

75
76

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**FISHERIES RESEARCH BOARD
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MANUSCRIPT REPORT SERIES

No. 1070

**Thermal Structure of Babine Lake
(Main Basin) in 1967**

by

J. G. McDonald and J. R. Scarsbrook

Biological Station, Nanaimo, B.C.

December 1969

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Throughout the summer and fall of 1967, temperature measurements were made at Babine Lake in conjunction with observations of the distribution of under-yearling sockeye. On five occasions, July 3-4, July 16-17, August 24-26, September 24-26, and October 21-23, temperature profiles were taken at up to 14 stations located at mid-lake and along the main axis of the main lake basin (Fig. 1). At each station readings were taken at the surface (actually 15 cm below) and then every metre down to a maximum of 80 m. Secchi disc readings and cloud cover were recorded at each station.

A thermistor thermometer, accurate to the nearest 0.1 C was used throughout. A 15 lb weight was fastened to the probe to keep the wire as near vertical as possible. Where a substantial deviation occurred, the angle was noted and the depth adjusted accordingly.

The purpose of this report is to describe very generally the thermal structure of the main lake basin and to provide a record of the individual observations (Tables 1-14). Observations of previous years (1956 to 1963), together with bathymetric maps, are provided by Johnson (MS, 1965).

Temperature profiles obtained on July 3-4, and then in August, September, and October have been used to show the major changes in the thermal structure throughout the summer and fall (Fig. 1). In early July, the thermocline was not yet well developed. Surface temperatures varied from about 8 to 13 C. The lake was nearly isothermal below 30 m. A prominent feature was the wedge of relatively warm surface water extending from the Southeast end of the lake (Station 12), into the Northwest end (to Station 3).

In late August the thermal structure of the lake was fairly uniform. The water was about 17 C at the surface and decreased to about 15 C at 10 m. A very well defined thermocline occurred between roughly 10 and 20 m. The thermocline was particularly sharp at the southeast end (Station 14), where the temperature dropped nearly 10 C in 5 metres. Below 20 m the water was 7 C or less at most stations.

The lake had cooled considerably by September 24-26. Surface water was 13-14 C. The thermocline was much less pronounced than in August. Warmer water was in the northwest end of the basin. At Stations 1 to 5, water 8 C or more extended down to 30 or 40 m, whereas further uplake, 8 C water extended down to only 20 m.

The water was nearing an isothermal state in late October. The surface had cooled to between 7 and 9 C. A relatively warm layer of water was still evident in the northwest end of the basin.

Reference

Johnson, W. E. 1965. Fish. Res. Bd. Canada, MS Rept. (Biol.) No. 820.

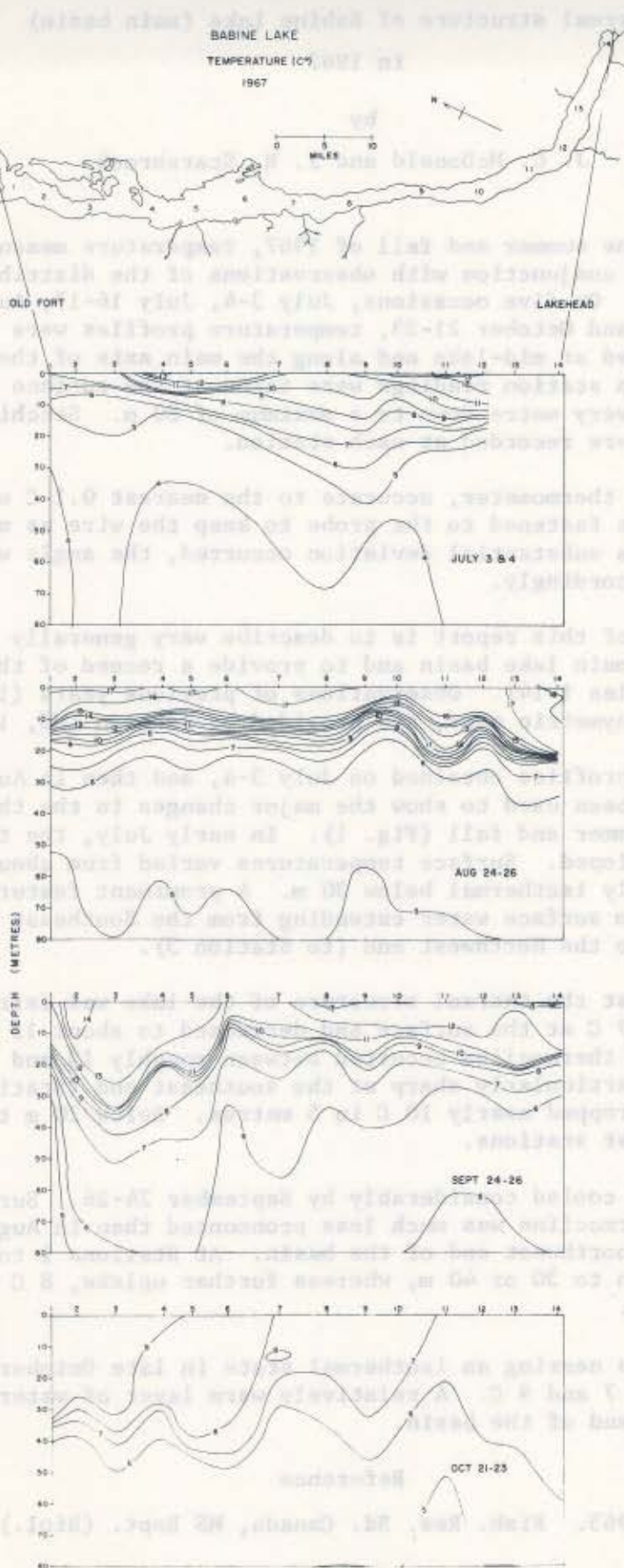


Fig. 1. Temperature profiles at Babine Lake, 1967. Station locations are shown on the map.

Table 1. Temperatures (°C) at 1-metre depth intervals, by date at Station 1.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 28, 1967	Oct. 23, 1967
Cloud cover:	10/10	8/10	6/10	9/10
Secchi Disc reading:	4.5 m	4.3 m	5.7 m	4.7 m
Depth (m)				
Surface	15.4	17.2	12.3	9.7
1	15.2	17.1	11.8	9.7
2	14.9	16.9	11.7	9.7
3	14.6	16.8	11.5	9.7
4	14.3	16.7	11.5	9.7
5	14.2	16.7	11.4	9.7
6	13.9	16.6	11.3	9.7
7	13.8	16.5	11.3	9.7
8	13.6	16.4	11.3	9.7
9	13.0	16.3	11.2	9.6
10	12.9	16.3	11.2	9.6
11	12.0	16.2	11.2	9.6
12	11.7	15.7	11.2	9.6
13	11.4	13.8	11.1	9.6
14	11.0	12.9	11.0	9.6
15	10.5	11.3	10.6	9.6
16	10.0	10.2	8.6	9.6
17	9.1	9.7	7.9	9.6
18	7.8	8.3	7.1	9.6
19	7.2	8.0	6.9	9.6
20	6.5	7.9	6.4	9.6
21	6.2	7.7	6.3	9.6
22	6.1	7.5	6.2	9.6
23	5.9	7.4	6.0	9.6
24	5.6	7.2	5.9	9.6
25	5.5	7.2	5.9	9.6
26	5.4	6.7	5.5	9.6
27	5.3	6.6	5.4	9.5
28	5.2	6.5	5.3	9.5
29	5.1	6.4	5.3	9.5
30	5.0	6.3	5.3	9.5
31	5.0	6.0	5.2	9.5
32	5.0	5.8	4.9	9.5
33	5.0	5.7	4.9	8.6
34	5.0	5.6	4.9	7.3
35	5.0	5.5	4.8	7.1
36	5.0	5.5	4.8	6.8
37	4.9	5.3	4.7	6.7
38	4.9	5.3	4.7	6.6
39	4.9	5.2	4.7	6.1
40	4.9	5.2	4.7	6.0
41	4.8	5.1	4.7	5.9
42	4.7	5.1	4.7	5.8

continued.....

Station 1 - cont'd.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 28, 1967	Oct. 23, 1967
Cloud cover:	10/10	8/10	6/10	9/10
Secchi Disc reading:	4.5 m	4.3 m	5.7 m	4.7 m

Depth (m)	July 17, 1967	Aug. 26, 1967	Sep. 28, 1967	Oct. 23, 1967
43	4.7	5.1	4.6	5.8
44	4.7	5.1	4.6	5.7
45	4.7	5.0	4.6	5.5
46	4.7	5.0	4.6	5.5
47	4.6	5.0	4.6	5.4
48	4.6	5.0	4.6	5.4
49	Bottom	5.0	4.6	5.4
50		5.0	4.5	5.4
51		5.0	4.5	5.3
52		5.0	4.5	5.2
53		4.9	4.5	Bottom
54		4.9	4.5	
55		4.9	4.5	
56		4.9	4.5	
57		4.9	4.4	
58		4.8	4.4	
59		4.8	4.4	
60		Bottom	4.4	
61			4.4	
62			4.4	
63			4.4	
64			4.4	
65			4.4	
66			4.4	
67			4.4	
68			4.4	
69			4.4	
70			4.3	
71			4.3	
72			4.3	
73			4.3	
74			4.3	
75			4.3	
76			4.3	
77			4.3	
78			4.3	
79			4.3	
80			4.3	

Table 2. Temperatures (°C) at 1-metre depth intervals, by date at Station 2.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	7/10	6/10
Secchi Disc reading:	4.5 m	4.1 m	5.0 m	4.8 m
<u>Depth (m)</u>				
Surface	15.2	17.2	14.8	9.6
1	15.0	16.9	14.7	9.6
2	14.3	16.8	14.6	9.6
3	14.2	16.7	14.5	9.6
4	13.9	16.4	14.4	9.6
5	13.8	16.1	14.4	9.5
6	13.6	15.5	14.4	9.5
7	13.2	15.1	14.3	9.5
8	12.6	14.3	14.3	9.5
9	11.8	14.0	14.3	9.5
10	11.2	13.9	14.2	9.5
11	10.0	13.9	14.1	9.5
12	9.2	12.9	13.9	9.5
13	8.3	11.5	13.8	9.5
14	8.0	11.1	13.6	9.5
15	7.9	10.4	13.4	9.5
16	7.9	10.0	13.1	9.5
17	7.8	9.3	12.8	9.5
18	7.2	8.8	12.5	9.5
19	6.8	8.5	12.3	9.5
20	6.2	8.4	12.0	9.5
21	6.0	8.2	11.8	9.4
22	6.0	7.8	11.6	9.4
23	5.9	7.4	11.1	9.4
24	5.7	7.3	10.8	9.4
25	5.6	7.2	10.6	9.0
26	5.6	7.0	11.4	9.0
27	5.5	6.8	10.0	8.8
28	5.5	6.6	9.8	8.5
29	5.4	6.4	9.5	8.2
30	5.4	6.3	8.1	8.0
31	5.4	6.1	7.9	7.7
32	5.4	6.0	7.8	(7.6)
				(7.3)
33	5.4	5.8	7.8	7.0
34	5.4	5.7	7.7	6.7
35	5.4	5.7	7.6	6.5
36	5.3	5.7	7.6	6.3
37	5.2	5.5	7.1	6.2
38	5.2	5.4	7.0	6.0
39	5.2	5.4	6.9	5.9
40	5.2	5.4	6.9	5.9
41	5.2	5.3	6.9	5.8
42	5.2	5.3	6.8	5.7

continued.....

Station 2 - cont'd.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	7/10	6/10
Secchi Disc reading:	4.5 m	4.1 m	5.0 m	4.8 m
Depth (m)				
43		5.2	5.3	6.7
44		5.2	5.3	6.7
45		5.2	5.2	6.6
46		5.2	5.2	6.5
47		5.1	5.2	6.5
48		5.1	5.2	6.4
49		5.1	5.1	6.3
50		5.1	5.1	6.2
51		5.1	5.1	6.2
52		5.1	5.1	6.2
53		5.0	5.1	6.2
54		4.9	5.0	6.2
55		4.7	5.0	6.2
56		4.7	5.0	6.2
57		4.7	5.0	6.1
58		4.7	5.0	6.1
59		4.7	5.0	6.1
60		4.6	5.0	6.1
61		4.6	5.0	6.1
62		4.6	5.0	6.1
63		4.6	5.0	6.1
64		4.6	5.0	6.1
65		4.6	5.0	6.1
66		4.6	4.9	6.1
67		4.5	4.9	6.1
68		4.5	4.9	5.9
69		4.5	4.9	5.9
70		4.5	4.9	
71		4.5	4.9	
72		4.5	4.9	
73		4.5	4.9	
74		4.5	4.9	
75		4.5	4.9	
76		4.5	4.9	
77		4.5	4.9	
78		Bottom	4.9	
79			4.9	
80			4.9	

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Table 3. Temperatures (°C) at 1-metre depth intervals, by date at Station 3.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
Cloud cover:	8/10	8/10	7/10	4/10
Secchi Disc reading:	4.0 m	4.4 m	5.3 m	4.8 m
Depth (m)				
Surface	15.1	17.4	13.7	9.5
1	14.6	17.1	13.7	9.5
2	14.3	16.8	13.6	9.5
3	14.1	16.6	13.7	9.4
4	13.9	16.5	13.6	9.4
5	13.9	16.0	13.6	9.3
6	12.5	15.6	13.6	9.3
7	12.1	15.4	13.6	9.3
8	11.3	15.1	13.6	9.3
9	10.6	15.0	13.6	9.3
10	10.0	13.9	13.6	9.3
11	8.8	12.8	13.5	9.3
12	8.8	12.4	13.5	9.3
13	8.7	11.8	13.5	9.3
14	8.3	11.3	13.5	9.3
15	8.1	10.8	13.4	9.3
16	7.4	9.9	13.4	9.3
17	6.9	9.3	13.4	9.3
18	6.7	8.1	13.3	9.3
19	6.6	7.8	13.3	9.3
20	6.5	7.2	13.3	9.3
21	6.4	6.9	13.3	9.2
22	6.0	6.6	13.2	9.2
23	5.8	6.3	13.1	9.1
24	5.6	6.2	13.1	9.1
25	5.5	6.1	13.1	9.1
26	5.5	6.0	13.0	9.0
27	5.5	5.8	12.9	9.0
28	5.3	5.7	12.9	9.0
29	5.3	5.6	12.9	9.0
30	5.3	5.4	12.8	9.0
31	5.2	5.4	12.8	9.0
32	5.1	5.3	12.8	(8.9)
				(8.8)
33	5.1	5.3	12.7	8.6
34	5.1	5.2	12.0	8.4
35	5.1	5.2	10.6	8.3
36	5.0	5.2	10.3	8.1
37	5.0	5.2	9.5	7.8
38	5.0	5.1	9.0	7.6
39	5.0	5.1	8.8	7.3
40	5.0	5.1	8.8	7.1
41	5.0	5.1	8.6	6.8
42	5.0	5.1	8.1	6.6

continued.....

Station 3 - cont'd.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
Cloud cover:	8/10	8/10	7/10	4/10
Secchi Disc reading:	4.0 m	4.4 m	5.3 m	4.8 m

Depth (m)	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
43	5.0	5.0	7.8	6.6
44	5.0	5.0	7.5	6.4
45	5.0	5.0	7.5	6.3
46	5.0	5.0	7.4	6.3
47	5.0	5.0	7.4	6.2
48	5.0	5.0	7.2	6.0
49	5.0	5.0	7.2	6.0
50	5.0	5.0	7.1	5.9
51	5.0	5.0	7.0	5.9
52	5.0	5.0	6.9	5.8
53	5.0	5.0	6.8	5.8
54	5.0	5.0	6.7	5.8
55	5.0	5.0	6.6	5.7
56	5.0	5.0	6.6	5.6
57	5.0	5.0	6.5	5.6
58	5.0	5.0	6.4	5.5
59	4.9	5.0	6.4	5.5
60	4.8	5.0	6.4	5.4
61	4.8	4.9	6.4	5.4
62	4.8	4.9	6.4	5.4
63	4.8	4.9	6.4	5.3
64	4.8	4.9	6.3	5.3
65	4.8	4.9	6.3	5.3
66	4.8	4.9	6.3	5.3
67	4.8	4.9	6.3	5.3
68	4.8	4.9	6.3	5.3
69	4.8	4.8	6.3	5.3
70	4.8	4.8	6.2	
71	4.8	4.8	6.2	
72	4.8	4.8	6.1	
73	4.8	4.8	6.0	
74	4.8	4.8	6.0	
75	4.7	4.8	6.0	
76	4.7	4.7	6.0	
77	4.7	4.7	6.0	
78	4.7	4.7		
79	4.7	4.7		
80	4.7	4.7		

Table 4. Temperatures (°C) at 1-metre depth intervals, by date at Station 4.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
Cloud cover:	4/10	9/10	7/10	3/10
Secchi Disc reading:	4.5 m	4.0 m	5.0 m	4.8 m
<u>Depth (m)</u>				
Surface	15.1	16.9	13.4	9.2
1	15.0	16.7	13.4	9.1
2	14.9	16.4	13.4	9.0
3	14.7	16.1	13.4	9.0
4	14.6	15.9	13.4	9.0
5	14.2	15.8	13.5	8.9
6	12.0	15.8	13.4	8.9
7	11.2	15.7	13.3	8.9
8	10.5	14.7	13.3	(8.9)
9	9.2	13.0	13.3	(8.8)
10	8.4	12.0	13.3	8.8
11	8.0	11.0	13.3	8.8
12	7.8	9.3	13.2	8.7
13	7.7	8.8	13.2	8.7
14	7.4	8.2	13.0	8.7
15	7.4	7.6	12.8	8.7
16	7.3	7.1	12.7	8.7
17	7.3	6.8	12.1	8.7
18	7.2	6.5	11.8	8.7
19	7.2	6.4	11.4	8.7
20	7.1	6.2	11.0	8.7
21	7.0	6.1	8.7	8.7
22	6.9	6.0	8.4	8.7
23	6.8	5.5	8.4	8.7
24	6.3	5.3	8.3	8.6
25	6.2	5.3	8.3	(8.6)
26	6.2	5.3	8.2	(8.5)
27	6.2	5.2	8.2	8.3
28	6.2	5.2	8.2	(8.0)
29	6.1	5.2	8.2	(7.7)
30	6.1	5.2	8.1	7.4
31	6.1	5.1	8.1	(6.9)
32	6.1	5.1	8.1	(6.4)
33	6.1	5.1	8.1	6.2
34	6.1	5.1	8.1	6.2
35	6.1	5.1	8.1	6.1
36	6.0	5.1	8.1	6.1
37	6.0	5.1	8.0	6.0
38	5.8	5.1	7.8	6.0
39	5.7	5.1	7.8	6.0
40	5.5	5.1	7.9	6.0
	5.3	5.1	7.6	(5.9)
				(5.7)

continued.....

Station 4 - cont'd.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
Cloud cover:	4/10	9/10	7/10	3/10
Secchi Disc reading:	4.5 m	4.0 m	5.0 m	4.8 m

Depth (m)	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 23, 1967
41	5.2	5.1	7.3	5.6
42	5.1	5.1	7.2	(5.6)
				(5.5)
43	5.1	5.1	7.1	5.4
44	5.1	5.1	7.0	5.3
45	5.1	5.1	6.9	5.2
46	5.1	5.0	6.6	5.2
47	5.1	5.0	6.6	5.2
48	5.1	5.0	6.5	5.2
49	5.1	5.0	6.4	5.2
50	5.1	5.0	6.3	
51	5.1	5.0	6.2	
52	5.1	5.0	6.2	
53	5.1	5.0	6.7	
54	5.1	5.0	6.7	
55	5.0	5.0	6.3	
56	Bottom	5.0	6.4	
57		5.0	6.4	
58		5.0		
59		5.0		
60		5.0		
61		5.0		
62		4.9		
63		4.9		
64		Bottom		
65				

Table 5. Temperatures ($^{\circ}\text{C}$) at 1-metre depth intervals, by date at Station 5.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 22, 1967
Cloud cover:	8/10	9/10	9/10	3/10
Secchi Disc reading:	4.0 m	3.9 m	5.0 m	5.1 m
<u>Depth (m)</u>				
Surface	14.8	17.4	13.5	8.4
1	14.7	17.8	13.5	8.4
2	14.6	16.9	13.5	8.4
3	14.4	16.4	13.5	8.4
4	14.0	16.2	13.5	8.4
5	13.8	16.0	13.3	8.4
6	13.7	15.9	13.2	8.4
7	13.6	15.7	13.2	8.4
8	13.0	13.9	13.1	8.4
9	11.7	13.0	13.1	8.4
10	10.7	12.5	13.0	8.4
11	10.2	11.9	12.8	8.4
12	9.2	11.0	12.8	8.4
13	8.1	10.3	12.6	8.4
14	7.0	9.9	12.6	8.4
15	6.6	8.9	12.5	8.4
16	6.4	8.5	12.4	8.4
17	6.2	7.7	12.2	8.4
18	6.1	7.4	12.1	8.3
19	5.9	7.2	12.1	8.3
20	5.8	6.8	12.0	8.3
21	5.6	6.6	12.0	8.3
22	5.5	6.5	11.8	8.3
23	5.5	6.4	11.4	8.3
24	5.4	6.2	9.7	8.3
25	5.4	6.0	9.0	8.3
26	5.4	6.0	8.7	8.2
27	5.3	5.9	8.3	8.2
28	5.3	5.8	8.2	8.2
29	5.2	5.6	7.7	8.2
30	5.2	5.5	7.5	8.2
31	5.2	5.4	7.5	8.2
32	5.2	5.4	7.5	8.1
33	5.2	5.4	7.5	8.1
34	5.1	5.3	7.4	8.1
35	5.1	5.3	7.3	8.1
36	5.1	5.3	7.3	8.1
37	5.1	5.3	7.2	8.1
38	5.1	5.3	7.2	8.1
39	5.1	5.2	7.2	7.9
40	5.1	5.1	7.2	7.7
41	5.1	5.1	7.2	7.5
42	5.1	5.1	7.2	7.2

Continued

Station 5 - cont'd.

Date:	July 27, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 22, 1967
Cloud cover:	8/10	9/10	9/10	3/10
Secchi Disc reading:	4.0 m	3.9 m	5.0 m	5.1 m
Depth (m)				
43	5.1	5.1	7.1	6.7
44	5.1	5.1	6.9	6.3
45	5.1	5.1	6.8	6.2
46	5.1	5.1	6.8	5.8
47	5.1	5.1	6.8	5.7
48	5.1	5.1	6.7	5.7
49	5.1	5.1	6.7	5.6
50	5.1	5.1	6.7	5.6
51	5.0	5.0	6.7	5.6
52	5.0	5.0	6.7	5.6
53	5.0	5.0	6.6	5.5
54	5.0	5.0	6.6	5.5
55	5.0	5.0	6.6	5.5
56	5.0	5.0	6.4	5.4
57	5.0	5.0	6.4	5.4
58	5.0	5.0	6.4	5.4
59	4.9	5.0	6.4	5.4
60	4.9	5.0	6.3	5.4
61	4.9	5.0	6.3	
62	4.9	5.0	6.3	
63	4.9	5.0	6.3	
64	4.9	5.0	6.3	
65	4.9	5.0	6.3	
66	4.9	5.0	6.3	
67	4.9	5.0	6.2	
68	4.9	5.0	6.2	
69	4.9	5.0	6.2	
70	4.9	5.0		
71	4.8	5.0		
72	4.7	5.0		
73	4.7	4.9		
74	4.7	4.9		
75	4.7	4.9		
76	4.7	4.9		
77	4.7	4.9		
78	4.7	4.9		
79	4.7	4.9		
80	4.7	4.9		

Table 6. Temperatures (°C) at 1-metre depth intervals, by date at Station 6.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 22, 1967
Cloud cover:	6/10	9/10	9/10	2/10
Secchi Disc reading:	3.5 m	3.7 m	5.5 m	5.1 m
<hr/>				
<u>Depth (m)</u>				
Surface	13.9	16.9	11.6	8.2
1	13.8	16.8	11.5	8.2
2	13.7	16.6	11.5	8.2
3	13.6	16.5	11.5	8.2
4	13.5	16.4	11.4	8.2
5	13.3	16.2	11.0	8.2
6	13.2	16.1	10.4	8.2
7	13.0	16.1	8.5	8.2
8	12.7	16.0	7.9	8.2
9	12.4	15.1	7.8	8.1
10	11.2	14.1	7.7	8.1
11	10.0	13.3	7.7	8.1
12	8.8	12.4	7.6	8.1
13	8.0	11.4	7.5	8.1
14	7.6	10.6	7.4	8.1
15	7.0	9.0	7.3	8.1
16	6.4	8.1	7.2	8.1
17	6.3	7.7	7.1	8.1
18	6.1	7.3	7.0	8.1
19	5.8	6.9	6.8	8.1
20	5.7	6.5	6.6	8.1
21	5.6	6.3	6.5	8.1
22	5.3	5.9	6.5	8.1
23	5.1	5.9	6.5	8.1
24	5.0	5.7	6.4	8.1
25	5.0	5.5	6.4	8.1
26	5.0	5.4	6.3	8.1
27	5.0	5.3	6.3	8.1
28	5.0	5.3	6.2	8.1
29	5.0	5.3	6.1	8.1
30	5.0	5.1	6.1	8.1
31	5.0	5.1	6.1	8.1
32	5.0	5.1	6.1	8.1
33	5.0	5.1	6.0	8.1
34	4.9	5.1	6.0	8.0
35	4.8	5.1	5.9	7.8
36	4.8	5.1	5.9	7.7
37	4.8	5.1	5.8	7.7
38	4.8	5.0	5.8	7.7
39	4.8	5.0	5.8	7.7
40	4.8	5.0	5.8	7.7
41	4.8	5.0	5.8	7.7
42	4.8	5.0	5.8	7.4

continued.....

Station 6 - cont'd.

Date:	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 22, 1967
Cloud cover:	6/10	9/10	9/10	2/10
Secchi Disc reading:	3.5 m	3.7 m	5.5 m	5.1 m

Depth (m)

Depth (m)	July 17, 1967	Aug. 26, 1967	Sep. 24, 1967	Oct. 22, 1967
43	4.8	5.0	5.7	7.1
44	4.8	5.0	5.7	6.5
45	4.8	5.0	5.7	6.2
46	4.8	5.0	5.7	6.1
47	4.7	5.0	5.7	6.1
48	4.7	5.0	5.7	6.0
49	4.7	5.0	5.7	5.9
50	4.7	5.0	5.7	5.8
51	4.7	5.0	5.7	5.5
52	4.7	5.0	5.7	5.5
53	4.7	5.0	5.7	5.4
54	4.7	5.0	5.7	5.4
55	4.7	5.0	5.7	5.4
56	4.7	5.0	5.7	5.3
57	4.7	5.0	5.7	5.3
58	4.7	5.0	5.6	5.3
59	4.7	5.0	5.6	5.3
60	4.6	5.0	5.6	5.3
61	4.6	5.0	5.6	5.3
62	4.6	5.0	5.6	
63	4.6	5.0	5.6	
64	4.6	5.0	5.6	
65	4.6	4.9	5.6	
66	4.6	4.9	5.6	
67	4.6	4.9	5.6	
68	4.6	4.9		
69	4.6	4.9		
70	4.6	4.9		
71	4.6	4.9		
72	4.6	4.9		
73	4.6	4.9		
74	4.6	4.9		
75	4.6	4.9		
76	4.6	4.8		
77	4.6	4.8		
78	4.6	4.8		
79	4.6	4.8		
80	4.6	4.8		

Table 7. Temperatures (°C) at 1-metre depth intervals, by date at Station 7.

Date:	July 16, 1967	Aug. 24, 1967	Sept. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	5/10	5/10	10/10
Secchi Disc reading:	4.0 m	4.2 m	5.2 m	5.0 m
<u>Depth (m)</u>				
Surface	15.0	17.4	11.4	7.9
1	14.7	17.3	11.3	7.9
2	14.7	17.2	11.3	7.9
3	14.4	17.1	11.2	7.9
4	13.8	17.1	11.2	7.9
5	11.8	17.0	11.1	7.9
6	11.4	16.9	11.1	7.9
7	11.2	16.8	11.1	7.9
8	10.8	16.8	11.0	7.9
9	9.4	16.7	10.7	7.9
10	9.3	15.7	10.7	7.9
11	8.7	14.4	10.7	7.9
12	8.1	13.5	9.7	8.0
13	7.7	12.3	9.5	8.0
14	7.2	10.8	9.1	8.0
15	6.6	10.0	8.4	7.8
16	6.2	9.6	8.1	7.8
17	6.0	8.9	7.6	7.6
18	5.9	8.1	7.6	7.3
19	5.7	7.5	7.4	7.1
20	5.6	7.0	7.3	6.8
21	5.4	6.5	7.2	6.7
22	5.3	6.3	7.1	6.5
23	5.2	6.1	7.1	6.4
24	5.1	5.9	7.0	6.4
25	5.1	5.9	6.9	6.4
26	5.1	5.8	6.7	6.4
27	5.1	5.7	6.7	6.2
28	5.1	5.7	6.6	6.1
29	5.1	5.6	6.5	5.9
30	5.1	5.6	6.5	5.9
31	5.0	5.5	6.5	5.8
32	5.0	5.5	6.5	5.7
33	5.0	5.4	6.4	5.6
34	5.0	5.4	6.4	5.6
35	5.0	5.4	6.3	5.5
36	5.0	5.3	6.3	5.5
37	4.8	5.3	6.3	5.5
38	4.8	5.3	6.3	5.5
39	4.8	5.2	6.3	5.5
40	4.8	5.2	6.2	5.5
41	4.8	5.2	6.2	5.5
42	4.7	5.2	6.2	5.5

continued.....

Station 7 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sept. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	5.10	5/10	10/10
Secchi Disc reading:	4.0 m	4.2 m	5.2 m	5.0 m

Depth (m)

Depth (m)	July 16, 1967	Aug. 24, 1967	Sept. 24, 1967	Oct. 21, 1967
43	4.7	5.2	6.2	5.4
44	4.7	5.2	6.2	5.4
45	4.7	5.2	6.2	5.4
46	4.7	5.2	6.1	5.4
47	4.7	5.1	6.1	5.4
48	4.7	5.1	6.1	5.4
49	4.7	5.1	6.1	5.3
50	4.6	5.1	6.1	5.3
51	4.6	5.1	6.1	5.3
52	4.6	5.1	6.1	5.3
53	4.6	5.1	6.1	5.3
54	4.6	5.1	6.0	5.3
55	4.6	5.0	6.0	5.2
56	4.6	5.0	6.0	5.2
57	4.6	5.0	6.0	5.2
58	4.6	5.0		5.2
59	4.6	5.0		
60	4.6	5.0		
61	4.6	5.0		
62	4.6	5.0		
63	4.6	5.0		
64	4.6	5.0		
65	4.6	5.0		
66	4.6	5.0		
67	4.6	5.0		
68	4.6	5.0		
69	4.6	5.0		
70	4.6	5.0		
71	4.6	5.0		
72	4.6	5.0		
73	4.6	5.0		
74	4.6	5.0		
75	4.6	5.0		
76	4.6	5.0		
77	4.6	5.0		
78	4.6	5.0		
79	4.6	5.0		
80	4.6	5.0		

Table 8. Temperatures (°C) at 1-metre depth intervals, by date at Station 8.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	5/10	6/10	10/10
Secchi disc reading:	4.0 m	3.4 m	4.0 m	5.5 m
<u>Depth (m)</u>				
Surface	16.1	17.1	13.0	7.3
1	15.1	17.0	13.0	7.3
2	15.0	17.0	12.9	7.3
3	14.3	16.9	12.9	7.3
4	13.8	16.8	12.9	7.3
5	13.1	16.7	12.9	7.3
6	12.8	16.5	12.7	7.3
7	12.5	16.5	12.0	7.3
8	12.3	16.4	11.7	7.3
9	12.0	16.4	11.2	7.3
10	11.7	15.4	11.1	7.3
11	11.6	14.8	11.0	7.3
12	11.3	14.0	9.0	7.3
13	11.1	12.4	8.4	7.3
14	10.2	11.7	7.2	7.3
15	9.4	11.1	7.1	7.2
16	8.3	10.2	7.0	7.2
17	7.3	10.0	6.9	7.1
18	6.9	9.0	6.8	7.1
19	6.8	8.6	6.8	7.0
20	6.4	7.8	6.7	6.8
21	5.9	7.5	6.7	6.7
22	5.6	7.2	6.6	6.6
23	5.4	6.9	6.6	6.5
24	5.2	6.4	6.5	6.3
25	5.1	6.2	6.4	6.2
26	5.1	6.1	6.3	6.0
27	5.0	6.1	6.3	5.8
28	5.0	6.0	6.3	5.8
29	5.0	6.0	6.2	5.7
30	5.0	6.0	6.2	5.7
31	5.0	5.9	6.2	5.6
32	4.8	5.9	6.1	5.5
33	4.8	5.9	6.1	5.5
34	4.8	5.8	6.1	5.4
35	4.8	5.8	6.0	5.4
36	4.8	5.7	6.0	5.4
37	4.8	5.6	6.0	5.4
38	4.8	5.6	6.0	5.3
39	4.8	5.6	6.0	5.3
40	4.8	5.5	6.0	5.3
41	4.8	5.5	6.0	5.2
42	4.8	5.5	6.0	5.2

continued.....

Station 8 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	5/10	6/10	10/10
Secchi Disc reading:	4.0 m	3.4 m	4.0 m	5.5 m

Depth (m)	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
43	4.7	5.4	6.0	5.2
44	4.6	5.3	6.0	5.2
45	4.6	5.2	6.0	5.2
46	4.6	5.2	5.9	5.2
47	4.6	5.2	5.9	5.2
48	4.6	5.1	5.9	5.1
49	4.6	5.1	5.9	5.1
50	4.5	5.1	5.9	5.1
51	4.4	5.0	5.9	5.0
52	4.4	5.0	5.9	5.0
53	4.4	5.0	5.9	5.0
54	4.4	5.0	5.9	5.0
55	4.4	5.0	5.9	5.0
56	4.4	5.0	5.9	5.0
57	4.4	5.0	5.9	5.0
58	4.4	5.0	5.9	5.0
59	4.4	5.0	5.9	5.0
60	4.4	5.0	5.9	5.0
61	4.4	5.0	5.9	5.0
62	4.4	5.0	5.9	5.0
63	4.4	5.0	5.9	5.0
64	4.4	5.0	5.9	5.0
65	4.4	5.0	5.9	5.0
66	4.4	5.0	5.9	5.0
67	4.4	5.0	5.9	5.0
68	4.4	5.0	5.9	5.0
69	4.4	5.0	5.9	5.0
70	4.4	5.0	5.9	5.0
71	4.4	5.0	5.9	5.0
72	4.4	5.0	5.9	5.0
73	4.4	5.0	5.9	5.0
74	4.4	5.0	5.9	5.0
75	4.4	5.0	5.9	5.0
76	4.4	5.0	5.9	5.0
77	4.4	5.0	5.9	5.0
78	4.4	5.0	5.9	5.0
79	4.4	5.0	5.9	5.0
80	4.4	5.0	5.9	5.0

Table 9. Temperatures (°C) at 1-metre depth intervals, by date at Station 9.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	6/10	6/10	10/10
Secchi Disc reading:	4.0 m	4.2 m	5.6 m	5.3 m
<u>Depth (m)</u>				
Surface	15.9	17.0	13.1	7.7
1	15.1	16.9	12.8	7.7
2	14.8	16.7	12.7	7.7
3	14.7	16.6	12.6	7.7
4	14.6	16.5	12.5	7.7
5	14.5	16.4	12.5	7.7
6	14.3	15.6	12.4	7.7
7	14.2	14.6	12.3	7.7
8	13.8	12.0	11.7	7.7
9	12.9	10.7	11.5	7.7
10	12.7	10.1	11.3	7.7
11	11.9	9.3	11.1	7.1
12	11.5	8.5	11.0	7.1
13	10.7	7.8	10.7	7.1
14	10.5	7.7	10.4	7.1
15	9.3	7.2	10.3	7.1
16	8.7	6.7	10.3	7.1
17	7.9	6.3	10.0	7.5
18	7.8	6.3	9.7	7.5
19	7.7	6.3	9.0	7.5
20	7.6	5.8	8.7	7.4
21	7.0	5.8	8.4	7.2
22	6.7	5.7	7.8	7.2
23	6.4	5.6	7.6	7.2
24	5.9	5.5	7.4	7.2
25	5.6	5.5	7.2	7.1
26	5.2	5.4	7.1	7.1
27	5.1	5.4	7.1	7.1
28	5.1	5.3	7.0	7.1
29	5.1	5.3	6.9	7.0
30	5.0	5.3	6.8	7.0
31	5.0	5.3	6.7	7.0
32	5.0	5.3	6.6	7.0
33	5.0	5.3	6.4	6.9
34	5.0	5.3	6.3	6.8
35	5.0	5.2	6.3	6.7
36	4.9	5.2	6.3	6.6
37	4.8	5.2	6.2	6.6
38	4.8	5.2	6.2	6.5
39	4.7	5.2	6.1	6.5
40	4.7	5.2	6.0	6.5
41	4.7	5.2	5.8	6.4
42	4.7	5.1	5.8	6.4

continued.....

Station 9 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
Cloud cover:	7/10	6/10	6/10	10/10
Secchi disc reading:	4.0 m	4.2 m	5.6 m	5.3 m

Depth (m)	July 16, 1967	Aug. 24, 1967	Sep. 24, 1967	Oct. 21, 1967
43	4.6	5.1	5.8	6.4
44	4.6	5.1	5.8	6.4
45	4.6	5.1	5.8	6.4
46	4.6	5.1	5.7	5.9
47	4.6	5.0	5.7	5.9
48	4.6	5.0	5.7	5.8
49	4.5	5.0	5.6	5.8
50	4.4	5.0	5.6	5.6
51	4.4	5.0	5.6	5.6
52	4.4	5.0	5.6	5.5
53	4.4	5.0	5.5	5.5
54	4.4	5.0	5.5	5.3
55	4.3	5.0	5.5	5.1
56	4.3	5.0	5.5	5.1
57	4.3	5.0	5.4	5.0
58	4.3	4.9	5.4	5.0
59	4.3	4.9	5.4	
60	4.3	4.9	5.4	
61	4.3	4.9	5.4	
62	4.3	4.9	5.3	
63	4.3	4.9	5.3	
64	4.3	4.9	5.3	
65	4.3	4.9	5.2	
66	4.3	4.9	5.2	
67	4.3	4.8	5.2	
68	4.3	4.7	5.2	
69	4.3	4.8	5.2	
70	4.3	4.8	5.2	
71	4.3	4.8	5.2	
72	4.3	4.8	5.2	
73	4.3	4.8	5.2	
74	4.3	4.8	5.2	
75	4.3	4.8	5.2	
76	4.3	4.8	5.2	
77	4.3	4.8	5.2	
78	4.3	Bottom	5.2	
79	4.2		5.2	
80	4.2		5.2	

Table 10. Temperatures (°C) at 1-metre depth intervals, by date at Station 10.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	7/10	7/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.3 m	5.3 m	5.3 m
<u>Depth (m)</u>				
Surface	15.1	16.4	13.1	7.5
1	15.0	16.3	12.7	7.5
2	14.7	16.1	12.6	7.5
3	14.4	15.8	12.5	7.5
4	14.3	14.6	12.5	7.5
5	13.8	13.8	12.4	7.5
6	13.7	12.8	12.3	7.5
7	13.7	12.4	12.2	7.5
8	13.0	11.9	12.0	7.5
9	11.7	10.7	11.9	7.4
10	11.5	9.7	11.5	7.4
11	11.2	8.5	10.3	7.4
12	10.8	7.8	9.6	7.4
13	10.4	7.4	9.1	7.3
14	9.7	6.8	8.7	7.3
15	8.9	6.6	8.4	7.2
16	8.3	6.1	8.0	7.2
17	7.7	6.0	7.7	7.2
18	7.3	5.7	7.2	7.2
19	7.2	5.5	7.0	7.2
20	7.0	5.4	7.0	7.2
21	6.6	5.4	6.9	7.2
22	6.5	5.4	6.8	7.2
23	6.5	5.4	6.8	7.0
24	6.5	5.4	6.7	6.8
25	6.4	5.4	6.6	6.8
26	6.3	5.3	6.5	6.6
27	5.9	5.3	6.4	6.6
28	5.7	5.3	6.4	6.6
29	5.7	5.3	6.3	6.5
30	5.6	5.3	6.3	6.5
31	5.6	5.3	6.3	6.2
32	5.5	5.3	6.2	6.2
33	5.3	5.3	6.2	6.0
34	5.2	5.3	6.2	6.0
35	5.1	5.3	6.2	6.0
36	5.1	5.3	6.2	6.0
37	5.0	5.3	6.2	5.9
38	5.0	5.2	6.0	5.9
39	5.0	5.2	5.9	5.9
40	5.0	5.2	5.9	5.8
41	5.0	5.2	5.8	5.8
42	5.0	5.2	5.8	5.7

continued.....

Station 10 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	7/10	7/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.3 m	5.3 m	5.3 m
Depth (m)				
43	4.8	5.2	5.7	5.7
44	4.8	5.2	5.7	5.6
45	4.8	5.2	5.6	5.6
46	4.7	5.2	5.6	5.6
47	4.7	5.2	5.5	5.5
48	4.7	5.2	5.5	5.5
49	4.6	5.2	5.5	5.5
50	4.6	5.1	5.5	5.4
51	4.6	5.1	5.5	5.4
52	4.6	5.1	5.5	5.3
53	4.6	5.1	5.5	5.3
54	4.6	5.1	5.4	5.2
55	4.6	5.1	5.4	5.2
56	4.6	5.1	5.4	5.2
57	4.6	5.1	5.4	5.2
58	4.5	5.1	5.4	5.2
59	4.4	5.1	5.4	5.1
60	4.4	5.0	5.4	5.1
61	4.4	5.0	5.4	
62	4.4	5.0	5.3	
63	4.3	5.0	5.3	
64	4.3	5.0	5.3	
65	4.3	5.0	5.3	
66	4.3	5.0	5.3	
67	4.2	5.0	5.3	
68	4.2	5.0	5.3	
69	4.2	5.0	5.2	
70	4.2	5.0	5.2	
71	4.2	5.0	5.2	
72	4.2	4.9	5.2	
73	4.2	4.9	5.2	
74	4.2	4.9	5.2	
75	4.2	4.9	5.2	
76	4.2	4.9	5.2	
77	4.2	4.9	5.2	
78	4.2	4.9	5.2	
79	4.2	4.9	5.2	
80	4.2	4.9	5.2	

Table 11. Temperatures (°C) at 1-metre depth intervals, by date at Station 11.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.2 m	5.0 m	5.7 m
<u>Depth (m)</u>				
Surface	14.6	16.9	12.7	6.7
1	14.4	16.7	12.7	6.7
2	14.2	16.6	12.6	6.7
3	13.8	16.6	12.3	6.7
4	13.2	16.7	12.2	6.7
5	13.0	16.5	12.2	6.7
6	12.6	16.5	12.1	6.7
7	12.4	16.5	12.1	6.7
8	12.4	16.3	11.9	6.7
9	12.3	16.1	11.9	6.7
10	11.1	15.3	11.7	6.5
11	10.7	15.0	11.3	6.4
12	10.4	15.0	11.1	6.3
13	9.9	13.9	10.5	6.3
14	9.8	13.4	10.4	6.3
15	8.9	13.1	10.2	6.3
16	8.4	12.9	9.7	6.3
17	7.5	12.8	9.1	6.2
18	7.0	12.5	8.4	6.2
19	6.7	12.1	8.0	6.1
20	6.2	11.3	7.8	6.1
21	6.1	10.8	7.4	6.0
22	5.9	10.0	7.0	6.0
23	5.6	8.1	6.6	5.9
24	5.2	7.6	6.2	5.9
25	5.1	6.9	6.2	5.9
26	5.1	6.6	6.1	5.8
27	5.1	6.4	6.0	5.6
28	5.0	6.1	5.9	5.6
29	4.8	6.0	5.8	5.6
30	4.6	5.8	5.7	5.5
31	4.6	5.7	5.6	5.5
32	4.4	5.7	5.6	5.5
33	4.3	5.7	5.6	5.5
34	4.3	5.6	5.6	5.4
35	4.3	5.6	5.6	5.4
36	4.2	5.6	5.6	5.4
37	4.2	5.6	5.5	5.4
38	4.2	5.5	5.4	5.3
39	4.2	5.5	5.4	5.3
40	4.1	5.4	5.4	5.2
41	3.9	5.3	5.3	5.2
42	3.9	5.3	5.3	5.2

Continued

Station 11 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.2 m	5.0 m	5.7 m

Depth (m)

Depth (m)	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
43	3.9	5.3	5.3	5.2
44	3.8	5.2	5.3	5.1
45	3.8	5.2	5.3	5.1
46	3.8	5.2	5.3	5.1
47	3.8	5.2	5.2	5.0
48		5.1	5.2	5.0
49		5.1	5.2	5.0
50		5.1	5.2	5.0
51		5.1	5.2	5.0
52		5.1	5.2	4.9
53		5.1	5.2	4.9
54		5.1	5.2	4.9
55		5.1	5.2	4.9
56		5.1	5.2	4.8
57		5.0	5.2	4.8
58		5.0	5.1	4.8
59		5.0	5.1	4.8
60		5.0	5.0	4.8
61		5.0	5.0	
62		5.0	5.0	
63		5.0	4.9	
64		5.0	4.9	
65		5.0	4.9	
66		5.0	4.9	
67		5.0	4.9	
68		5.0	4.9	
69		5.0	4.9	
70		5.0	4.9	
71		5.0	4.9	
72		5.0	4.9	
73		4.9	4.8	
74		4.9	4.8	
75		4.9	4.8	
76		4.9	4.8	
77		4.9	4.8	
78		4.9	4.8	
79		4.9	4.8	
80		4.9	4.8	

Table 12. Temperatures (°C) at 1-metre depth intervals, by date at Station 12.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	7/10	10/10
Secchi Disc reading:	5.0 m	3.8 m	4.5 m	5.5 m
Depth (m)				
Surface	15.1	16.8	12.7	6.9
1	15.0	16.5	12.4	6.9
2	15.0	16.5	12.3	6.9
3	14.6	16.5	12.2	6.9
4	14.3	16.5	12.1	6.9
5	14.2	16.5	12.1	6.9
6	14.1	16.4	12.1	6.9
7	13.9	16.4	12.0	6.9
8	13.5	16.0	12.0	6.9
9	12.8	15.0	12.0	6.9
10	11.9	12.8	12.0	6.9
11	11.2	12.5	12.0	6.9
12	8.7	12.5	11.9	6.9
13	7.6	11.5	11.7	6.9
14	7.3	10.5	11.5	6.9
15	7.1	9.2	11.4	6.9
16	6.8	8.7	11.0	6.9
17	6.6	8.1	10.5	6.8
18	6.2	7.2	9.7	6.8
19	6.0	6.9	9.3	6.8
20	5.7	6.6	8.4	6.8
21	5.4	6.5	8.1	6.7
22	5.4	6.3	7.8	6.6
23	5.3	6.3	7.5	6.5
24	5.3	6.2	7.1	6.4
25	5.2	6.1	7.0	6.4
26	5.1	6.0	6.7	6.4
27	5.0	5.8	6.5	6.4
28	5.0	5.7	6.4	6.4
29	4.9	5.7	6.3	6.4
30	4.7	5.7	6.0	6.3
31	4.7	5.6	5.9	6.3
32	4.7	5.6	5.8	6.3
33	4.7	5.6	5.7	6.3
34	4.6	5.6	5.6	6.2
35	4.6	5.6	5.5	6.2
36	4.6	5.5	5.5	6.2
37	4.4	5.5	5.5	6.2
38	4.4	5.5	5.5	6.0
39	4.4	5.5	5.5	6.0
40	4.4	5.4	5.4	6.0
41	4.3	5.4	5.4	5.8
42	4.3	5.4	5.3	5.8

Continued

Station 12 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	9/10	8/10	7/10	10/10
Secchi Disc reading:	5.0 m	3.8 m	4.5 m	5.5 m

Depth (m)	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
43	4.3	5.4	5.3	5.8
44	4.3	5.3	5.3	5.6
45	4.2	5.3	5.3	5.5
46	4.2	5.3	5.2	5.5
47	4.2	5.3	5.2	5.4
48	4.2	5.3	5.2	5.4
49	4.1	5.3	5.2	5.3
50	4.1	5.2	5.2	5.3
51	4.1	5.2	5.2	5.2
52	4.0	5.2	5.2	5.2
53	4.0	5.2	5.2	5.2
54	3.9	5.2	5.2	5.2
55	3.9	5.2	5.2	5.1
56	3.9	5.2	5.2	5.1
57	3.9	5.2	5.1	5.1
58	3.9	5.2	5.1	5.0
59		5.2	5.1	5.0
60		5.2	5.0	5.0
61		5.2	5.0	
62		5.1	5.0	
63		5.1	4.9	
64		5.1	4.9	
65		5.1	4.9	
66		5.1	4.9	
67		5.1	4.9	
68		5.1	4.9	
69		5.0	4.9	
70		5.0	4.9	
71		5.0	4.9	
72		5.0	4.9	
73		5.0	4.9	
74		5.0	4.9	
75		5.0	4.9	
76		5.0	4.9	
77		5.0	4.9	
78		5.0	4.9	
79		5.0	4.9	
80		4.9	4.9	

Table 13. Temperatures (°C) at 1-metre depth intervals, by date at Station 13.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	7/10	8/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.1 m	4.4 m	6.2 m
<hr/>				
<u>Depth (m)</u>				
Surface	15.2	17.6	13.3	6.6
1	15.2	17.5	12.4	6.6
2	15.0	17.5	12.1	6.6
3	14.4	17.4	11.9	6.6
4	14.4	17.3	11.7	6.6
5	14.3	17.2	11.6	6.6
6	14.3	17.1	11.6	6.6
7	14.3	16.9	11.6	6.6
8	12.6	16.9	11.6	6.6
9	10.9	16.9	11.6	6.6
10	9.7	16.9	11.6	6.6
11	8.2	16.9	11.6	6.6
12	7.4	16.8	11.6	6.6
13	6.9	16.7	11.6	6.6
14	6.6	16.4	11.6	6.6
15	6.5	16.2	11.6	6.6
16	6.3	15.2	11.6	6.6
17	6.0	15.0	11.6	6.6
18	5.7	14.9	11.5	6.6
19	5.5	14.7	11.2	6.6
20	5.3	11.8	11.2	6.6
21	5.1	10.2	9.6	6.6
22	5.0	9.9	8.7	6.6
23	5.0	8.3	7.7	6.6
24	5.0	7.9	7.4	6.6
25	5.0	7.7	7.3	6.6
26	5.0	7.5	7.3	6.6
27	4.8	7.3	7.2	6.6
28	4.7	7.0	7.2	6.6
29	4.6	6.8	6.9	6.6
30	4.4	6.7	6.8	6.6
31	4.3	6.5	6.4	6.6
32	4.2	6.4	6.4	6.5
33	4.1	6.3	6.4	6.5
34	3.9	6.1	6.4	6.5
35	3.8	6.0	6.3	6.5
36	3.8	6.0	6.0	6.5
37	3.8	6.0	5.8	6.5
38		5.9	5.7	6.4
39		5.7	5.7	6.4
40		5.7	5.6	6.2
41		5.5	5.6	6.2
42		5.5	5.6	6.1

continued.....

Station 13 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	7/10	8/10	6/10	10/10
Secchi Disc reading:	4.5 m	4.1 m	4.4 m	6.2 m

Depth (m)

43		5.4	5.6	6.1
44		5.3	5.5	5.7
45		5.3	5.5	5.6
46		5.3	5.4	5.6
47		5.3	5.4	5.5
48		5.2	5.4	5.5
49		5.2	5.3	5.4
50		5.2	5.3	5.4
51		5.2	5.3	5.3
52		5.2	5.3	5.2
53		5.1	5.3	5.2
54		5.1	5.3	5.1
55		5.1	5.2	5.1
56		5.1	5.2	5.1
57		5.1	5.2	5.0
58		5.1	5.2	5.0
59		5.1	5.2	5.0
60		5.0	5.2	5.0
61		5.0	5.2	
62		5.0	5.2	
63		5.0	5.2	
64		5.0	5.2	
65		5.0	5.2	
66		5.0	5.2	
67		5.0	5.2	
68		5.0	5.2	
69		5.0	5.1	
70		5.0	5.1	
71		5.0	5.1	
72		5.0	5.1	
73		5.0	5.1	
74		5.0	4.9	
75		5.0	4.9	
76		5.0	4.9	
77		5.0	4.9	
78		5.0	4.9	
79		5.0	4.9	
80		5.0	4.9	

Table 14. Temperatures (°C) at 1-metre depth intervals, by date at Station 14.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	4/10	6/10	6/10	10/10
Secchi Disc reading:	4.5 m	3.8 m	4.0 m	6.2 m
<u>Depth (m)</u>				
Surface	16.2	18.5	14.4	6.5
1	16.2	18.4	13.1	6.5
2	15.9	18.0	12.9	6.5
3	15.5	17.9	12.9	6.5
4	15.3	17.9	12.8	6.5
5	12.7	18.3	12.6	6.5
6	12.2	18.5	12.6	6.5
7	11.7	18.3	12.6	6.5
8	11.4	18.0	12.6	6.5
9	9.4	18.0	12.6	6.5
10	8.4	18.0	12.6	6.5
11	7.7	17.9	12.5	6.5
12	6.9	17.9	12.5	6.5
13	6.6	17.8	12.5	6.5
14	6.1	17.8	12.0	6.5
15	6.0	17.8	12.0	6.5
16	5.9	17.8	11.6	6.5
17	5.9	17.7	9.6	6.4
18	5.7	17.5	8.4	6.4
19	5.4	17.2	8.2	6.4
20	5.2	17.2	8.0	6.4
21	5.0	16.8	7.8	6.4
22	5.0	11.8	7.6	6.4
23	5.0	8.3	7.4	6.4
24	4.8	7.8	7.2	6.4
25	4.7	7.4	7.0	6.4
26	4.4	7.2	6.7	6.4
27	4.3	7.2	6.4	6.4
28	4.0	7.0	6.2	6.4
29	3.9	6.9	6.1	6.4
30	3.9	6.7	6.0	6.4
31	3.9	6.5	5.9	6.4
32	3.9	6.4	5.9	6.4
33		6.3	5.7	6.4
34		6.2	5.7	6.4
35		5.9	5.7	6.4
36		5.9	5.7	6.4
37		5.8	5.6	6.4
38		5.8	5.6	6.4
39		5.8	5.6	6.4
40		5.7	5.5	6.4
41		5.7	5.4	6.4
42		5.6	5.4	6.4

continued.....

Station 14 - cont'd.

Date:	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
Cloud cover:	4/10	6/10	6/10	10/10
Secchi Disc reading:	4.5 m	3.8 m	4.0 m	6.2 m

Depth (m)	July 16, 1967	Aug. 24, 1967	Sep. 26, 1967	Oct. 21, 1967
43	4.4	5.6	5.4	6.3
44	4.1	5.5	5.4	6.3
45	4.5	5.4	5.3	6.3
46	4.5	5.4	5.3	6.2
47	4.5	5.4	5.3	6.2
48	4.5	5.3	5.3	6.2
49	4.5	5.3	5.3	6.2
50	4.5	5.3	5.3	6.2
51	4.5	5.3	5.2	6.2
52	4.5	5.3	5.2	6.2
53	4.5	5.3	5.2	6.1
54	4.5	5.3	5.2	6.1
55	4.5	5.3	5.2	6.1
56	4.5	5.3	5.2	6.0
57	4.5	5.2	5.2	6.0
58	4.5	5.2	5.2	6.0
59	4.5	5.2	5.2	5.9
60	4.5	5.2	5.2	5.9
61	4.5	5.2	5.2	5.9
62	4.5	5.2	5.2	5.8
63	4.5	5.2	5.2	5.8
64	4.5	5.2	5.2	5.8
65	4.5	5.2	5.2	5.6
66	4.5	5.2	5.2	5.6
67	4.5	5.2	5.2	5.6
68	4.5	5.2	5.1	5.6
69	4.5	5.2	5.1	5.5
70	4.5	5.2	5.1	5.5
71	4.5	5.2	5.1	5.5
72	4.5	5.2	5.1	5.5
73	4.5	5.2	5.1	5.4
74	4.5	5.2	5.1	5.4
75	4.5	5.1	5.1	5.3
76	4.5	5.1	5.1	5.3
77	4.5	5.1	5.0	5.3
78	4.5	5.1	5.0	5.2
79	4.5	5.1	5.0	5.2
80	4.5	5.1	5.0	5.2