



**FISHERIES RESEARCH BOARD
OF CANADA**

MANUSCRIPT REPORTS OF THE BIOLOGICAL STATIONS

No. 177

Title

an analysis of surface water temperatures for the
Atlantic coast of Canada for the year 1934.

Author

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AN ANALYSIS OF SURFACE WATER TEMPERATURES
FOR THE ATLANTIC COAST OF
CANADA

for the year 1934

by

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An Analysis of Surface Water Temperatures for the
Atlantic Coast of Canada --- 1934.

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Introduction:

As in previous years, surface water temperatures for various points on the Canadian Atlantic coast have been analysed. Tabulated data are furnished and the daily mean water temperatures are plotted.

The collection of data at Isle Haute was discontinued at the end of April.

Attempt at Forecasting:

In the late winter of 1934 an attempt was made to forecast the general water temperature conditions for the remainder of the year (Hachey, Prog. Rep. Atl. 11, 1934). The forecast was based on the supposed "after winter effect" on our coastal waters. The forecast was practically a complete failure, but it was of the utmost value in bringing to the fore that the "after winter effect" has been heretofore greatly exaggerated. Invasions of warmer waters from the southward controlled conditions and was particularly intensified in late summer and early autumn. This question of invasion then becomes a pertinent one.

A Five Year Summary:

At the end of the present season (1935), the more important stations will have been in operation for a five year period. It is hoped that the data for this period may be summarized, and analysed as a whole. Publishing of such an analysis will furnish a record of some importance to the student of problems relating to our Canadian Atlantic waters.

Data:

The average daily temperatures for the year 1934 for each of the stations, are plotted in figure 1 and furnished in appended tables. The monthly mean temperatures for each station have been calculated and are furnished in table 1. The highest monthly mean for each station, and the lowest monthly mean, as well as the annual range as determined from the monthly means, are also furnished in the table. In table 2, the period with temperatures above 10.0 C. is given for each station. This period is determined by the date at which the daily average water temperature attains a permanent summer value of 10.0 C. or higher, and the date at which the daily average water temperature attains a permanent autumn value of less than 10.0 C.

Maximum and Minimum Monthly Mean Temperatures:

From the table of maximum monthly means (table 1) it is seen that the warmest waters are those of North Pt. (19.7).

Listing the others in order of magnitude of the maximum monthly means we have Sable Is. (18.2), Scatari Is. (17.7), Halifax (17.5), Sambro Is. (17.4), Entry Is. (17.0), Hall's Hbr. (14.9), St. Andrews (13.1), G. Manan (11.8), Mutton Bay (10.6), and Cape St. Mary (10.0). A comparison with the records of the previous year indicate that the maximum monthly mean is in all cases higher in 1934 than in 1933; that in 1934, Sable Is., Scatari Is., Halifax, and Sambro Is. all preceed Entry Is. in order of magnitude of the maximum monthly mean, while in 1933 and other years (since 1929) the maximum monthly mean of Entry Is. was either equal to or greater than that of Sable Is., and greater than those of Scatari Is., Halifax, and Sambro Is. Such results indicate the invasion by waters from the southward (which would have the greatest effect on the temperature of the waters of the outer Nova Scotian coast).

From the table of minimum monthly means, all points with the exception of Lurcher Lgt. (0.3) and Sable Is. (1.2), have a minimum monthly mean which is less than 0.0 C.

Permanent Summer Temperature of 10.0 C. or More:

A permanent summer temperature of 10.0 C. or greater was reached at North Pt. on June 17th., at Sable Is. on June 18th., at Entry Is., Halifax, and Sambro Is. on June 23rd., at Scatari Is. on June 28th., at Hall's Hbr. on June 29th., at St. Andrews on July 3rd., at Lurcher Lgt. on July 12th., and at G. Manan on August 4th. A permanent summer temperature of 10.0 C. or greater was never attained at St. Mary's Is. or Mutton Bay.

Permanent Autumn Temperature of Less than 10.0 C.

A permanent autumn temperature of less than 10.0 C was reached at North Pt. on October 12th., at St. Andrews on October 19th., at Entry Is. on October 28th., at G. Manan on November 1st., at Halifax, Scatari Is. and Hall's Hbr. on November 10th., at Sambro Is. on November 24th., and at Sable Is. on December 12th. Judging by the date at which Sable Is. reached a permanent autumn temperature of less than 10.0 C (a month later than any record within the period 1929-34), it would seem that the invasion of waters from the southward was particularly effective during the months of late autumn.

	Isle Haute	Grand Manan	St. Andrews	Lurcher Lgt.	Sambro Is.	Halifax	Sable Is.	Scotari Is.	Entry Is.	North Pt.	Capo St. Mary	Hall's Harbour	Mutton Bay
January	-1.05	2.0	-0.4	4.0	-0.6	0.2	1.5	-1.1	0	-1.3	-1.7		
February	-1.7	-0.1	-1.4	2.7	-1.6	-0.4	1.2	-1.1	0	-1.5	-0.5		
March	-1.7	1.0	-0.5	0.3	-0.4	0.9	1.2	-1.0		-0.6	-0.3		
April	1.9	2.9	3.4	3.4	3.0	3.9	3.7	-0.7		0.4	0.4	1.7	
May		5.7	6.5	6.1	5.9	6.6	7.5	3.2	3.5	8.4	1.0	5.7	
June		7.5	9.1	8.1	10.0	10.5	10.5	7.1	8.8	13.7	5.2	8.4	7.3
July		9.7	11.6	10.5	14.6	15.0	14.9	14.2	14.5	19.7	8.4	11.8	10.6
August		10.9	12.7	11.6	14.9	15.2	18.2	17.7	17.0	19.4	8.3	14.2	10.5
September		11.8	13.1		17.4	17.5	18.0	17.1	16.8	17.3	10.0	14.9	10.1
October		10.4	10.4		10.7	12.3	13.9	12.3	10.7	9.3	6.2	12.0	6.9
November		8.4	7.6		7.9	8.7	9.9	7.7	5.2	4.5	3.2	9.0	
December		5.0	3.3		7.0	1.8	4.4	2.5	-0.6	-0.7	-0.8	4.9	
Mean Annual.		6.3	6.3		7.0	7.9	7.9	6.5	5.8	7.4	3.3		
Max Monthly		11.8	13.1		17.4	17.5	18.2	17.7	17.0	19.7	16.0	14.9	10.6
Min. Monthly		-0.1	-1.4		0.3	-1.6	-0.4	1.2	-1.1	-1.6	-1.7		

Table 1. Mean Monthly Temperatures

Atlantic Coast of Canada - 1934.

Station	Date at which a permanent summer temperature of 10.0 C. or greater was reached	Date at which a permanent autumn temperature of less than 10.0 C. was reached
G. Manan	August 4th.	November 1st.
St. Andrews	July 3rd.	October 19th.
Lurcher Lgt.	July 12th.	-----
Sambro Is.	June 23rd.	November 24th.
Halifax	June 23rd.	November 10th.
Sable Is.	June 18th.	December 12th.
Sctari Is.	June 28th.	November 10th.
Entry Is.	June 23rd.	October 28th.
North Pt.	June 17th.	October 12th.
Cape St. Mary	never	always 1888
Hall's Hbr.	June 29th.	November 10th.
Mutton Bay	never	always

Table 2.

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures.

Atlantic Coast of Canada

Grand Manan 1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.
1	3.8	1.0	0.4	1.3	4.3	8.7	8.2	9.7	11.0	10.8	10.0	8.9
2	2.8	1.2	0.2	1.8	4.5	7.6	8.4	9.9	10.3	12.2	9.6	8.0
3	1.5	0.5	1.2	1.9	4.1	7.8	8.4	9.7	12.1	11.7	8.4	7.3
4	2.3	0.4	1.1	1.9	4.3	7.3	8.6	10.2	11.7	12.3	9.5	7.2
5	2.6	0.3	1.0	1.9	4.1	7.8	9.4	10.2	11.4	11.1	9.6	7.0
6	3.5	0.7	1.1	1.8	5.1	6.0	8.9	10.1	11.9	9.7	9.5	5.6
7	3.7	-0.3	0.7	1.8	5.1	6.7	8.8	10.5	11.1	11.4	9.2	4.9
8	3.6	-0.3	1.0	3.9	4.3	7.7	9.0	10.7	12.4	11.1	8.9	3.5
9	3.5	-1.6	0.5	2.3	4.0	5.8	9.3	10.8	11.0	10.7	8.7	2.3
10	2.5	-0.9	0.3	3.3	4.6	6.3	10.2	10.6	12.3	9.8	8.2	3.9
11	3.1	0.4	-0.3	3.2	4.3	6.1	10.8	10.6	12.2	10.5	9.0	5.5
12	3.1	0.6	0.0	2.5	4.9	6.5	10.5	11.4	12.1	10.3	8.4	5.8
13	2.9	0.7	0.3	2.9	5.3	5.7	10.6	10.8	12.1	10.2	7.2	5.9
14	3.0	-0.2	1.5	3.3	4.8	7.4	10.2	10.4	11.5	10.4	7.6	5.1
15	2.0	0.0	0.0	3.1	4.8	7.1	9.5	10.4	11.5	10.2	8.1	3.4
16	2.1	-1.2	0.8	2.9	5.2	7.1	9.9	11.4	12.1	10.5	8.3	5.2
17	2.2	-1.0	1.1	2.7	5.0	7.1	10.1	11.9	11.9	10.2	8.5	4.9
18	0.6	-0.9	1.5	2.9	5.1	8.5	10.0	11.3	11.6	10.5	8.8	4.0
19	0.7	0.4	0.8	3.6	5.8	7.9	9.9	12.2	11.3	10.3	8.7	4.4
20	0.6	0.5	0.9	2.8	6.7	6.4	9.2	10.8	12.3	10.2	8.5	5.8
21	0.6	0.0	0.9	3.2	6.6	7.3	9.8	11.0	11.8	10.5	7.4	5.0
22	0.4	0.6	1.2	3.0	5.6	7.8	10.5	10.9	12.5	10.4	8.0	3.7
23	0.7	0.6	1.1	3.4	5.4	8.4	9.9	11.1	12.1	10.3	8.8	7.2
24	1.9	-0.6	1.6	2.8	6.3	7.9	11.4	10.9	11.8	9.8	8.9	5.7
25	1.1	-1.2	1.8	3.6	6.2	8.3	11.0	11.0	12.1	10.0	7.4	5.8
26	1.5	-0.5	2.1	3.4	6.4	8.6	9.3	11.6	12.1	10.1	6.6	4.9
27	1.3	-1.0	1.6	3.7	9.1	8.6	9.3	11.8	12.0	10.0	6.9	3.6
28	1.7	-1.5	1.8	3.6	8.6	8.6	9.7	11.8	11.6	9.5	7.4	3.0
29	1.4		1.8	3.8	8.4	8.2	8.7	11.6	11.6	9.2	8.3	3.1
30	0.3		1.9	4.2	8.7	9.6	10.0	11.1	11.2	9.5	8.7	2.6
31	0.3		1.6		7.3		10.3	10.9		9.3		3.0
Mean	2.0	-0.1	1.0	2.9	5.7	7.5	9.7	10.9	11.8	10.4	8.4	5.0

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures.

Atlantic Coast of Canada

St. Andrews, N. B.

1934.

Day of Month.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-0.3	-0.7	-1.5		4.7	6.8	9.9	11.7	12.2	12.0	9.3	7.4
2	-0.5	-1.5	-1.2	1.9	6.1	7.0	9.7	12.1	12.3	12.0	8.4	7.0
3	-0.6	-1.3	-1.2	1.7	5.8	7.5	9.9	12.2	13.0	12.1	7.3	6.3
4	-0.6	-1.1	-1.0	0.9	6.2	7.0	10.9	12.8	12.5	11.3	8.8	7.0
5	-0.8	-1.3	-0.8	1.4	5.5	7.2	11.1	12.6	13.5	11.8	9.3	5.7
6	0.5	-1.1	-1.0	1.6	7.0	8.3	10.8	12.3	14.0	11.9	9.3	5.2
7	0.2	-1.0	-0.8	1.7	6.6	8.2	10.4	14.3	13.1	12.1	9.0	4.9
8	0.5	-1.6	-0.7	2.0	6.7	8.9	11.9	12.8	13.0	11.8	8.3	4.6
9	0.5	-1.7	-0.7	2.0	6.0	8.5	11.9	12.9	12.6	11.1	8.4	3.8
10	-0.2	-1.7	-0.9	3.0	5.2	8.1	11.1	13.9	13.1	10.9	7.7	4.0
11	0.0	-1.5	-1.3	2.9	6.0	7.8	11.9	13.5	12.8	10.8	8.4	3.5
12	0.7	-1.6	-1.4	2.5	7.0	8.0	12.2	13.0	13.4	10.7	7.4	3.0
13	0.7	-1.3	-0.8	2.9	5.8	7.5	11.4	13.9	13.1	10.1	6.7	4.0
14	0.6	-1.7	-0.5	3.4	5.3	8.6	11.4	13.1	13.0	9.9	7.3	3.5
15	-0.3	-1.6	-0.6	4.2	6.0	9.0	11.5	12.3	12.9	9.9	7.2	2.8
16	-0.5	-1.6	-0.6	3.0	6.2	9.3	11.7	12.4	13.0	9.9	7.1	2.4
17	-0.4	-1.5	-0.6	3.5	6.1	9.4	12.2	12.3	12.9	10.0	7.3	2.6
18	-0.6	-1.2	-0.1	4.2	6.2	9.5	12.5	13.4	12.8	10.2	7.5	2.1
19	-1.0	-1.6	-0.9	4.7	6.0	8.6	11.9	12.6	13.8	10.0	7.7	2.7
20	-1.1	-1.5	-0.4	5.0	6.0	12.4	12.3	12.8	13.8	9.9	7.1	3.1
21	-1.0	-1.6	-0.4	5.8	7.0	10.8	12.9	13.5	13.6	10.0	6.5	2.4
22	-0.8	-1.3	0.1	5.0	6.2	11.3	12.6	12.5	13.3	10.0	7.3	2.3
23	-0.5	-0.8	-1.2	4.7	8.8	9.9	12.1	12.6	13.3	10.0	7.4	1.8
24	-0.3	-1.7	-0.9	5.4	7.4	10.5	12.2	12.5	13.2	9.9	7.7	2.7
25	-0.5	-1.6	0.1	6.4	7.3	11.2	11.9	13.0	13.2	9.8	6.7	2.4
26	-0.7	-1.6	-0.1	5.2	6.1	10.2	12.9	12.7	12.8	9.8	6.5	2.8
27	-0.9	-1.7	0.7	4.8	7.6	10.1	11.7	11.8	13.0	9.8	6.3	1.1
28	-0.5	-1.5	0.8	4.5	7.2	10.0	11.8	12.3	13.1	8.4	6.6	0.2
29	-0.5		0.9	4.3	7.4	10.3	11.4	12.2	12.8	8.8	7.1	0.3
30	-1.6		0.6	4.5	8.1	10.2	11.8	12.3	12.8	8.9	7.3	0.7
31	-1.7		0.6		7.5		11.7	12.1		9.1		0.3
Jan	-0.4	-1.4	-0.5	3.4	6.5	9.1	11.6	12.7	13.1	10.4	7.6	3.3

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures.

Atlantic Coast of Canada

Sambro Island
1934.

Day of Month.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2.0	-1.3	-1.7	1.3	4.8	8.6	13.4	16.5	13.5	13.0	11.3	10.0
2	0.0	0.0	-1.3	1.9	5.1	7.9	13.8	16.0	15.3	12.4	9.5	8.0
3	-1.0	-1.0	-1.3	1.4	5.6	8.1	14.6	16.5	16.5	14.3	6.5	5.5
4	-0.5	-1.5	-0.8	0.8	5.9	9.0	14.3	15.3	17.0	10.6	8.0	5.5
5	0.5	-1.8	-0.5	0.8	5.4	10.6	15.0	14.0	16.3	11.4	12.3	5.0
6	1.9	-1.8	-0.3	1.6	5.8	10.6	14.5	13.8	17.9	14.3	13.0	4.0
7	0.8	-1.8	0.3	2.3	5.5	8.5	15.3	13.9	17.3	16.0	11.0	2.3
8	0.8	-1.8	-0.3	1.8	5.3	8.6	14.8	14.8	17.3	11.9	8.8	1.0
9	0.0	-1.8	-0.8	1.5	5.4	9.1	14.0	15.5	17.1	9.0	8.9	0.0
10	-0.3	-1.8	-0.8	2.3	5.3	10.3	14.0	15.4	17.4	7.3	7.1	0.3
11	0.5	-1.8	-1.5	2.3	5.5	9.8	14.3	14.0	17.8	7.8	6.8	0.0
12	0.3	-1.8	-1.3	1.8	5.5	8.0	15.6	14.5	16.0	9.8	8.8	0.5
13	-1.0	-1.8	-0.3	1.9	5.0	8.3	15.1	15.0	16.0	8.5	7.0	3.0
14	-0.5	-1.8	0.5	3.3	5.4	8.8	16.9	15.9	16.9	7.6	6.9	2.0
15	-1.5	-1.5	-0.8	3.8	5.1	9.4	17.3	14.5	17.0	7.1	5.8	1.0
16	-1.7	-1.5	-0.8	3.9	5.5	9.6	16.9	14.1	16.8	7.9	5.0	0.5
17	0.3	-1.8	0.3	3.4	5.5	9.4	15.9	16.5	17.4	9.0	6.4	1.3
18	-1.5	-1.6	0.4	4.5	5.6	8.8	14.5	16.0	18.0	12.3	8.0	1.3
19	-1.8	-1.3	-1.4	4.3	6.0	10.8	15.0	15.3	18.0	13.5	8.5	1.3
20	-1.8	-1.5	-1.4	3.5	6.1	11.0	14.3	15.5	18.0	13.9	7.3	2.0
21	-1.7	-1.5	-1.3	4.5	6.6	11.0	12.5	14.5	17.9	13.8	5.4	1.3
22	-1.7	-1.3	-0.5	4.9	5.5	11.1	13.1	14.3	18.0	12.0	7.3	1.0
23	-1.6	-0.9	-1.3	4.0	6.6	10.8	13.3	15.3	19.0	10.8	8.8	0.3
24	-1.3	-1.5	-1.3	3.8	8.1	11.3	14.6	13.9	18.6	11.4	10.5	0.0
25	1.3	-1.8	-0.5	3.9	8.5	11.0	14.0	15.3	19.1	11.0	5.5	0.8
26	-1.3	-1.8	0.5	4.0	8.3	11.1	13.0	14.5	20.0	11.5	4.8	0.5
27	-1.3	-1.8	1.3	4.5	8.6	11.8	12.5	14.3	19.6	11.0	5.4	-0.5
28	-1.0	-1.8	1.3	4.3	9.5	12.3	14.0	16.0	16.8	7.8	6.4	-0.8
29	-1.4		1.3	3.0	10.4	12.0	14.5	15.4	16.0	8.0	7.8	-0.5
30	-1.8		0.5	3.4	10.5	13.5	15.9	14.1	17.3	9.0	9.5	-1.0
31	-1.8		0.5		9.8		16.3	12.8		9.3		-0.8
Mean	-0.6	-1.6	-0.4	3.0	5.9	10.0	14.6	14.9	17.4	10.7	7.9	1.8

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures.

Atlantic Coast of Canada

Sable Island
1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	2.0	1.4	1.2	2.7	6.6	9.4	12.4	17.5	17.6	18.1	12.9	
2	1.4	1.5	1.0	2.9	6.3	9.1	12.0	17.2	16.8	17.6	11.7	
3	1.5	1.1	0.8	2.6	6.6	9.0	13.1	17.6	17.3	16.6	8.5	
4	0.2	0.9	1.0	2.2	6.5	10.0	12.6	18.1	18.8	16.1	13.6	
5	2.9	0.3	1.5	2.5	6.6	9.9	14.6	18.1	18.6	14.6	13.2	
6	0.6	0.4	1.5	2.6	7.1	10.4	13.2	17.6	18.7	14.7	13.8	
7	2.0	1.2	1.5	2.7	6.0	9.8	11.7	17.7	19.4	14.9	13.0	
8	2.5	1.1	1.5	2.7	5.5	8.5	14.1	17.8	18.8	14.5	11.9	
9	2.0	2.4	1.1	2.5	6.9	9.6	15.0	18.7	18.7	13.7	11.2	
10	0.8	3.6	1.0	2.8	7.2	9.3	15.4	18.4	18.8	13.5	9.3	
11	1.0	1.7	0.9	3.5	5.7	9.5	14.6	18.3	18.3	12.8	11.4	
12	1.0	0.2	0.1	3.4	6.7	10.0	14.8	17.5	16.9	13.0	10.1	
13	1.0	1.1	0.6	3.6	8.1	9.8	14.6	17.8	17.0	14.1	10.0	
14	1.1	0.6	0.7	3.4	7.0	9.5	15.6	18.6	16.3	13.9	9.7	
15	1.5	1.3	1.5	3.1	7.2	9.0	14.0	18.3	16.6	12.5	9.0	
16	1.2	1.2	0.5	2.8	7.6	9.6	14.5	18.0	16.5	12.4	8.0	
17	1.0	2.2	2.2	2.9	7.9	9.6	15.0	18.4	16.8	13.6	9.9	
18	0.5	1.6	2.5	3.6	7.3	10.5	14.2	18.1	17.5	12.9	9.9	
19	0.9	1.1	0.6	3.5	7.0	11.0	15.6	18.7	18.0	12.9	9.9	
20	1.2	0.2	0.2	4.3	8.4	11.0	14.1	18.8	17.9	14.5	10.0	
21	1.9	0.1	0.1	4.9	7.5	12.1	15.1	18.9	17.6	14.6	10.0	
22	2.8	0.6	0.1	4.4	7.0	11.2	15.1	18.9	18.3	13.9	7.0	
23	3.2	1.5	0.4	5.0	8.4	11.3	15.2	18.6	18.5	14.2	9.1	
24	1.4	0.8	0.9	4.2	7.8	11.7	17.2	18.2	18.5	13.2	9.1	
25	0.7	2.1	0.5	5.6	8.4	11.4	16.3	18.8	18.2	13.9	8.9	
26	1.4	1.5	0.9	5.2	8.8	12.0	15.5	18.7	18.6	14.1	6.6	
27	1.0	1.0	1.5	5.1	8.7	11.7	16.1	18.4	19.5	14.0	6.7	
28	2.1	1.6	3.5	5.7	10.2	12.9	15.8	18.8	19.5	12.0	7.2	
29	2.0		2.8	5.3	10.1	13.0	17.9	18.3	17.6	10.3	7.4	
30	0.6		2.6	5.2	9.2	13.8	17.6	18.4	18.3	11.8	8.1	
31	1.6		2.1		9.5		18.1	17.6		13.1		
Mean	1.5	1.2	1.2	3.7	7.5	10.5	14.9	18.2	18.0	13.9	9.9	

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada

Seatar Island,
1934.

Day of
Month

Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec.

1	-1.0	-0.2	-1.0	-1.0	1.0	4.8	10.1	18.8	17.0	16.3	10.3	6.3
2	-1.6	-0.1	-0.9	-0.7	1.3	4.9	10.2	17.8	17.1	16.6	10.9	7.0
3	-1.5	0.0	-1.0	-0.6	1.0	4.6	11.1	17.5	16.7	16.2	8.3	5.3
4	-1.4	-1.0	-0.9	-0.3	1.3	5.6	11.3	16.9	16.6	15.9	9.2	5.2
5	-1.8	-1.0	-0.8	-0.6	1.7	7.1	11.3	17.7	17.2	15.0	9.2	5.1
6	-0.5	-1.3	-0.6	-0.8	1.6	7.2	13.2	18.3	17.5	15.0	10.0	5.0
7	-0.5	-1.3	-0.7	-0.8	1.7	7.0	12.3	18.7	18.0	15.0	10.4	3.1
8	-1.2	-1.3	-0.7	-1.0	2.0	6.9	12.7	17.7	17.9	14.0	10.5	3.3
9	-1.3	-1.4	-0.8	-1.0	1.9	6.8	13.8	18.0	18.0	13.1	10.6	4.1
10	-1.4	-1.5	-0.8	-1.0	1.8	6.4	13.9	17.8	17.8	12.7	8.4	4.1
11	-1.0	-1.5	-0.9	-1.0	1.8	7.0	13.9	17.1	18.0	12.7	8.2	2.6
12	-1.1	-1.4	-0.7	-1.0	2.2	7.1	13.3	18.0	16.9	12.6	8.7	2.4
13	-1.0	-1.4	-1.2	-1.1	2.4	7.0	13.8	18.0	16.9	12.8	7.0	2.4
14	-1.0	-1.1	-1.1	-1.1	2.2	7.0	13.8	17.9	16.8	12.2	7.1	2.3
15	-1.1	-1.1	-1.2	-1.2	2.3	6.3	13.9	17.7	16.8	11.0	6.8	2.0
16	-1.0	-1.3	-1.1	-1.2	2.4	6.0	12.6	17.8	16.8	11.1	7.0	2.1
17	-1.1	-1.2	-1.0	-0.9	2.3	6.1	13.8	17.7	17.1	11.0	6.9	2.3
18	-1.0	-1.1	-1.0	-1.0	2.4	6.3	13.9	17.9	17.2	11.0	5.4	1.7
19	-1.5	-1.0	-1.0	-0.9	2.9	6.2	14.0	18.1	17.0	11.7	7.2	1.5
20	-1.4	-1.0	-1.1	-0.8	4.0	7.0	14.0	18.0	16.5	11.6	7.0	1.4
21	-1.2	-1.0	-1.2	-0.9	3.9	6.9	14.1	18.0	16.7	11.2	6.6	1.2
22	-1.3	-1.1	-1.1	-1.0	3.9	7.0	15.0	18.0	17.0	11.0	6.5	1.2
23	-1.3	-1.1	-1.2	-0.9	4.0	7.1	15.2	18.0	17.0	11.0	6.6	1.3
24	-0.9	-1.0	-1.3	-1.0	3.3	7.8	16.9	16.8	17.0	11.0	6.8	1.4
25	-0.8	-1.5	-1.4	-0.9	3.7	8.8	16.9	17.3	16.3	10.9	6.7	1.4
26	-1.0	-1.3	-1.4	-1.0	4.7	9.0	19.9	18.0	17.1	10.4	5.3	1.0
27	-1.0	-1.2	-1.4	-0.1	4.9	9.1	17.4	17.4	17.0	10.4	5.2	1.0
28	-0.7	-1.1	-1.1	0.2	4.9	9.9	16.9	17.1	17.1	10.2	5.0	1.2
29	-0.6		-1.0	0.3	4.8	10.0	16.3	17.0	17.2	10.0	5.8	1.4
30	-1.1		-1.1	1.6	5.0	10.0	16.1	17.1	16.6	8.5	6.1	1.4
31	-1.1		-1.0		4.9		18.0	16.8		8.4		1.4
Mean	-1.1	-1.1	-1.0	-0.7	3.2	7.1	14.2	17.7	17.1	12.3	7.7	2.7

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada

Entry Island

1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.
1					-0.5	7.1	12.1	17.3	16.6	14.1	7.8	4.4
2					-0.4	8.3	11.1	16.6	16.9	15.3	7.9	4.9
3					-0.9	8.3	11.0	17.0	16.8	14.9	5.6	1.8
4					1.3	6.8	12.1	16.6	18.0	12.6	6.6	1.9
5					1.1	6.6	12.8	17.9	17.1	12.5	7.3	3.8
6					2.8	7.8	12.8	16.5	16.9	13.0	7.6	2.9
7					1.8	6.9	12.8	16.6	16.9	14.3	7.8	-1.0
8					2.1	8.3	12.0	18.3	16.6	12.3	7.0	-0.3
9					3.3	7.6	13.8	17.5	16.9	10.1	6.5	-0.1
10					2.5	8.6	12.8	16.4	17.0	9.1	5.9	-0.6
11					2.5	7.0	13.5	16.4	16.4	10.0	5.6	-1.0
12					2.5	7.8	14.1	17.8	16.8	10.6	6.9	-1.1
13					2.8	8.0	13.4	17.6	16.8	10.5	5.3	-0.5
14					3.3	6.8	14.0	18.0	17.0	9.8	3.9	0.1
15					3.8	7.9	14.0	16.3	16.8	8.8	4.1	0.1
16					3.8	8.6	14.3	17.6	17.3	9.5	4.1	1.4
17					3.9	9.5	14.6	17.3	17.4	9.5	4.3	0.0
18					3.4	8.9	15.8	17.8	17.5	10.3	4.3	0.1
19					4.0	10.3	15.4	17.4	17.4	10.1	3.5	-1.6
20					4.8	9.3	15.3	17.5	16.8	10.1	4.0	0.3
21					3.5	9.9	15.0	16.5	17.5	10.0	3.6	-1.6
22					3.0	9.8	16.0	16.9	17.1	10.4	4.4	-1.7
23					3.1	10.0	16.3	15.6	16.9	10.5	4.8	-1.8
24					3.6	10.8	17.4	16.5	15.6	10.3	4.9	-1.6
25					4.5	10.3	17.5	17.0	16.9	10.1	4.1	-1.5
26					6.3	10.3	17.1	16.9	16.3	10.3	3.1	-1.5
27					6.8	11.1	16.1	16.9	17.1	10.5	2.9	-1.0
28					6.6	11.3	15.6	16.9	16.1	9.4	4.0	-1.7
29					8.6	10.3	15.5	16.9	15.8	8.6	3.8	-1.7
30					7.9	11.1	16.8	16.4	15.8	7.1	4.6	-1.7
31					7.8		16.9	16.9		6.5		-1.7
Mean					3.5	8.8	14.5	17.0	16.8	10.7	5.2	-0.6

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada

North Point

1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-1.5	-1.1	-1.4	0.0	2.6	10.9	18.1	22.3	15.9	13.6	6.5	4.0
2	-1.8	-1.2	-1.0	0.5	10.0	12.6	16.6	20.6	14.3	12.8	6.6	4.9
3	-1.5	-1.8	-1.3	0.3	8.9	14.0	17.0	18.3	17.1	14.5	4.8	3.0
4	-1.8	-1.8	-0.4	0.1	8.4	11.9	16.1	21.0	20.5	12.9	4.9	1.0
5	-1.8	-1.6	-0.3	0.0	8.8	14.0	18.3	19.5	19.1	12.0	9.3	2.0
6	-1.1	-1.8	0.0	0.3	7.3	15.1	18.5	20.4	18.9	12.1	8.6	-0.5
7	-1.0	-1.6	0.1	0.6	5.5	11.0	19.3	20.5	17.5	14.3	8.6	-1.5
8		-1.4	0.1	0.5	3.4	11.0	17.4	21.5	17.5	10.6	6.3	-1.3
9	-1.8	-1.8	-0.3	0.8	4.8	11.6	17.9	20.9	19.0	9.5	5.4	-1.4
10	-1.8	-1.6	-0.1	0.5	5.9	12.4	21.1	22.1	15.6	10.3	5.4	-1.5
11	-1.5	-1.5		0.4	9.1	14.3	19.9	21.1	15.8	9.8	3.8	-1.5
12	-1.5	-1.6	-0.8	0.5	7.4	14.9	20.4	20.0	15.4	9.5	6.0	-0.9
13	-1.4	-1.5	-0.4	0.5	4.8	12.6	20.6	20.8	15.3	9.5	3.4	-1.4
14		-1.5	-0.6	0.8	6.5	11.8	20.4	18.8	17.1	7.3	2.9	-0.1
15	-1.8	-1.8	-0.9	0.0	7.5	10.4	21.9	18.5	18.5	7.4	1.6	-0.8
16	-1.3	-1.8	-0.8	0.0	5.6	8.5	20.4	19.8	18.1	8.1	4.1	-1.8
17		-1.8	-0.8	0.3	7.0	11.3	18.0	18.6	18.5	8.5	3.3	-1.4
18		-1.8	-1.0	0.6	7.0	11.8	19.5	19.5	17.8	8.6	3.4	-1.8
19		-1.5	-1.0	0.5	6.9	12.8	20.5	21.6	17.0	9.0	3.1	-1.6
20	-1.8	-1.6	-0.6	0.5	7.6	11.9	21.5	20.1	17.3	8.4	4.0	
21	-1.8	-1.5	-1.3	0.8	8.4	13.8	22.3	18.8	18.1	8.6	2.9	-1.8
22	-1.6	-1.6	-1.3	0.5	5.9	15.8			18.0	8.9	2.5	-1.8
23	-1.4	-1.5	-1.5	0.5	8.4	17.0	22.8	17.5	17.9	8.3	5.3	-1.7
24	0.3	-1.3	-1.5	0.6	9.6	17.8	21.4	21.4	16.3	8.3		-1.7
25	0.0	-1.5	-1.0	1.0	11.8	18.6		18.4	17.4	8.6	3.3	-1.6
26	-0.1	-1.5	-0.9	0.5	13.3	15.8	22.1	19.1	18.3	8.4	2.4	-1.6
27	-0.6	-1.8	-1.0	-0.1	12.4	18.5	20.9	19.3	19.1	8.8	1.1	-1.5
28	-0.9	-1.5	0.4	-0.5	15.6	18.1	18.5	16.8	17.1	6.3	3.3	-1.8
29	-1.1		0.4	-0.1	14.5	16.3	19.8	15.3	16.1	3.6	3.6	-1.6
30	-1.5		0.1	0.4	13.3	15.5	20.4	15.5	15.4	3.9	4.8	-1.8
31	-1.5		0.1		12.5		20.9	13.5		5.0		-1.8
Jan	-1.3	-1.5	-0.6	0.4	8.4	13.7	19.7	19.4	17.3	9.3	4.5	-0.7

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures.

Atlantic Coast of Canada

St. Mary's Island

1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	-1.7	-1.6	-0.4	-0.3	0.6	0.6	8.7	11.2	11.2	8.1	5.5	1.8
2	-1.8	-0.8	-0.4	-0.3	1.0	1.7	8.7	11.9	11.6	7.6	5.6	2.7
3	-1.9	0.3	-0.4	-0.1	1.0	4.2	9.1	12.1	11.1	5.4	5.2	2.1
4	-1.8	-0.1	-0.3	-0.1	1.1	2.1	6.6	8.7	11.1	5.2	4.7	0.3
5	-1.7	-0.7	-0.3	-0.1	1.1	1.9	7.0	11.7	10.6	6.4	4.9	0.2
6	-1.7	-1.0	-0.1	0.0	0.8	1.6	10.1	11.8	9.7	6.8	4.7	-0.2
7	-1.6	-0.9	-0.2	0.0	1.0	2.9	6.6	11.7	11.1	6.8	4.9	0.3
8	-1.9	-0.8	-0.2	0.5	0.7	2.3	7.3	10.6	10.8	4.4	4.7	0.3
9	-1.7	-0.7	-0.3	0.5	0.9	3.7	9.5	8.5	10.2	3.6	4.0	0.3
10	-1.8	-0.5	-0.4	0.3	0.9	5.3	7.0	5.8	9.9	4.1	3.8	0.3
11	-1.7	-0.4	-0.4	0.3	0.5	4.5	6.7	6.5	10.2	4.8	3.0	0.4
12	-1.8	-0.2	-0.4	0.3	0.9	5.4	6.5	7.7	10.3	5.8	3.9	-0.1
13	-1.8	-0.5	-0.4	0.3	1.0	5.5	6.0	7.3	9.4	6.3	3.7	-0.4
14	-1.8	-0.5	-0.3	0.4	1.2	4.3	7.0	6.8	8.5	6.5	3.9	0.3
15	-1.8	-0.5	-0.4	0.4	0.9	4.4	7.2	7.0	7.8	6.3	2.8	0.1
16	-1.7	-0.4	-0.4	0.6	0.7	4.7	8.0	7.9	8.1	6.7	2.0	-1.2
17	-1.6	-0.4	-0.4	0.5	0.8	5.0	10.1	8.2	9.2	5.8	3.0	-0.7
18	-1.6	-0.4	-0.3	0.6	0.8	5.3	11.3	7.1	7.4	6.2	2.1	-1.7
19	-1.8	-0.3	-0.4	0.4	0.8	5.3	11.0	7.7	9.6	6.1	1.9	-1.8
20	-1.7	-0.4	-0.3	0.4	0.7	8.9	9.0	7.3	10.1	6.0	1.6	-1.6
21	-1.7	-0.4	-0.3	0.3	1.0	6.4	7.4	5.6	11.4	5.9	0.7	-1.6
22	-1.9	-0.5	-0.3	0.3	0.5	6.8	8.6	5.8	10.7	6.2	2.7	-1.6
23	-1.7	-0.3	-0.4	0.3	-0.2	9.3	8.7	5.3	10.1	6.6	2.2	-1.6
24	-1.5	-0.4	-0.3	0.8	1.4	8.0	9.4	7.0	10.7	6.7	2.8	-1.7
25	-1.0	-0.5	-0.3	0.6	1.5	5.7	11.6	5.7	10.5	6.9	1.6	-1.5
26	-1.7	-0.5	-0.2	0.7	2.2	7.2	9.2	7.1	10.2	7.0	1.5	-1.5
27	-1.8	-0.5	-0.3	0.8	1.2	8.4	7.7	7.2	9.9	7.6	1.5	-1.6
28	-1.6	-0.5	-0.2	0.7	-1.4	10.1	8.2	8.4	7.8	7.1	2.7	-1.5
29	-1.3		-0.3	1.4	2.0	8.8	10.1	8.0	9.9	6.5	2.0	-1.7
30	-1.8		-0.4	1.2	2.3	6.7	8.1	9.3	9.8	6.0	2.6	-1.6
31	-1.7		-0.4		2.2		9.1	10.7		5.5		-1.6
Mean	-1.7	-0.5	-0.3	0.4	1.0	5.2	8.4	8.3	10.0	6.2	3.2	-0.8

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada

Hall's Harbour

1934

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1				0.0	4.5	7.0	10.0	14.0	14.5	14.5	10.5	9.0
2				0.0	5.0	7.0	10.5	14.0	14.5	14.5	10.0	8.5
3				0.0	5.0	7.5	11.0	14.0	14.5	14.8	10.0	8.0
4				0.0	5.1	7.5	11.0	14.0	14.5	13.5	10.0	8.0
5				0.0	5.5	7.5	11.0	14.0	14.5	13.5	10.0	7.9
6				0.0	5.5	7.5	11.0	14.0	15.0	13.5	10.5	7.0
7				0.5	5.5	7.2	11.0	14.0	15.0	13.0	10.5	6.7
8				0.5	5.2	7.5	11.3	14.0	14.8	12.5	10.0	6.0
9				0.5	5.2	7.7	11.5	14.0	14.8	12.5	10.0	6.0
10				0.7	5.2	7.7	11.5	13.5	15.0	12.0	10.0	5.5
11				0.7	5.5	8.0	11.5	13.8	15.0	12.5	9.5	5.0
12				0.7	5.6	7.7	11.5	14.0	14.9	12.0	9.3	5.0
13				1.0	5.5	7.7	11.5	14.0	14.9	12.0	9.0	5.0
14				1.2	5.5	7.7	11.7	14.0	15.0	12.0	9.0	5.0
15				1.5	5.6	8.0	11.5	14.0	15.0	11.8	8.5	4.9
16				2.0	5.7	8.0	12.0	14.0	15.0	11.1	8.5	4.6
17				2.0	5.5	9.0	12.0	14.0	15.0	11.5	8.3	4.7
18				2.0	5.5	9.0	12.0	14.0	15.0	11.5	8.5	4.5
19				2.0	5.7	8.5	12.0	14.0	14.9	11.5	8.5	4.5
20				2.0	5.9	9.0	12.0	14.5	15.0	11.0	8.0	4.8
21				2.5	5.7	9.0	11.9	14.5	15.0	11.0	8.0	3.0
22				3.0	5.7	9.5	11.9	14.5	15.0	11.5	8.5	4.0
23				3.0	5.7	9.5	12.0	14.5	14.7	11.5	8.5	4.0
24				2.6	5.7	9.5	12.0	14.5	14.8	11.5	8.6	3.8
25				3.0	6.0	9.5	12.0	14.6	15.0	11.5	8.0	3.5
26				3.0	6.0	9.5	12.0	14.6	15.0	11.0	7.5	3.5
27				3.5	6.0	9.5	13.0	14.5	15.0	11.0	8.0	2.3
28				3.5	6.5	9.5	13.0	14.5	15.0	11.0	8.2	2.0
29				4.0	7.0	10.0	13.5	14.5	15.0	10.5	8.5	1.5
30				4.0	7.0	10.0	13.5	14.5	14.5	10.5	9.0	1.5
31					7.0		14.0	14.5		10.5		1.5
Mean				1.7	5.7	8.4	11.8	14.2	14.9	12.0	9.0	4.9

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada

Mutton Bay

1934.

Day of
Month Jan. Feb. Mar. Apr. May Jun. July Aug. Sep. Oct. Nov. Dec.

1							8.6	13.5	9.9	8.8		
2							9.5	13.8	11.0	8.3		
3							9.3	13.9	11.8	8.8		
4							9.3	13.6	11.5	6.8		
5						7.8	9.3	13.8	11.8	7.5		
6						5.8	10.1	10.0	12.5	8.0		
7						5.0	9.9	12.8	11.8	7.8		
8						5.4	8.6	12.3	11.3	7.3		
9						6.5	9.5	11.3	12.3	6.8		
10						4.8	9.8	10.5	9.8	7.3		
11						5.8	10.0	8.8	10.6	6.8		
12						6.1	9.3	9.5	9.8	6.3		
13						5.8	9.0	8.5	9.0	6.4		
14						6.3	9.5	9.6	8.5	6.8		
15						5.3	9.3	7.8	9.3	6.8		
16						6.1	11.8	8.8	9.8	6.8		
17						7.5	12.8	9.3	8.3	6.1		
18						7.0	11.3	9.3	9.8	7.0		
19						8.8	11.4	9.8	10.3	6.5		
20						9.8	11.0	10.0	9.8	6.1		
21						7.4	10.3	10.5	11.3	6.5		
22						8.0	12.8	9.8	9.6	7.0		
23						6.8	9.8	9.6	10.0	7.0		
24						8.4	11.6	9.8	9.5	6.9		
25						8.0	13.4	10.5	10.5	6.8		
26						7.5	11.3	9.3	11.0	6.8		
27						6.8	11.3	9.5	10.8	6.4		
28						7.9	11.8	8.8	10.9	6.5		
29						8.9	12.3	9.3	9.8	5.8		
30						7.8	11.5	11.0	10.3	5.9		
31							12.5	11.0		5.9		
Mean						7.3	10.6	10.5	10.1	6.9		

BIOLOGICAL BOARD OF CANADA

Daily and Monthly Mean Water Temperatures

Atlantic Coast of Canada.

Lurher Lightship

1934.

Day of Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	5.4	4.8	0.4	0.3	4.8	7.0	8.5	11.0	13.5			9.0
2	3.4	4.5	0.3	0.4	5.0	7.5	8.5	11.2	12.8			8.8
3	3.4	3.3	0.3	0.3	5.1	8.3	8.8	11.0	13.7			8.7
4	3.7	2.8	0.3	0.3	5.0	8.0	9.6	11.2	12.5			8.7
5	4.1	2.4	0.3	0.3	5.2	8.5	10.0	11.2	12.5			8.5
6	5.0	2.5	0.3	1.9	5.0	8.5	10.3	11.8	13.0			7.8
7	5.0	2.3	0.3	3.3	5.4	8.3	10.3	12.0	12.6			7.7
8	5.2	2.0	0.3	3.5	6.1	8.5	10.2	11.8	12.8			7.0
9	5.2	1.0	0.3	3.7	5.7	8.0	9.8	11.8	13.0			6.4
10	4.6	2.1	0.2	3.3	5.9	8.3	10.7	11.1	12.3			6.9
11	4.7	3.0	0.3	4.1	6.4	8.0	9.8	12.1	12.9			6.9
12	4.4	3.8	0.3	3.4	5.4	8.0	10.4	12.1	12.1			6.9
13	4.4	4.0	0.3	4.4	5.4	8.0	10.5	11.4	12.3			7.1
14	5.0	3.0	0.3	3.8	5.9	8.0	10.7	12.0	12.4			6.9
15	4.0	3.6	0.3	3.4	5.5	8.0	11.3	12.0	12.8		7.5	6.9
16	3.9	2.7	0.3	3.9	6.1	8.0	10.8	11.3	12.3		7.5	7.1
17	4.0	2.3	0.3	4.0	5.8	8.0	10.2	11.4	13.0		7.5	7.0
18	3.0	2.5	0.3	4.0	6.3	8.0	10.0	11.5	13.0		8.0	7.1
19	3.9	2.5	0.3	4.2	6.4	8.0	11.0	11.5	13.8		8.2	7.1
20	3.8	2.8	0.3	4.1	6.3	8.0	11.0	11.4	13.5		7.9	7.0
21	3.0	2.9	0.3	4.4	6.3	8.0	11.1	11.6	15.1		7.8	6.8
22	3.5	2.5	0.4	3.9	5.9	8.0	11.1	11.8	15.2		8.0	6.2
23	4.0	3.0	0.3	4.3	6.8	8.6	11.1	11.5	15.5		8.0	6.0
24	3.8	1.8	0.3	4.7	7.0	8.0	11.4	12.0	15.3		8.0	6.4
25	4.1	1.9	0.3	5.0	7.0	8.3	11.7	11.8	15.5		7.2	6.0
26	3.9	1.6	0.3	4.9	7.0	8.5	11.3	12.0	15.4		8.7	6.4
27	3.0	1.5	0.3	4.5	7.1	8.5	11.0	11.8	15.8		8.1	5.9
28	4.2	1.5	0.3	3.9	7.0	8.5	11.0	11.5	16.0		8.5	6.1
29	2.8		0.3	4.5	7.3	8.5	10.7	11.5	15.9		8.8	5.9
30	2.3		0.3	4.8	7.3	8.5	11.3	11.9	15.0		8.9	5.8
31	2.0		0.3		7.5		11.0	11.9				5.8
Mean	4.0	2.7	0.3	3.4	6.1	8.1	10.5	11.6				7.0

Hermit lobsters

1934

