March 10, ..	2 0 a.m.	6.4	..
Feb. 5, ..	9 50 a.m.	7.4	..	..	2 25 p.m.	6.6	..
Feb. 6, ..	10 45 a.m.	7.4	..	March 11, ..	3 0 a.m.	6.4	..
Feb. 7, ..	11 35 a.m.	7.6	..	..	3 30 p.m.	6.6	..
Feb. 8, ..	1 0 p.m.	7.4	..	March 12, ..	4 20 a.m.	6.4	..
Feb. 9, ..	1 50 p.m.	7.6	..	..	5 0 p.m.	6.8	..
Feb. 10, ..	2 30 a.m.	7.4	34.04	March 13, ..	5 30 a.m.	6.8	..
..	3 20 p.m.	7.4	..	..	6 0 p.m.	6.8	..
Feb. "11, ..	3 50 a.m.	7.2	..	March 14, ..	6 30 a.m.	6.8	..
..	4 30 p.m.	7.4	..	..	7 0 p.m.	6.6	..
Feb. "12, ..	5 10 a.m.	7.2	..	March 15, ..	7 20 a.m.	6.4	..
..	5 30 p.m.	7.2	..	..	7 45 p.m.	6.6	..
Feb. "13, ..	6 0 a.m.	7.2	..	March 16, ..	7 55 a.m.	6.6	..
..	6 20 p.m.	7.4	..	..	8 15 p.m.	6.6	..
Feb. "14, ..	7 0 p.m.	7.2	..	March 17, ..	8 35 a.m.	6.6	34.09
Feb. 15, ..	7 15 a.m.	7.2	..	..	9 0 p.m.	6.8	34.11
Feb. 16, ..	8 15 a.m.	6.7	..	March 18, ..	9 10 a.m.	6.6	..
..	8 30 a.m.	..	34.11	..	9 20 p.m.	6.6	..
Feb. 17, ..	8 25 a.m.	7.0	..	March 19, ..	9 7 a.m.	6.4	..
Feb. 18, ..	8 45 a.m.	6.7	..	..	9 25 p.m.	6.8	..
Feb. 19, ..	9 10 a.m.	6.7	..	March 20, ..	9 40 a.m.	7.0	..
Feb. 20, ..	9 40 a.m.	6.7	..	..	10 0 p.m.	7.0	..
Feb. 21, ..	10 20 a.m.	7.1	..	March 21, ..	10 15 a.m.	6.8	..
Feb. 22, ..	10 50 a.m.	6.9	..	..	10 30 p.m.	6.8	..
Feb. 23, ..	11 45 a.m.	6.9	..	March 22, ..	11 0 a.m.	7.0	..
Feb. 24, ..	1 30 p.m.	6.7	..	..	11 10 p.m.	7.0	..
Feb. 25, ..	1 50 p.m.	6.9	34.11	March 23, ..	11 30 a.m.	7.0	..
Feb. 26, ..	2 45 p.m.	6.7	..	..	11 45 p.m.	7.2	..
Feb. 27, ..	4 15 p.m.	6.9	..	March 24, ..	12 15 p.m.	7.2	34.12
Feb. 28, ..	5 20 p.m.	6.5	..	..	1 0 a.m.	7.0	..
Feb. 29, ..	5 40 a.m.	6.5	..	March 25, ..	1 30 p.m.	7.0	..

* The samples of water were titrated at the M. B. A. Laboratory, Plymouth, by Mr. D. J. MATTHEWS.

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
March 26,	2 10 a.m.	7.0	..	May 1,	8 40 p.m.	7.2	..
"	2 45 p.m.	7.0	..	May 2,	8 50 a.m.	7.2	..
March 27,	3 30 a.m.	7.0	..	"	9 20 p.m.	7.2	..
"	4 0 p.m.	7.0	..	May 3,	9 50 a.m.	7.6	..
March 28,	4 45 a.m.	7.0	..	"	10 15 p.m.	7.4	..
"	5 15 p.m.	7.0	..	May 4,	10 35 a.m.	7.6	..
March 29,	6 0 a.m.	7.0	..	"	10 55 p.m.	7.4	..
"	6 30 p.m.	6.8	..	May 5,	11 20 a.m.	7.6	..
March 30,	7 0 a.m.	6.8	..	"	11 45 p.m.	7.4	..
"	7 20 p.m.	6.8	..	May 6,	Midday.	7.6	..
March 31,	7 45 a.m.	6.8	34.10	May 7,	12 45 a.m.	7.4	..
"	8 0 p.m.	6.8	..	"	1 15 p.m.	7.6	34.22
April 1,	8 20 a.m.	7.0	..	May 8,	2 0 a.m.	7.6	..
April 2,	8 45 a.m.	6.8	..	"	2 30 p.m.	7.6	..
April 3,	9 10 a.m.	6.6	..	May 9,	3 10 a.m.	7.6	..
"	9 30 p.m.	6.6	..	"	3 45 p.m.	7.8	..
April 4,	9 50 a.m.	6.6	..	May 10,	4 20 a.m.	8.0	..
April 5,	10 30 a.m.	6.6	..	"	4 47 p.m.	8.0	..
April 6,	11 10 a.m.	6.8	..	May 11,	5 16 a.m.	8.2	..
April 7,	12 15 p.m.	6.8	..	"	5 40 p.m.	8.0	..
April 8,	1 10 a.m.	7.0	..	May 12,	6 2 a.m.	7.8	..
"	1 50 p.m.	7.2	34.09	"	6 23 p.m.	8.0	..
April 9,	2 30 a.m.	6.8	..	May 13,	6 43 a.m.	8.0	..
"	3 10 p.m.	6.6	..	"	7 3 p.m.	8.0	..
April 10,	4 20 p.m.	7.0	..	May 14,	7 21 a.m.	8.0	..
April 11,	5 0 a.m.	6.8	..	"	7 35 p.m.	8.0	..
"	5 20 p.m.	7.0	..	May 15,	7 53 a.m.	8.0	..
April 12,	5 40 a.m.	7.0	..	"	8 11 p.m.	8.0	..
"	6 0 p.m.	7.2	..	May 16,	8 30 a.m.	8.2	34.22
April 13,	6 15 a.m.	6.8	..	"	8 49 p.m.	8.2	..
"	6 35 p.m.	6.8	..	May 17,	9 0 a.m.	8.2	..
April 14,	6 50 p.m.	6.8	..	"	9 15 p.m.	8.0	..
April 15,	7 10 a.m.	7.0	..	May 18,	9 32 a.m.	8.2	..
"	7 20 p.m.	7.4	34.11	"	9 54 p.m.	8.0	..
April 16,	7 40 a.m.	7.0	..	May 19,	10 15 a.m.	8.2	..
"	8 0 p.m.	7.2	..	"	10 39 p.m.	8.2	..
April 17,	8 30 a.m.	7.2	..	May 20,	11 4 a.m.	8.2	..
April 18,	9 0 a.m.	7.4	..	"	11 31 p.m.	8.0	..
"	9 15 p.m.	7.2	..	May 21,	11 55 a.m.	8.2	..
April 19,	9 25 a.m.	7.2	..	"	Midnight.	8.2	..
"	9 35 p.m.	7.2	..	May 22,	12 58 a.m.	8.0	..
April 20,	10 30 a.m.	7.4	..	"	1 36 p.m.	8.2	..
April 21,	11 20 a.m.	7.4	..	May 23,	2 13 a.m.	8.2	..
April 22,	Midday.	7.4	..	"	2 48 p.m.	8.4	34.14
April 23,	1 20 p.m.	7.2	34.04	May 24,	3 18 a.m.	8.2	..
April 24,	2 40 p.m.	7.2	..	"	3 48 p.m.	8.4	..
April 25,	3 10 a.m.	7.0	..	May 25,	4 21 a.m.	8.4	..
"	3 40 p.m.	7.2	..	"	4 54 p.m.	8.6	..
April 26,	5 0 p.m.	7.4	..	May 26,	5 26 a.m.	8.4	..
April 27,	5 25 a.m.	7.2	..	"	5 54 p.m.	8.6	..
"	5 45 p.m.	7.4	..	May 27,	6 18 a.m.	8.6	..
April 28,	6 30 p.m.	7.4	..	"	6 46 p.m.	8.6	..
April 29,	7 0 a.m.	7.6	..	May 28,	7 8 a.m.	8.6	..
"	7 20 p.m.	7.6	..	"	7 30 p.m.	8.8	..
April 30,	7 40 a.m.	7.4	34.13	May 29,	7 52 a.m.	8.8	..
"	8 10 p.m.	7.4	..	"	8 12 p.m.	8.8	..
May 1,	8 30 a.m.	7.4	..	May 30,	8 33 a.m.	8.8	34.16

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
May 30, ..	8 53 p.m.	8.8	..	July 1, ..	9 30 a.m.	10.6	..
May 31, ..	9 6 a.m.	8.8	..	" ..	10 0 p.m.	10.6	..
" ..	9 16 p.m.	8.8	..	July 2, ..	10 0 a.m.	10.8	..
June 1, ..	9 36 a.m.	9.0	..	" ..	10 29 p.m.	10.6	..
" ..	9 53 p.m.	9.0	..	July 3, ..	10 49 a.m.	10.8	..
June 2, ..	10 15 a.m.	9.2	..	" ..	11 10 p.m.	10.6	..
" ..	10 35 p.m.	9.2	..	July 4, ..	11 30 a.m.	10.8	..
June 3, ..	11 0 a.m.	9.4	..	" ..	11 55 p.m.	10.8	..
" ..	11 18 p.m.	9.2	..	July 5, ..	12 30 p.m.	11.2	33.28
June 4, ..	11 40 a.m.	9.8	..	July 6, ..	1 7 a.m.	11.0	..
" ..	Midnight.	9.6	..	" ..	1 35 p.m.	11.0	..
June 5, ..	12 25 p.m.	9.8	..	July 7, ..	2 4 a.m.	11.8	..
June 6, ..	1 5 a.m.	9.4	..	" ..	2 37 p.m.	11.2	..
" ..	1 30 p.m.	9.8	..	July 8, ..	3 3 a.m.	11.0	..
June 7, ..	2 0 a.m.	9.2	..	" ..	3 38 p.m.	11.2	..
" ..	2 35 p.m.	10.0	33.26	July 9, ..	4 9 a.m.	11.0	..
June 8, ..	3 5 a.m.	9.4	..	" ..	4 40 p.m.	11.2	..
" ..	3 35 p.m.	9.8	..	July 10, ..	5 6 a.m.	11.6	..
June 9, ..	4 0 a.m.	9.2	..	" ..	5 32 p.m.	12.0	..
" ..	4 30 p.m.	9.6	..	July 11, ..	5 56 a.m.	11.2	..
June 10, ..	5 0 a.m.	9.0	..	" ..	6 21 p.m.	11.0	..
" ..	5 20 p.m.	10.0	..	July 12, ..	6 43 a.m.	11.2	..
June 11, ..	5 45 a.m.	9.4	..	" ..	7 6 p.m.	11.2	..
" ..	6 5 p.m.	10.0	..	July 13, ..	7 29 a.m.	11.2	..
June 12, ..	6 25 a.m.	9.8	..	" ..	7 55 p.m.	11.4	..
" ..	6 50 p.m.	10.0	..	July 14, ..	8 16 a.m.	11.4	..
June 13, ..	7 5 a.m.	10.0	..	" ..	8 39 p.m.	11.6	..
" ..	7 25 p.m.	10.2	..	July 15, ..	9 0 a.m.	11.6	..
June 14, ..	7 45 a.m.	10.0	..	" ..	9 5 p.m.	11.8	..
June 15, ..	8 30 a.m.	9.8	33.24	July 16, ..	9 27 a.m.	11.8	..
" ..	8 50 p.m.	10.2	..	" ..	9 54 p.m.	11.2	..
June 16, ..	9 15 a.m.	9.6	..	July 17, ..	10 20 a.m.	11.6	..
" ..	9 40 p.m.	9.4	..	" ..	10 46 p.m.	11.0	..
June 17, ..	10 0 a.m.	10.0	..	July 18, ..	11 13 a.m.	11.6	..
" ..	10 30 p.m.	10.0	..	" ..	11 41 p.m.	11.4	..
June 18, ..	11 10 a.m.	9.8	..	July 19, ..	12 36 p.m.	11.6	..
June 19, ..	Midday.	10.0	..	July 20, ..	1 6 a.m.	11.4	..
June 20, ..	12 30 a.m.	10.0	..	" ..	1 36 p.m.	11.6	..
" ..	1 0 p.m.	9.8	..	July 21, ..	2 9 a.m.	11.4	..
June 21, ..	1 30 a.m.	9.8	..	" ..	2 42 p.m.	11.8	..
" ..	2 10 p.m.	10.0	..	July 22, ..	3 15 a.m.	11.6	..
June 22, ..	3 10 p.m.	10.0	33.31	" ..	3 48 p.m.	12.0	..
June 23, ..	3 45 a.m.	9.6	..	July 23, ..	4 24 a.m.	11.6	34.14
" ..	4 15 p.m.	10.0	..	" ..	4 54 p.m.	11.8	..
June 24, ..	4 50 a.m.	9.8	..	July 24, ..	5 25 a.m.	11.6	..
" ..	5 15 p.m.	9.8	..	" ..	5 52 p.m.	11.8	..
June 25, ..	5 40 a.m.	9.8	..	July 25, ..	6 16 a.m.	11.6	..
" ..	6 5 p.m.	10.0	..	" ..	6 36 p.m.	12.0	..
June 26, ..	7 0 p.m.	10.0	..	July 26, ..	7 0 a.m.	12.0	..
June 27, ..	7 15 a.m.	10.0	..	" ..	7 20 p.m.	11.8	..
" ..	7 35 p.m.	10.2	..	July 27, ..	7 40 a.m.	11.8	..
June 28, ..	7 50 a.m.	10.0	33.53	" ..	7 58 p.m.	12.0	..
" ..	8 15 p.m.	10.0	..	July 28, ..	8 15 a.m.	12.0	34.14
June 29, ..	8 30 a.m.	10.2	..	" ..	8 32 p.m.	12.0	..
" ..	8 50 p.m.	10.2	..	July 29, ..	8 48 a.m.	12.0	..
June 30, ..	9 0 a.m.	10.6	..	" ..	9 0 p.m.	12.0	..
" ..	9 10 p.m.	10.6	..	July 30, ..	9 5 a.m.	12.4	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰.	1904.		°C.	S‰.
July 30, ..	9 23 p.m.	12.0	..	August 30,	10 0 a.m.	13.2	..
July 31, ..	9 41 a.m.	12.2	..	" ..	10 17 p.m.	13.0	..
" ..	9 58 p.m.	12.0	..	August 31,	10 37 a.m.	13.0	..
August 1,	10 15 a.m.	12.4	..	" ..	10 55 p.m.	12.8	..
" ..	10 34 p.m.	12.2	..	Sept. 1, ..	11 19 a.m.	13.0	..
August 2,	10 53 a.m.	12.6	..	" ..	11 41 p.m.	13.0	..
" ..	11 13 p.m.	12.4	..	Sept. 2, ..	Midday.	13.2	..
August 3,	11 36 a.m.	12.6	..	Sept. 3, ..	12 32 a.m.	13.0	..
" ..	11 59 p.m.	12.2	..	" ..	1 2 p.m.	12.8	..
August 4,	12 20 a.m.	12.2	..	Sept. 4, ..	1 37 a.m.	12.8	..
" ..	12 45 p.m.	12.6	..	" ..	2 14 p.m.	13.0	..
August 5,	1 15 a.m.	12.4	..	Sept. 5, ..	2 52 a.m.	13.0	34.02
" ..	1 45 p.m.	12.6	..	" ..	3 32 p.m.	13.2	..
August 6,	2 16 a.m.	12.2	..	Sept. 6, ..	4 11 a.m.	13.0	..
" ..	2 50 p.m.	12.4	34.14	" ..	4 46 p.m.	13.2	..
August 7,	3 25 a.m.	12.2	..	Sept. 7, ..	5 17 a.m.	13.0	..
" ..	4 0 p.m.	12.6	..	" ..	5 44 p.m.	13.0	..
August 8,	4 37 a.m.	12.4	..	Sept. 8, ..	6 8 a.m.	12.8	..
" ..	5 10 p.m.	12.6	..	" ..	6 32 p.m.	13.0	..
August 9,	5 36 a.m.	12.4	..	Sept. 9, ..	6 55 a.m.	12.8	..
" ..	6 0 p.m.	12.6	..	" ..	7 17 p.m.	13.0	..
August 10,	6 25 a.m.	12.4	..	Sept. 10, ..	7 42 a.m.	12.8	..
" ..	6 50 p.m.	12.6	..	" ..	8 4 p.m.	13.0	..
August 11,	7 15 a.m.	12.2	..	Sept. 11, ..	8 26 a.m.	13.0	..
" ..	7 38 p.m.	12.4	..	" ..	8 47 p.m.	12.8	..
August 12,	8 0 a.m.	12.4	34.11	Sept. 12, ..	9 0 a.m.	12.8	34.14
" ..	8 25 p.m.	12.2	..	" ..	9 11 p.m.	12.8	..
August 13,	8 47 a.m.	12.6	..	Sept. 13, ..	9 36 a.m.	13.0	..
" ..	9 0 p.m.	12.4	..	" ..	9 58 p.m.	12.8	..
August 14,	9 35 p.m.	12.4	..	Sept. 14, ..	10 20 a.m.	13.0	..
August 15,	10 23 a.m.	12.4	..	" ..	10 46 p.m.	13.0	..
" ..	10 49 p.m.	12.4	..	Sept. 15, ..	11 11 a.m.	13.0	..
August 16,	11 15 a.m.	12.6	..	" ..	11 37 p.m.	12.8	..
" ..	11 42 p.m.	12.6	..	Sept. 16, ..	Midday.	13.0	..
August 17,	12 10 a.m.	12.4	..	Sept. 17, ..	1 5 a.m.	12.8	..
" ..	12 35 p.m.	12.0	..	" ..	1 39 p.m.	13.0	..
August 18,	1 5 p.m.	12.6	..	Sept. 18, ..	2 17 a.m.	13.0	..
August 19,	1 36 a.m.	12.4	..	" ..	2 55 p.m.	13.2	..
" ..	2 10 p.m.	12.6	34.07	Sept. 19, ..	3 36 a.m.	13.0	34.18
August 20,	2 45 a.m.	12.4	..	" ..	4 17 p.m.	13.2	..
" ..	3 30 p.m.	12.6	..	Sept. 20, ..	4 48 a.m.	13.0	..
August 21,	4 0 a.m.	12.4	..	" ..	5 17 p.m.	13.2	..
" ..	4 35 p.m.	12.6	..	Sept. 21, ..	5 42 a.m.	13.0	..
August 22,	5 15 a.m.	12.2	..	" ..	6 2 p.m.	13.0	..
" ..	5 40 p.m.	12.4	..	Sept. 22, ..	6 22 a.m.	13.0	..
August 23,	6 30 p.m.	12.8	..	" ..	6 39 p.m.	13.2	..
August 24,	6 45 a.m.	12.4	..	Sept. 23, ..	6 56 a.m.	13.2	..
" ..	7 5 p.m.	12.8	..	" ..	7 12 p.m.	13.2	..
August 25,	7 20 a.m.	12.6	..	Sept. 24, ..	7 27 a.m.	13.0	..
" ..	7 40 p.m.	12.8	..	" ..	7 42 p.m.	12.6	..
August 26,	8 0 a.m.	12.6	..	Sept. 25, ..	7 58 a.m.	13.0	..
" ..	8 12 p.m.	12.8	..	" ..	8 11 p.m.	13.0	..
August 27,	8 25 a.m.	12.8	34.20	Sept. 26, ..	8 26 a.m.	12.8	34.14
" ..	8 40 p.m.	12.8	..	" ..	8 41 p.m.	13.0	..
August 28,	8 55 a.m.	13.0	..	Sept. 27, ..	8 57 a.m.	13.2	..
August 29,	9 28 a.m.	13.0	..	" ..	9 0 p.m.	13.0	..
" ..	9 45 p.m.	13.0	..	Sept. 28, ..	9 14 a.m.	13.2	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
Sept. 28, ..	9 31 p.m.	13.0	..	Oct. 28, ..	10 8 p.m.	12.2	..
Sept. 29, ..	10 5 a.m.	13.2	..	Oct. 29, ..	10 25 a.m.	12.0	..
"	10 25 p.m.	13.0	..	"	10 52 p.m.	11.8	..
Sept. 30, ..	10 46 a.m.	13.2	..	Oct. 30, ..	11 15 a.m.	12.2	..
"	11 10 p.m.	13.0	..	"	11 45 p.m.	12.2	..
Oct. 1, ..	11 37 a.m.	13.2	..	Oct. 31, ..	12 16 p.m.	12.4	..
"	Midnight.	13.2	..	Nov. 1, ..	12 51 a.m.	12.4	34.09
Oct. 2, ..	12 35 p.m.	13.0	..	"	1 30 p.m.	12.2	..
Oct. 3, ..	1 10 a.m.	13.0	..	Nov. 2, ..	2 11 a.m.	12.0	..
"	1 50 p.m.	13.2	..	"	2 48 p.m.	12.2	..
Oct. 4, ..	2 28 a.m.	13.0	..	Nov. 3, ..	3 26 a.m.	12.0	..
"	3 10 p.m.	13.0	34.87	"	4 1 p.m.	12.2	..
Oct. 5, ..	3 50 a.m.	12.8	..	Nov. 4, ..	4 33 a.m.	12.2	..
"	4 25 p.m.	12.8	..	"	5 2 p.m.	12.0	..
Oct. 6, ..	4 58 a.m.	12.0	..	Nov. 5, ..	5 27 a.m.	12.0	..
"	5 25 p.m.	11.8	..	"	5 52 p.m.	11.8	..
Oct. 7, ..	5 50 a.m.	11.4	..	Nov. 6, ..	6 15 a.m.	11.8	..
"	6 15 p.m.	11.6	..	"	6 39 p.m.	11.6	..
Oct. 8, ..	6 35 a.m.	11.6	..	Nov. 7, ..	7 0 a.m.	11.8	..
"	6 55 p.m.	11.4	..	"	7 23 p.m.	11.4	..
Oct. 9, ..	7 19 a.m.	11.8	..	Nov. 8, ..	7 44 a.m.	11.4	34.18
"	7 43 p.m.	12.0	..	"	8 5 p.m.	11.6	34.14
Oct. 10, ..	8 5 a.m.	12.4	34.16	Nov. 9, ..	8 26 a.m.	11.8	..
"	8 26 p.m.	12.6	..	"	8 47 p.m.	11.6	..
Oct. 11, ..	8 47 a.m.	12.6	..	Nov. 10, ..	9 9 a.m.	11.2	..
"	9 10 p.m.	12.6	..	"	9 31 p.m.	11.4	..
Oct. 12, ..	9 32 a.m.	12.4	..	Nov. 11, ..	9 54 a.m.	11.4	..
"	9 55 p.m.	12.4	..	"	10 19 p.m.	11.4	..
Oct. 13, ..	10 18 a.m.	12.6	..	Nov. 12, ..	10 44 a.m.	11.6	..
"	10 42 p.m.	12.4	..	"	11 7 p.m.	11.4	..
Oct. 14, ..	11 0 a.m.	12.4	..	Nov. 13, ..	11 33 a.m.	11.6	..
"	11 34 p.m.	12.4	..	"	Midnight.	11.4	..
Oct. 15, ..	Midday.	12.4	..	Nov. 14, ..	12 28 p.m.	11.4	..
Oct. 16, ..	12 32 a.m.	12.0	..	Nov. 15, ..	12 59 a.m.	11.4	..
"	1 5 p.m.	12.4	..	"	1 31 p.m.	11.6	..
Oct. 17, ..	1 40 a.m.	12.4	..	Nov. 16, ..	2 8 a.m.	11.4	34.13
"	2 20 p.m.	12.2	34.14	"	2 43 p.m.	11.6	..
Oct. 18, ..	2 58 a.m.	12.4	..	Nov. 17, ..	3 19 a.m.	11.4	..
"	3 35 p.m.	12.6	..	"	3 52 p.m.	11.6	..
Oct. 19, ..	4 10 a.m.	12.4	..	Nov. 18, ..	4 22 a.m.	11.6	..
"	4 40 p.m.	12.8	..	"	4 48 p.m.	11.8	..
Oct. 20, ..	5 10 a.m.	12.6	..	Nov. 19, ..	5 11 a.m.	11.6	..
"	5 30 p.m.	12.8	..	"	5 32 p.m.	11.0	..
Oct. 21, ..	5 50 a.m.	12.6	..	Nov. 20, ..	5 50 a.m.	11.0	..
"	6 10 p.m.	12.6	..	"	6 8 p.m.	10.4	..
Oct. 22, ..	6 26 a.m.	12.2	..	Nov. 21, ..	6 26 a.m.	10.6	..
"	6 45 p.m.	12.4	..	"	6 45 p.m.	10.4	..
Oct. 23, ..	6.57 a.m.	12.4	..	Nov. 22, ..	7 0 a.m.	10.4	..
"	7.12 p.m.	12.2	..	"	7 18 p.m.	10.0	..
Oct. 24, ..	7 30 a.m.	12.0	..	Nov. 23, ..	7 35 a.m.	10.2	..
"	7 45 p.m.	12.0	..	"	7 53 p.m.	10.4	..
Oct. 25, ..	8 0 a.m.	12.0	34.14	Nov. 24, ..	8 9 a.m.	10.0	34.27
"	8 15 p.m.	12.0	..	"	8 26 p.m.	10.2	..
Oct. 26, ..	8 45 p.m.	12.2	..	Nov. 25, ..	8 45 a.m.	10.0	..
Oct. 27, ..	9 5 a.m.	12.2	..	"	9 6 p.m.	10.2	..
"	9 20 p.m.	12.2	..	Nov. 26, ..	9 28 a.m.	10.0	..
Oct. 28, ..	9 45 a.m.	12.0	..	"	9 50 p.m.	10.0	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued*.

SKULMARTIN LIGHTSHIP. Lat. 54° 32' N., Long. 5° 26' W. 20 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
Nov. 27, ..	10 14 a.m.	10.2	..	Dec. 15, ..	1 40 p.m.	9.4	..
" ..	10 40 p.m.	10.2	..	Dec. 16, ..	2 15 a.m.	9.4	..
Nov. 28, ..	11 7 a.m.	10.2	..	" ..	2 45 p.m.	9.2	34.42
" ..	11 36 p.m.	10.0	..	Dec. 17, ..	3 15 a.m.	9.2	..
Nov. 29, ..	Midday.	10.4	..	" ..	3 50 p.m.	9.2	..
Nov. 30, ..	12 38 a.m.	10.2	..	Dec. 18, ..	4 20 a.m.	9.4	..
" ..	1 13 p.m.	10.4	..	" ..	4 45 p.m.	9.4	..
Dec. 1, ..	1 50 a.m.	10.4	34.29	Dec. 19, ..	5 10 a.m.	9.2	..
" ..	2 26 p.m.	10.4	..	" ..	5 30 p.m.	9.4	..
Dec. 2, ..	2 58 a.m.	10.2	..	Dec. 20, ..	5 55 a.m.	9.2	..
" ..	3 33 p.m.	10.4	..	" ..	6 15 p.m.	9.0	..
Dec. 3, ..	4 8 a.m.	10.4	..	Dec. 21, ..	6 32 a.m.	9.4	..
" ..	4 38 p.m.	10.2	..	" ..	6 52 p.m.	9.2	..
Dec. 4, ..	5 5 a.m.	10.4	..	Dec. 22, ..	7 13 a.m.	9.2	..
" ..	5 30 p.m.	10.2	..	" ..	7 34 p.m.	9.2	..
Dec. 5, ..	5 55 a.m.	10.2	..	Dec. 23, ..	7 55 a.m.	9.4	34.27
" ..	6 20 p.m.	10.4	..	" ..	8 15 p.m.	9.0	..
Dec. 6, ..	6 45 a.m.	10.2	..	Dec. 24, ..	8 34 a.m.	9.2	..
" ..	7 5 p.m.	10.4	..	" ..	9 0 p.m.	9.2	..
Dec. 7, ..	7 25 a.m.	10.2	..	Dec. 25, ..	9 17 a.m.	9.2	..
" ..	7 50 p.m.	10.2	..	" ..	9 40 p.m.	9.2	..
Dec. 8, ..	8 12 a.m.	10.0	34.45	Dec. 26, ..	10 4 a.m.	8.8	..
" ..	8 30 p.m.	10.2	..	" ..	10 30 p.m.	9.0	..
Dec. 9, ..	8 52 a.m.	10.0	..	Dec. 27, ..	10 55 a.m.	9.2	..
" ..	9 5 p.m.	9.8	..	" ..	11 26 p.m.	9.0	..
Dec. 10, ..	9 30 a.m.	9.8	..	Dec. 28, ..	Midday.	9.2	..
" ..	9 56 p.m.	9.6	..	Dec. 29, ..	12 28 a.m.	9.0	..
Dec. 11, ..	10 15 a.m.	9.8	..	" ..	12 54 p.m.	9.4	34.36
Dec. 12, ..	11 5 a.m.	9.0	..	Dec. 30, ..	1 25 a.m.	9.0	..
Dec. 13, ..	Midday.	9.2	..	" ..	1 58 p.m.	9.0	..
Dec. 14, ..	12 45 p.m.	9.2	..	Dec. 31, ..	2 32 a.m.	9.0	..
Dec. 15, ..	1 15 a.m.	9.2	..	" ..	3 5 p.m.	9.0	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued*.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
Jan. 17, ..	7 10 p.m.	7.2	..	Feb. 2, ..	8 0 a.m.	7.1	..
" ..	7 25 p.m.	7.2	..	" ..	8 10 a.m.	7.1	..
" ..	7 35 p.m.	7.2	..	" ..	8 20 a.m.	7.2	..
" ..	7 40 p.m.	7.2	..	Feb. 3, ..	8 30 a.m.	7.2	..
" ..	7 55 p.m.	7.2	..	" ..	8 40 a.m.	7.1	..
" ..	8 5 p.m.	7.4	..	" ..	8 55 a.m.	7.1	..
Jan. 18, ..	7 35 a.m.	..	34.33	" ..	9 5 a.m.	7.1	..
" ..	7 0 p.m.	7.2	..	Feb. 4, ..	9 20 a.m.	7.3	..
" ..	7 6 p.m.	7.2	..	" ..	9 30 a.m.	7.2	..
" ..	7 11 p.m.	7.0	..	" ..	9 40 a.m.	7.2	..
" ..	7 18 p.m.	7.0	..	Feb. 5, ..	9 50 a.m.	7.2	..
" ..	7 25 p.m.	7.0	..	" ..	10 0 a.m.	7.2	..
Jan. 19, ..	8 0 p.m.	7.2	..	" ..	10 12 a.m.	7.1	..
" ..	8 10 p.m.	7.2	..	" ..	10 15 a.m.	7.1	..
Jan. 21, ..	9 0 a.m.	7.4	..	Feb. 6, ..	10 30 a.m.	7.2	..
" ..	9 10 a.m.	7.4	..	" ..	10 40 a.m.	7.2	..
" ..	9 20 a.m.	7.4	..	" ..	10 50 a.m.	7.1	..
Jan. 22, ..	9 50 a.m.	7.2	..	Feb. 7, ..	11 0 a.m.	7.3	..
" ..	10 0 a.m.	7.2	..	" ..	11 10 a.m.	7.2	..
" ..	10 15 a.m.	7.3	..	" ..	11 20 a.m.	7.2	..
" ..	10 25 a.m.	7.3	..	" ..	11 26 a.m.	7.2	..
Jan. 23, ..	10 40 a.m.	7.2	..	Feb. 8, ..	11 50 a.m.	7.2	..
" ..	10 55 a.m.	7.2	..	" ..	Midday.	7.1	..
" ..	11 10 a.m.	7.2	..	" ..	12 10 p.m.	7.1	..
Jan. 24, ..	11 30 a.m.	7.2	..	Feb. 9, ..	12 35 p.m.	7.0	..
" ..	11 40 a.m.	7.2	..	" ..	12 45 p.m.	7.0	..
" ..	11 55 a.m.	7.1	..	" ..	12 55 p.m.	7.1	34.42
" ..	Midday.	7.1	..	" ..	1 5 p.m.	7.1	..
Jan. 25, ..	11 45 a.m.	7.2	..	Feb. 10, ..	1 20 p.m.	7.0	..
" ..	Midday.	7.3	..	" ..	1 27 p.m.	7.1	..
" ..	12 15 p.m.	7.3	..	" ..	1 35 p.m.	7.1	..
Jan. 26, ..	Midday.	..	34.43	Feb. 11, ..	2 30 p.m.	7.2	..
" ..	12 20 p.m.	7.6	..	" ..	2 40 p.m.	7.3	..
" ..	12 30 p.m.	7.5	..	" ..	2 50 p.m.	7.3	..
" ..	12 38 p.m.	7.4	..	" ..	3 0 p.m.	7.3	..
" ..	12 45 p.m.	7.4	..	Feb. 12, ..	3 45 p.m.	7.2	..
Jan. 27, ..	1 20 p.m.	7.3	..	" ..	4 0 p.m.	7.1	..
" ..	1 30 p.m.	7.2	..	" ..	4 10 p.m.	7.1	..
" ..	1 50 p.m.	7.2	..	" ..	4 20 p.m.	7.1	..
" ..	2 0 p.m.	7.2	..	Feb. 13, ..	5 0 p.m.	7.3	..
Jan. 28, ..	2 40 p.m.	7.3	..	" ..	5 10 p.m.	7.3	..
" ..	2 55 p.m.	7.2	..	" ..	5 17 p.m.	7.3	..
" ..	3 0 p.m.	7.2	..	Feb. 14, ..	6 30 p.m.	7.1	..
Jan. 29, ..	3 40 p.m.	7.2	..	" ..	6 40 p.m.	7.1	..
" ..	4 0 p.m.	7.1	..	" ..	7 0 p.m.	7.0	..
" ..	4 15 p.m.	7.2	..	Feb. 15, ..	8 0 p.m.	7.0	..
Jan. 30, ..	5 0 p.m.	7.2	..	" ..	8 10 p.m.	7.9	..
" ..	5 10 p.m.	7.3	..	" ..	8 20 p.m.	7.9	..
" ..	5 20 p.m.	7.1	..	" ..	8 25 p.m.	7.9	..
" ..	5 30 p.m.	7.1	..	Feb. 16, ..	8 30 p.m.	7.0	..
Jan. 31, ..	5 45 p.m.	7.3	..	Feb. 17, ..	9 15 a.m.	6.4	34.52
" ..	6 0 p.m.	7.2	..	" ..	9 15 p.m.	6.6	..
" ..	6 10 p.m.	7.1	..	Feb. 18, ..	9 25 a.m.	6.6	..
" ..	6 20 p.m.	7.1	..	" ..	9 30 p.m.	6.6	..
Feb. 1, ..	7 0 a.m.	7.0	34.49	Feb. 19, ..	9 45 a.m.	6.8	..
" ..	7 10 a.m.	7.1	..	" ..	10 0 p.m.	7.0	..
" ..	7 25 a.m.	7.1	..	Feb. 20, ..	10 15 p.m.	7.0	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
Feb. 21, ..	10 25 a.m.	7.0	..	March 16,	8 20 a.m.	6.4	..
" ..	10 35 p.m.	7.0	..	" ..	8 30 a.m.	6.4	..
Feb. 22, ..	10 55 a.m.	6.8	..	" ..	8 38 a.m.	6.4	..
" ..	11 20 p.m.	6.8	..	March 17,	8 30 a.m.	6.3	..
Feb. 23, ..	11 45 a.m.	7.0	..	" ..	8 38 a.m.	6.4	..
Feb. 24, ..	12 5 a.m.	6.8	..	" ..	8 50 a.m.	6.4	..
" ..	12 41 p.m.	6.8	34.45	March 18,	9 0 a.m.	6.4	..
Feb. 25, ..	1 15 a.m.	6.4	..	" ..	9 10 a.m.	6.4	..
" ..	1 40 p.m.	6.8	..	" ..	9 19 a.m.	6.3	..
Feb. 26, ..	2 23 a.m.	6.8	..	" ..	9 28 a.m.	6.3	..
" ..	3 0 p.m.	6.6	..	" ..	9 0 p.m.	..	34.43
Feb. 27, ..	3 45 a.m.	6.2	..	March 19,	9 35 a.m.	6.4	..
" ..	4 24 p.m.	6.8	..	" ..	9 45 a.m.	6.5	..
Feb. 28, ..	5 2 a.m.	6.8	..	" ..	9 56 a.m.	6.5	..
" ..	5 34 p.m.	6.6	..	March 20,	9 50 a.m.	6.3	..
Feb. 29, ..	6 15 a.m.	5.8	..	" ..	9 58 a.m.	6.3	..
" ..	6 31 p.m.	6.2	..	" ..	10 10 a.m.	6.3	..
March 1, ..	6 50 a.m.	5.8	..	" ..	10 20 a.m.	6.3	..
" ..	7 10 p.m.	6.0	..	March 21,	10 30 a.m.	6.3	..
March 2, ..	7 38 a.m.	6.2	..	" ..	10 40 a.m.	6.4	..
" ..	8 0 p.m.	6.4	..	" ..	10 50 a.m.	6.4	..
March 3, ..	8 25 a.m.	6.0	34.49	March 22,	10 50 a.m.	6.4	..
" ..	8 30 p.m.	6.2	..	" ..	11 0 a.m.	6.4	..
March 4, ..	8 48 a.m.	6.4	..	" ..	11 10 a.m.	6.4	..
" ..	9 10 p.m.	6.4	..	" ..	11 20 a.m.	6.4	..
March 5, ..	9 32 a.m.	6.2	..	March 23,	11 50 a.m.	6.3	..
" ..	9 56 p.m.	6.2	..	" ..	Midday.	6.3	..
March 6, ..	10 17 a.m.	6.2	..	" ..	12 10 p.m.	6.4	..
" ..	10 38 p.m.	6.4	..	March 24,	12 35 p.m.	6.4	..
March 7, ..	10 59 a.m.	6.4	..	" ..	12 45 p.m.	6.4	..
" ..	11 21 p.m.	6.2	..	" ..	12 58 p.m.	6.3	..
March 8, ..	11 45 a.m.	6.4	..	" ..	1 10 p.m.	6.3	..
" ..	12 10 p.m.	6.4	..	March 25,	2 0 p.m.	6.5	..
March 9, ..	12 41 a.m.	6.4	..	" ..	2 10 p.m.	6.5	..
" ..	12 41 p.m.	..	34.47	" ..	2 22 p.m.	6.4	..
" ..	1 12 p.m.	6.0	..	March 26,	2 40 p.m.	6.3	..
March 10, ..	1 45 a.m.	6.6	..	" ..	2 50 p.m.	6.3	..
" ..	2 20 p.m.	6.4	..	" ..	2 58 p.m.	6.4	34.29
March 11, ..	3 0 a.m.	5.8	..	" ..	3 10 p.m.	6.4	..
" ..	4 30 p.m.	6.4	..	March 27,	3 20 p.m.	6.8	..
" ..	4 38 p.m.	6.4	..	" ..	3 30 p.m.	6.6	..
" ..	4 45 p.m.	6.3	..	" ..	3 40 p.m.	6.6	..
March 12, ..	5 15 p.m.	6.2	..	March 28,	4 10 p.m.	6.3	..
" ..	5 28 p.m.	6.3	..	" ..	4 20 p.m.	6.3	..
" ..	5 35 p.m.	6.3	..	" ..	4 30 p.m.	6.3	..
" ..	5 42 p.m.	6.3	..	" ..	4 42 p.m.	6.3	..
March 13, ..	6 30 p.m.	6.2	..	March 29,	5 20 p.m.	6.2	..
" ..	6 42 p.m.	6.2	..	" ..	5 30 p.m.	6.2	..
" ..	6 53 p.m.	6.3	..	" ..	5 40 p.m.	6.4	..
March 14, ..	7 15 p.m.	6.4	..	March 30,	6 10 p.m.	6.6	..
" ..	7 25 p.m.	6.4	..	" ..	6 20 p.m.	6.5	..
" ..	7 34 p.m.	6.4	..	" ..	6 30 p.m.	6.5	..
" ..	7 42 p.m.	6.4	..	" ..	6 40 p.m.	6.5	..
March 15, ..	7 50 a.m.	6.3	..	March 31,	6 30 p.m.	6.4	..
" ..	8 0 a.m.	6.3	..	" ..	6 45 p.m.	6.4	..
" ..	8 10 a.m.	6.3	..	" ..	7 0 p.m.	6.3	..
March 16, ..	8 10 a.m.	6.4	..	" ..	7 10 p.m.	6.3	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
April 1, ..	8 0 a.m.	6.6	..	April 21, ..	11 5 p.m.	7.4	..
" ..	8 10 a.m.	6.5	..	April 22, ..	11 30 a.m.	7.4	..
" ..	8 20 a.m.	6.5	..	" ..	11 30 p.m.	..	34.34
April 2, ..	8 40 a.m.	6.3	..	" ..	11 55 p.m.	7.4	..
" ..	8 50 a.m.	6.3	..	April 23, ..	12 38 a.m.	7.4	..
" ..	9 10 a.m.	6.4	34.33	" ..	1 15 p.m.	7.8	..
April 3, ..	9 50 a.m.	6.6	..	April 24, ..	1 53 a.m.	7.6	..
" ..	10 0 a.m.	6.5	..	" ..	2 32 p.m.	8.0	..
" ..	10 10 a.m.	6.5	..	April 25, ..	3 10 a.m.	7.4	..
" ..	10 20 a.m.	6.5	..	" ..	3 44 p.m.	7.4	..
April 4, ..	10 20 a.m.	6.3	..	April 26, ..	4 18 a.m.	7.6	..
" ..	10 30 a.m.	6.4	..	" ..	4 37 p.m.	7.8	..
" ..	10 40 a.m.	6.4	..	April 27, ..	5 18 a.m.	7.4	..
April 5, ..	11 0 a.m.	6.4	..	" ..	5 45 p.m.	7.6	..
" ..	11 10 a.m.	6.4	..	April 28, ..	6 10 a.m.	7.4	..
" ..	11 20 a.m.	6.5	..	" ..	6 34 p.m.	7.8	..
" ..	11 30 a.m.	6.5	..	April 29, ..	6 57 a.m.	7.8	34.33
April 6, ..	Midday.	6.2	..	" ..	7 17 p.m.	7.8	..
" ..	12 10 p.m.	6.3	..	April 30, ..	7 39 a.m.	8.0	..
" ..	12 25 p.m.	6.3	..	" ..	8 0 p.m.	8.0	..
April 7, ..	12 45 p.m.	6.4	..	May 1, ..	8 20 a.m.	8.0	..
" ..	12 58 p.m.	6.5	..	" ..	8 30 p.m.	8.0	..
" ..	1 10 p.m.	6.5	..	May 2, ..	8 43 a.m.	8.0	..
" ..	1 20 p.m.	6.5	..	" ..	9 4 p.m.	8.0	..
April 8, ..	1 30 p.m.	6.6	..	May 3, ..	9 24 a.m.	8.2	..
" ..	1 40 p.m.	6.6	..	" ..	9 47 p.m.	8.0	..
" ..	1 50 p.m.	6.6	..	May 4, ..	10 7 a.m.	8.4	..
April 9, ..	3 0 p.m.	6.4	..	" ..	10 28 p.m.	8.2	..
" ..	3 10 p.m.	6.4	..	May 5, ..	10 50 a.m.	8.0	..
" ..	3 25 p.m.	6.4	..	" ..	11 13 p.m.	8.0	..
April 10, ..	3 30 p.m.	6.6	..	May 6, ..	11 37 a.m.	8.2	..
" ..	3 40 p.m.	6.5	..	" ..	11 58 p.m.	8.0	..
" ..	3 50 p.m.	6.5	..	May 7, ..	12 31 a.m.	8.0	..
" ..	4 0 p.m.	6.5	..	" ..	1 4 p.m.	8.2	..
April 11, ..	4 20 a.m.	6.8	34.16	May 8, ..	1 37 a.m.	7.4	..
" ..	4 30 a.m.	6.7	..	" ..	2 4 p.m.	8.0	..
" ..	4 45 a.m.	6.7	..	May 9, ..	2 45 a.m.	8.0	..
" ..	5 0 p.m.	7.0	..	" ..	3 18 p.m.	9.6	..
April 12, ..	5 24 a.m.	7.0	..	May 10, ..	3 50 a.m.	8.2	..
" ..	5 55 p.m.	7.0	..	" ..	4 17 p.m.	9.0	..
April 13, ..	6 15 a.m.	6.2	..	May 11, ..	6 30 a.m.	6.6	..
" ..	6 30 p.m.	6.6	..	" ..	6 40 a.m.	6.5	..
April 14, ..	6 45 a.m.	6.2	..	" ..	6 50 a.m.	6.5	..
" ..	7 5 p.m.	6.6	..	May 12, ..	7 0 a.m.	7.0	..
April 15, ..	7 20 a.m.	6.4	..	" ..	7 10 a.m.	7.0	..
" ..	7 34 p.m.	7.0	..	" ..	7 20 a.m.	7.1	..
April 16, ..	7 50 a.m.	7.2	34.33	" ..	7 30 a.m.	7.1	..
" ..	8 10 p.m.	7.2	..	May 13, ..	7 30 a.m.	6.8	..
April 17, ..	8 24 a.m.	7.0	..	" ..	7 40 a.m.	6.7	..
" ..	8 30 p.m.	7.0	..	" ..	7 50 a.m.	6.7	..
April 18, ..	8 43 a.m.	7.2	..	" ..	8 0 a.m.	6.7	..
" ..	9 3 p.m.	7.2	..	May 14, ..	8 0 a.m.	7.9	..
April 19, ..	9 23 a.m.	7.2	..	" ..	8 10 a.m.	7.9	..
" ..	9 43 p.m.	7.2	..	" ..	8 20 a.m.	7.8	..
April 20, ..	10 0 a.m.	7.4	..	May 15, ..	8 30 a.m.	8.3	..
" ..	10 20 p.m.	7.2	..	" ..	3 40 a.m.	8.4	..
April 21 ..	10 40 a.m.	7.2	..	" ..	8 50 a.m.	8.4	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	‰	1904.		°C.	‰
May 16, ..	8 40 a.m.	8.8	34.34	June 8, ..	2 30 p.m.	9.8	..
" ..	8 50 a.m.	8.9	..	" ..	2 40 p.m.	9.8	..
" ..	9 0 a.m.	8.8	..	" ..	2 50 p.m.	9.8	34.33
" ..	9 10 a.m.	8.8	..	June 9, ..	3 40 p.m.	11.1	..
May 17, ..	9 0 a.m.	9.0	..	" ..	3 50 p.m.	11.2	..
" ..	9 10 a.m.	9.1	..	" ..	4 0 p.m.	11.2	..
" ..	9 20 a.m.	9.1	..	June 10, ..	5 0 p.m.	11.6	..
May 18, ..	9 20 a.m.	9.2	..	" ..	5 10 p.m.	11.5	..
" ..	9 30 a.m.	9.2	..	" ..	5 20 p.m.	11.5	..
" ..	9 40 a.m.	9.2	..	" ..	5 30 p.m.	11.5	..
" ..	9 50 a.m.	9.2	..	June 11, ..	6 10 p.m.	11.2	..
May 19, ..	10 0 a.m.	9.0	..	" ..	6 20 p.m.	11.1	..
" ..	10 10 a.m.	9.1	..	" ..	6 30 p.m.	11.1	..
" ..	10 20 a.m.	9.1	..	June 12, ..	6 40 p.m.	11.5	..
May 20, ..	11 0 p.m.	9.0	..	" ..	6 50 p.m.	11.4	..
May 21, ..	11 27 a.m.	8.8	..	" ..	7 0 p.m.	11.4	..
" ..	11 56 p.m.	8.8	..	" ..	7 10 p.m.	11.4	..
May 22, ..	12 28 a.m.	8.8	..	June 13, ..	7 20 a.m.	11.1	..
" ..	1 6 p.m.	9.0	34.33	" ..	7 30 a.m.	11.2	..
May 23, ..	1 43 a.m.	9.0	..	" ..	7 40 a.m.	11.2	..
" ..	2 18 p.m.	9.2	..	June 14, ..	7 50 a.m.	11.0	..
May 24, ..	2 48 a.m.	9.0	..	" ..	8 0 a.m.	10.9	34.29
" ..	3 18 p.m.	9.6	..	" ..	8 10 a.m.	11.0	..
May 25, ..	3 51 a.m.	9.2	..	" ..	8 20 a.m.	11.0	..
" ..	4 24 p.m.	9.6	..	June 15, ..	8 40 a.m.	11.5	..
May 26, ..	4 56 a.m.	9.2	..	" ..	8 50 a.m.	11.4	..
" ..	5 24 p.m.	9.4	..	" ..	9 0 a.m.	11.4	..
May 27, ..	5 48 a.m.	9.6	..	June 16, ..	9 0 a.m.	11.2	..
" ..	6 16 p.m.	9.8	..	" ..	9 10 a.m.	11.1	..
May 28, ..	6 38 a.m.	9.6	..	" ..	9 20 a.m.	11.1	..
" ..	7 0 p.m.	9.6	..	" ..	9 30 a.m.	11.1	..
May 29, ..	7 22 a.m.	9.6	..	June 17, ..	10 20 a.m.	10.8	..
" ..	7 42 p.m.	9.8	..	" ..	10 30 a.m.	10.7	..
May 30, ..	8 0 a.m.	9.8	..	" ..	10 40 a.m.	10.7	..
" ..	8 23 p.m.	9.8	..	June 18, ..	10 50 a.m.	11.2	..
May 31, ..	8 30 a.m.	9.8	..	" ..	11 0 a.m.	11.1	..
" ..	8 46 p.m.	9.8	..	" ..	11 10 a.m.	11.1	..
June 1, ..	9 6 a.m.	9.6	..	" ..	11 20 a.m.	11.1	..
" ..	9 4 p.m.	10.0	..	June 19, ..	11 40 a.m.	11.8	..
June 2, ..	9 45 a.m.	9.2	..	" ..	11 50 a.m.	11.7	..
June 3, ..	10 30 a.m.	10.3	..	" ..	Midday.	11.7	..
" ..	10 40 a.m.	10.2	..	June 20, ..	12 30 p.m.	11.8	..
" ..	10 50 a.m.	10.2	..	" ..	12 40 p.m.	11.7	..
June 4, ..	11 10 a.m.	11.2	..	" ..	12 50 p.m.	11.7	..
" ..	11 20 a.m.	11.1	..	" ..	1 0 p.m.	11.7	34.31
" ..	11 30 a.m.	11.1	..	June 21, ..	2 0 p.m.	11.8	..
June 5, ..	11 40 a.m.	11.3	..	" ..	2 10 p.m.	11.7	..
" ..	11 58 a.m.	11.3	..	" ..	2 20 p.m.	11.7	..
" ..	12 10 p.m.	11.3	..	June 22, ..	3 0 p.m.	11.9	..
June 6, ..	12 50 p.m.	11.0	..	" ..	3 10 p.m.	11.8	..
" ..	1 10 p.m.	11.1	..	" ..	3 20 p.m.	11.8	..
" ..	1 20 p.m.	11.1	..	" ..	3 30 p.m.	11.8	..
" ..	1 30 p.m.	11.1	..	June 23, ..	4 0 p.m.	12.7	..
June 7, ..	2 10 p.m.	10.8	..	" ..	4 10 p.m.	12.6	..
" ..	2 20 p.m.	10.7	..	" ..	4 20 p.m.	12.6	..
" ..	2 30 p.m.	10.7	..	June 24, ..	4 30 p.m.	12.2	..
June 8, ..	2 20 p.m.	9.8	..	" ..	4 40 p.m.	12.1	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SOUTH ARKLOW LIGHTSHIP. 'Lat. 52° 41' N., Long 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
June 24, ..	4 50 p.m.	12.1	..	July 15, ..	9 0 p.m.	13.0	..
" ..	5 0 p.m.	12.1	..	July 16, ..	9 24 a.m.	12.8	..
June 25, ..	5 20 p.m.	12.0	..	" ..	9 50 p.m.	12.8	..
" ..	5 30 p.m.	11.9	..	July 17, ..	10 16 a.m.	13.0	..
" ..	5 40 p.m.	11.9	..	" ..	10 40 p.m.	12.6	..
June 26, ..	6 0 p.m.	12.1	..	July 18, ..	11 5 a.m.	13.1	..
" ..	6 10 p.m.	12.0	..	" ..	11 31 p.m.	13.0	..
" ..	6 20 p.m.	12.0	..	" ..	Midnight.	13.0	..
" ..	6 30 p.m.	12.0	..	July 19, ..	12 25 p.m.	13.4	..
June 27, ..	7 0 p.m.	12.2	..	July 20, ..	12 35 a.m.	13.0	..
" ..	7 10 p.m.	12.1	..	" ..	1 26 p.m.	13.4	..
" ..	7 20 p.m.	12.1	..	July 21, ..	1 57 a.m.	13.2	..
June 28, ..	8 0 a.m.	12.6	34.34	" ..	2 29 p.m.	13.6	..
" ..	8 10 a.m.	12.5	..	July 22, ..	3 0 a.m.	13.4	..
" ..	8 20 a.m.	12.5	..	" ..	3 34 p.m.	13.6	..
" ..	8 30 a.m.	12.5	..	July 23, ..	4 8 a.m.	13.4	..
June 29, ..	8 30 a.m.	12.0	..	" ..	4 41 p.m.	13.8	..
" ..	8 40 a.m.	12.0	..	July 24, ..	5 14 a.m.	13.4	..
" ..	8 50 a.m.	12.0	..	" ..	5 43 p.m.	13.6	..
June 30, ..	9 0 a.m.	12.2	..	July 25, ..	6 10 a.m.	13.4	..
" ..	9 10 a.m.	12.1	..	" ..	6 35 p.m.	13.8	..
" ..	9 20 a.m.	12.1	..	July 26, ..	6 55 a.m.	13.6	..
" ..	9 30 a.m.	12.1	..	" ..	7 14 p.m.	13.6	..
July 1, ..	10 0 a.m.	11.5	..	July 27, ..	7 33 a.m.	13.6	34.38
" ..	10 10 a.m.	11.4	..	" ..	7 50 p.m.	13.6	..
" ..	10 20 a.m.	11.4	..	July 28, ..	8 8 a.m.	14.0	..
July 2, ..	9 22 a.m.	12.1	..	" ..	8 25 p.m.	14.0	..
" ..	11 0 a.m.	11.8	..	July 29, ..	8 30 a.m.	14.2	..
" ..	11 10 a.m.	11.7	..	" ..	8 44 p.m.	14.0	..
" ..	11 20 a.m.	11.7	..	July 30, ..	9 0 a.m.	14.4	..
" ..	11 30 a.m.	11.7	..	" ..	9 19 p.m.	14.0	..
" ..	10 41 p.m.	12.0	..	July 31, ..	9 37 a.m.	14.2	..
July 3, ..	11 0 a.m.	12.0	..	" ..	9 54 p.m.	14.0	..
" ..	11 21 p.m.	12.0	..	August 1, ..	10 11 a.m.	14.4	..
July 4, ..	11 42 a.m.	12.2	..	" ..	10 28 p.m.	14.0	..
" ..	11 58 p.m.	12.0	..	August 2, ..	10 40 a.m.	14.6	..
July 5, ..	12 4 a.m.	12.0	..	" ..	10 50 a.m.	14.5	..
" ..	12 30 p.m.	12.8	34.34	" ..	11 5 a.m.	14.5	..
July 6, ..	1 0 a.m.	12.0	..	August 3, ..	Midday.	14.3	..
" ..	1 25 p.m.	12.8	..	" ..	12 10 p.m.	14.2	..
July 7, ..	1 52 a.m.	12.0	..	" ..	12 20 p.m.	14.2	..
" ..	2 25 p.m.	13.0	..	August 4, ..	12 38 p.m.	14.6	..
July 8, ..	3 0 a.m.	12.2	..	" ..	12 50 p.m.	14.5	..
" ..	3 24 p.m.	12.8	..	" ..	1 3 p.m.	14.5	..
July 9, ..	3 54 a.m.	12.8	..	August 5, ..	1 40 p.m.	14.6	34.42
" ..	4 25 p.m.	13.2	..	" ..	1 50 p.m.	14.5	..
July 10, ..	4 54 a.m.	12.8	..	" ..	2 0 p.m.	14.5	..
" ..	5 22 p.m.	13.0	..	" ..	2 10 p.m.	14.5	..
July 11, ..	5 49 a.m.	12.8	..	August 6, ..	2 50 p.m.	14.2	..
" ..	6 16 p.m.	13.0	..	" ..	3 0 p.m.	14.1	..
July 12, ..	6 38 a.m.	12.8	..	" ..	3 10 p.m.	14.1	..
" ..	7 0 p.m.	12.8	..	August 7, ..	3 40 p.m.	14.6	..
July 13, ..	7 30 a.m.	12.8	..	" ..	3 50 p.m.	14.5	..
" ..	7 47 p.m.	12.8	34.40	" ..	4 0 p.m.	14.5	..
July 14, ..	8 9 a.m.	13.0	..	" ..	4 10 p.m.	14.5	..
" ..	8 30 p.m.	13.0	..	August 8, ..	5 0 p.m.	14.4	..
July 15, ..	8 34 a.m.	13.0	..	" ..	5 10 p.m.	14.3	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N. Long 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
August 8,	5 20 p.m.	14.3	..	August 25,	7 50 p.m.	14.2	..
August 9,	6 30 p.m.	14.6	..	" ..	8 0 p.m.	14.2	..
" ..	6 40 p.m.	14.5	..	" ..	8 10 p.m.	14.1	..
" ..	6 50 p.m.	14.5	..	August 26,	8 15 a.m.	14.8	..
" ..	7 0 p.m.	14.5	..	" ..	8 25 a.m.	14.8	..
August 10,	7 20 a.m.	14.1	..	" ..	8 35 a.m.	14.8	..
" ..	7 30 a.m.	14.0	..	" ..	8 45 a.m.	14.7	..
" ..	7 40 a.m.	14.0	..	August 27,	8 40 a.m.	14.6	..
August 11,	8 0 a.m.	14.4	..	" ..	8 50 a.m.	14.6	..
" ..	8 10 a.m.	14.3	..	" ..	9 0 a.m.	14.5	..
" ..	8 20 a.m.	14.3	..	August 28,	9 0 a.m.	14.5	34.49
August 12,	8 30 a.m.	14.6	34.45	" ..	9 10 a.m.	14.4	..
" ..	8 40 a.m.	14.5	..	" ..	9 20 a.m.	14.4	..
" ..	8 50 a.m.	14.5	..	" ..	9 30 a.m.	14.4	..
August 13,	9 0 a.m.	14.5	..	August 29,	9 30 a.m.	14.9	..
" ..	10 0 a.m.	14.8	..	August 30,	9 50 a.m.	14.7	..
" ..	10 10 a.m.	14.7	..	" ..	10 0 a.m.	14.7	..
" ..	10 20 a.m.	14.7	..	" ..	10 10 a.m.	14.6	..
August 14,	11 0 a.m.	14.1	..	" ..	10 20 a.m.	14.6	..
" ..	11 10 a.m.	14.0	..	August 31,	10 30 a.m.	14.8	..
" ..	11 20 a.m.	14.0	..	" ..	10 40 a.m.	14.7	..
" ..	11 30 a.m.	14.0	..	" ..	10 50 a.m.	14.7	..
August 15,	11 20 a.m.	14.8	..	Sept. 1,	11 9 a.m.	15.0	..
" ..	11 30 a.m.	14.8	..	Sept. 2,	11 30 p.m.	14.6	..
" ..	11 40 a.m.	14.7	..	" ..	11 53 a.m.	14.9	..
" ..	11 50 a.m.	14.7	..	" ..	12 5 p.m.	14.9	..
August 16,	11 40 a.m.	14.6	..	Sept. 3,	12 25 a.m.	14.8	..
" ..	11 50 a.m.	14.5	..	" ..	12 35 a.m.	14.8	..
" ..	Midday.	14.5	..	" ..	1 0 p.m.	14.6	34.45
August 17,	12 10 p.m.	14.6	..	" ..	1 15 p.m.	14.6	..
" ..	12 20 p.m.	14.5	..	Sept. 4,	1 27 a.m.	14.6	..
" ..	12 30 p.m.	14.5	..	" ..	2 0 p.m.	14.8	..
August 18,	1 0 p.m.	14.6	..	" ..	2 30 p.m.	14.8	..
" ..	1 10 p.m.	14.6	..	Sept. 5,	2 40 a.m.	15.0	..
" ..	1 20 p.m.	14.5	..	" ..	3 19 p.m.	15.0	..
" ..	1 30 p.m.	14.5	..	Sept. 6,	4 0 a.m.	14.4	..
August 19,	2 10 p.m.	14.4	..	" ..	4 30 p.m.	15.0	..
" ..	2 20 p.m.	14.4	..	" ..	4 40 p.m.	15.0	..
" ..	2 30 p.m.	14.3	34.45	Sept. 7,	5 10 a.m.	14.6	..
August 20,	3 20 p.m.	14.8	..	" ..	5 35 p.m.	15.0	..
" ..	3 30 p.m.	14.8	..	" ..	5 50 p.m.	15.0	..
" ..	3 40 p.m.	14.7	..	Sept. 8,	6 0 a.m.	14.8	..
" ..	3 50 p.m.	14.7	..	" ..	6 28 p.m.	15.0	..
August 21,	4 0 p.m.	14.6	..	Sept. 9,	6 51 a.m.	14.8	34.54
" ..	4 10 p.m.	14.6	..	" ..	7 30 a.m.	14.8	..
" ..	4 20 p.m.	14.5	..	" ..	7 11 p.m.	14.6	..
August 22,	5 0 p.m.	14.8	..	Sept. 10,	7 34 a.m.	14.6	..
" ..	5 10 p.m.	14.8	..	" ..	8 0 p.m.	14.8	..
" ..	5 20 p.m.	14.7	..	Sept. 11,	8 23 a.m.	14.8	..
" ..	5 30 p.m.	14.7	..	" ..	8 45 a.m.	14.8	..
August 23,	6 0 p.m.	14.6	..	" ..	8 30 p.m.	14.8	..
" ..	6 10 p.m.	14.5	..	Sept. 12,	8 44 a.m.	14.8	..
" ..	6 20 p.m.	14.5	..	" ..	9 8 p.m.	14.6	..
August 24,	7 0 p.m.	14.8	..	Sept. 13,	9 31 a.m.	14.6	..
" ..	7 10 p.m.	14.7	..	" ..	10 0 a.m.	14.8	..
" ..	7 20 p.m.	14.7	..	" ..	9 53 p.m.	14.5	..
" ..	7 30 p.m.	14.7	..	Sept. 14,	10 15 a.m.	14.8	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	‰	1904.		°C.	‰
Sept. 14, ..	10 30 a.m.	14.8	..	Sept. 28, ..	9 26 p.m.	14.7	..
" "	10 37 p.m.	14.4	..	" "	9 35 p.m.	14.6	..
Sept. 15, ..	11 0 a.m.	14.9	..	Sept. 29, ..	9 43 a.m.	14.8	..
" "	11 30 a.m.	14.9	..	" "	10 0 a.m.	14.8	..
" "	11 26 p.m.	14.9	..	" "	10 0 p.m.	14.6	..
Sept. 16, ..	11 51 a.m.	15.0	34.56	" "	10 15 p.m.	14.6	..
" "	12 22 p.m.	15.0	..	Sept. 30, ..	10 17 a.m.	14.7	..
Sept. 17, ..	1 0 a.m.	14.9	..	" "	10 35 a.m.	14.7	..
" "	1 10 a.m.	14.9	..	" "	10 37 p.m.	14.4	..
" "	1 29 p.m.	15.0	..	" "	10 55 p.m.	14.4	..
" "	1 40 p.m.	15.0	..	Oct. 1, ..	11 0 a.m.	14.6	..
" "	2 0 p.m.	15.0	..	" "	11 20 p.m.	14.4	..
Sept. 18, ..	2 0 a.m.	14.8	..	Oct. 2, ..	Midday.	14.5	..
" "	2 10 a.m.	14.8	..	" "	12 10 p.m.	14.4	..
" "	2 30 p.m.	15.0	..	" "	12 20 p.m.	14.4	..
" "	2 40 p.m.	15.1	..	Oct. 3, ..	1 0 p.m.	14.8	..
" "	2 50 p.m.	15.0	..	" "	1 10 p.m.	14.7	..
" "	3 0 p.m.	14.9	..	" "	1 20 p.m.	14.7	..
Sept. 19, ..	3 23 a.m.	14.6	..	Oct. 4, ..	2 40 p.m.	14.5	..
" "	4 0 p.m.	15.0	..	" "	2 50 p.m.	14.4	..
" "	4 10 p.m.	15.0	..	" "	3 0 p.m.	14.4	34.54
Sept. 20, ..	4 34 a.m.	14.4	..	" "	3 10 p.m.	14.4	..
" "	5 4 p.m.	15.0	..	Oct. 5, ..	4 10 p.m.	14.2	..
" "	5 20 p.m.	15.0	..	" "	4 20 p.m.	14.1	..
" "	5 30 p.m.	14.9	..	" "	4 30 p.m.	14.1	..
" "	5 35 p.m.	14.9	..	Oct. 6, ..	5 10 p.m.	14.2	..
Sept. 21, ..	5 32 a.m.	14.5	..	" "	5 20 p.m.	14.1	..
" "	5 50 a.m.	14.2	..	" "	5 30 p.m.	14.1	..
" "	5 55 p.m.	15.0	..	" "	5 40 p.m.	14.1	..
" "	6 10 p.m.	14.6	..	Oct. 7, ..	6 10 p.m.	14.6	..
Sept. 22, ..	6 16 a.m.	14.4	..	" "	6 20 p.m.	14.5	..
" "	6 30 a.m.	14.4	..	" "	6 30 p.m.	14.5	..
" "	6 36 p.m.	14.4	..	Oct. 8, ..	7 0 a.m.	13.8	..
" "	6 50 p.m.	14.6	..	" "	7 10 a.m.	13.8	..
Sept. 23, ..	6 51 a.m.	14.4	..	" "	7 20 a.m.	13.7	..
" "	7 0 a.m.	14.4	..	Oct. 9, ..	7 30 a.m.	13.9	..
" "	7 7 p.m.	14.6	..	" "	7 40 a.m.	13.8	..
" "	7 20 p.m.	14.6	..	" "	7 50 a.m.	13.8	..
Sept. 24, ..	7 0 a.m.	14.0	..	" "	8 0 a.m.	13.8	..
" "	7 30 a.m.	14.4	34.63	Oct. 10, ..	8 0 a.m.	13.8	..
" "	7 34 p.m.	14.4	34.61	" "	8 10 a.m.	13.6	34.56
" "	8 4 p.m.	14.3	..	" "	8 20 a.m.	13.6	..
Sept. 25, ..	7 50 a.m.	14.4	..	" "	8 30 a.m.	13.6	..
" "	8 0 a.m.	14.4	..	Oct. 11, ..	9 0 a.m.	14.0	..
" "	8 10 a.m.	14.4	..	" "	9 10 a.m.	13.9	..
" "	8 4 p.m.	14.4	..	" "	9 20 a.m.	13.9	..
" "	8 15 p.m.	14.2	..	Oct. 12, ..	9 20 a.m.	14.2	..
Sept. 26, ..	8 20 a.m.	14.8	..	" "	9 30 a.m.	14.1	..
" "	8 35 a.m.	14.8	..	" "	9 40 a.m.	14.1	..
" "	8 30 p.m.	14.2	..	Oct. 13, ..	10 0 a.m.	13.9	..
" "	9 0 p.m.	14.6	..	" "	10 10 a.m.	13.8	..
Sept. 27, ..	8 37 a.m.	14.6	..	" "	10 20 a.m.	13.8	..
" "	8 50 a.m.	14.6	..	" "	10 30 a.m.	13.8	..
" "	8 54 p.m.	14.6	..	Oct. 14, ..	10 50 a.m.	13.6	..
" "	9 5 p.m.	14.4	..	" "	11 0 a.m.	13.6	..
Sept. 28, ..	9 10 a.m.	14.8	..	" "	11 10 a.m.	13.5	..
" "	9 30 a.m.	14.7	..	Oct. 15, ..	11 30 a.m.	13.9	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰.	1904.		°C.	S‰.
Oct. 15, ..	11 40 a.m.	13.9	..	Oct. 31, ..	11 50 a.m.	13.3	..
" ..	11 50 a.m.	13.8	..	" ..	Midday.	13.3	..
" ..	Midday.	13.8	..	Nov. 2, ..	12 50 p.m.	13.6	..
Oct. 16, ..	12 20 p.m.	14.0	..	" ..	1 0 p.m.	13.6	..
" ..	12 30 p.m.	13.9	..	" ..	1 10 p.m.	13.5	..
" ..	12 40 p.m.	13.9	..	" ..	2 40 p.m.	13.2	..
" ..	12 50 p.m.	13.9	..	Nov. 3, ..	3 14 a.m.	13.0	..
Oct. 17, ..	1 40 p.m.	14.4	..	" ..	3 46 a.m.	13.2	..
" ..	1 50 p.m.	14.3	..	" ..	4 0 p.m.	13.2	34.63
" ..	2 0 p.m.	14.3	..	" ..	4 15 p.m.	13.2	..
Oct. 18, ..	3 30 p.m.	14.2	..	Nov. 4, ..	4 21 a.m.	13.2	..
" ..	3 40 p.m.	14.1	..	" ..	4 21 p.m.	13.2	..
" ..	3 50 p.m.	14.1	..	" ..	4 30 p.m.	13.1	..
Oct. 19, ..	4 40 p.m.	13.8	..	" ..	4 45 p.m.	13.1	..
" ..	4 50 p.m.	13.6	..	Nov. 5, ..	5 14 a.m.	13.4	..
" ..	5 0 p.m.	13.6	..	" ..	5 45 p.m.	13.0	..
" ..	5 10 p.m.	13.6	..	" ..	5 55 p.m.	13.0	..
Oct. 20, ..	5 30 a.m.	13.6	..	" ..	6 5 p.m.	13.0	..
" ..	5 40 a.m.	13.5	..	Nov. 6, ..	6 11 a.m.	12.8	..
" ..	5 50 a.m.	13.5	..	" ..	6 36 p.m.	13.0	..
Oct. 21, ..	6 0 a.m.	13.8	..	" ..	6 40 p.m.	13.0	..
" ..	6 10 a.m.	13.7	..	" ..	6 50 p.m.	13.0	..
" ..	6 20 a.m.	13.7	..	Nov. 7, ..	7 0 a.m.	13.0	34.63
" ..	6 30 a.m.	13.7	..	" ..	7 15 a.m.	13.0	..
Oct. 22, ..	6 30 a.m.	13.4	..	" ..	7 30 a.m.	13.0	..
" ..	6 40 a.m.	13.3	..	" ..	7 0 p.m.	12.4	..
" ..	6 50 a.m.	13.3	..	" ..	7 15 p.m.	12.4	..
Oct. 23, ..	7 0 a.m.	13.6	..	" ..	7 30 p.m.	12.2	..
" ..	7 10 a.m.	13.5	..	Nov. 8, ..	7 36 a.m.	12.2	..
" ..	7 20 a.m.	13.5	..	" ..	8 0 p.m.	12.4	..
" ..	7 30 a.m.	13.5	..	" ..	8 10 p.m.	12.4	..
Oct. 24, ..	7 40 a.m.	13.6	..	" ..	8 20 p.m.	12.4	..
" ..	7 50 a.m.	13.5	..	Nov. 9, ..	8 21 a.m.	13.0	..
" ..	8 0 a.m.	13.5	..	" ..	8 35 a.m.	13.0	..
Oct. 25, ..	8 0 a.m.	14.0	..	" ..	8 40 a.m.	13.0	..
" ..	8 10 a.m.	14.0	..	" ..	8 30 p.m.	12.6	..
" ..	8 20 a.m.	13.9	..	" ..	8 40 p.m.	12.6	..
" ..	8 30 a.m.	13.9	..	" ..	8 45 p.m.	12.5	..
Oct. 26, ..	8 30 a.m.	13.4	..	Nov. 10, ..	9 0 a.m.	12.6	..
" ..	8 40 a.m.	13.4	..	" ..	9 10 a.m.	12.4	..
" ..	8 50 a.m.	13.3	..	" ..	9 20 a.m.	12.4	..
Oct. 27, ..	9 10 a.m.	13.6	..	" ..	9 0 p.m.	12.7	..
" ..	9 20 a.m.	13.5	..	" ..	9 15 p.m.	12.7	..
" ..	9 30 a.m.	13.5	..	Nov. 11, ..	9 26 a.m.	12.7	..
" ..	9 40 a.m.	13.5	..	" ..	9 40 a.m.	12.7	..
Oct. 28, ..	9 30 a.m.	13.8	..	" ..	9 40 p.m.	12.4	..
" ..	9 40 a.m.	13.8	..	" ..	9 50 p.m.	12.4	..
" ..	9 50 a.m.	13.7	..	" ..	10 0 p.m.	12.5	..
Oct. 29, ..	10 0 a.m.	13.0	..	Nov. 12, ..	10 10 a.m.	12.6	..
" ..	10 10 a.m.	13.0	..	" ..	10 20 a.m.	12.6	..
" ..	10 20 a.m.	13.0	..	" ..	10 25 a.m.	12.6	..
" ..	10 30 a.m.	13.0	..	" ..	10 25 p.m.	12.4	..
Oct. 30, ..	11 0 a.m.	13.2	..	" ..	10 36 p.m.	12.4	..
" ..	11 10 a.m.	13.2	..	Nov. 13, ..	10 50 a.m.	12.8	..
" ..	11 20 a.m.	13.1	..	" ..	11 0 a.m.	12.8	..
Oct. 31, ..	11 30 a.m.	13.4	..	" ..	11 10 p.m.	12.6	..
" ..	11 40 a.m.	13.3	..	" ..	11 20 p.m.	12.6	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N, Long 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
Nov. 14, ..	11 47 a.m.	12.8	..	Nov. 29, ..	11 53 p.m.	11.1	..
" ..	11 55 a.m.	12.8	..	Nov. 30, ..	12 24 a.m.	11.1	34.70
" ..	12 14 p.m.	12.8	..	" ..	1 0 p.m.	11.6	34.70
Nov. 15, ..	12 45 a.m.	12.6	..	" ..	1 10 p.m.	11.6	..
" ..	1 20 p.m.	12.8	34.67	Dec. 1, ..	1 40 a.m.	11.2	..
" ..	1 30 p.m.	12.8	..	" ..	2 15 p.m.	11.2	..
Nov. 16, ..	1 56 a.m.	12.2	..	" ..	2 30 p.m.	11.4	..
" ..	2 34 p.m.	12.6	..	Dec. 2, ..	2 47 a.m.	11.2	..
" ..	2 40 p.m.	12.6	..	" ..	3 10 p.m.	11.2	..
Nov. 17, ..	3 0 a.m.	12.2	..	" ..	3 20 p.m.	11.0	..
" ..	3 39 p.m.	12.5	..	Dec. 3, ..	3 50 a.m.	10.8	..
" ..	3 50 p.m.	12.5	..	" ..	4 25 p.m.	11.1	..
Nov. 18, ..	4 0 a.m.	12.4	..	" ..	4 35 p.m.	11.0	..
" ..	4 35 p.m.	12.4	..	Dec. 4, ..	4 54 a.m.	11.2	..
" ..	4 45 p.m.	12.4	..	" ..	5 21 p.m.	11.2	..
Nov. 19, ..	5 0 a.m.	12.4	..	" ..	5 30 p.m.	11.2	..
" ..	5 22 p.m.	12.2	..	Dec. 5, ..	5 50 a.m.	10.8	..
" ..	5 35 p.m.	12.2	..	" ..	6 0 a.m.	10.8	..
Nov. 20, ..	5 42 a.m.	11.8	..	" ..	6 14 p.m.	10.8	..
" ..	5 55 a.m.	11.6	..	" ..	6 30 p.m.	10.8	..
" ..	6 0 p.m.	12.0	..	Dec. 6, ..	6 38 a.m.	10.6	..
" ..	6 10 p.m.	12.0	..	" ..	6 50 a.m.	10.6	..
" ..	6 15 p.m.	11.8	..	" ..	7 11 p.m.	10.6	..
Nov. 21, ..	6 23 a.m.	11.2	..	" ..	7 20 p.m.	10.6	..
" ..	6 41 p.m.	11.4	..	Dec. 7, ..	7 21 a.m.	10.5	..
" ..	6 50 p.m.	11.4	..	" ..	7 30 a.m.	10.6	34.67
Nov. 22, ..	7 0 a.m.	11.4	..	" ..	7 42 p.m.	10.2	34.60
" ..	7 10 a.m.	11.2	..	" ..	7 50 p.m.	10.2	..
" ..	7 11 p.m.	10.8	..	Dec. 8, ..	8 5 a.m.	9.6	..
" ..	7 20 p.m.	11.0	..	" ..	8 10 a.m.	10.0	..
" ..	7 30 p.m.	11.0	..	" ..	8 20 a.m.	10.0	..
Nov. 23, ..	7 30 a.m.	10.8	..	" ..	8 26 p.m.	10.2	..
" ..	7 50 a.m.	11.0	34.69	" ..	8 35 p.m.	10.2	..
" ..	7 30 p.m.	11.0	..	Dec. 9, ..	8 30 a.m.	10.2	..
" ..	7 45 p.m.	11.0	..	" ..	8 40 a.m.	10.2	..
Nov. 24, ..	8 0 a.m.	11.0	..	" ..	8 48 p.m.	10.4	..
" ..	8 10 a.m.	11.2	..	" ..	9 0 p.m.	10.6	..
" ..	8 21 p.m.	10.9	..	Dec. 10, ..	9 0 a.m.	10.0	..
" ..	8 35 p.m.	11.0	..	" ..	9 10 a.m.	10.2	..
Nov. 25, ..	8 30 a.m.	11.0	..	" ..	9 29 p.m.	9.8	..
" ..	8 45 a.m.	11.0	..	" ..	9 40 p.m.	9.8	..
" ..	8 42 p.m.	11.1	..	Dec. 11, ..	9 51 a.m.	10.2	..
" ..	9 0 p.m.	11.1	..	" ..	10 0 a.m.	10.2	..
Nov. 26, ..	9 0 a.m.	11.2	..	" ..	10 11 p.m.	10.2	..
" ..	9 15 a.m.	11.2	..	" ..	10 20 p.m.	10.2	..
" ..	9 23 p.m.	11.0	..	Dec. 12, ..	10 31 a.m.	10.4	..
" ..	9 35 p.m.	11.0	..	" ..	10 55 p.m.	9.0	..
Nov. 27, ..	9 45 a.m.	11.2	..	" ..	11 5 p.m.	9.2	..
" ..	9 55 a.m.	11.2	..	Dec. 13, ..	11 17 a.m.	9.6	..
" ..	10 0 p.m.	11.4	..	" ..	11 35 a.m.	9.8	..
" ..	10 15 p.m.	11.4	..	" ..	11 41 p.m.	9.4	..
Nov. 28, ..	10 31 a.m.	11.4	..	Dec. 14, ..	11 58 a.m.	9.8	34.56
" ..	10 45 a.m.	11.4	..	" ..	12 31 p.m.	9.8	..
" ..	10 55 p.m.	11.1	..	Dec. 15, ..	1 0 a.m.	9.2	..
" ..	11 15 p.m.	11.1	..	" ..	1 31 p.m.	9.6	..
Nov. 29, ..	11 25 a.m.	11.2	..	" ..	1 40 p.m.	9.7	..
" ..	11 30 a.m.	11.2	..	Dec. 16, ..	2 0 a.m.	9.8	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—*continued.*

SOUTH ARKLOW LIGHTSHIP. Lat. 52° 41' N., Long. 5° 47' W. 26 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	‰	1904.		°C.	‰
Dec. 16, ..	2 30 p.m.	9.8	34.51	Dec. 24, ..	8 40 p.m.	9.6	..
" ..	2 40 p.m.	9.8	..	Dec. 25, ..	8 51 a.m.	9.8	..
Dec. 17, ..	3 0 a.m.	9.8	..	" ..	9 5 a.m.	9.8	..
" ..	3 30 p.m.	10.2	..	" ..	9 13 p.m.	9.6	..
" ..	3 40 p.m.	10.0	..	" ..	9 20 p.m.	9.7	..
Dec. 18, ..	4 0 a.m.	9.6	..	Dec. 26, ..	9 35 a.m.	9.7	..
" ..	4 30 p.m.	9.6	..	" ..	9 45 a.m.	9.7	..
" ..	4 40 p.m.	9.8	..	" ..	10 0 p.m.	9.6	..
Dec. 19, ..	5 0 a.m.	9.8	..	" ..	10 10 p.m.	9.6	..
" ..	5 22 p.m.	9.8	..	Dec. 27, ..	10 23 a.m.	9.6	..
" ..	5 40 p.m.	9.8	..	" ..	10 35 a.m.	9.6	..
Dec. 20, ..	5 45 a.m.	10.0	..	" ..	10 49 p.m.	9.6	..
" ..	6 8 p.m.	9.8	..	" ..	11 0 p.m.	9.6	..
" ..	6 20 p.m.	9.8	..	Dec. 28, ..	11 16 a.m.	9.8	..
Dec. 21, ..	6 29 a.m.	9.6	..	" ..	11 30 a.m.	9.8	..
" ..	6 48 p.m.	9.4	..	" ..	11 44 p.m.	9.6	..
" ..	7 0 p.m.	9.6	..	Dec. 29, ..	12 10 a.m.	9.7	..
Dec. 22, ..	7 15 a.m.	9.6	34.54	" ..	12 42 p.m.	9.7	..
" ..	7 25 a.m.	9.6	..	" ..	12 50 p.m.	9.7	..
" ..	7 27 p.m.	9.4	..	Dec. 30, ..	1 14 a.m.	9.6	..
Dec. 23, ..	7 47 a.m.	9.6	..	" ..	1 47 p.m.	9.0	..
" ..	8 7 p.m.	9.4	..	" ..	2 0 p.m.	9.0	..
" ..	8 15 p.m.	9.4	..	Dec. 31, ..	2 19 a.m.	8.6	..
Dec. 24, ..	8 27 a.m.	9.4	..	" ..	2 32 p.m.	..	34.47
" ..	8 40 a.m.	9.6	..	" ..	2 52 p.m.	9.0	..
" ..	8 30 p.m.	9.4	..	" ..	3 0 p.m.	9.0	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP.

Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Salinity.	Surface Temperature.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.	*	°C.	S‰	1904.		°C.	S‰
Jan. 18, ..	7 30 p.m.	8.2	34.71	Feb. 16, ..	7 39 p.m.	6.8	33.93
Jan. 19, ..	7 50 p.m.	8.2	34.72	Feb. 17, ..	7 55 a.m.	7.0	..
Jan. 20, ..	8 55 a.m.	8.2	..	Feb. " 18, ..	8 14 p.m.	7.4	..
Jan. " 21, ..	9 0 p.m.	8.2	..	Feb. " 18, ..	8 34 a.m.	7.4	..
Jan. " 21, ..	9 21 a.m.	8.1	..	Feb. " 18, ..	8 55 p.m.	7.4	..
Jan. " 21, ..	9 42 p.m.	8.1	..	Feb. " 19, ..	9 16 a.m.	7.5	..
Jan. " 22, ..	10 3 a.m.	8.2	..	Feb. " 19, ..	9 36 p.m.	7.4	..
Jan. " 22, ..	10 24 p.m.	8.2	..	Feb. " 20, ..	9 57 a.m.	7.4	..
Jan. 23, ..	10 45 a.m.	8.3	..	Feb. " 20, ..	10 16 p.m.	7.5	..
Jan. " 24, ..	11 6 p.m.	8.1	..	March 1, ..	1 46 a.m.	7.0	..
Jan. " 24, ..	11 27 a.m.	8.1	..	March " 1, ..	2 14 p.m.	7.2	..
Jan. " 24, ..	11 48 p.m.	7.4	..	March 2, ..	2 40 a.m.	7.2	34.70
Jan. " 25, ..	12 9 a.m.	8.0	34.72	March " 2, ..	3 2 p.m.	7.2	34.65
Jan. " 25, ..	12 30 p.m.	8.2	34.70	March 3, ..	3 26 a.m.	7.2	..
Jan. 26, ..	12 51 a.m.	8.3	..	March 3, ..	3 50 p.m.	7.1	..
Jan. " 27, ..	1 12 p.m.	8.1	..	March " 3, ..	4 11 a.m.	6.9	..
Jan. " 27, ..	1 33 a.m.	8.3	..	March " 3, ..	4 34 p.m.	7.0	..
Jan. " 28, ..	1 54 p.m.	8.1	..	March 5, ..	4 55 a.m.	6.9	..
Jan. 28, ..	2 36 p.m.	8.0	..	March " 5, ..	5 15 p.m.	7.0	..
Jan. 29, ..	2 57 a.m.	8.0	..	March " 5, ..	5 35 a.m.	6.9	..
Jan. " 30, ..	3 18 p.m.	7.8	..	March 6, ..	5 52 p.m.	6.8	..
Jan. " 30, ..	3 39 a.m.	8.0	..	March " 6, ..	6 11 a.m.	6.8	..
Jan. " 30, ..	4 0 p.m.	8.0	..	March " 6, ..	6 30 p.m.	7.0	..
Jan. " 31, ..	4 21 a.m.	8.0	..	March 8, ..	6 51 a.m.	7.1	..
Jan. " 31, ..	4 42 p.m.	7.8	..	March " 8, ..	7 14 p.m.	7.0	..
Feb. 1, ..	5 3 a.m.	7.6	..	March " 8, ..	7 42 a.m.	7.0	34.70
Feb. " 2, ..	5 28 p.m.	8.0	34.65	March " 8, ..	8 18 p.m.	7.0	34.70
Feb. " 2, ..	5 54 a.m.	8.0	..	March " 10, ..	8 54 a.m.	7.0	..
Feb. " 3, ..	6 28 p.m.	8.0	..	March " 10, ..	9 33 p.m.	7.0	..
Feb. " 3, ..	6 53 a.m.	8.0	..	March " 11, ..	10 12 a.m.	7.3	..
Feb. " 4, ..	7 17 p.m.	8.7	..	March " 11, ..	10 50 p.m.	7.0	..
Feb. " 4, ..	7 42 a.m.	8.0	..	March 12, ..	11 23 a.m.	7.0	..
Feb. " 5, ..	8 9 p.m.	8.0	..	March " 12, ..	11 59 p.m.	7.0	..
Feb. " 5, ..	8 35 a.m.	7.9	..	March 13, ..	12 30 p.m.	7.2	..
Feb. " 6, ..	9 2 p.m.	7.9	..	March 14, ..	12 55 a.m.	7.0	..
Feb. " 6, ..	9 29 a.m.	7.8	..	March " 14, ..	1 21 p.m.	7.0	..
Feb. " 7, ..	9 57 p.m.	7.6	..	March 15, ..	1 42 a.m.	7.0	..
Feb. " 7, ..	10 24 a.m.	7.9	..	March " 15, ..	2 2 p.m.	7.4	..
Feb. " 8, ..	10 54 p.m.	7.8	..	March 16, ..	2 21 a.m.	7.1	..
Feb. " 8, ..	11 24 a.m.	7.8	..	March " 16, ..	2 37 p.m.	7.4	..
Feb. " 9, ..	12 14 p.m.	..	34.70	March " 17, ..	2 52 a.m.	7.1	34.63
Feb. " 9, ..	11 58 p.m.	7.8	..	March " 17, ..	3 8 p.m.	7.1	34.60
Feb. 9, ..	12 32 a.m.	7.8	..	March 18, ..	3 23 a.m.	7.2	..
Feb. " 10, ..	1 7 p.m.	7.9	..	March " 18, ..	3 39 p.m.	7.2	..
Feb. " 10, ..	1 43 a.m.	7.8	..	March " 19, ..	3 54 a.m.	7.2	..
Feb. " 11, ..	2 29 p.m.	7.8	..	March " 19, ..	4 11 p.m.	7.2	..
Feb. " 11, ..	3 5 a.m.	7.8	..	March 20, ..	4 29 a.m.	7.2	..
Feb. " 12, ..	3 40 p.m.	7.6	..	March " 20, ..	4 44 p.m.	7.3	..
Feb. " 12, ..	4 14 a.m.	8.0	..	March 21, ..	5 1 a.m.	7.2	..
Feb. " 13, ..	4 50 p.m.	7.9	..	March " 21, ..	5 17 p.m.	7.4	..
Feb. " 13, ..	5 22 a.m.	7.6	..	March 22, ..	5 33 a.m.	7.2	..
Feb. " 14, ..	5 46 p.m.	7.6	..	March " 22, ..	5 50 p.m.	7.4	..
Feb. " 14, ..	6 9 a.m.	7.7	..	March 23, ..	6 11 a.m.	7.3	..
Feb. " 15, ..	6 30 p.m.	7.5	..	March " 23, ..	6 31 p.m.	7.6	..
Feb. " 15, ..	6 48 a.m.	7.5	..	March 24, ..	6 55 a.m.	7.2	..
Feb. " 16, ..	7 6 p.m.	7.2	..	March " 24, ..	7 22 p.m.	7.4	34.65
Feb. " 16, ..	7 23 a.m.	7.2	34.17	March 25, ..	7 59 a.m.	7.2	..

*Observations previous to March 1st were not taken at the right time of tide.

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP.

Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰.	1904.		°C.	S‰.
March 25,	8 37 p.m.	7.2	..	April 24, ..	9 0 a.m.	8.7	..
March 26,	9 17 a.m.	7.2	..	April " ..	9 4 p.m.	8.4	..
" ..	9 56 p.m.	7.2	..	April 25, ..	9 39 a.m.	8.4	..
March 27,	10 36 a.m.	7.2	..	" ..	10 15 p.m.	8.0	..
" ..	11 12 p.m.	7.4	..	April 26, ..	10 50 a.m.	8.2	..
March 28,	11 50 a.m.	7.8	..	" ..	11 26 p.m.	8.2	..
March 29,	12 25 a.m.	7.4	..	April 27, ..	12 30 p.m.	8.4	..
" ..	12 55 p.m.	7.4	..	April 28, ..	12 58 a.m.	8.3	..
March 30,	1 25 a.m.	7.0	..	" ..	1 25 p.m.	8.3	..
" ..	1 51 p.m.	7.4	..	April 29, ..	1 54 a.m.	8.4	..
March 31,	2 40 p.m.	7.4	34.74	" ..	2 18 p.m.	8.6	..
April 1, ..	3 2 a.m.	7.2	34.81	April 30, ..	2 40 a.m.	8.4	34.69
" ..	3 23 p.m.	7.4	..	" ..	3 2 p.m.	8.3	34.87
April 2, ..	3 47 a.m.	7.2	..	May 1, ..	3 23 a.m.	8.3	..
" ..	4 8 p.m.	7.6	..	" ..	3 45 p.m.	8.2	..
April 3, ..	4 29 a.m.	7.4	..	May 2, ..	4 6 a.m.	8.2	..
" ..	4 49 p.m.	7.6	..	" ..	4 27 p.m.	8.7	..
April 4, ..	5 10 a.m.	7.4	..	May 3, ..	4 48 a.m.	8.6	..
" ..	5 28 p.m.	7.6	..	" ..	5 5 p.m.	8.6	..
April 5, ..	5 48 a.m.	7.6	..	May 4, ..	5 24 a.m.	8.6	..
" ..	6 6 p.m.	7.7	..	" ..	5 43 p.m.	8.6	..
April 6, ..	6 23 a.m.	7.7	..	May 5, ..	6 3 a.m.	8.6	..
" ..	6 45 p.m.	7.8	..	" ..	6 21 p.m.	8.8	..
April 7, ..	7 10 a.m.	7.7	34.69	May 6, ..	6 43 a.m.	8.7	..
" ..	7 41 p.m.	7.6	34.63	" ..	7 6 p.m.	8.4	..
April 8, ..	8 17 a.m.	7.6	..	May 7, ..	7 38 a.m.	8.6	34.79
" ..	8 53 p.m.	7.8	..	" ..	8 10 p.m.	8.6	34.81
April 9, ..	9 28 a.m.	8.0	..	May 8, ..	8 42 a.m.	8.6	..
" ..	9 6 p.m.	7.8	..	" ..	9 14 p.m.	8.8	..
April 10,	10 40 a.m.	7.9	..	May 9, ..	9 48 a.m.	9.8	..
" ..	11 13 p.m.	8.0	..	" ..	10 20 p.m.	8.9	..
April 11, ..	11 44 a.m.	8.2	..	May 10, ..	10 49 a.m.	8.8	..
" ..	11 44 p.m.	7.7	..	" ..	11 19 p.m.	8.8	..
April 12, ..	12 14 a.m.	7.8	..	May 11, ..	11 46 a.m.	8.9	..
" ..	12 38 p.m.	8.2	..	May 12, ..	12 15 a.m.	9.0	..
April 13, ..	1 1 a.m.	8.0	..	" ..	12 38 p.m.	9.2	..
" ..	1 23 p.m.	8.0	..	May 13, ..	1 1 a.m.	9.0	..
April 14, ..	1 43 a.m.	8.0	..	" ..	1 23 p.m.	8.9	..
" ..	2 2 p.m.	8.2	..	May 14, ..	1 44 a.m.	9.0	..
April 15, ..	2 19 a.m.	8.2	..	" ..	2 5 p.m.	9.4	..
" ..	2 36 p.m.	8.3	..	May 15, ..	2 25 a.m.	8.9	..
April 16, ..	2 53 a.m.	8.0	..	" ..	2 43 p.m.	9.4	34.87
" ..	3 10 p.m.	8.4	..	May 16, ..	3 2 a.m.	9.0	..
April 17, ..	3 27 a.m.	8.2	..	" ..	3 22 p.m.	9.2	..
" ..	3 45 p.m.	8.1	..	May 17, ..	3 42 a.m.	9.1	..
April 18, ..	4 3 a.m.	8.0	..	" ..	4 3 p.m.	9.2	..
" ..	4 23 p.m.	8.4	..	May 18, ..	4 26 a.m.	9.1	..
April 19, ..	4 41 a.m.	8.0	..	" ..	4 46 p.m.	9.4	..
" ..	4 59 p.m.	8.4	..	May 19, ..	5 7 a.m.	9.0	..
April 20, ..	5 18 a.m.	8.0	..	" ..	5 30 p.m.	9.6	..
" ..	5 38 p.m.	8.2	..	May 20, ..	5 52 a.m.	9.1	..
April 21, ..	5 59 a.m.	8.6	..	" ..	6 16 p.m.	9.4	..
" ..	6 21 p.m.	8.4	..	May 21, ..	6 38 a.m.	9.2	..
April 22, ..	6 44 a.m.	8.4	..	" ..	7 6 p.m.	9.6	..
" ..	7 12 p.m.	8.2	..	May 22, ..	7 39 a.m.	9.5	..
April 23, ..	7 48 a.m.	8.2	..	" ..	8 15 p.m.	9.8	34.83
" ..	8 27 p.m.	8.6	..	May 23, ..	8 50 a.m.	9.4	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP.

Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
May 23, ..	9 18 p.m.	9.4	..	June 22, ..	9 27 a.m.	12.0	..
May 24, ..	9 48 a.m.	9.4	..	" ..	9 56 p.m.	11.8	..
" ..	10 22 p.m.	9.6	..	June 23, ..	10 29 a.m.	13.0	..
May 25, ..	10 57 a.m.	9.4	..	" ..	11 3 p.m.	11.9	..
" ..	11 32 p.m.	9.8	..	June 24, ..	11 38 a.m.	11.6	..
May 26, ..	12 6 p.m.	9.4	..	June 25, ..	12 12 a.m.	12.0	..
May 27, ..	12 35 a.m.	9.6	..	" ..	12 44 p.m.	12.1	..
" ..	1 4 p.m.	9.8	..	June 26, ..	1 12 a.m.	11.6	..
May 28, ..	1 31 a.m.	9.4	..	" ..	1 39 p.m.	12.0	..
" ..	1 58 p.m.	10.2	..	June 27, ..	2 6 a.m.	11.8	..
May 29, ..	2 23 a.m.	9.8	..	" ..	2 29 p.m.	12.2	34.79
" ..	2 44 p.m.	10.1	..	June 28, ..	2 50 a.m.	11.4	34.74
May 30, ..	3 5 a.m.	9.8	..	" ..	3 9 p.m.	12.6	..
" ..	3 26 p.m.	9.3	..	June 29, ..	3 29 a.m.	11.4	..
May 31, ..	3 48 a.m.	9.8	..	" ..	3 49 p.m.	12.2	..
" ..	4 7 p.m.	9.4	..	June 30, ..	4 8 a.m.	11.8	..
June 1, ..	4 27 a.m.	9.6	..	" ..	4 28 p.m.	12.2	..
" ..	4 25 p.m.	9.6	..	July 1, ..	4 45 a.m.	11.8	..
June 2, ..	5 4 a.m.	9.8	..	" ..	5 2 p.m.	12.2	..
" ..	5 20 p.m.	10.6	..	July 2, ..	5 20 a.m.	11.8	..
June 3, ..	5 41 a.m.	9.8	..	" ..	5 36 p.m.	12.2	..
" ..	5 58 p.m.	10.4	..	July 3, ..	5 54 a.m.	11.8	..
June 4, ..	6 17 a.m.	10.2	..	" ..	6 11 p.m.	12.4	..
" ..	6 37 p.m.	11.4	..	July 4, ..	6 27 a.m.	12.0	..
June 5, ..	6 59 a.m.	11.0	..	" ..	6 46 p.m.	12.3	..
" ..	7 23 p.m.	11.0	..	July 5, ..	7 7 a.m.	12.4	..
June 6, ..	7 53 a.m.	10.8	34.85	" ..	7 29 p.m.	12.4	34.72
" ..	8 23 p.m.	11.0	34.85	July 6, ..	7 57 a.m.	12.2	..
June 7, ..	8 53 a.m.	10.6	..	" ..	8 26 p.m.	12.3	..
" ..	9 21 p.m.	10.6	..	July 7, ..	8 57 a.m.	12.5	..
June 8, ..	9 50 a.m.	10.4	..	" ..	9 27 p.m.	12.4	..
" ..	10 18 p.m.	10.6	..	July 8, ..	9 54 a.m.	13.4	..
June 9, ..	10 48 a.m.	10.6	..	" ..	10 25 p.m.	12.4	..
" ..	11 17 p.m.	10.4	..	July 9, ..	10 57 a.m.	13.4	..
June 10, ..	11 46 a.m.	11.8	..	" ..	11 29 p.m.	12.8	..
June 11, ..	12 17 a.m.	11.4	..	July 10, ..	12 2 p.m.	13.2	..
" ..	12 45 p.m.	12.4	..	July 11, ..	12 32 a.m.	12.6	..
June 12, ..	1 11 a.m.	11.6	..	" ..	1 3 p.m.	13.0	..
" ..	1 36 p.m.	11.4	..	July 12, ..	1 29 a.m.	12.4	..
June 13, ..	1 57 a.m.	10.8	..	" ..	1 57 p.m.	13.0	..
" ..	2 20 p.m.	12.0	34.76	July 13, ..	2 23 a.m.	12.8	34.70
June 14, ..	2 41 a.m.	11.4	34.76	" ..	2 48 p.m.	13.4	..
" ..	3 3 p.m.	11.6	..	July 14, ..	3 11 a.m.	12.6	..
June 15, ..	3 26 a.m.	11.4	..	" ..	3 36 p.m.	13.1	..
" ..	3 50 p.m.	11.6	..	July 15, ..	4 0 a.m.	13.0	..
June 16, ..	4 14 a.m.	11.4	..	" ..	4 26 p.m.	13.0	..
" ..	4 37 p.m.	11.6	..	July 16, ..	4 50 a.m.	12.8	..
June 17, ..	5 1 a.m.	11.6	..	" ..	5 14 p.m.	13.4	..
" ..	5 23 p.m.	11.8	..	July 17, ..	5 37 a.m.	12.6	..
June 18, ..	5 47 a.m.	11.8	..	" ..	6 0 p.m.	13.0	..
" ..	6 11 p.m.	11.6	..	July 18, ..	6 22 a.m.	13.0	..
June 19, ..	6 33 a.m.	11.4	..	" ..	6 42 p.m.	13.4	..
" ..	6 59 p.m.	12.2	..	July 19, ..	7 4 a.m.	12.8	..
June 20, ..	7 24 a.m.	12.1	..	" ..	7 29 p.m.	13.2	34.70
" ..	7 54 p.m.	12.0	34.78	July 20, ..	7 59 a.m.	13.0	..
June 21, ..	8 28 a.m.	12.0	34.72	" ..	8 31 p.m.	13.5	..
" ..	9 0 p.m.	12.0	..	July 21, ..	9 3 a.m.	13.6	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP. Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	‰	1904.		°C.	‰
July 21, ..	9 34 p.m.	13.2	..	August 20,	9 40 a.m.	14.4	..
July 22, ..	10 5 a.m.	13.4	..	" ..	10 18 p.m.	14.4	..
" ..	10 40 p.m.	13.4	..	August 21,	10 54 a.m.	14.6	..
July 23, ..	11 14 a.m.	14.2	..	" ..	11 31 p.m.	14.0	..
" ..	11 51 p.m.	14.0	..	August 22,	12 7 p.m.	14.4	..
July 24, ..	12 25 p.m.	14.2	..	August 23,	12 38 a.m.	14.2	..
July 25, ..	12 56 a.m.	13.2	..	" ..	1 6 p.m.	14.6	..
" ..	1 24 p.m.	14.4	..	August 24,	1 30 a.m.	14.2	..
July 26, ..	1 48 a.m.	13.8	..	" ..	1 52 p.m.	14.6	..
" ..	2 13 p.m.	13.8	..	August 25,	2 2 a.m.	14.0	..
July 27, ..	2 34 a.m.	13.2	34.63	" ..	2 31 p.m.	14.2	..
" ..	2 51 p.m.	13.8	..	August 26,	2 48 a.m.	14.0	34.85
July 28, ..	3 10 a.m.	13.0	..	" ..	3 5 p.m.	14.4	..
" ..	3 28 p.m.	14.0	..	August 27,	3 21 a.m.	14.2	..
July 29, ..	3 46 a.m.	14.0	..	" ..	3 37 p.m.	14.2	..
" ..	4 4 p.m.	14.2	..	August 28,	3 54 a.m.	14.2	..
July 30, ..	4 21 a.m.	14.0	..	" ..	4 9 p.m.	14.2	..
" ..	4 37 p.m.	14.2	..	August 29,	4 25 a.m.	14.2	..
July 31, ..	4 54 a.m.	14.0	..	" ..	4 42 p.m.	14.4	..
" ..	5 9 p.m.	14.2	..	August 30,	4 55 a.m.	14.4	..
August 1, ..	5 25 a.m.	13.8	..	" ..	5 10 p.m.	14.4	..
" ..	5 40 p.m.	13.4	..	August 31,	5 26 a.m.	14.0	..
August 2, ..	5 56 a.m.	13.5	..	" ..	5 43 p.m.	14.0	..
" ..	6 15 p.m.	13.8	..	Sept. 1, ..	6 0 a.m.	14.2	..
August 3, ..	6 32 a.m.	14.0	..	" ..	6 15 p.m.	14.2	..
" ..	6 50 p.m.	14.6	..	Sept. 2, ..	6 35 a.m.	14.0	..
August 4, ..	7 9 a.m.	14.8	..	" ..	6 57 p.m.	14.0	..
" ..	7 35 p.m.	14.8	34.67	Sept. 3, ..	7 24 a.m.	14.2	..
August 5, ..	8 5 a.m.	15.0	..	" ..	7 59 p.m.	14.2	..
" ..	8 37 p.m.	14.6	..	Sept. 4, ..	8 34 a.m.	14.4	..
August 6, ..	9 10 a.m.	14.6	..	" ..	9 11 p.m.	14.2	..
" ..	9 44 p.m.	14.6	..	Sept. 5, ..	9 49 a.m.	14.2	..
August 7, ..	10 17 a.m.	15.0	..	" ..	10 28 p.m.	14.2	..
" ..	10 54 p.m.	14.4	..	Sept. 6, ..	11 5 a.m.	14.2	..
August 8, ..	11 31 a.m.	15.4	..	" ..	11 43 p.m.	14.2	..
August 9, ..	12 6 a.m.	14.6	..	Sept. 7, ..	12 17 p.m.	14.4	..
" ..	12 38 p.m.	14.8	..	Sept. 8, ..	12 48 a.m.	14.4	..
August 10, ..	1 9 a.m.	14.2	..	" ..	1 18 p.m.	14.4	..
" ..	1 37 p.m.	14.8	..	Sept. 9, ..	1 45 a.m.	14.2	..
August 11, ..	2 6 a.m.	14.0	..	" ..	2 11 p.m.	14.4	..
" ..	2 32 p.m.	14.6	34.74	Sept. 10, ..	2 35 a.m.	14.2	34.88
August 12, ..	2 55 a.m.	14.0	..	" ..	2 59 p.m.	14.4	..
" ..	3 21 p.m.	14.4	..	Sept. 11, ..	3 23 a.m.	14.4	..
August 13, ..	3 45 a.m.	14.0	..	" ..	3 46 p.m.	14.4	..
" ..	4 8 p.m.	14.3	..	Sept. 12, ..	4 9 a.m.	14.3	..
August 14, ..	4 32 a.m.	14.2	..	" ..	4 32 p.m.	14.0	..
" ..	4 53 p.m.	14.4	..	Sept. 13, ..	4 53 a.m.	13.8	..
August 15, ..	5 17 a.m.	14.0	..	" ..	5 13 p.m.	14.2	..
" ..	5 38 p.m.	14.3	..	Sept. 14, ..	5 33 a.m.	14.2	..
August 16, ..	6 1 a.m.	14.0	..	" ..	5 54 p.m.	14.4	..
" ..	6 21 p.m.	14.2	..	Sept. 15, ..	6 14 a.m.	14.2	..
August 17, ..	6 40 a.m.	14.0	..	" ..	6 33 p.m.	14.3	..
" ..	7 2 p.m.	14.2	..	Sept. 16, ..	6 58 a.m.	14.2	..
August 18, ..	7 27 a.m.	14.2	34.74	" ..	7 27 p.m.	14.6	..
" ..	7 59 p.m.	14.2	..	Sept. 17, ..	8 1 a.m.	14.5	..
August 19, ..	8 32 a.m.	14.0	..	" ..	8 37 p.m.	14.2	..
August 19, ..	9 5 p.m.	14.2	..	Sept. 18, ..	9 14 a.m.	14.4	..

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP.

Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰.	1904.		°C.	S‰.
Sept. 18, ..	9 53 p.m.	14.2	..	Oct. 18, ..	9 52 a.m.	13.8	..
Sept. 19, ..	10 30 a.m.	14.2	..	..	10 27 p.m.	13.6	..
" 19, ..	11 7 p.m.	14.0	..	Oct. 19, ..	11 0 a.m.	13.8	..
Sept. 20, ..	11 40 a.m.	14.4	..	" 19, ..	11 31 p.m.	13.4	..
Sept. 21, ..	12 3 a.m.	14.4	..	Oct. 20, ..	12 1 p.m.	13.8	..
" 21, ..	12 39 p.m.	14.2	..	Oct. 21, ..	12 26 a.m.	13.4	..
Sept. 22, ..	1 4 a.m.	14.2	..	" 21, ..	12 50 p.m.	13.6	..
" 22, ..	1 25 p.m.	14.2	..	Oct. 22, ..	1 11 a.m.	13.2	..
Sept. 23, ..	1 45 a.m.	14.0	..	" 22, ..	1 30 p.m.	13.4	..
" 23, ..	2 4 p.m.	14.4	..	Oct. 23, ..	1 49 a.m.	13.2	..
Sept. 24, ..	2 21 a.m.	14.2	..	" 23, ..	2 6 p.m.	13.4	..
" 24, ..	2 36 p.m.	14.2	35.01	Oct. 24, ..	2 23 a.m.	13.2	..
Sept. 25, ..	2 52 a.m.	13.6	..	" 24, ..	2 38 p.m.	13.4	34.96
" 25, ..	3 7 p.m.	14.0	..	Oct. 25, ..	2 54 a.m.	13.0	..
Sept. 26, ..	3 23 a.m.	14.0	..	" 25, ..	3 12 p.m.	13.0	..
" 26, ..	3 39 p.m.	14.2	..	Oct. 26, ..	3 28 a.m.	13.2	..
Sept. 27, ..	3 55 a.m.	14.4	..	" 26, ..	3 46 p.m.	13.2	..
" 27, ..	4 12 p.m.	14.4	..	Oct. 27, ..	4 3 a.m.	13.0	..
Sept. 28, ..	4 27 a.m.	14.0	..	" 27, ..	4 19 p.m.	13.2	..
" 28, ..	4 42 p.m.	14.4	..	Oct. 28, ..	4 37 a.m.	13.2	..
Sept. 29, ..	4 59 a.m.	14.4	..	" 28, ..	4 55 p.m.	13.2	..
" 29, ..	5 14 p.m.	14.2	..	Oct. 29, ..	5 14 a.m.	13.0	..
Sept. 30, ..	5 31 a.m.	14.2	..	" 29, ..	5 35 p.m.	13.0	..
" 30, ..	5 51 p.m.	14.2	..	Oct. 30, ..	5 53 a.m.	13.0	..
Oct. 1, ..	6 10 a.m.	14.2	..	" 30, ..	6 14 p.m.	13.0	..
" 1, ..	6 32 p.m.	14.0	..	Oct. 31, ..	6 41 a.m.	13.0	..
Oct. 2, ..	6 56 a.m.	13.7	..	" 31, ..	7 13 p.m.	13.0	34.97
" 2, ..	7 32 p.m.	14.0	35.03	Nov. 1, ..	7 53 a.m.	13.0	..
Oct. 3, ..	8 10 a.m.	14.0	..	" 1, ..	8 31 p.m.	13.2	..
" 3, ..	8 48 p.m.	14.0	..	Nov. 2, ..	9 7 a.m.	13.2	..
Oct. 4, ..	9 27 a.m.	14.2	..	" 2, ..	9 42 p.m.	13.0	..
" 4, ..	10 6 p.m.	14.0	..	Nov. 3, ..	10 17 a.m.	13.2	..
Oct. 5, ..	10 42 a.m.	14.0	..	" 3, ..	10 54 p.m.	13.0	..
" 5, ..	11 21 p.m.	14.0	..	Nov. 4, ..	11 29 a.m.	13.2	..
Oct. 6, ..	11 56 a.m.	14.0	..	Nov. 4, ..	12 2 a.m.	13.2	..
Oct. 7, ..	12 28 a.m.	13.8	..	Nov. 5, ..	12 32 p.m.	13.2	..
" 7, ..	12 51 p.m.	13.8	..	Nov. 5, ..	1 1 a.m.	13.0	..
Oct. 8, ..	1 23 a.m.	13.4	..	Nov. 6, ..	1 28 p.m.	13.0	..
" 8, ..	1 49 p.m.	14.0	..	" 6, ..	1 53 a.m.	13.2	..
Oct. 9, ..	2 13 a.m.	13.4	34.99	Nov. 7, ..	2 17 p.m.	12.8	..
" 9, ..	2 37 p.m.	13.4	..	" 7, ..	2 38 a.m.	12.4	35.10
Oct. 10, ..	3 1 a.m.	13.4	..	Nov. 8, ..	3 1 p.m.	12.6	..
" 10, ..	3 24 p.m.	13.8	..	" 8, ..	3 24 a.m.	13.0	..
Oct. 11, ..	3 46 a.m.	13.6	..	Nov. 9, ..	3 45 p.m.	12.8	..
" 11, ..	4 8 p.m.	13.8	..	" 9, ..	4 7 a.m.	12.6	..
Oct. 12, ..	4 28 a.m.	13.4	..	Nov. 10, ..	4 27 p.m.	12.5	..
" 12, ..	4 49 p.m.	13.4	..	" 10, ..	4 48 a.m.	12.6	..
Oct. 13, ..	5 9 a.m.	13.8	..	Nov. 11, ..	5 8 p.m.	13.0	..
" 13, ..	5 29 p.m.	13.8	..	" 11, ..	5 28 a.m.	12.8	..
Oct. 14, ..	5 47 a.m.	14.2	..	Nov. 12, ..	5 47 p.m.	12.8	..
" 14, ..	6 7 p.m.	13.8	..	Nov. 12, ..	6 5 a.m.	12.4	..
Oct. 15, ..	6 29 a.m.	13.8	..	Nov. 13, ..	6 28 p.m.	12.8	..
" 15, ..	6 55 p.m.	13.6	..	" 13, ..	6 50 a.m.	12.8	..
Oct. 16, ..	7 27 a.m.	13.4	34.99	Nov. 14, ..	7 12 p.m.	12.6	..
" 16, ..	8 2 p.m.	13.4	..	" 14, ..	7 53 a.m.	12.6	..
Oct. 17, ..	8 38 a.m.	13.4	..	Nov. 15, ..	8 3 a.m.	..	34.96
" 17, ..	9 15 p.m.	13.8	..	" 15, ..	8 28 p.m.	12.6	..

VI. '04,

77

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

CONINGBEG LIGHTSHIP.

Lat. 52° 2' N., Long. 6° 40' W. 29 fathoms.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰.	1904.		°C.	S‰.
Nov. 16, ..	9 2 a.m.	13.8	..	Dec. 9, ..	4 11 p.m.	10.2	..
Nov. 16, ..	9 36 p.m.	12.4	..	Dec. 10, ..	4 31 a.m.	10.2	..
Nov. 17, ..	10 8 a.m.	12.4	..	" "	4 50 p.m.	9.8	..
Nov. 17, ..	10 39 p.m.	12.4	..	Dec. 11, ..	5 9 a.m.	10.4	..
Nov. 18, ..	11 8 a.m.	12.5	..	" "	5 27 p.m.	10.0	..
Nov. 18, ..	11 36 p.m.	12.4	..	Dec. 12, ..	5 46 a.m.	10.0	..
Nov. 19, ..	12 4 p.m.	12.4	..	" "	6 5 p.m.	9.8	..
Nov. 20, ..	12 27 a.m.	12.0	..	Dec. 13, ..	6 24 a.m.	8.8	..
Nov. 20, ..	12 50 p.m.	12.2	..	" "	6 44 p.m.	10.0	..
Nov. 21, ..	1 12 a.m.	11.6	..	Dec. 14, ..	7 6 a.m.	10.0	..
Nov. 21, ..	1 33 p.m.	11.8	..	" "	7 35 p.m.	9.8	34.87
Nov. 22, ..	1 54 a.m.	11.2	..	Dec. 15, ..	8 3 a.m.	10.0	..
Nov. 22, ..	2 12 p.m.	11.4	..	" "	8 33 p.m.	10.2	..
Nov. 23, ..	2 28 a.m.	11.0	35.12	Dec. 16, ..	9 3 a.m.	10.0	..
Nov. 23, ..	2 47 p.m.	11.0	..	" "	9 33 p.m.	10.0	..
Nov. 24, ..	3 5 a.m.	11.0	..	Dec. 17, ..	10 4 a.m.	10.0	..
Nov. 24, ..	3 24 p.m.	11.0	..	" "	10 34 p.m.	10.0	..
Nov. 25, ..	3 44 a.m.	11.2	..	Dec. 18, ..	11 4 a.m.	9.6	..
Nov. 25, ..	4 4 p.m.	11.2	..	" "	11 34 p.m.	9.4	..
Nov. 26, ..	4 24 a.m.	11.2	..	Dec. 19, ..	12 2 p.m.	9.8	..
Nov. 26, ..	4 44 p.m.	11.0	..	Dec. 20, ..	12 28 a.m.	9.6	..
Nov. 27, ..	5 5 a.m.	11.2	..	" "	12 54 p.m.	9.6	..
Nov. 27, ..	5 27 p.m.	11.0	..	Dec. 21, ..	1 18 a.m.	9.6	..
Nov. 28, ..	5 48 a.m.	11.2	..	" "	1 41 p.m.	9.4	..
Nov. 28, ..	6 10 p.m.	11.2	..	Dec. 22, ..	2 5 a.m.	9.4	..
Nov. 29, ..	6 35 a.m.	11.0	..	" "	2 28 p.m.	9.8	34.81
Nov. 29, ..	7 1 p.m.	11.0	..	Dec. 23, ..	2 49 a.m.	10.0	..
Nov. 30, ..	7 36 a.m.	11.4	34.96	" "	3 10 p.m.	10.0	..
Nov. 30, ..	8 12 p.m.	11.4	..	Dec. 24, ..	3 31 a.m.	9.8	..
Dec. 1, ..	8 46 a.m.	11.2	..	" "	3 54 p.m.	9.8	..
Dec. 1, ..	9 16 p.m.	11.0	..	Dec. 25, ..	4 15 a.m.	10.0	..
Dec. 2, ..	9 49 a.m.	11.0	..	" "	4 36 p.m.	10.0	..
Dec. 2, ..	10 24 p.m.	11.2	..	Dec. 26, ..	4 58 a.m.	9.8	..
Dec. 3, ..	10 58 a.m.	10.8	..	" "	5 21 p.m.	9.8	..
Dec. 3, ..	11 32 p.m.	11.0	..	Dec. 27, ..	5 44 a.m.	9.8	..
Dec. 4, ..	12 5 p.m.	11.0	..	" "	6 7 p.m.	10.0	..
Dec. 5, ..	12 36 a.m.	10.8	..	Dec. 28, ..	6 30 a.m.	10.0	..
Dec. 5, ..	1 3 p.m.	10.8	..	" "	6 52 p.m.	10.4	..
Dec. 6, ..	1 32 a.m.	10.8	..	Dec. 29, ..	7 18 a.m.	10.0	..
Dec. 6, ..	1 59 p.m.	10.8	..	" "	7 47 p.m.	10.2	..
Dec. 7, ..	2 22 a.m.	10.4	34.88	Dec. 30, ..	8 20 a.m.	10.0	..
Dec. 7, ..	2 44 p.m.	10.2	..	" "	8 52 p.m.	10.4	..
Dec. 8, ..	3 8 a.m.	10.2	..	Dec. 31, ..	9 24 a.m.	10.4	..
Dec. 8, ..	3 29 p.m.	10.4	..	" "	9 54 p.m.	10.2	..
Dec. 9, ..	3 51 a.m.	10.2	..				

HYDROGRAPHICAL OBSERVATIONS AT IRISH LIGHT STATIONS, 1904—continued.

FASTNET ROCK LIGHTHOUSE. Lat. 51° 23' N., Long. 9° 36' W.

Date.	Hour.	Surface Temperature.	Surface Salinity.	Date.	Hour.	Surface Temperature.	Surface Salinity.
1904.		°C.	S‰	1904.		°C.	S‰
July 26, ..	2 30 p.m.	14.3	..	Sept. 29, ..	4 15 p.m.	14.0	..
July 27, ..	3 0 p.m.	14.4	..	Sept. 30, ..	4 45 p.m.	14.0	..
July 28, ..	3 30 p.m.	14.2	..	Oct. 1, ..	5 30 p.m.	14.2	..
July 29, ..	4 30 p.m.	14.2	34.96	Oct. 2, ..	6 0 p.m.	14.1	35.05
July 30, ..	5 0 p.m.	14.3	..	Oct. 3, ..	6 30 p.m.	14.0	..
August 1, ..	5 15 p.m.	15.0	..	Oct. 4, ..	7 0 p.m.	14.1	..
August 2, ..	6 0 p.m.	14.4	..	Oct. 5, ..	6 30 a.m.	14.2	..
August 3, ..	6 30 p.m.	14.4	..	Oct. 6, ..	7 15 a.m.	14.0	..
August 4, ..	8 45 a.m.	14.4	..	Oct. 7, ..	8 0 a.m.	13.4	..
" ..	5 45 p.m.	..	34.88	Oct. 8, ..	8 30 a.m.	13.4	..
August 5, ..	9 30 a.m.	14.8	..	Oct. 9, ..	Midday.	13.8	..
August 6, ..	10 15 a.m.	14.8	..	Oct. 10, ..	12 45 p.m.	13.8	..
August 7, ..	11 0 a.m.	14.8	..	" ..	1 30 p.m.	..	35.37
August 8, ..	11 45 a.m.	15.0	..	Oct. 11, ..	1 30 p.m.	13.6	..
August 9, ..	12 30 p.m.	15.2	..	Oct. 12, ..	2 15 p.m.	13.4	..
August 10, ..	1 15 p.m.	15.2	..	Oct. 13, ..	3 0 p.m.	12.4	..
August 11, ..	2 0 p.m.	13.0	..	Oct. 14, ..	3 45 p.m.	12.2	..
August 12, ..	2 30 p.m.	..	34.94	Oct. 16, ..	5 15 p.m.	12.4	..
" ..	2 45 p.m.	13.2	..	Oct. 18, ..	8 30 a.m.	13.0	35.16
August 13, ..	3 30 p.m.	13.0	..	Oct. 19, ..	9 15 a.m.	13.0	..
August 14, ..	4 15 p.m.	12.0	..	Oct. 20, ..	10 0 a.m.	13.2	..
August 15, ..	5 0 p.m.	11.0	..	Oct. 21, ..	10 45 a.m.	13.0	..
August 16, ..	5 45 p.m.	11.2	..	Oct. 22, ..	11 30 a.m.	12.2	..
August 17, ..	6 30 p.m.	11.0	..	Oct. 23, ..	12 15 p.m.	12.0	..
August 18, ..	7 15 p.m.	11.0	..	Oct. 24, ..	1 0 p.m.	12.2	..
August 19, ..	9 0 a.m.	13.0	..	Oct. 25, ..	1 45 p.m.	12.4	..
August 20, ..	9 45 a.m.	13.2	..	Oct. 26, ..	2 30 p.m.	12.4	..
August 21, ..	10 30 a.m.	13.0	..	Oct. 27, ..	3 15 p.m.	12.6	..
August 22, ..	11 15 a.m.	13.4	..	Oct. 28, ..	4 0 p.m.	12.8	..
August 23, ..	Midday.	13.4	..	Oct. 29, ..	4 45 p.m.	12.6	..
August 24, ..	12 45 p.m.	13.2	..	Oct. 30, ..	5 30 p.m.	12.4	..
August 25, ..	1 30 p.m.	13.0	..	Oct. 31, ..	6 0 p.m.	12.2	..
August 26, ..	2 0 p.m.	13.0	34.83	Nov. 1, ..	7 0 a.m.	12.2	..
August 27, ..	2 45 p.m.	14.0	..	Nov. 2, ..	7 45 a.m.	12.2	..
August 28, ..	3 15 p.m.	14.0	..	Nov. 3, ..	8 30 a.m.	12.0	..
August 29, ..	3 45 p.m.	13.2	..	Nov. 4, ..	10 30 a.m.	12.2	..
August 30, ..	4 15 p.m.	13.0	..	Nov. 5, ..	Midday.	13.0	..
August 31, ..	5 0 p.m.	13.0	..	Nov. 7, ..	1 30 p.m.	12.0	..
Sept. 1, ..	5 30 p.m.	12.4	..	Nov. 8, ..	2 30 p.m.	12.2	..
Sept. 2, ..	6 0 p.m.	13.0	34.79	" ..	?	..	34.88
Sept. 3, ..	6 30 p.m.	13.2	..	Nov. 10, ..	3 0 p.m.	12.0	..
Sept. 4, ..	7 15 p.m.	13.0	..	Nov. 11, ..	4 0 p.m.	12.0	..
Sept. 7, ..	9 45 a.m.	13.0	..	Nov. 12, ..	4 30 p.m.	12.0	..
Sept. 8, ..	10 30 a.m.	12.4	..	Nov. 14, ..	8 0 a.m.	12.0	..
Sept. 9, ..	11 15 a.m.	12.4	..	Nov. 15, ..	9 0 a.m.	11.3	..
" ..	12 30 p.m.	..	34.96	Nov. 17, ..	10 30 a.m.	11.2	..
Sept. 10, ..	12 30 p.m.	13.0	..	Nov. 23, ..	1 15 p.m.	10.8	..
Sept. 11, ..	1 30 p.m.	13.0	..	Nov. 24, ..	2 0 p.m.	10.6	35.07
Sept. 12, ..	2 45 p.m.	12.4	..	Nov. 25, ..	2 45 p.m.	10.4	..
Sept. 15, ..	4 50 p.m.	15.0	..	Nov. 26, ..	3 15 p.m.	10.6	..
Sept. 20, ..	9 45 a.m.	14.0	..	Nov. 27, ..	3 45 p.m.	10.4	..
Sept. 21, ..	10 30 a.m.	13.2	..	Nov. 28, ..	4 30 p.m.	10.4	..
Sept. 22, ..	11 15 a.m.	14.2	..	Nov. 29, ..	5 0 p.m.	10.6	..
Sept. 23, ..	Midday.	14.2	..	Nov. 30, ..	5 30 p.m.	10.6	..
Sept. 24, ..	1 0 p.m.	14.0	..	Dec. 3, ..	9 30 a.m.	10.4	35.16
" ..	1 30 p.m.	..	35.35	Dec. 4, ..	10 15 a.m.	10.4	..
Sept. 25, ..	2 0 p.m.	14.0	..	Dec. 23, ..	2 0 p.m.	9.4	..
Sept. 26, ..	2 30 p.m.	14.0	..	Dec. 24, ..	2 30 p.m.	9.2	35.43
Sept. 27, ..	3 15 p.m.	14.2	..	Dec. 25, ..	3 15 p.m.	9.2	..
Sept. 28, ..	3 45 p.m.	14.2	..				