

BRISTOL BAY OCEANOGRAPHY

AUGUST-SEPTEMBER, 1938

Marine Biological Laboratory
STATION
JULY 1959
WOODS HOLE, MASS.



SPECIAL SCIENTIFIC REPORT-FISHERIES No. 311

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

SPECIAL NOTE

The International North Pacific Fisheries Commission, established in 1953 by the International Convention for the High Seas Fisheries of the North Pacific Ocean, coordinates the research of the member nations: Japan, Canada, and the United States. The resulting investigations provide data to the Commission for use in carrying out its duties in connection with fishery conservation problems in the North Pacific Ocean. Publication of this scientific report has been approved by the United States Section of the Commission.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

BRISTOL BAY OCEANOGRAPHY, AUGUST-SEPTEMBER 1938

by

Felix Favorite, Oceanographer, and
Glenn Pedersen, Editorial Writer
Bureau of Commercial Fisheries

Contribution No. 11 to research conducted with
the approval of the United States Section of the
International North Pacific Fisheries Commission.



United States Fish and Wildlife Service
Special Scientific Report--Fisheries No. 311

Washington, D. C.
August 1959

TABLE OF CONTENTS

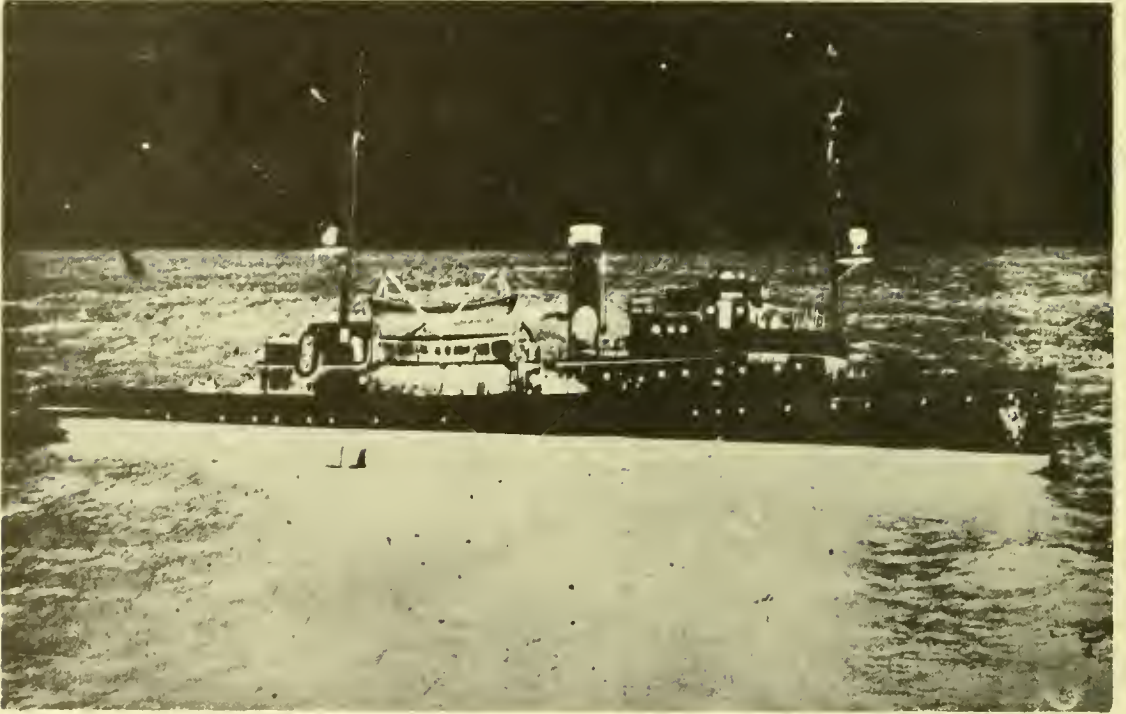
	<u>Page</u>
Introduction	1
Personnel and vessel	1
Observations	
Stations	2
Hydrographic casts	3
Bottom samples	3
Current measurements	3
Notes on tabulated data	3

TABLES

Station data	8
Current measurements	29

FIGURES

<u>No.</u>		
1	Station plan, 1938	2
2	Sketch of a modified Ekman dredge	3
3	Horizontal contours of surface and bottom temperatures, Bristol Bay, August 1938	5
4	Horizontal contours of surface and bottom temperatures, Bristol Bay, September 1938	5
5	Horizontal contours of surface and bottom salinities, Bristol Bay, August 1938	6
6	Horizontal contours of surface and bottom salinities, Bristol Bay, September 1938	6
7	Vertical profiles of salinity and density from Cape Seniavin to Cape Newenham	7
8	Vertical profiles of salinity and density seaward from Cape Chichagof	7



U. S. Coast Guard Tug Redwing

BRISTOL BAY OCEANOGRAPHY, AUGUST-SEPTEMBER 1938

by

Felix Favorite and Glenn Pedersen
U. S. Fish and Wildlife Service
Seattle, Washington

ABSTRACT

Oceanographic observations tabulated from the files of the U. S. Fish and Wildlife Service and from the official logs of the U. S. Coast Guard Tug Redwing present values of temperature, salinity, density, dynamic heights, and dissolved oxygen at 128 stations, current measurements at 29 stations including 4 tidal cycles, and descriptions of the bottom from samples at 56 stations. Several horizontal and vertical sections of temperature, salinity, and density have been constructed to show the gross features of the oceanographic conditions in the eastern section of Bristol Bay, Alaska.

INTRODUCTION

This report supplements current investigations of the distribution and migration of salmon in the North Pacific Ocean and the Bering Sea. Data from the field logs kept during the oceanographic work of the Bureau of Fisheries in Bristol Bay in August and September 1938 have been analyzed and tabulated. The results of exploratory fishing in the area during 1939-41 have been published by Barnaby ^{1/}.

The 1938 oceanographic studies using State Department funds were planned to provide information on the movement of salmon in the ocean, but the time available for these studies was limited. Accordingly, since a knowledge of the oceanography of the area was considered essential, an oceanographic data survey was conducted following a program planned by Dr. T. G.

Thompson of the University of Washington. Observations were made aboard the U. S. Coast Guard Tug Redwing equipped to make hydrographic casts, measure currents, and obtain bottom samples.

Grateful acknowledgement is made to the Commandant, U. S. Coast Guard, for loaning the official logs of the U. S. Coast Guard Tug Redwing and to Joseph T. Barnaby of the U. S. Fish and Wildlife Service for describing procedure and details not recorded in the field logs.

PERSONNEL AND VESSEL

Joseph T. Barnaby	Biologist in Charge
John H. Lincoln	Oceanographer
Walter C. Sands	Oceanographer

USCG Tug <u>Redwing</u>	J. A. Fletcher, Lt., USCG, Captain
-------------------------	---------------------------------------

^{1/} Barnaby, Joseph T., 1952. Offshore fishing in Bristol Bay and Bering Sea. U. S. Fish and Wildlife Service, Special Scientific Report--Fisheries No. 89, 30 pp.

The Redwing was a steam-driven vessel with a hull of wood and steel, measuring in length 187 feet 10 inches, beam 35 feet 6 inches, draft 12 feet 4 inches, and displacing 1,210 tons.

OBSERVATIONS

Stations

Sampling stations were located on a grid which covered and surrounded Bristol Bay (fig. 1). The grid was bounded on the northwest by a line between Nunivak Island and the Pribilofs and then generally by the thousand fathom curve to 170° W. north of the Aleutian Chain and to the Shumagin Island area south of the Chain. The grid, composed of 17 perpendicular sections and 20 parallel lines relative to the Chain, would have provided a complete coverage of the area of investigation: the sections, set 20 miles apart, consisted of two rows of stations at 10-mile intervals, the rows also 10 miles apart; the lines were also

set 20 miles apart but consisted of only one row of stations at the same interval.

Although effort was made to occupy the exact locations of the stations as laid out, the almost continuous inclement weather and short working season necessitated many deviations from the original plan. During the 4-week season in 1938, August 6 to September 7, only the first four sections and parts of five of the lines were completed in inner Bristol Bay. Thus, we have renumbered the station positions according to the consecutive hydrographic casts, which maintain the continuity of the oceanographic observations. The Redwing was anchored on nearly every station until August 24 (Station 67); thereafter the vessel drifted during the hydrographic casts.

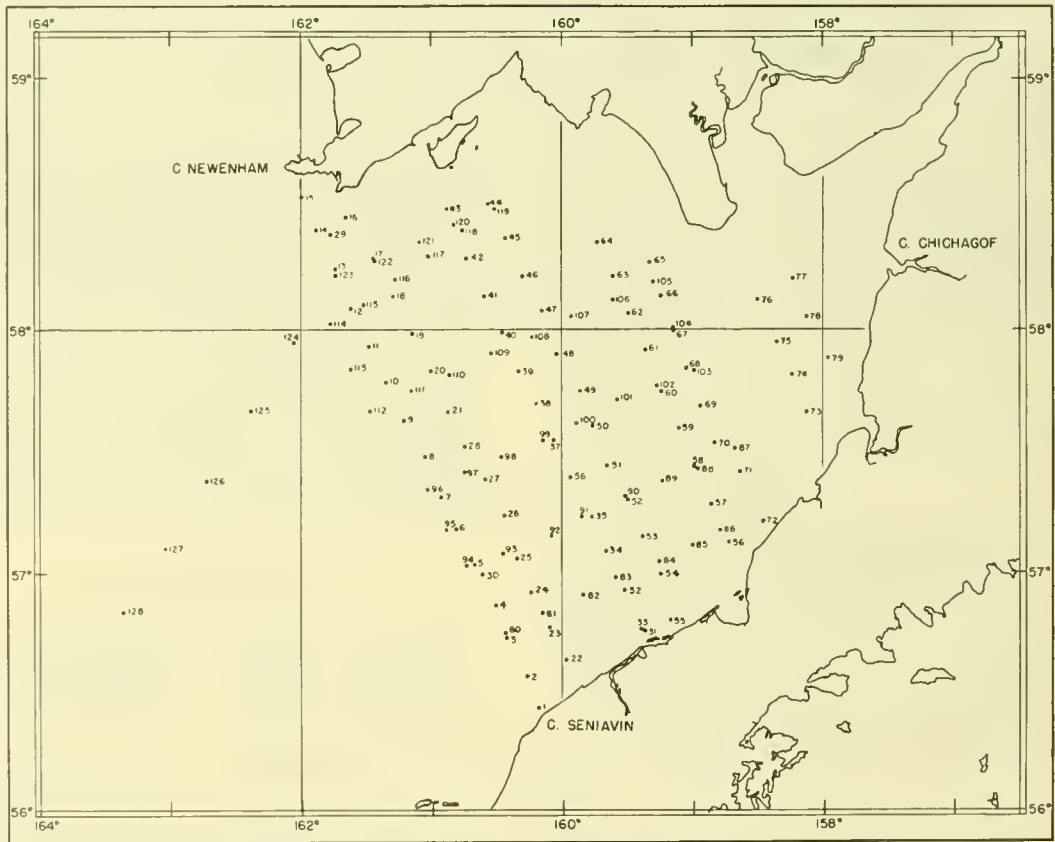


Figure 1. --Station plan, 1938.

At the beginning of the cruise, the sampling routine at each station generally required an hour when all three observations were made: hydrographic cast, current measurement, bottom sampling. Later in the cruise only the hydrocast was taken which reduced the time on each station to about 20 minutes.

Hydrographic Casts

Reversing water bottles were cast at the surface, 5 and 10 meters, and 10-meter intervals thereafter to the bottom; occasionally the final spacing was only 5 meters. Each water bottle carried one protected thermometer.

Samples were drawn for analysis of chlorinity and dissolved oxygen at all depths.

Bottom Samples

Bottom samples were obtained at stations 1-15, 17, 18, 22-28, 30, 31, 46, 47, and 60 with an Ekman dredge modified by adding bars of metal to increase its weight and stability (fig. 2). Descriptions of

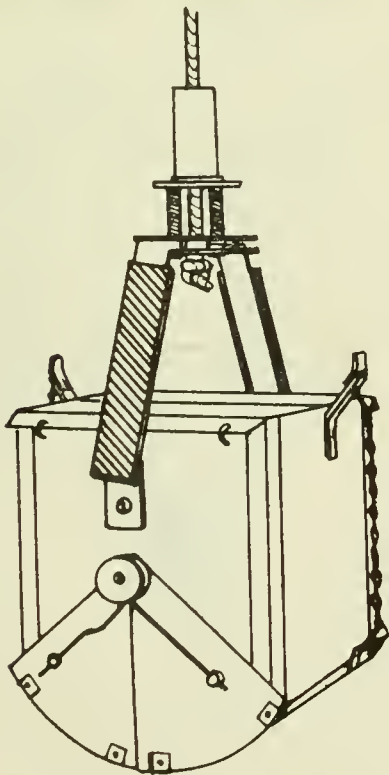


Figure 2. --Sketch of a modified Ekman dredge.

the bottom at these locations are listed under the respective station headings.

Current Measurements

Currents were measured at the surface by drift stick observed from the anchored vessel and at 5 meters and the bottom by Ekman or Gurley-Price current meter at most of the stations from 1 to 33. In addition, weather permitting, measurements were made at approximately 2-hour intervals for partial or complete tidal cycles at stations 11, 29, 30, and 31. Only drift stick observations were made from stations 37 to 66.

Field logs indicated the direction of the current at 5 meters, but these are questionable because of the magnetic influence of the ship's hull. Compass deviations up to 80° were reported when the Ekman meter was held above the water, parallel to the vessel. Conversion from magnetic to true direction was made by applying 19° E. variation.

Some data from the Gurley-Price meter which were recorded as revolutions per minute were converted from a graph of RPM vs velocity constructed from complete experimental data.

NOTES ON TABULATED DATA

Hydrographic Casts

Station description

Position determined by

- (1) Dead reckoning
- (2) Bearings
- (3) Sights within 4 hours

Messenger time and date, GCT

Weather condition

- b blue sky, cloudless
- c cloudy
- d drizzle
- f fog
- m mist
- o overcast
- p passing showers of rain
- r rain
- v variable
- z hazy

Barometer, in inches

Wind

Direction
Force in Beaufort scale

Sea

Direction

Height

0	No swell	}	Calm or light sea
1	Moderate swell		
2	Heavy swell		
3	No swell	}	Moderate sea
4	Moderate swell		
5	Heavy swell		
6	Rather rough sea		
7	Rough sea		
8	Very rough sea		
9	Mountainous sea		

Temperature, in °F

Depth

Bottom

G	gravel
S	sand
crs	coarse
fne	fine
bk	black
gy	grey

Observed Data

Z (m)	Depth in meters
T (°C)	Temperature observed from reversing thermometer
S (‰)	Salinity as defined from chlorinity
O ₂ (mgat/L)	Dissolved oxygen content

Values in parentheses are interpolated.

Computed Data

Calculations were done on an IBM 650, Magnetic Drum Data-Processing Machine, at the computer center of the University of Washington, by using formulas presented in Oceanographic Data Processing by Automatic Methods, U. S. Hydrographic Office, 31 January 1955.

σ_t (g/L) Density, defined by (specific gravity - 1) x 1000, expressed as grams per liter

ΔD (dyn m) Anomaly of dynamic height, in dynamic meters, of the sea surface relative to the indicated depth in meters

Chemistry

Water samples were analyzed for chlorinity by the Knudsen method and dissolved oxygen by the Winkler method.

Current Measurements

* Time of hydrocast indicating the approximate time of current measurement

() Average value: for current direction, the weighted mean as determined by number of pellets in compass box of the current meter, and for speed, the average of the indicated number of observations.

// The number of observations at the indicated depth

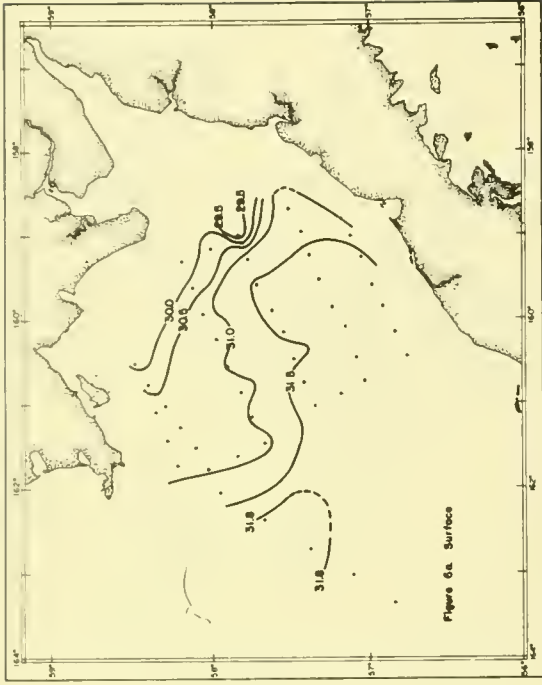
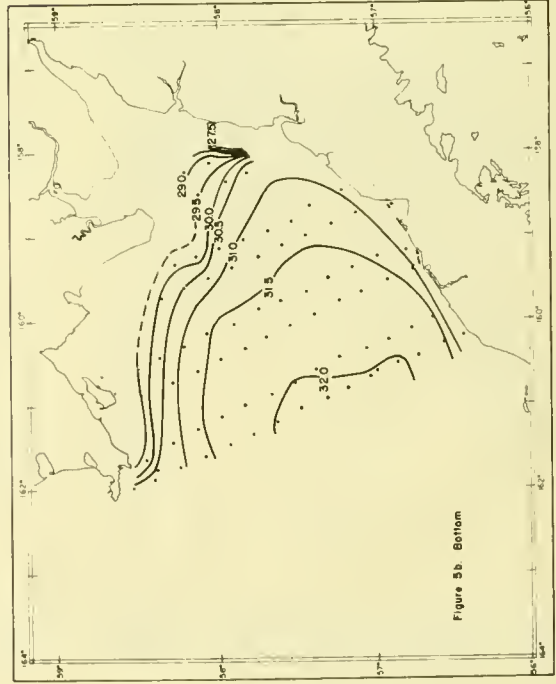


Figure 5. --Horizontal contours of surface and bottom salinities, Bristol Bay, August 1938.

Figure 6. --Horizontal contours of surface and bottom salinities, Bristol Bay, September 1938.

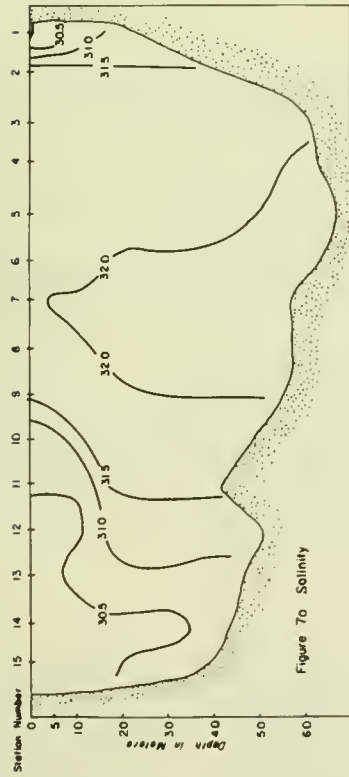


Figure 7a Salinity

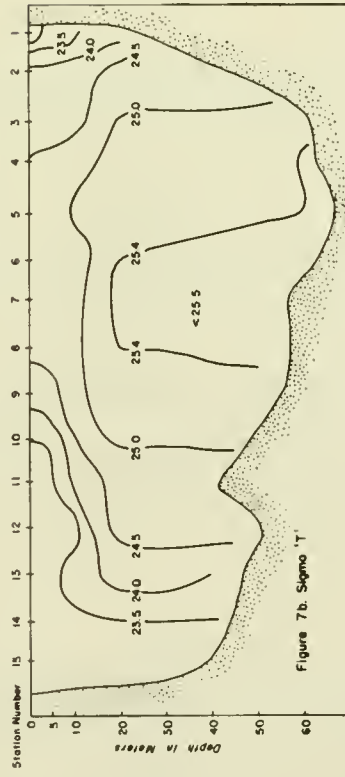


Figure 7b. Sigma 'T'

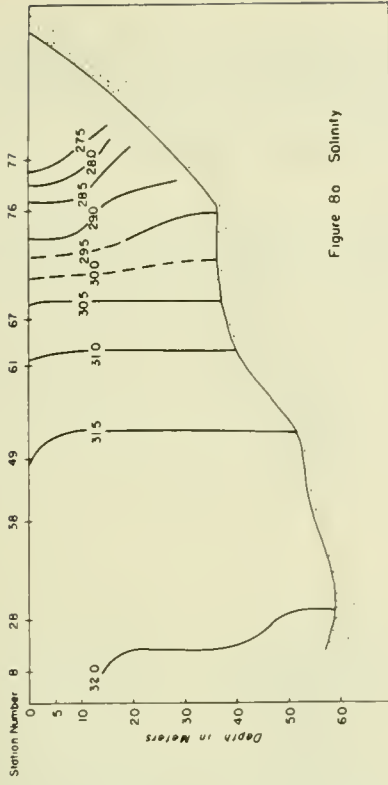


Figure 8a Salinity

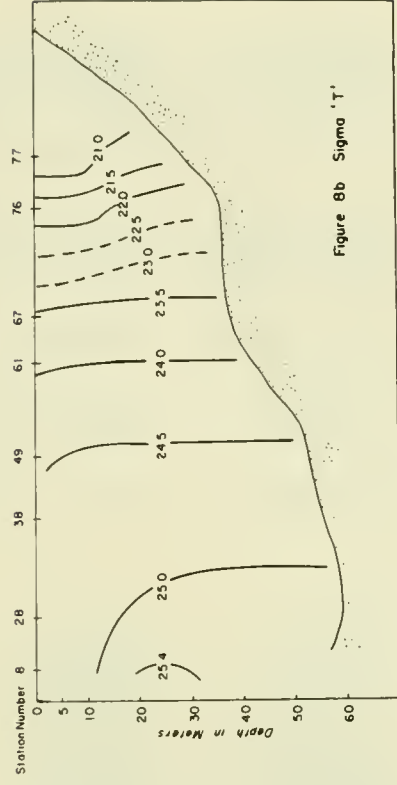


Figure 8b Sigma 'T'

Figure 7. --Vertical profiles of salinity and density from Cape Seniavin to Cape Newenham.

Figure 8. --Vertical profiles of salinity and density seaward from Cape Chichagof.

D A T A

S T A T I O N

STATION DESCRIPTION	H (m)	T (°C)	S (°/∞)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mgat/L)
Station 1 50° 26' N, 160° 11' W (2) 0945 GGT, 7 August 1938 Wea. c Bar. 30.25 Wind 0, m Sea 0 Temp: dry 54, wet --- Depth 21 m., Bottom crs bk S	0 5 10	11.25 10.47 10.17	29.96 30.43 30.53	22.84 23.34 23.46	.000 .024 .046	0.553 0.547 0.538
Station 2 50° 35' N, 160° 17' W (1) 1145 GGT, 7 August 1938 Wea. b, c Bar. 30.26 Wind WSW, 2 Sea W, 1 Temp: dry 52, wet 51 Depth 42.5 m., Bottom crs bk S	0 5 10 20 30 40	11.02 11.07 10.68 8.07 8.05 7.95	31.58 31.60 31.60 31.60 31.60 31.60	24.13 24.14 24.21 24.62 24.62 24.64	.000 .019 .038 .073 .106 .139	0.567 0.564 0.579 0.525 0.520 0.514
Station 3 50° 44' N, 160° 26' W (1) 1415 GGT, 7 August 1938 Wea. c Bar. 30.26 Wind WSW, 2 Sea SW, 1 Temp: dry 52, wet 51 Depth 61 m., Bottom fne gy S	0 5 10 20 30 40 50 55	10.54 10.60 10.42 5.94 5.89 5.86 5.75 5.66	31.73 31.73 31.74 31.78 31.78 31.78 31.78 31.82	24.33 24.32 24.36 25.04 25.05 25.05 25.06 25.11	.000 .018 .036 .069 .098 .127 .136 .171	0.630 0.631 0.632 0.512 0.504 0.500 0.507 0.497
Station 4 50° 53' N, 160° 38' W (2) 1625 GGT, 7 August 1938 Wea. c Bar. 30.27 Wind SW, 2 Sea SW, 1 Temp: dry 52, wet 51 Depth 63 m., Bottom fne gy S	0 5 10 20 30 40 50 60	10.24 10.30 9.01 5.17 4.69 4.59 4.51 4.41	31.89 31.85 31.89 31.91 31.92 31.92 31.94 32.05	24.51 24.47 24.71 25.23 25.29 25.30 25.33 25.43	.000 .017 .034 .064 .091 .118 .145 .171	0.621 0.619 0.656 --- 0.534 --- --- 0.579
Station 5 57° 02' N, 160° 41' W (2) 1905 GGT, 7 August 1938 Wea. c Bar. 30.27 Wind SSW, 2 Sea SW, 1 Temp: dry 54, wet 53 Depth 67 m., Bottom fne gy S	0 5 10 15 20 30 40 50 60	10.19 9.83 6.38 5.29 4.65 4.58 4.42 4.36 4.29	31.83 31.83 31.92 31.94 31.96 31.96 31.98 32.00 32.00	24.47 24.53 25.10 25.24 25.33 25.34 25.37 25.39 25.40	.000 .017 .033 .047 .060 .087 .113 .139 .165	0.618 0.628 0.579 0.541 0.539 0.538 0.541 0.543 0.531
Station 6 57° 11' N, 160° 49' W (3) 2130 GGT, 7 August 1938 Wea. c Bar. 30.29 Wind SSW, 2 Sea SW, 1 Temp: dry 54, wet 53 Depth 64 m., Bottom fne gy S	0 5 10 20 30 40 50 60	10.53 10.57 9.16 4.22 4.20 4.13 4.10	31.87 31.87 31.99 32.01 32.01 32.01 32.01	24.44 24.44 24.69 25.41 25.41 25.42 25.43	.000 .017 .034 .064 .089 .115 .141 .166	0.611 0.609 0.619 0.557 0.560 0.559 0.559 0.546
Station 7 57° 19' N, 160° 56' W (3) 2350 GGT, 7 August 1938 Wea. c Bar. 30.30 Wind SSW, 2 Sea SW, 1 Temp: dry 55, wet 54 Depth 56.5 m., Bottom fne gy S	0 5 10 20 30 40 50	9.86 9.92 8.78 4.16 4.11 4.08 4.07	31.94 32.01 31.98 32.07 32.05 32.09 32.05	24.61 24.66 24.81 25.47 25.46 25.49 25.46	.000 .017 .033 .061 .086 .112 .137	0.590 0.592 0.654 0.564 0.559 0.559 0.565
Station 8 57° 29' N, 161° 05' W (1) 0155 GGT, 8 August 1938 Wea. c Bar. 30.30 Wind SSW, 2 Sea SW, 1 Temp: dry 53, wet 52 Depth 57 m., Bottom fne gy S	0 5 10 20 30 40	9.91 9.39 8.04 4.66 4.59 4.06	31.94 31.91 31.96 32.05 32.05 32.07	24.60 24.66 24.91 25.40 25.41 25.48	.000 .017 .032 .061 .087 .112	0.653 0.664 0.641 0.555 0.555 0.555

STATION DESCRIPTION	\bar{h} (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O_2 (mgat/L)
<u>Station 9</u> 57° 38' N, 161° 13' W (3) 0345 GCT, 8 August 1938 Wea. c Bar. 30.29 Wind SSE,2 Sea SW,2 Temp: dry 53, wet 52 Depth 55 m., Bottom fine gy S	0 5 10 15 20 30 40 50	10.21 10.29 8.05 6.02 (5.72) 5.48 5.38 5.20	31.55 31.55 31.85 31.96 31.98 32.00 32.01 32.01	24.25 24.24 24.82 25.17 25.23 25.27 25.29 25.31	.000 .013 .036 .050 .064 .092 .119 .146	0.608 0.608 0.674 0.583 0.555 0.551 0.552 0.548
<u>Station 10</u> 57° 47' N, 161° 21' W (1) 0605 GCT, 8 August 1938 Wea. c Bar. 30.29 Wind SSE,2 Sea SW,1 Temp: dry 52, wet 51 Depth 48 m., Bottom fine gy S	0 5 10 20 30 40 45	10.24 10.19 7.59 (6.23) 6.13 6.13 6.13	30.59 30.62 31.40 31.82 31.83 31.83 31.83	23.50 23.53 24.53 25.04 25.06 25.06 25.06	.000 .022 .041 .073 .102 .131 .146	0.607 0.608 0.599 0.549 0.551 0.556 0.556
<u>Station 11-1</u> 57° 56' N, 161° 28' W (1) 0900 GCT, 8 August 1938 Wea. o Bar. 30.28 Wind SSW,2 Sea SW,1 Temp: dry 52, wet 51 Depth 41 m., Bottom fine gy S	0 5 10 20 30 35	10.32 10.39 7.32 6.74 (6.72) 6.71	30.64 30.64 30.64 31.62 31.62 31.62	23.53 23.51 23.97 24.82 24.82 24.82	.000 .022 .043 .078 .110 .125	0.445 0.584 0.564 0.549 0.553 0.550
<u>Station 11-2</u> 1220 GCT, 8 August 1938 Wea. o Bar. 30.26 Wind SSE,2 Sea SW,1 Temp: dry 53, wet 52 Depth 41 m.	0 5 10 20 30 35	10.13 10.05 9.26 6.78 6.78 6.77	30.66 30.64 30.77 31.55 31.56 31.56	23.57 23.57 23.79 24.76 24.76 24.77	.000 .022 .043 .111 .127	0.585 0.586 0.587 0.544 0.547

STATION DESCRIPTION	\bar{h} (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O_2 (mgat/L)
<u>Station 11-3</u> 1405 GCT, 8 August 1938 Wea. c Bar. 30.25 Wind SSE,2 Sea SW,1 Temp: dry 53, wet 52 Depth 41.5	0 5 10 20 30 35	10.19 10.43 9.60 6.81 6.80 6.76	30.61 30.64 30.73 31.53 31.55 31.55	23.52 23.51 23.71 24.74 24.75 24.76	.000 .022 .043 .080 .113 .129	0.576 0.573 0.590 0.547 0.547 0.543
<u>Station 11-4</u> 1615 GCT, 8 August 1938 Wea. o Bar. 30.21 Wind SE,2 Sea SE,1 Temp: dry 53, wet 52	0 5 10 20 30 35	10.18 10.27 8.12 6.79 6.79 6.76	30.52 30.55 30.95 31.55 31.55 31.55	23.45 23.46 24.10 24.76 24.76 24.76	.000 .022 .043 .078 .110 .126	0.588 0.585 0.572 0.545 0.544 0.546
<u>Station 11-5</u> 1830 GCT, 8 August 1938 Wea. o Bar. 30.18 Wind SE,3 Sea SE,2 Temp: dry 52, wet 52	0 5 10 20 30 35	10.22 10.25 8.06 6.79 6.80 6.76	30.52 30.50 30.95 31.53 31.53 31.53	23.45 23.43 24.11 24.74 24.74 24.76	.000 .022 .043 .078 .110 .126	0.581 0.575 0.563 0.538 0.541 0.543
<u>Station 12</u> 58° 06' N, 161° 37' W (1) 2050 GCT, 8 August 1938 Wea. o Bar. 30.13 Wind SE,3 Sea SE,2 Temp: dry 53, wet 52 Depth 51 m., Bottom fine G S	0 5 10 20 30 40 45	10.40 10.40 10.18 6.74 6.70 6.68 6.69	30.41 30.39 30.43 31.35 31.40 31.44 31.44	23.33 23.32 23.38 24.61 24.65 24.68 24.68	.000 .023 .046 .085 .118 .151 .167	0.583 0.584 0.584 0.540 0.539 0.540 0.435

STATION DESCRIPTION		S	T	S	σ_t	ΔD	O ₂	STATION DESCRIPTION		S	T	S	σ_t	ΔD	O ₂
		(m)	(°C)	(‰)	(g/L)	(dyn m)	(mgat/L)			(m)	(°C)	(‰)	(g/L)	(dyn m)	(mgat/L)
Station 21								Station 25							
57° 40' N, 160° 53' W (1)		0	10.22	30.88	23.73	.000	0.615	57° 04' N, 160° 21' W (3)		0	9.38	31.78	24.56	.000	0.617
0620 OCT, 11 August 1938		5	10.28	30.84	23.69	.021	0.614	2305 OCT, 12 August 1938		5	9.36	31.76	24.55	.017	0.619
Wea. o,v Bar. 29.91		10	9.22	31.47	24.35	.041	0.635	Wea. c Bar. 30.14		10	9.27	31.78	24.58	.034	0.608
Wind SW, 5 Sea SW, 4		20	5.97	31.92	25.15	.073	0.539	Wind SW, 1 Sea W, 2		20	5.90	31.89	25.18	.065	0.522
Temp: dry 54, wet 53		30	5.96	31.92	25.15	.101	0.539	Temp: dry 53, wet 52		30	5.46	31.89	25.18	.093	0.518
Depth 55 m.		40	5.95	31.92	25.15	.129	0.539	Depth 64 m., Bottom fine gy S		40	5.40	31.91	25.21	.120	0.521
		50	5.93	31.92	25.15	.157	0.538			50	5.41	31.91	25.21	.148	0.522
										60	5.44	31.92	25.21	.176	0.528
Station 22								Station 26							
56° 38' N, 159° 58' W (1)		0	10.74	31.58	24.18	.000	0.560	57° 14' N, 160° 27' W (3)		0	9.35	31.77	24.56	.000	0.624
1510 OCT, 12 August 1938		5	10.81	31.62	24.20	.019	0.533	2305 OCT, 12 August 1938		5	(9.30)	31.78	24.58	.017	0.621
Wea. o,r Bar. 30.22		10	10.78	31.60	24.19	.037	0.551	Wea. c Bar. 30.12		10	9.00	31.83	24.66	.034	0.603
Wind S, 1 Sea SW, 2		20	10.72	31.60	24.20	.075	0.552	Wind SW, 3 Sea W, 2		20	5.31	31.96	25.26	.064	0.532
Temp: dry 52, wet 51		30	9.19	31.51	24.38	.111	0.515	Temp: dry 53, wet 52		30	5.20	31.94	25.25	.091	0.531
Depth 43 m., Bottom bk S		40	8.60	31.51	24.47	.146	0.502	Depth 61.5 m., Bottom fine gy S		40	5.20	31.96	25.27	.118	0.530
										50	5.20	31.94	25.25	.145	0.528
										57	5.15	31.96	25.28	.164	0.528
Station 23								Station 27							
57° 47' N, 160° 06' W (1)		0	10.89	31.65	24.21	.000	0.562	57° 24' N, 160° 36' W (1)		0	9.53	31.89	24.63	.000	0.629
1730 OCT, 12 August 1938		5	10.94	31.69	24.24	.019	0.564	0013 OCT, 13 August 1938		5	9.49	31.87	24.62	.017	0.630
Wea. o,r Bar. 30.21		10	10.95	31.73	24.26	.037	0.567	Wea. c Bar. 30.08		10	9.25	31.89	24.67	.033	0.304
Wind W, 1 Sea W, 2		20	8.81	31.73	24.61	.072	0.553	Wind SW, 2 Sea W, 2		20	5.94	31.96	25.18	.064	0.543
Temp: dry 52, wet 51		30	6.94	31.73	24.88	.104	0.503	Temp: dry 53, wet 52		30	5.31	31.96	25.26	.091	0.518
Depth 57 m., Bottom fine gy S		40	6.47	31.76	24.96	.135	0.501	Depth 61 m., Bottom fine gy S		40	5.25	31.96	25.26	.118	0.518
		50	6.45	31.78	24.98	.165	0.503			50	5.17	31.96	25.27	.146	0.518
										57	5.14	36.98	25.29	.164	0.517
Station 24								Station 28							
56° 53' N, 160° 14' W (1)		0	10.11	31.76	24.43	.000	0.583	57° 32' N, 160° 45' W (1)		0	9.30	31.89	24.66	.000	0.622
1945 OCT, 12 August 1938		5	10.07	31.82	24.48	.017	0.581	0245 OCT, 13 August 1938		5	9.29	31.91	24.68	.016	0.626
Wea. c Bar. 30.16		10	9.96	31.82	24.50	.035	0.580	Wea. o,f,m Bar 30.07		10	9.08	31.91	24.71	.033	0.612
Wind SW, 1 Sea W, 2		20	5.46	31.85	25.15	.066	0.513	Wind SW, 3 Sea W, 2		20	6.04	31.94	25.16	.063	0.541
Temp: dry 52, wet 52		30	5.33	31.87	25.18	.094	0.505	Temp: dry 50, wet 49		30	5.66	31.96	25.22	.091	0.529
Depth 63 m., Bottom S		40	5.32	31.85	25.17	.122	0.513	Depth 59 m., Bottom fine gy S		40	5.61	31.96	25.22	.119	0.524
		50	5.35	31.85	25.17	.150	0.503			50	5.17	32.01	25.31	.146	0.524
		60	5.30	31.87	25.19	.178	0.503			55	5.06	32.01	25.33	.159	0.523

STATION DESCRIPTION	B (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mg/g/L)
Station 13						
53° 14' N, 161° 45' W (3)	0	10.45	30.34	23.27	.000	0.578
2340 GCT, 8 August 1938	5	10.45	30.34	23.27	.023	0.582
Wea. o.p. Bar. 30.11	10	8.63	30.64	23.79	.045	0.566
Wind SE, 3 Sea SE, 2	20	7.69	30.90	24.13	.085	0.551
Temp: dry 54, wet 52	30	7.62	30.91	24.14	.122	0.548
Depth 46 m., Bottom fine G S	40	7.59	30.72	24.00	.161	0.557
Station 14						
53° 24' N, 161° 53' W (2)	0	9.94	30.41	23.41	.000	0.548
0140 GCT, 9 August 1938	5	9.99	30.41	23.40	.022	0.554
Wea. o. Bar. 30.09	10	10.01	30.41	23.40	.045	0.554
Wind SE, 4 Sea SE, 2	20	9.99	30.41	23.40	.090	0.555
Temp: dry 53, wet 51	30	(9.92)	30.44	23.43	.135	0.542
Depth 43.5 m., Bottom fine G	40	9.83	30.55	23.53	.179	0.531
Station 15						
53° 32' N, 162° 00' W	0	10.81	30.48	23.32	.000	0.518
0345 GCT, 9 August 1938	5	10.86	30.46	23.29	.023	0.519
Wea. o.y. Bar. 30.02	10	10.88	30.46	23.29	.046	0.528
Wind SE, 5 Sea SE, 4	20	10.84	30.50	23.33	.092	0.527
Temp: dry 53, wet 51	30	10.80	30.53	23.36	.137	0.518
Depth 39.5 m., Bottom crs S	35	10.95	30.55	23.35	.160	0.517
Station 16						
53° 27' N, 161° 39' W (2)	0	11.04	29.56	22.57	.000	0.525
1930 GCT, 10 August 1938	5	11.10	29.54	22.54	.027	0.539
Wea. o.y. Bar. 30.00	10	11.10	29.58	22.57	.053	0.529
Wind S, 6 Sea SW, 6	20	11.06	29.60	22.59	.106	0.527
Temp: dry 51, wet 51	25	11.03	29.60	22.60	.132	0.525
Depth 27 m.						
Station 17						
53° 17' N, 161° 27' W (3)	0	10.84	29.58	22.62	.000	0.538
2212 GCT, 10 August 1938	5	10.91	29.55	22.58	.026	0.545
Wea. o. Bar. 30.02	10	10.95	29.60	22.61	.053	0.538
Wind SSW, 5 Sea SW, 5	20	10.08	30.10	23.14	.103	0.544
Temp: dry 52, wet 52	30	8.35	30.70	23.88	.146	0.525
Depth 37 m., Bottom G S	34	8.17	30.73	23.93	.163	0.524
Station 18						
53° 08' N, 161° 18' W (1)	0	9.47	30.52	23.57	.000	0.557
0020 GCT, 11 August 1938	5	9.48	30.50	23.55	.022	0.559
Wea. d. Bar. 30.00	10	(9.48)	30.66	23.67	.043	0.551
Wind SSW, 4 Sea SW, 4	20	7.04	31.35	24.57	.081	0.534
Temp: dry 55, wet 52	30	6.79	31.42	24.65	.115	0.529
Depth 43 m., Bottom fine G S	40	(6.60)	31.46	24.68	.148	0.529
Station 19						
53° 59' N, 161° 09' W (1)	0	10.59	30.64	23.48	.000	0.596
0230 GCT, 11 August 1938	5	10.65	30.64	23.47	.022	0.597
Wea. o. Bar. 29.95	10	10.64	30.66	23.49	.044	0.599
Wind SSW, 5 Sea SW, 4	20	6.58	31.74	24.93	.081	0.530
Temp: dry 54, wet 53	30	6.55	31.74	24.94	.112	0.528
Depth 46 m.	40	6.55	31.74	24.94	.142	0.524
Station 20						
53° 50' N, 161° 01' W (1)	0	10.33	30.72	23.58	.000	0.609
0425 GCT, 11 August 1938	5	10.39	30.73	23.58	.022	0.611
Wea. o.y. Bar. 29.92	10	10.40	30.73	23.58	.043	0.612
Wind SSW, 5 Sea SW, 4	20	6.28	31.82	25.03	.079	0.527
Temp: dry 54, wet 53	30	6.26	31.82	25.03	.109	0.527
Depth 45 m.	40	6.26	31.82	25.03	.138	0.525

STATION DESCRIPTION	h (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 29-1						
50° 23' N, 161° 46' W (2)	0	11.05	30.52	23.31	.000	0.551
1030 GCT, 13 August 1938	5	10.78	30.53	23.36	.023	0.546
Wea. o,y Bar. 30.06	10	10.66	30.55	23.40	.045	0.543
Wind NE, 3 Sea W, 1	20	10.49	30.64	23.50	.090	0.524
Temp: dry 50, wet 49	30	9.-	30.64	-	-	0.521
Depth 36 m.	34	9.-	30.64	-	-	0.521
Station 29-2						
1215 GCT, 13 August 1938	0	11.22	30.53	23.29	.000	---
Wea. o Bar. 30.05	5	10.71	30.59	23.42	.023	0.557
Wind 0 Sea W, 1	10	10.68	30.57	23.41	.045	0.552
Temp: dry 51, wet 50	20	10.55	30.64	23.49	.090	0.533
	30	10.43	30.68	23.54	.133	0.522
	34	10.43	30.68	23.54	.151	0.521
Station 29-3						
1420 GCT, 13 August 1938	0	11.31	30.53	23.27	.000	0.550
Wea. c Bar. 30.04	5	11.23	30.55	23.30	.023	0.552
Wind 0 Sea W, 1	10	10.77	30.56	23.36	.046	0.542
Temp: dry 53, wet 52	20	10.53	30.64	23.49	.090	0.522
	30	10.45	30.66	23.52	.134	0.521
	34	10.46	30.66	23.52	.152	0.521
Station 29-4						
1417 GCT, 13 August 1938	0	10.64	30.53	23.39	.000	0.543
Wea. c Bar. 30.05	5	10.52	30.55	23.42	.022	0.536
Wind NW, 1 Sea W, 1	10	10.51	30.59	23.45	.045	0.526
Temp: dry 54, wet 53	20	10.47	30.62	23.48	.089	0.526
	30	10.45	30.62	23.49	.133	0.521
	34	10.45	30.62	23.49	.151	0.527
Station 29-5						
1417 GCT, 13 August 1938	0	10.43	30.26	23.20	.000	0.555
Wea. o,y Bar. 30.03	5	10.49	30.35	23.27	.023	0.545
Wind NW, 1 Sea W, 1	10	10.33	30.43	23.40	.046	0.538
Temp: dry 56, wet 55	20	10.31	30.53	23.44	.091	0.533
	30	10.30	30.53	23.44	.135	0.533
	34	10.29	30.55	23.46	.153	0.533
Station 29-6						
2010 GCT, 13 August 1938	0	10.59	30.17	23.11	.000	0.559
Wea. c Bar. 30.09	5	10.45	30.26	23.21	.024	0.555
Wind NNW, 3 Sea W, 1	10	10.30	30.46	23.39	.047	0.541
Temp: dry 55, wet 54	20	10.23	30.50	23.42	.091	0.538
	30	10.26	30.52	23.44	.136	0.530
	34	10.26	30.52	23.44	.154	0.538
Station 29-7						
2225 GCT, 13 August 1938	0	-	30.32	-	-	0.557
Wea. c Bar. 30.09	5	-	30.30	-	-	0.550
Wind NNW, 3 Sea W, 1	10	-	30.43	-	-	0.541
Temp: dry 54, wet 53	20	-	30.50	-	-	0.533
	30	-	30.50	-	-	0.529
	34	-	30.50	-	-	0.580
Station 29-8						
0020 GCT, 11 August 1938	0	10.46	30.52	23.41	.000	0.468
Wea. c Bar. 30.10	5	10.51	30.52	23.40	.022	0.546
Wind W, 4 Sea W, 2	10	10.49	30.52	23.40	.045	0.535
Temp: dry 54, wet 53	20	10.43	30.50	23.40	.090	0.532
	30	10.37	30.52	23.42	.135	0.532
	34	10.40	30.50	23.40	.153	0.535

STATION DESCRIPTION	z (m)	T (°C)	S (‰)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mg/L)
Station 29-9						
0215 GCT, 14 August 1938	0	10.49	30.52	23.40	.000	0.549
Wea. o Bar. 30.11	5	10.55	30.52	23.39	.022	0.550
Wind W,4 Sea W,2	10	10.56	30.52	23.39	.045	0.550
Temp: dry 53, wet 52	20	10.44	30.52	23.41	.090	0.541
	30	10.32	30.53	23.44	.135	0.529
	34	10.34	30.52	23.43	.152	0.532
Station 29-10						
0415 GCT, 14 August 1938	0	10.43	30.50	23.40	.000	0.542
Wea. o,d Bar. 30.10	5	10.51	30.52	23.40	.022	0.535
Wind W,4 Sea W,2	10	10.51	30.50	23.33	.045	0.544
Temp: dry 53, wet 52	20	10.45	30.50	23.40	.090	0.543
	30	10.29	30.53	23.45	.135	0.531
	34	10.31	30.57	23.47	.153	0.530
Station 29-11						
0624 GCT, 14 August 1938	0	10.42	30.46	23.37	.000	0.551
Wea. o,d Bar. 30.11	5	10.40	30.46	23.36	.023	0.543
Wind WSW,6 Sea W,2	10	10.50	30.44	23.34	.045	0.550
Temp: dry 52, wet 52	20	10.37	30.46	23.33	.091	0.516
	30	10.29	30.59	23.49	.135	0.496
	34	10.30	30.59	23.49	.153	0.529
Station 29-12						
0320 GCT, 14 August 1938	0	10.41	30.46	23.37	.000	0.543
Wea. c Bar. 30.13	5	10.46	30.46	23.36	.023	0.550
Wind W,4 Sea W,3	10	10.45	30.46	23.36	.045	0.550
Temp: dry 51, wet 50	20	10.35	30.52	23.45	.090	0.531
	30	10.31	30.52	23.43	.135	0.534
	34	10.31	30.52	23.43	.153	0.518

STATION DESCRIPTION	S (m)	T (°C)	S (‰)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mg/L)
Station 29-13						
1027 GCT, 14 August 1938	0	10.44	30.44	23.35	.000	0.544
Wea. o,p Bar. 30.13	5	10.48	30.44	23.34	.023	0.546
Wind W,5 Sea W,3	10	10.52	30.44	23.33	.045	0.539
Temp: dry 50, wet 49	20	10.41	30.50	23.40	.091	0.528
	30	10.39	30.53	23.43	.136	0.528
	34	10.38	30.53	23.43	.153	0.527
Station 30-1						
578 00' N, 160° 37' W (3)	0	10.40	31.83	24.44	.000	0.574
2125 GCT, 14 August 1938	5	10.40	31.82	24.43	.018	0.574
Wea. c Bar. 30.12	10	10.40	31.82	24.43	.035	0.572
Wind SE,2 Sea W,1	20	4.96	31.87	25.22	.066	0.508
Temp: dry 52, wet 51	30	4.86	31.87	25.24	.094	0.508
Depth 66.5 m, Bottom fine gy S	40	4.72	31.89	25.27	.121	0.517
	50	4.67	31.91	25.29	.148	0.519
	60	4.56	31.92	25.31	.175	0.523
Station 30-2						
2327 GCT, 14 August 1938	0	10.59	31.85	24.42	.000	0.567
Wea. c Bar. 30.10	5	10.40	31.82	24.43	.018	0.575
Wind ESE,1 Sea W,1	10	10.37	31.83	24.44	.035	0.572
Temp: dry 52, wet 51	15	10.38	31.83	24.44	.053	0.570
	20	9.85	31.85	24.54	.070	0.559
	30	4.71	31.91	25.28	.100	0.518
	40	4.53	31.92	25.31	.127	0.527
	50	4.37	31.92	25.31	.154	0.527
	60	4.52	31.92	25.31	.181	0.512
Station 30-3						
0117 GCT, 15 August 1938	0	10.66	31.87	24.42	.000	0.560
Wea. c Bar. 30.06	5	10.55	31.85	24.43	.018	0.570
Wind E,2 Sea W,1	10	10.38	31.85	24.46	.035	0.574
Temp: dry 53, wet 52	15	10.37	31.87	24.47	.052	0.569
	20	6.98	31.92	25.02	.069	0.569
	30	4.71	31.94	25.31	.097	0.520
	40	4.55	31.94	25.33	.123	0.524
	50	4.58	31.95	25.33	.150	0.524
	60	4.56	31.94	25.32	.177	0.519

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ^t (g/L)	ΔD (dyn m)	O ₂ ($\mu\text{g}/\text{L}$)
Station 30-4						
0320 GCT, 15 August 1938	0	10.82	31.85	24.38	.000	0.567
Wea. b,c Bar. ---	5	10.75	31.85	24.39	.018	0.567
Wind E,2 Sea W,1	10	10.42	31.85	24.45	.035	0.568
Temp: dry 52, wet 51	15	10.31	31.85	24.47	.053	0.567
	20	4.98	31.87	25.22	.068	0.498
	30	4.93	31.85	25.21	.096	0.499
	40	4.82	31.91	25.27	.123	0.506
	50	4.75	31.92	25.29	.150	0.515
	60	4.65	31.92	25.30	.177	0.515
Station 30-5						
0517 GCT, 15 August 1938	0	10.76	31.85	24.39	.000	0.567
Wea. b,c Bar. 30.02	5	10.66	31.85	24.41	.018	0.572
Wind E,2 Sea W,1	10	10.44	31.85	24.44	.035	0.574
Temp: dry 53, wet 51	15	10.38	31.85	24.46	.053	0.568
	20	4.98	31.85	25.21	.068	0.495
	30	4.94	31.87	25.23	.096	0.495
	40	4.92	31.87	25.23	.124	0.490
	50	4.87	31.87	25.23	.151	0.501
	60	4.72	31.91	25.28	.178	0.503
Station 30-6						
0633 GCT, 15 August 1938	0	--	--	--	--	--
Wea. b,c Bar. 30.02	15	10.39	31.85	24.45	.053	0.568
Wind E,2 Sea W,1	16	5.63	(31.87)	25.15	.056	0.569
Temp: dry 52, wet 51	17	5.13	31.87	25.21	.059	0.501
	18	4.97	31.85	25.21	.062	0.490
	19	5.00	31.87	25.22	.064	0.497
	20	4.97	31.87	25.22	.067	0.497
Station 30-7						
0816 GCT, 15 August 1938	0	10.73	31.83	24.38	.000	0.575
Wea. b,c Bar. 30.03	5	10.75	31.83	24.38	.018	0.566
Wind E,1 Sea W,1	10	10.47	31.85	24.44	.035	0.573
Temp: dry 52, wet 51	17	5.16	31.87	25.20	.057	0.515
	20	5.01	31.87	25.22	.066	0.499
	30	4.91	31.87	25.23	.093	0.502
	40	4.89	31.89	25.25	.121	0.509
	50	4.89	31.92	25.29	.148	0.521
	60	4.43	31.94	25.34	.175	0.524

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ^t (g/L)	ΔD (dyn m)	O ₂ ($\mu\text{g}/\text{L}$)
Station 30-8						
0945 GCT, 15 August 1938	0	10.67	31.85	24.41	.000	0.564
Wea. b,c Bar. 30.02	5	10.71	31.85	24.40	.018	0.567
Wind SE,1 Sea W,1	10	10.48	31.85	24.44	.035	0.568
Temp: dry 52, wet 51	16	10.42	31.85	24.45	.056	0.568
	20	6.87	31.91	25.03	.069	0.571
	30	4.77	31.89	25.26	.097	0.508
	40	4.53	31.94	25.33	.124	0.514
	50	4.53	31.94	25.33	.151	0.521
	60	4.52	31.96	25.34	.177	0.511
Station 30-9						
1125 GCT, 15 August 1938	0	10.52	31.85	24.43	.000	0.556
Wea. c Bar. 29.97	5	10.55	31.85	24.43	.018	0.568
Wind SE,1 Sea W,1	10	10.30	31.85	24.47	.035	0.572
Temp: dry 52, wet 51	17	10.25	31.89	24.51	.059	0.571
	20	10.20	31.86	24.49	.070	0.578
	30	4.50	31.96	25.34	.100	0.528
	40	4.48	31.96	25.35	.126	0.523
	50	4.39	31.94	25.34	.153	0.511
	60	4.46	31.94	25.33	.179	0.511
Station 30-10						
1323 GCT, 15 August 1938	0	10.37	31.87	24.47	.000	0.588
Wea. c Bar. 29.95	5	10.43	31.87	24.46	.017	0.584
Wind SE,1 Sea W,1	10	10.33	31.85	24.46	.035	0.588
Temp: dry 52, wet 51	18	9.90	31.85	24.53	.062	0.572
	20	6.45	31.94	25.11	.069	0.568
	30	4.54	31.96	25.34	.096	0.519
	40	4.48	31.96	25.35	.123	0.524
	50	4.50	31.96	25.34	.149	0.525
	60	4.48	31.94	25.33	.176	0.524
Station 30-11						
1530 GCT, 15 August 1938	0	10.43	31.85	24.45	.000	0.574
Wea. c Bar. 29.94	5	10.47	31.84	24.43	.018	0.578
Wind SE,1 Sea W,1	10	10.31	31.83	24.45	.035	0.568
Temp: dry 52, wet 51	17	8.30	31.84	24.77	.058	0.551
	20	5.30	31.82	25.15	.067	0.497
	30	4.84	31.85	25.22	.095	---
	40	4.69	31.85	25.24	.123	0.517
	50	4.69	31.92	25.29	.150	0.516
	60	4.54	31.94	25.33	.177	0.522

STATION DESCRIPTION	Z (m)	T (°C)	S (°/∞)	σ^t (g/L)	Δ^D (dyn m)	O ₂ (mgat/L)
Station 30-12						
1720 GCT, 15 August 1938	0	10.58	31.82	24.40	.000	0.563
Wea. c Bar. 29.88	5	10.61	31.83	24.40	.018	0.566
Wind SE, 3 Sea W, 2	10	10.48	31.83	24.42	.035	0.569
Temp: dry 52, wet 51	17	5.25	31.83	25.16	.058	0.499
	20	5.13	31.82	25.17	.066	0.497
	30	4.98	31.83	25.19	.094	0.495
	40	4.94	31.83	25.20	.122	0.497
	50	4.86	31.85	25.22	.149	0.502
	60	4.71	31.87	25.25	.177	0.508
Station 30-13						
1725 GCT, 15 August 1938	0	10.67	31.81	24.37	.000	0.564
Wea. c Bar. 29.89	5	10.67	31.82	24.38	.018	0.564
Wind ESE, 3 Sea W, 2	10	10.54	31.82	24.40	.036	0.572
Temp: dry 54, wet 52	15	5.38	31.82	25.14	.051	0.502
	20	5.07	31.83	25.18	.066	0.498
	30	4.98	31.83	25.19	.093	0.500
	40	4.97	31.85	25.21	.121	0.498
	50	4.86	31.85	25.22	.149	0.507
	60	4.62	31.90	25.29	.176	0.516
Station 30-14						
2110 GCT, 15 August 1938	0	10.70	31.83	24.38	.000	0.579
Wea. c Bar. 29.73	5	10.75	31.83	24.38	.018	0.577
Wind ESE, 3 Sea W, 2	10	10.68	31.85	24.40	.036	0.579
Temp: dry 53, wet 52	14	10.47	31.83	24.42	.050	0.578
	20	5.04	31.85	25.20	.069	0.508
	30	4.97	31.85	25.21	.096	0.504
	40	4.86	31.89	25.25	.124	0.511
	50	4.66	31.92	25.30	.151	0.525
	60	4.53	31.91	25.30	.178	0.530
Station 31-1						
560° 46' N, 159° 23' W (2)	0	11.32	30.99	23.62	.000	0.530
0930 GCT, 21 August 1938	5	11.36	30.99	23.62	.021	0.536
Wea. c Bar. 30.09	10	11.10	31.08	23.73	.043	0.519
Wind S, 4 Sea SSW, 2	15	11.07	31.08	23.74	.063	0.524
Temp: dry 58, wet 56	20	11.09	31.08	23.74	.084	0.522
Depth 31.5 m., Bottom fine SG	28	11.05	31.11	23.76	.118	0.512
Station 31-2						
1310 GCT, 21 August 1938	0	11.35	30.91	23.56	.000	0.534
Wea. c Bar. 30.09	5	11.40	30.91	23.55	.022	0.535
Wind S, 5 Sea SW, 2	10	11.13	31.06	23.71	.043	0.527
Temp: dry 56, wet 54	15	11.05	31.09	23.75	.064	0.523
	20	11.05	(31.12)	23.77	.085	0.519
	28	11.00	31.15	23.81	.118	0.511
Station 31-3						
1317 GCT, 21 August 1938	0	11.31	30.91	23.57	.000	0.525
Wea. c Bar. 30.09	5	11.35	30.91	23.56	.022	0.527
Wind SSW, 4 Sea SW, 4	10	11.29	30.97	23.61	.043	0.528
Temp: dry 56, wet 54	15	11.05	31.09	23.75	.064	0.520
	20	11.06	31.11	23.76	.085	0.523
	28	10.96	31.20	23.85	.118	0.509
Station 31-4						
1521 GCT, 21 August 1938	0	11.42	30.86	23.51	.000	0.532
Wea. c Bar. 30.10	5	11.49	30.86	23.49	.022	0.527
Wind SSW, 4 Sea SW, 2	10	11.42	30.90	23.54	.044	0.525
Temp: dry 63, wet 60	15	11.25	30.99	23.64	.065	0.522
	20	11.05	31.09	23.75	.087	0.519
	28	10.94	31.20	23.86	.119	0.507
Station 32						
560° 56' N, 159° 32' W (2)	0	11.05	31.74	24.25	.000	0.555
1720 GCT, 21 August 1938	5	11.06	31.74	24.25	.018	0.554
Wea. o,p Bar. 30.11	10	(11.00)	31.76	24.28	.037	0.555
Wind SW, 5 Sea SW, 4	15	8.63	31.74	24.65	.054	0.514
Temp: dry 59, wet 59	20	7.42	31.71	24.80	.070	0.484
Depth 55 m.	30	7.32	31.69	24.80	.102	0.485
	40	7.28	31.71	24.82	.134	0.477
	50	7.20	31.73	24.84	.165	0.476

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
---------------------	----------	-----------	----------	---------------------	-----------------------	----------------------------

Station 33-1 56°46' N, 159° 22' W (2)	0	11.70	30.68	23.32	.000	0.541
2045 GCT, 21 August 1938	5	11.59	30.70	23.35	.023	0.538
Wea. c Bar. 30.21	10	11.38	30.77	23.44	.045	0.530
Wind SSE, 3 Sea SW, 2	15	11.36	30.81	23.47	.067	0.525
Temp: dry 63, wet, 61	20	11.31	30.81	23.49	.090	0.529
Depth 25.5 m.						

Station 33-2 57°06' N, 159° 40' W (1)	0	10.85	31.83	24.36	.000	0.563
0855 GCT, 22 August 1938	5	10.87	31.83	24.36	.018	0.556
Wea. c Bar. 30.24	10	10.86	31.83	24.36	.036	0.554
Wind SW, 4 Sea SW, 5	15	10.91	31.83	24.35	.054	0.557
Temp: dry 59, wet 57	20	10.10	31.82	24.48	.071	0.545
Depth 56 m.	30	7.16	31.74	24.86	.104	0.487
	40	7.06	31.74	24.87	.135	0.484
	50	7.04	31.74	24.87	.166	0.481

Station 33-3 57°14' N, 159° 47' W (1)	0	10.33	31.74	24.38	.000	0.563
1105 GCT, 22 August 1938	5	10.37	31.69	24.33	.018	0.565
Wea. c Bar. 30.25	10	10.39	31.69	24.33	.036	0.569
Wind SW, 4 Sea, SW, 5	15	10.30	31.69	24.34	.094	0.568
Temp: dry 56, wet 56	20	9.10	31.69	24.54	.071	0.531
Depth 58 m.	30	7.44	31.69	24.78	.104	0.497
	40	7.38	31.69	24.79	.136	0.493
	50	7.34	31.69	24.79	.168	0.492

Station 33-4 57°24' N, 159° 56' W (1)	0	9.70	31.67	24.43	.000	0.573
1302 GCT, 22 August 1938	5	9.71	31.65	24.41	.018	0.573
Wea. o, r Bar. 30.25	10	9.61	31.65	24.43	.035	0.570
Wind SW, 4 Sea SW, 4	20	7.84	31.69	24.72	.069	0.516
Temp: dry 56, wet 54	30	7.53	31.69	24.77	.101	0.505
Depth 59 m.	40	7.50	31.69	24.77	.133	0.503
	50	7.52	31.67	24.75	.165	0.502
	55	7.47	31.69	24.78	.181	0.500

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
---------------------	----------	-----------	----------	---------------------	-----------------------	----------------------------

Station 33-1 56°46' N, 159° 22' W (2)	0	11.70	30.68	23.32	.000	0.541
2045 GCT, 21 August 1938	5	11.59	30.70	23.35	.023	0.538
Wea. c Bar. 30.21	10	11.38	30.77	23.44	.045	0.530
Wind SSE, 3 Sea SW, 2	15	11.36	30.81	23.47	.067	0.525
Temp: dry 63, wet, 61	20	11.31	30.81	23.49	.090	0.529
Depth 25.5 m.						

Station 33-2 57°06' N, 159° 40' W (1)	0	11.53	30.70	23.36	.000	0.535
2250 GCT, 21 August 1938	5	11.54	30.72	23.38	.023	0.527
Wea. c Bar. 30.22	10	11.35	30.82	23.49	.045	0.518
Wind SW, 3 Sea SW, 2	15	11.29	30.88	23.55	.067	0.513
Temp: dry 64, wet 62	20	11.30	30.88	23.54	.089	0.515

Station 33-3 57°14' N, 159° 47' W (1)	0	11.71	30.61	23.26	.000	0.524
0108 GCT, 22 August 1938	5	11.46	30.75	23.41	.023	0.519
Wea. c Bar. 30.22	10	11.32	30.88	23.54	.045	0.518
Wind SW, 4 Sea SW, 2	15	11.26	30.95	23.60	.067	0.500
Temp: dry 65, wet 62	20	11.25	30.99	23.64	.088	0.514

Station 33-4 57°24' N, 159° 56' W (1)	0	11.50	30.73	23.39	.000	0.526
0304 GCT, 22 August 1938	5	11.44	30.82	23.47	.022	0.523
Wea. c Bar. 30.23	10	11.34	30.91	23.56	.044	0.520
Wind SW, 4 Sea SW, 2	15	11.29	30.93	23.58	.066	0.515
Temp: dry 64, wet 62	20	11.30	30.95	23.60	.087	0.512

STATION DESCRIPTION	z (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (µgat/L)
Station 37 57° 33' N, 160° 04' W (1) 1459 GGT, 22 August 1938 Wea. o,d Bar. 30.27 Wind SW,4 Sea SW,4 Temp: dry 54, wet 53 Depth 58 m.	0 5 10 20 30 40 50 55	9.12 9.14 8.76 7.86 7.37 7.36 7.41 7.38	31.69 31.69 31.69 31.73 31.73 31.74 31.74 (31.74)	24.53 24.53 24.59 24.75 24.82 24.83 24.82 24.83	.000 .017 .034 .067 .099 .130 .161 .177	0.566 0.565 0.563 0.526 0.510 0.508 0.508
Station 38 57° 42' N, 160° 12' W (1) 1708 GGT, 22 August 1938 Wea. o,r,f Bar. 30.28 Wind SW,4 Sea SW,5 Temp: dry 52, wet 51 Depth 54 m.	0 5 10 15 20 30 40 50	8.61 8.64 8.37 8.40 8.26 8.20 8.18 (8.18)	31.67 31.69 31.67 31.69 31.69 31.69 31.69 31.69	24.60 24.61 24.63 24.64 24.66 24.67 24.67 24.67	.000 .017 .033 .050 .066 .099 .132 .165	0.552 0.548 0.538 0.532 0.534 0.530 0.531 0.526
Station 39 57° 50' N, 160° 20' W (1) 1850 GGT, 22 August 1938 Wea. o,r Bar. 30.30 Wind SW,3 Sea SW,2 Temp: dry 52, wet 51 Depth 56 m.	0 5 10 15 20 30 40 50	9.60 9.58 9.62 9.56 8.36 7.88 7.92 7.89	31.47 31.47 31.47 31.49 31.65 31.73 31.73 31.73	24.29 24.29 24.28 24.31 24.62 24.75 24.74 24.75	.000 .018 .036 .055 .072 .105 .137 .169	0.569 0.568 0.560 0.565 0.530 0.509 0.511 0.503
Station 40 57° 59' N, 160° 28' W (1) 2040 GGT, 22 August 1938 Wea. o,p Bar. 30.28 Wind S,3 Sea SW,2 Temp: dry 54, wet 53 Depth 50 m.	0 5 10 15 20 30 40 45	9.69 9.67 9.65 9.55 9.18 8.18 8.19 (8.18)	31.26 31.26 31.29 31.42 31.46 31.55 31.56 31.58	24.11 24.11 24.14 24.26 24.35 24.56 24.57 24.59	.000 .019 .038 .057 .075 .110 .144 .161	0.564 0.566 0.561 0.563 0.551 0.509 0.501 0.503
Station 41 58° 08' N, 160° 36' W (1) 2235 GGT, 22 August 1938 Wea. o,m Bar. 30.29 Wind S,3 Sea SW,2 Temp: dry 54, wet 53 Depth 43 m.	0 5 10 15 20 30 40	9.54 9.29 8.74 8.44 8.33 8.13 8.13	30.84 31.02 31.15 31.18 31.24 31.38 31.40	23.81 23.98 24.17 24.24 24.30 24.44 24.46	.000 .020 .039 .058 .076 .112 .147	0.545 0.533 0.523 0.508 0.510 0.505 0.505
Station 42 58° 17' N, 160° 44' W (1) 0020 GGT, 23 August 1938 Wea. o,r,f Bar. 30.29 Wind S,2 Sea SW,2 Temp: dry 52, wet 52 Depth 32 m.	0 5 10 15 20 28	9.46 9.42 9.24 9.19 9.18 9.16	30.64 30.64 30.68 30.70 30.70 30.70	23.66 23.67 23.73 23.75 23.75 23.76	.000 .021 .042 .063 .084 .117	0.538 0.532 --- 0.530 0.522 0.529
Station 43 58° 29' N, 160° 53' W (2) 0215 GGT, 23 August 1938 Wea. o,p,z Bar. 30.29 Wind WSW,1 Sea SW,2 Temp: dry 52, wet 52 Depth 24.5 m.	0 5 10 15 20	12.11 11.97 11.58 11.34 11.14	28.82 28.93 29.20 29.35 29.51	21.81 21.92 22.20 22.35 22.51	.000 .030 .059 .087 .114	0.530 0.515 0.515 0.514 0.513
Station 44 59° 30' N, 160° 34' W (2) 0340 GGT, 23 August 1938 Wea. e,z Bar. 30.29 Wind WSW,1 Sea SW,2 Temp: dry 52, wet 52 Depth 16.5 m.	0 5 10	11.90 11.90 11.89	28.98 29.00 29.00	21.97 21.98 21.98	.000 .029 .059	0.520 0.515 0.515

STATION DESCRIPTION	Z (m)	T _s (°C)	S (‰)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mgat/L)	STATION DESCRIPTION	H (m)	T _s (°C)	S (‰)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mgat/L)
Station 45							Station 49						
58° 22' N, 160° 26' W (2)	0	9.78	30.41	23.43	.000	0.534	57° 45' N, 159° 53' W (1)	0	8.82	31.46	24.40	.000	0.564
0525 GCT, 23 August 1938	5	9.80	30.41	23.43	.022	0.535	1230 GCT, 23 August 1938	5	8.68	31.58	24.52	.017	0.555
Wea. o. p. Bar. 30.28	10	9.85	30.43	23.44	.065	0.537	Wea. o. r. Bar. 30.31	10	8.62	31.58	24.52	.035	0.551
Wind 0 Sea SW, 2	15	9.79	30.43	23.45	.087	0.539	Wind N, 1 Sea SW, 2	20	8.58	31.60	24.55	.069	0.549
Temp: dry 51, wet 51	20	9.80	30.43	23.45	.089	0.535	Temp: dry 50, wet 50	30	8.56	31.60	24.55	.103	0.549
Depth 29 m.	25	9.80	30.43	23.45	.111	0.538	Depth 52.5 m.	40	8.55	31.62	24.57	.137	0.549
								45	8.57	31.60	24.55	.154	0.547
Station 46							Station 50						
58° 13' N, 160° 18' W (1)	0	9.50	30.84	23.81	.000	0.558	57° 36' N, 159° 46' W (1)	0	8.90	31.51	24.43	.000	0.570
0710 GCT, 23 August 1938	5	9.12	30.99	23.99	.020	0.537	1405 GCT, 23 August 1938	5	8.87	31.55	24.46	.017	0.567
Wea. o. f. Bar. 30.30	10	9.01	31.06	24.06	.040	0.532	Wea. o. r. Bar. 30.29	10	8.59	31.58	24.53	.035	0.549
Wind 0 Sea SW, 1	15	8.89	31.08	24.09	.059	0.533	Wind N, 1 Sea SW, 2	20	8.43	31.65	24.61	.069	0.542
Temp: dry 51, wet 50	20	8.86	31.08	24.10	.078	0.526	Temp: dry 50, wet 50	30	8.38	31.65	24.61	.102	0.536
Depth 43.5 m., Bottom fine gy S	30	8.69	31.11	24.15	.116	0.527	Depth 55.5 m.	40	8.33	31.65	24.62	.135	0.539
	40	8.73	31.11	24.14	.154	0.526		50	8.32	31.67	24.64	.169	0.535
Station 47							Station 51						
58° 04' N, 160° 10' W (1)	0	9.84	31.11	23.97	.000	0.584	57° 27' N, 159° 39' W (1)	0	9.93	31.53	24.28	.000	0.594
0900 GCT, 23 August 1938	5	9.72	31.18	24.04	.020	0.578	1600 GCT, 23 August 1938	5	9.84	31.60	24.35	.018	0.587
Wea. o. p. Bar. 30.31	10	9.65	31.20	24.07	.039	0.574	Wea. o. r. Bar. 30.28	10	9.05	31.62	24.49	.036	0.552
Wind NW, 1 Sea SW, 2	15	8.80	31.38	24.34	.058	0.538	Wind N, 1 Sea W, 2	20	8.17	31.65	24.65	.070	0.527
Temp: dry 51, wet 50	20	8.51	31.44	24.43	.075	0.526	Temp: dry 51, wet 50	30	8.04	31.67	24.68	.102	0.523
Depth 51 m., Bottom fine gy S	30	8.40	31.47	24.47	.110	0.525	Depth 58.5 m.	40	7.98	31.67	24.69	.135	0.524
	40	8.44	31.48	24.47	.145	0.526		50	8.02	31.67	24.68	.168	0.523
	45	(8.40)	31.47	24.47	.162			55	(8.00)	31.69	24.70	.184	0.515
Station 48							Station 52						
57° 54' N, 160° 02' W (1)	0	8.85	31.56	24.47	.000	0.562	57° 18' N, 159° 30' W (1)	0	11.04	31.56	24.12	.000	0.551
1055 GCT, 23 August 1938	5	8.75	31.56	24.50	.017	0.556	1740 GCT, 23 August 1938	5	10.44	31.56	24.22	.019	0.532
Wea. o. p. Bar. 30.31	10	8.67	31.65	24.57	.034	0.552	Wea. o. r. Bar. 30.28	10	9.24	31.64	24.48	.037	0.512
Wind N, 2 Sea SW, 2	20	8.65	31.64	24.57	.068	0.555	Wind N, 1 Sea SW, 2	20	8.34	31.64	24.61	.071	0.494
Temp: dry 51, wet 50	30	8.64	31.65	24.58	.102	0.552	Temp: dry 52, wet 51	30	8.16	31.64	24.64	.104	0.490
Depth 51.5 m.	40	8.64	31.65	24.58	.136	0.554	Depth 59 m.	40	8.08	31.64	24.65	.137	0.496
	45	8.67	31.64	24.56	.153	0.551		50	8.09	31.64	24.65	.170	0.490
								55	8.06	31.67	24.68	.187	0.490

STATION DESCRIPTION	g (m)	T (°C)	S (°/∞)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mgat/L)	STATION DESCRIPTION	H (m)	T (°C)	S (°/∞)	σ _t (g/L)	Δ D (dyn m)	O ₂ (mgat/L)
Station 53 57° 09' N, 159° 23' W (1) 1940 GCT, 23 August 1938 Wea. o,r Bar. 30.25 Wind N,1 Sea W,2 Temp: dry 55, wet 53 Depth 55.5 m.	0 5 10 20 30 40 50	11.25 10.64 8.84 8.75 8.58 8.58 8.59	31.67 31.72 31.69 31.69 31.67 31.69 (31.69)	24.16 24.31 24.58 24.59 24.60 24.62 24.61	.000 .018 .036 .070 .103 .137 .170	0.548 0.543 0.489 0.488 0.484 0.484 0.478	Station 57 57° 17' N, 158° 52' W (1) 0350 GCT, 24 August 1938 Wea. o,r,m Bar. 30.22 Wind NNW,2 Sea W,1 Temp: dry 52, wet 52 Depth 47 m.	0 5 10 20 30 40	9.98 10.01 10.04 9.96 9.95 9.96	31.31 31.33 31.33 31.35 31.33 31.33	24.10 24.11 24.11 24.14 24.12 24.12	.000 .019 .038 .076 .114 .152	0.525 0.523 0.519 0.522 0.521 0.524
Station 54 57° 00' N, 159° 15' W (1) 2115 GCT, 23 August 1938 Wea. o,r Bar. 30.25 Wind N,1 Sea W,2 Temp: dry 53, wet 52 Depth 37.5 m.	0 5 10 20 30	10.67 10.97 11.06 10.99 10.96	31.22 31.27 31.29 31.27 31.29	23.92 23.90 23.90 23.90 23.92	.000 .020 .040 .080 .121	0.581 0.512 0.509 0.503 0.503	Station 58 57° 26' N, 158° 59' W (1) 0515 GCT, 24 August 1938 Wea. o,r,m Bar. 30.22 Wind N,2 Sea W,2 Temp: dry 51, wet 51 Depth 50.5 m.	0 5 10 20 30 40 45	9.22 9.25 9.25 9.21 9.22 9.21 9.25	31.44 31.42 31.42 31.44 31.44 31.44 31.46	24.32 24.30 24.30 24.33 24.32 24.33 24.34	.000 .018 .036 .072 .109 .145 .163	0.536 0.533 0.532 0.527 0.530 0.528 0.533
Station 55 56° 48' N, 159° 11' W (2) 2230 GCT, 23 August 1938 Wea. o,r Bar. 30.25 Wind N,1 Sea W,2 Temp: dry 53, wet 52 Depth 24 m.	0 5 10 15 20	12.24 11.57 11.51 11.46 11.47	30.10 30.75 30.81 30.79 30.81	22.77 23.40 23.45 23.45 23.46	.000 .024 .046 .068 .090	0.531 0.512 0.511 0.510 0.508	Station 59 57° 36' N, 159° 06' W (1) 0720 GCT, 24 August 1938 Wea. o,r,m Bar. 30.18 Wind N,1 Sea W,2 Temp: dry 50, wet 50 Depth 50 m.	0 5 10 20 30 40 45	9.51 9.52 9.53 9.50 9.50 9.49 9.51	31.42 31.42 31.45 31.42 31.44 31.40 31.42	24.26 24.26 24.28 24.27 24.28 24.25 24.26	.000 .018 .037 .073 .110 .147 .165	0.558 0.553 0.555 0.562 0.561 0.565 0.562
Station 56 57° 08' N, 158° 44' W (1) 0245 GCT, 24 August 1938 Wea. o,r,z Bar. 30.22 Wind N,1 Sea NNW,2 Temp: dry 52, wet 52 Depth 35.5 m.	0 5 10 15 20 30	10.64 10.63 10.67 10.59 10.60 10.58	31.11 31.15 31.13 31.15 31.14 31.17	23.84 23.87 23.85 23.87 23.87 23.89	.000 .020 .041 .061 .081 .121	0.535 0.524 0.525 0.529 0.519 0.530	Station 60 57° 45' N, 159° 15' W (1) 0710 GCT, 24 August 1938 Wea. o,r Bar. 30.16 Wind N,2 Sea W,2 Temp: dry 51, wet 51 Depth 45.5 m., Bottom S G	0 5 10 20 30 40	9.81 9.62 9.60 9.51 9.49 9.48	31.04 31.22 31.35 31.36 31.38 31.38	23.92 24.09 24.19 24.22 24.23 24.24	.000 .020 .039 .076 .113 .150	0.596 0.565 0.569 0.570 0.569 0.571

STATION DESCRIPTION	H (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 61						
570 55' N, 159° 22' W (1)	0	9.54	31.02	23.95	.000	0.553
1055 GCT, 24 August 1938	5	9.54	31.08	23.99	.020	0.552
Wea. o,r Bar. 30.13	10	9.58	31.09	23.99	.039	0.552
Wind NW,2 Sea W,1	20	9.55	31.11	24.01	.079	0.554
Temp: dry 51, wet 51	30	9.51	31.09	24.00	.118	0.554
	35	9.51	31.11	24.02	.137	0.552
Station 62						
580 04' N, 159° 30' W (1)	0	10.42	29.90	22.93	.000	0.555
1230 GCT, 24 August 1938	5	10.27	30.23	23.21	.024	0.550
Wea. o,r Bar. 30.11	10	9.95	30.62	23.57	.047	0.541
Wind NNW,2 Sea NW,1	20	9.67	30.89	23.82	.089	0.542
Temp: dry 51, wet 51	30	9.70	30.88	23.81	.130	0.541
Depth 40 m.	35	9.68	30.84	23.78	.150	0.541
Station 63						
580 13' N, 159° 37' W (1)	0	10.12	30.10	23.14	.000	0.563
1415 GCT, 24 August 1938	5	10.04	30.30	23.31	.023	0.553
Wea. o,r Bar. 30.08	10	9.87	30.48	23.50	.046	0.532
Wind NNW,1 Sea NW,1	20	9.72	30.48	23.50	.090	0.523
Temp: dry 51, wet 51	30	9.66	30.50	23.52	.134	0.524
Depth 35.5 M.						
Station 64						
580 21' N, 159° 44' W (1)	0	9.66	30.12	23.23	.000	0.522
1545 GCT, 24 August 1938	5	9.66	30.16	23.26	.023	0.520
Wea. o,r Bar. 30.06	10	9.68	30.17	23.26	.046	0.519
Wind NNW,3 Sea NNW,2	20	9.57	30.19	23.29	.092	0.519
Temp: dry 52, wet 52						
Depth 23 m.						
Station 65						
580 16' N, 159° 20' W (1)	0	11.00	29.79	22.75	.000	0.535
1805 GCT, 24 August 1938	5	11.00	29.81	22.77	.026	0.539
Wea. o,r Bar. 30.05	10	10.99	29.90	22.84	.051	0.534
Wind N,4 Sea N,3	20	10.99	29.90	22.84	.101	0.533
Temp: dry 53, wet 53						
Depth 24.5 m.						
Station 66						
580 08' N, 159° 15' W (1)	0	10.95	29.72	22.70	.000	0.538
1920 GCT, 24 August 1938	5	10.96	29.72	22.70	.026	0.536
Wea. o,r Bar. 30.07	10	10.93	29.79	22.76	.051	0.530
Wind N,3 Sea W,2	20	10.87	29.83	22.80	.102	0.531
Temp: dry 52, wet 52						
Depth 27 m.						
Station 67						
580 00' N, 159° 09' W	0	10.10	30.64	23.56	.000	0.547
2100 GCT, 24 August 1938	5	10.14	30.66	23.57	.022	0.547
Wea. o,r Bar. 30.08	10	10.08	30.66	23.58	.043	0.549
Wind N,4 Sea W,2	20	10.05	30.68	23.60	.086	0.543
Temp: dry 53, wet 53	30	10.05	30.68	23.60	.130	0.541
Depth 37.5						
Station 68						
570 50' N, 159° 04' W	0	10.38	30.37	23.31	.000	0.551
2248 GCT, 24 August 1938	5	10.40	30.37	23.30	.023	0.548
Wea. o,r Bar. 30.12	10	10.30	30.52	23.43	.046	0.549
Wind NW,6 Sea W,2	20	9.88	30.97	23.85	.088	0.548
Temp: dry 54, wet 54	30	9.85	31.02	23.90	.129	0.547
Depth 40 m.	35	9.84	31.02	23.90	.149	0.553

STATION DESCRIPTION		B	T	S	σ^t	ΔD	O ₂
		(m)	(°C)	(‰)	(g/L)	(dyn m)	(mgst/L)
Station 60							
57° 41' N, 158° 57' W (1)		0	9.99	31.31	24.10	.000	0.562
0010 GCT, 25 August 1938		5	10.02	31.33	24.11	.019	0.561
Wea. c Bar. 30.14		10	10.01	31.35	24.13	.038	0.561
Wind W, 2 Sea NW, 1		20	9.94	31.35	24.14	.076	0.561
Temp: dry 53, wet 52		30	9.94	31.33	24.12	.114	0.556
Depth 46 m.		40	9.92	31.35	24.14	.152	0.559
Station 70							
57° 32' N, 158° 50' W (3)		0	9.78	31.40	24.20	.000	0.555
0110 GCT, 25 August 1938		5	9.80	31.38	24.18	.019	0.557
Wea. c Bar. 30.16		10	9.84	31.35	24.16	.037	0.552
Wind WNW, 3 Sea W, 2		20	9.76	31.44	24.24	.075	0.555
Temp: dry 53, wet 52		30	9.75	31.42	24.23	.112	0.555
Depth 44.5 m.		40	9.75	31.40	24.21	.149	0.544
Station 71							
57° 25' N, 158° 39' W (3)		0	9.57	31.42	24.25	.000	0.562
0315 GCT, 25 August 1938		5	9.56	31.42	24.26	.018	0.559
Wea. c Bar. 30.19		10	9.59	31.42	24.25	.037	0.558
Wind WNW, 4 Sea WNW, 3		20	9.53	31.42	24.26	.074	0.555
Temp: dry 53, wet 52		30	9.51	31.40	24.25	.110	0.554
Depth 36.5 m.							
Station 72							
57° 13' N, 158° 28' W (3)		0	11.46	30.93	23.55	.000	0.524
0440 GCT, 25 August 1938		5	11.50	30.91	23.53	.022	0.523
Wea. c Bar. 30.20		10	11.51	30.91	23.53	.044	0.518
Wind WNW, 4 Sea WNW, 3		18	11.39	30.95	23.56	.078	0.523
Temp: dry 53, wet 52							
Depth 22.5							
STATION DESCRIPTION		B	T	S	σ^t	ΔD	O ₂
		(m)	(°C)	(‰)	(g/L)	(dyn m)	(mgst/L)
Station 73							
57° 40' N, 158° 08' W		0	11.48	30.86	23.50	.000	0.528
0740 GCT, 25 August 1938		5	11.50	-	-	-	0.521
Wea. c Bar. 30.20		10	11.55	-	-	-	0.526
Wind WNW, 4 Sea W, 4		20	11.51	-	-	-	0.528
Temp: dry 52, wet 50		25	11.53	-	-	-	0.531
Depth 30 m.							
Station 74							
57° 49' N, 158° 15' W		0	11.77	30.61	23.25	.000	0.524
0855 GCT, 25 August 1938		5	11.81	30.61	23.24	.023	0.525
Wea. c Bar. 30.20		10	11.84	30.57	23.21	.046	0.528
Wind WNW, 5 Sea W, 4		20	11.81	30.55	23.20	.093	0.527
Temp: dry 51, wet 51		25	11.83	30.57	23.21	.117	0.529
Depth 31.5 m.							
Station 75							
57° 57' N, 158° 22' W		0	11.59	30.26	23.01	.000	0.534
1005 GCT, 25 August 1938		5	11.65	30.25	22.99	.024	0.533
Wea. c Bar. 30.20		10	11.62	30.32	23.05	.049	0.530
Wind WNW, 5 Sea W, 4		20	11.56	30.34	23.08	.097	0.535
Temp: dry 50, wet 49		30	11.57	30.35	23.09	.145	0.532
Depth 37.5 m.							
Station 76							
58° 07' N, 158° 30' W		0	11.77	28.66	21.74	.000	0.530
1115 GCT, 25 August 1938		5	11.82	28.66	21.73	.030	0.530
Wea. c Bar. 30.20		10	11.81	28.87	21.90	.060	0.530
Wind WNW, 5 Sea W, 4		20	11.69	29.27	22.23	.118	0.531
Temp: dry 50, wet 49		30	11.66	29.47	22.39	.174	0.532
Depth 36 m.							

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
<u>Station 77</u>						
58° 12' N, 158° 14' W (1)	0	12.26	27.41	20.69	.000	0.539
1230 GGT, 25 August 1938	5	12.30	27.41	20.69	.035	0.539
Wea. c Bar. 30.23	10	12.25	27.70	20.92	.070	0.537
Wind NNW, 4 Sea W, 4	20	11.93	28.66	21.71	.135	0.527
Temp: dry 50, wet 49						
Depth 28 m.						
<u>Station 78</u>						
58° 03' N, 158° 08' W (1)	0	11.97	29.05	22.01	.000	0.529
1340 GGT, 25 August 1938	5	12.00	29.05	22.00	.029	0.535
Wea. b,c Bar. 30.24	10	12.02	29.07	22.02	.058	0.533
Wind NNW, 3 Sea W, 3	20	11.98	29.29	22.19	.116	0.537
Temp: dry 50, wet 49						
Depth 31 m.	25	11.93	29.25	22.17	.144	0.532
<u>Station 79</u>						
57° 53' N, 157° 58' W	0	12.39	27.29	20.58	.000	0.498
1455 GGT, 25 August 1938	5	12.53	27.29	20.55	.036	0.542
Wea. c Bar. 30.26	10	12.48	27.30	20.57	.072	0.543
Wind W, 3 Sea W, 3	13	12.43	27.32	20.59	.094	0.537
Temp: dry 51, wet 50						
Depth 17 m.						
<u>Station 80</u>						
56° 45' N, 160° 26' W (1)	0	11.39	31.64	24.12	.000	0.536
0818 GGT, 5 September 1938	5	11.40	31.64	24.12	.019	0.543
Wea. o Bar. 29.79	10	11.42	31.64	24.11	.038	0.543
Wind E, 2 Sea NE, 2	20	11.30	31.65	24.14	.076	0.543
Temp: dry 51, wet 51	30	11.30	31.64	24.13	.114	0.534
Depth 68 m.	40	11.01	31.67	24.21	.152	0.523
	50	7.95	31.73	24.74	.186	0.458
	60	7.84	31.74	24.76	.219	0.457
STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
<u>Station 81</u>						
56° 50' N, 160° 09' W (1)	0	11.44	31.65	24.12	.000	0.542
0945 GGT, 5 September 1938	5	11.47	31.64	24.10	.019	0.535
Wea. o Bar. 29.81	10	11.50	31.65	24.10	.038	0.542
Wind W, 2 Sea NE, 2	20	11.19	31.69	24.19	.076	0.530
Temp: dry 52, wet 51	30	11.09	31.71	24.22	.113	0.527
Depth 61 m.	40	7.73	31.76	24.79	.148	0.361
	50	7.72	31.80	24.83	.179	0.461
	55	7.71	31.76	24.80	.195	0.460
<u>Station 82</u>						
56° 55' N, 159° 50' W (1)	0	11.13	31.74	24.24	.000	0.539
1132 GGT, 5 September 1938	5	11.18	31.73	24.22	.019	0.539
Wea. c Bar. 29.83	10	11.23	31.74	24.22	.037	0.539
Wind SW, 3 Sea SW, 1	20	7.87	31.76	24.77	.072	0.471
Temp: dry 56, wet 54	30	7.72	31.76	24.80	.103	0.469
Depth 57 m.	40	7.70	31.78	24.81	.135	0.467
	50	7.69	31.76	24.80	.166	0.465
<u>Station 83</u>						
56° 59' N, 159° 35' W	0	11.29	31.67	24.16	.000	0.539
1252 GGT, 5 September 1938	5	11.30	31.69	24.17	.019	0.539
Wea. c Bar. 29.84	10	11.33	31.67	24.15	.032	0.536
Wind SW, 3 Sea SW, 1	20	9.45	31.69	24.48	.074	0.486
Temp: dry 56, wet 54	30	9.43	31.69	24.49	.108	0.482
Depth 56.5 m.	40	9.33	31.71	24.52	.143	0.479
	50	9.12	31.71	24.55	.177	0.473
<u>Station 84</u>						
57° 03' N, 159° 16' W	0	11.01	31.64	24.18	.000	0.538
1405 GGT, 5 September 1938	5	11.04	31.64	24.18	.019	0.540
Wea. c Bar. 29.83	10	11.08	31.65	24.18	.037	0.540
Wind SW, 2 Sea SW, 1	20	10.19	31.67	24.35	.074	0.508
Temp: dry 56, wet 54	30	9.94	31.65	24.37	.110	0.496
Depth 56 m.	40	9.91	31.69	24.41	.146	0.496
	50	(9.90)	31.66	24.39	.181	0.494

STATION DESCRIPTION	H (m)	T (°C)	S (°/∞)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 85 57° 07' N, 159° 00' W (1) 1550 GCT, 5 September 1938 Wes. c Bar. 29.84 Wind SE, 2 Sea S, 1 Temp: dry 56, vet 54 Depth 51 m.	0 5 10 20 30 40 45	11.15 11.19 11.18 11.04 11.00 10.75 10.76	31.35 31.36 31.35 31.36 31.36 31.47 31.49	23.93 23.93 23.93 23.96 23.97 24.10 24.11	.000 .020 .040 .080 .119 .158 .177	0.523 0.520 0.518 0.513 0.512 0.488 0.503
Station 86 57° 11' N, 158° 47' W (2) 1709 GCT, 5 September 1938 Wes. c Bar. 29.85 Wind S, 1 Sea S, 1 Temp: dry 54, vet 54 Depth 45 m.	0 5 10 20 30 40	11.74 11.78 11.67 11.54 11.54 11.51	31.00 31.00 31.03 31.08 31.08 31.11	23.56 23.55 23.63 23.66 23.66 23.69	.000 .022 .043 .086 .128 .171	0.525 0.522 0.513 0.516 0.513 0.512
Station 87 57° 31' N, 158° 41' W (2) 1931 GCT, 5 September 1938 Wes. c Bar. 29.86 Wind SE, 1 Sea S, 1 Temp: dry 54, vet 53 Depth 47.5 m.	0 5 10 20 30 40	9.91 9.96 9.96 9.91 9.91 9.92	31.46 31.44 31.42 31.44 31.44 31.46	24.23 24.21 24.19 24.22 24.22 24.23	.000 .019 .037 .075 .112 .149	0.549 0.550 0.549 0.544 0.544 0.544
Station 88 57° 26' N, 158° 58' W (2) 2105 GCT, 5 September 1938 Wes. c Bar. 29.87 Wind SE, 1 Sea S, 1 Temp: dry 54, vet 53 Depth 51 m.	0 5 10 20 30 40 45	10.15 10.09 10.10 10.05 10.04 10.04 10.08	31.46 31.46 31.44 31.46 31.46 31.46 31.46	24.19 24.20 24.18 24.21 24.21 24.21 24.20	.000 .019 .037 .075 .112 .149 .168	0.541 0.536 0.536 0.537 0.536 0.535 0.532
Station 89 57° 23' N, 159° 14' W (2) 2223 GCT, 5 September 1938 Wes. c Bar. 29.87 Wind SE, 1 Sea S, 1 Temp: dry 54, vet 53 Depth 53.5 m.	0 5 10 20 30 40 50	10.08 9.91 9.87 9.80 9.74 9.73 9.58	31.55 31.55 31.55 31.56 31.55 31.55 31.56	24.27 24.30 24.31 24.33 24.33 24.33 24.36	.000 .018 .036 .073 .109 .145 .181	0.534 0.529 0.525 0.525 0.523 0.525 0.522
Station 90 57° 19' N, 159° 30' W 2344 GCT, 5 September 1938 Wes. c Bar. 29.86 Wind SE, 1 Sea S, 1 Temp: dry 54, vet 53 Depth 57 m.	0 5 10 20 30 40 50	10.26 9.88 9.80 9.65 9.62 9.60 9.55	31.60 31.60 31.58 31.60 31.60 31.60 31.60	24.28 24.34 24.34 24.38 24.39 24.39 24.40	.000 .018 .036 .072 .107 .143 .179	0.539 0.551 0.547 0.527 0.522 0.515 0.513
Station 91 57° 11' N, 159° 51' W 0104 GCT, 6 September 1938 Wes. c Bar. 29.84 Wind SE, 2 Sea S, 1 Temp: dry 53, vet 52 Depth 61 m.	0 5 10 20 30 40 55	10.29 10.30 10.19 9.46 8.36 8.21 (8.21)	31.65 31.67 31.64 31.65 31.69 31.71 31.71	24.32 24.33 24.32 24.45 24.65 24.69 24.69	.000 .018 .036 .072 .106 .139 .188	0.583 0.588 0.568 0.535 0.488 0.485 0.485
Station 92 57° 10' N, 160° 05' W 0253 GCT, 6 September 1938 Wes. c Bar. 29.83 Wind SE, 2 Sea S, 1 Temp: dry 53, vet 52 Depth 64 m.	0 5 10 20 30 40 50 60	10.83 10.87 10.68 8.08 7.49 7.43 7.45 7.36	31.74 31.74 31.74 31.74 31.74 31.74 31.76	24.29 24.29 24.32 24.73 24.81 24.82 24.82 24.85	.000 .018 .036 .071 .102 .134 .165 .197	0.551 0.551 0.557 0.493 0.478 0.478 0.474 0.472

STATION DESCRIPTION	B (m)	T (C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 93						
57° 05' N, 160° 27' W (1)	0	10.95	31.71	24.25	.000	0.551
0451 GCT, 6 September 1938	5	10.99	31.67	24.21	.019	0.542
Wea. c Bar. 29.79	10	10.97	31.71	24.25	.037	0.549
Wind E,3 Sea E,1	20	10.65	31.74	24.32	.074	0.523
Temp: dry 53, wet 52	30	10.20	31.74	24.40	.109	0.523
Depth 64.5 m.	40	6.54	31.93	25.01	.142	0.474
	50	6.58	31.85	25.02	.172	0.472
	60	6.55	31.83	25.01	.201	0.474
Station 94						
57° 02' N, 160° 44' W (1)	0	10.85	31.71	24.26	.000	0.554
0457 GCT, 6 September 1938	5	10.98	31.71	24.24	.018	0.548
Wea. c Bar. 29.79	10	10.73	31.74	24.31	.037	0.540
Wind E,3 Sea E,2	20	10.51	31.73	24.35	.073	0.536
Temp: dry 53, wet 52	30	10.45	31.73	24.35	.109	0.536
Depth 70 m.	40	6.95	31.76	24.90	.142	0.464
	50	6.89	31.80	24.94	.173	0.460
	60	6.86	31.78	24.93	.203	0.461
Station 95						
57° 11' N, 160° 53' W (1)	0	10.83	31.69	24.25	.000	0.556
0620 GCT, 6 September 1938	5	10.87	31.69	24.25	.018	0.561
Wea. c Bar. 29.76	10	10.89	31.67	24.23	.037	0.559
Wind ENE,3 Sea NE,1	20	10.22	31.73	24.39	.073	0.546
Temp: dry 54, wet 52	30	9.54	31.80	24.55	.108	0.551
Depth 65.5 m.	40	6.19	31.85	25.07	.139	0.473
	50	6.17	31.82	25.04	.169	0.473
	60	6.13	31.87	25.09	.198	0.477
Station 96						
57° 21' N, 161° 02' W (1)	0	10.58	31.73	24.33	.000	0.586
0746 GCT, 6 September 1938	5	10.62	31.73	24.32	.018	0.590
Wea. c Bar. 29.76	10	10.64	31.73	24.32	.036	0.585
Wind NE,4 Sea NE,3	20	10.09	31.76	24.43	.072	0.567
Temp: dry 53, wet 52	30	9.94	31.78	24.47	.107	0.550
Depth 62 m.	40	6.01	31.87	25.10	.138	0.467
	50	6.04	31.87	25.10	.167	0.466
	55	6.01	31.87	25.10	.182	0.468

STATION DESCRIPTION	Z (m)	T (OC)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 97						
57° 25' N, 160° 45' W (1)	0	10.42	31.76	24.38	.000	0.578
0915 GCT, 6 September 1938	5	10.45	31.78	24.39	.018	0.578
Wea. c Bar. 29.75	10	10.47	31.76	24.37	.036	0.580
Wind NE,3 Sea NE,2	20	10.21	31.76	24.41	.071	0.549
Temp: dry 53, wet 52	30	7.72	31.80	24.83	.104	0.488
Depth 63 m.	40	7.10	31.83	24.94	.135	0.469
	50	7.08	31.83	24.94	.166	0.469
	60	7.01	31.83	24.95	.196	0.465
Station 98						
57° 29' N, 160° 28' W (1)	0	10.56	31.36	24.04	.000	0.567
1039 GCT, 6 September 1938	5	10.60	31.38	24.05	.019	0.569
Wea. c Bar. 29.74	10	10.64	31.38	24.05	.039	0.512
Wind NE,2 Sea NE,1	20	9.70	31.60	24.37	.076	0.552
Temp: dry 52, wet 51	30	8.30	31.73	24.69	.110	0.498
Depth 60 m.	40	7.93	31.78	24.78	.142	0.484
	50	7.95	31.78	24.78	.174	0.483
	55	7.91	31.78	24.78	.190	0.481
Station 99						
57° 33' N, 160° 09' W	0	9.41	31.56	24.39	.000	0.554
1200 GCT, 6 September 1938	5	9.47	31.58	24.39	.018	0.556
Wea. c Bar. 29.70	10	9.45	31.60	24.41	.035	0.551
Wind NE,1 Sea 0,0	20	9.14	31.62	24.48	.070	0.531
Temp: dry 52, wet 51	30	8.97	31.62	24.50	.105	0.515
Depth 55 m.	40	8.92	31.64	24.52	.139	0.509
	50	8.94	31.64	24.52	.174	0.506
Station 100						
57° 37' N, 159° 53' W	0	9.25	31.60	24.44	.000	0.547
1330 GCT, 6 September 1938	5	9.26	31.56	24.41	.018	0.547
Wea. c Bar. 29.69	10	9.24	31.60	24.45	.035	0.543
Wind NE,2 Sea NE,1	20	9.18	31.58	24.44	.070	0.542
Temp: dry 52, wet 51	30	9.20	31.56	24.42	.105	0.540
Depth 53 m.	40	9.19	31.60	24.45	.140	0.541
	50	9.21	31.58	24.43	.175	0.539

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
<u>Station 101</u>						
57° 43' N, 159° 35' W	0	9.41	31.53	24.36	.000	0.557
1455 GCT, 6 September 1938	5	9.47	31.52	24.37	.018	0.556
Wea. o.r. Bar. 29.67	10	9.48	31.56	24.38	.036	0.556
Wind NE, 3 Sea NE, 1	20	9.43	31.56	24.38	.071	0.549
Temp: dry 52, wet 51	30	9.42	31.55	24.38	.107	0.548
Depth 48.5 m.	40	9.43	31.56	24.38	.142	0.548
	45	9.44	31.56	24.38	.160	0.546
<u>Station 102</u>						
57° 46' N, 159° 17' W (1)	0	10.30	31.29	24.03	.000	0.533
1619 GCT, 6 September 1938	5	10.34	31.27	24.01	.020	0.539
Wea. o.r. Bar. 29.63	10	10.36	31.31	24.04	.059	0.535
Wind NE, 4 Sea NE, 3	20	10.24	31.31	24.06	.078	0.534
Temp: dry 53, wet 52	30	10.08	31.42	24.17	.116	0.534
Depth 46 m.	40	10.04	31.46	24.21	.153	0.534
<u>Station 103</u>						
57° 50' N, 159° 00' W (1)	0	11.87	29.18	22.13	.000	0.533
1732 GCT, 6 September 1938	5	11.89	29.20	22.14	.029	0.530
Wea. o.r. Bar. 29.62	10	11.49	29.94	22.78	.055	0.531
Wind E, 5 Sea E, 6	20	11.19	30.32	23.13	.105	0.523
Temp: dry 55, wet 54	30	10.85	30.72	23.50	.150	0.524
Depth 43 m.	40	10.60	31.09	23.83	.193	0.534
<u>Station 104</u>						
58° 01' N, 159° 09' W (1)	0	10.97	30.26	23.12	.000	0.542
1914 GCT, 6 September 1938	5	10.99	30.28	23.13	.024	0.542
Wea. o.r. Bar. 29.63	10	11.02	30.28	23.13	.048	0.539
Wind ESE, 6 Sea ESE, 6	20	10.79	30.41	23.27	.095	0.543
Temp: dry 55, wet 54	30	10.75	30.43	23.29	.142	0.535
Depth 39 m.						

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
<u>Station 105</u>						
58° 11' N, 159° 18' W (1)	0	11.51	29.63	22.54	.000	0.530
2033 GCT, 6 September 1938	5	11.54	29.63	22.53	.027	0.531
Wea. o.r. Bar. 29.62	10	11.54	29.61	22.52	.053	0.532
Wind E, 6 Sea E, 6	20	11.39	29.69	22.61	.106	0.533
Temp: dry 54, wet 54						
Depth 28.5 m						
<u>Station 106</u>						
58° 07' N, 159° 37' W (1)	0	11.01	30.05	22.95	.000	0.533
2142 GCT, 6 September 1938	5	11.02	30.07	22.96	.025	0.534
Wea. o.r. Bar. 29.59	10	10.98	30.17	23.05	.049	0.536
Wind E, 6 Sea E, 6	20	10.58	30.55	23.41	.095	0.539
Temp: dry 54, wet 54	30	10.41	30.64	23.51	.140	0.529
Depth 39.5 m						
<u>Station 107</u>						
58° 03' N, 159° 56' W (1)	0	10.21	30.93	23.77	.000	0.540
2307 GCT, 6 September 1938	5	10.27	30.93	23.76	.021	0.546
Wea. o.r. Bar. 29.57	10	10.22	30.97	23.80	.041	0.539
Wind E, 6 Sea E, 6	20	9.98	31.08	23.92	.082	0.541
Temp: dry 54, wet 54	30	9.80	31.09	23.96	.122	0.543
Depth 39 m.						
<u>Station 108</u>						
57° 58' N, 160° 14' W (1)	0	9.96	30.73	23.65	.000	0.532
0018 GCT, 7 September 1938	5	10.02	30.72	23.64	.021	0.530
Wea. o.r. Bar. 29.54	10	10.03	30.72	23.64	.043	0.526
Wind E, 6 Sea E, 6	20	9.82	30.82	23.75	.085	0.522
Temp: dry 54, wet 52	30	9.58	31.02	23.94	.126	0.512
Depth 51 m.	40	9.30	31.11	24.04	.165	0.503

STATION DESCRIPTION	Z (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgst/L)
Station 109						
57° 54' N, 160° 33' W (1)	0	10.15	31.02	23.85	.000	0.562
0155 GCT, 7 September 1938	5	10.20	31.00	23.82	.020	0.562
Wea. o,r Bar. 29.48	10	10.23	31.00	23.82	.041	0.562
Wind E,6 Sea E,6	20	10.07	31.08	23.91	.081	0.567
Temp: dry 54, wet 54	30	9.35	31.27	24.17	.120	0.525
Depth 51.5 m.	40	8.78	31.51	24.45	.157	0.479
Station 110						
57° 49' N, 161° 52' W (1)	0	10.51	30.82	23.63	.000	0.553
0300 GCT, 7 September 1938	5	10.54	30.84	23.64	.021	0.548
Wea. o,r Bar. 29.47	10	10.58	30.84	23.64	.043	0.555
Wind E,6 Sea E,6	20	10.21	30.88	23.73	.085	0.562
Temp: dry 54, wet 54	30	8.40	30.88	24.01	.125	0.473
Depth 49 m.	40	8.19	30.81	23.99	.165	0.472
Station 111						
57° 45' N, 161° 10' W (1)	0	10.52	31.02	23.79	.000	0.550
0422 GCT, 7 September 1938	5	10.58	31.00	23.76	.021	0.549
Wea. c Bar. 29.44	10	10.56	31.08	23.83	.041	0.543
Wind E,5 Sea E,6	20	10.25	31.20	23.97	.081	0.543
Temp: dry 53, wet 53	30	7.46	31.76	24.83	.117	0.543
Depth 48.5 m.	40	7.42	31.74	24.82	.148	0.465
Station 112						
57° 40' N, 161° 28' W (1)	0	9.95	30.88	23.77	.000	0.555
0547 GCT, 7 September 1938	5	10.00	30.86	23.75	.021	0.559
Wea. c Bar. 29.40	10	10.05	30.86	23.74	.042	0.559
Wind NE,4 Sea NE,5	20	7.31	30.86	24.15	.081	0.464
Temp: dry 53, wet 52	30	7.18	30.93	24.22	.119	0.460
Depth 51 m.	40	7.17	30.93	24.22	.156	0.460
Station 113						
57° 50' N, 161° 38' W (1)	0	9.54	30.95	23.89	.000	0.557
0703 GCT, 7 September 1938	5	9.56	30.95	23.89	.020	0.558
Wea. c Bar. 29.39	10	9.61	30.95	23.88	.040	0.558
Wind NE,4 Sea NE,5	20	8.25	31.22	24.30	.079	0.477
Temp: dry 53, wet 52	30	8.19	31.22	24.31	.115	0.474
Depth 42 m.						
Station 114						
58° 01' N, 161° 46' W (1)	0	9.45	30.90	23.87	.000	0.554
0830 GCT, 7 September 1938	5	9.45	30.86	23.84	.020	0.555
Wea. c Bar. 29.39	10	9.46	30.88	23.85	.041	0.548
Wind NE,4 Sea NE,5	20	9.16	30.90	23.91	.081	0.548
Temp: dry 53, wet 53	30	9.01	31.22	24.18	.120	0.555
Depth 54 m.	40	7.94	31.26	24.37	.156	0.549
50	7.96	31.26	24.37	.192	0.549	
Station 115						
58° 06' N, 161° 31' W (1)	0	9.42	30.64	23.67	.000	0.533
0955 GCT, 7 September 1938	5	9.43	30.64	23.67	.021	0.529
Wea. c Bar. 29.39	10	9.45	30.64	23.66	.042	0.525
Wind ENE,4 Sea NE,5	20	8.96	30.82	23.88	.084	0.503
Temp: dry 52, wet 52	30	8.73	30.93	24.00	.124	0.491
Depth 40 m.						
Station 116						
58° 12' N, 161° 17' W (1)	0	9.30	30.81	23.82	.000	0.530
1122 GCT, 7 September 1938	5	9.33	30.82	23.82	.020	0.534
Wea. c Bar. 29.37	10	9.35	30.82	23.82	.041	0.528
Wind ENE,3 Sea NE,5	20	9.17	30.82	23.85	.082	0.528
Temp: dry 52, wet 52	30	9.17	30.82	23.85	.122	0.520
Depth 47 m.	40	9.14	30.82	23.85	.163	0.523

STATION DESCRIPTION	H (m)	T (°C)	S (‰)	σ_t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
<u>Station 117</u> 58° 18' N, 161° 02' W 1235 GCT, 7 September 1938 Wea. c Bar. 29.35 Wind KNE, 5 Sea KNE, 5 Temp: dry 52, wet 52 Depth 39 m.	0 5 10 20 30	9.85 9.89 9.92 9.79 9.72	30.59 30.57 30.61 30.64 30.68	23.56 23.54 23.57 23.61 23.65	.000 .022 .043 .087 .129	0.534 0.538 0.538 0.535 0.534
<u>Station 118</u> 58° 24' N, 160° 47' W 1410 GCT, 7 September 1938 Wea. o Bar. 29.33 Wind KNE, 6 Sea KNE, 6 Temp: dry 52, wet 52 Depth 30 m.	0 5 10 20	10.17 10.20 10.24 10.18	30.37 30.35 30.39 30.37	23.34 23.32 23.34 23.34	.000 .023 .046 .091	0.554 0.543 0.539 0.546
<u>Station 119</u> 58° 29' N, 160° 31' W (2) 1536 GCT, 7 September 1938 Wea. c Bar. 29.34 Wind KNE, 6 Sea KNE, 6 Temp: dry 52, wet 52 Depth 16 m.	0 5 10	----- ----- -----	29.85 29.83 29.85			
<u>Station 120</u> 58° 25' N, 160° 50' W (2) 1702 GCT, 7 September 1938 Wea. o Bar. 29.30 Wind KNE, 7 Sea NE, 6 Temp: dry 54, wet 53 Depth 34.5 m.	0 5 10 20 30	10.06 10.09 10.16 10.13 10.14	30.50 30.44 30.48 30.53 30.53	23.46 23.41 23.43 23.47 23.47	.000 .022 .045 .089 .133	0.544 0.545 0.545 0.547 0.545
<u>Station 121</u> 58° 21' N, 161° 06' W (1) 1827 GCT, 7 September 1938 Wea. o,r Bar. 29.29 Wind KNE, 7 Sea NE, 6 Temp: dry 54, wet 53 Depth 46.5 m.	0 5 10 20 30 40	9.72 9.74 9.67 9.44 9.30 9.25	30.79 30.81 30.81 30.84 30.84 30.88	23.74 23.75 23.76 23.82 23.84 23.88	.000 .021 .042 .083 .124 .164	0.538 0.536 0.536 0.533 0.531 0.527
<u>Station 122</u> 58° 17' N, 161° 26' W (1) 1945 GCT, 7 September 1938 Wea. o,r Bar. 29.25 Wind NE, 6 Sea NE, 6 Temp: dry 54, wet 53 Depth 43.5 m.	0 5 10 20 30 40	9.87 9.89 9.88 9.24 9.22 9.16	30.81 30.81 30.82 30.86 30.84 30.88	23.73 23.73 23.74 23.87 23.86 23.90	.000 .021 .042 .083 .123 .164	0.545 0.544 0.544 0.525 0.520 0.520
<u>Station 123</u> 58° 13' N, 161° 44' W (1) 2102 GCT, 7 September 1938 Wea. o,r Bar. 29.25 Wind NE, 6 Sea NE, 6 Temp: dry 54, wet 53 Depth 50 m.	0 5 15 25 35 45	9.39 9.39 9.36 9.22 8.77 8.33	30.90 30.90 30.91 30.97 31.02 31.15	23.88 23.88 23.89 23.96 24.06 24.23	.000 .020 .061 .100 .140 .177	0.552 0.551 0.548 0.543 0.514 0.474
<u>Station 124</u> 57° 57' N, 162° 04' W 2324 GCT, 7 September 1938 Wea. o,r Bar. 29.24 Wind NE, 6 Sea NE, 6 Temp: dry 54, wet 53 Depth 46.5 m.	0 5 10 20 30 40	9.92 9.96 9.98 8.68 7.28 7.32	31.33 31.31 31.31 31.69 31.76 31.78	24.13 24.10 24.10 24.60 24.85 24.87	.000 .019 .038 .074 .106 .137	0.566 0.566 0.565 0.573 0.489 0.494

STATION DESCRIPTION	h (m)	T (°C)	S (‰)	σ^t (g/L)	ΔD (dyn m)	O ₂ (mgat/L)
Station 125						
57° 40' N, 162° 24' W	0	8.65	31.83	24.71	.000	0.578
0138 GCT, 8 September 1938	5	8.70	31.85	24.72	.016	0.589
Wea. o,r Bar. 29.22	10	8.68	31.85	24.73	.032	0.579
Wind NE,5 Sea NE,5	20	7.11	31.94	25.02	.063	0.472
Temp: dry 53, wet 52	30	7.04	31.96	25.05	.093	0.468
Depth 47 m.	40	7.04	31.96	25.05	.122	0.468
Station 126						
57° 23' N, 162° 44' W (1)	0	8.82	31.85	24.71	.000	0.578
0344 GCT, 8 September 1938	5	8.87	31.85	24.70	.016	0.578
Wea. o Bar. 29.21	10	8.87	31.87	24.71	.033	0.578
Wind NNW,5 Sea N,5	20	8.74	31.89	24.75	.065	0.566
Temp: dry 51, wet 51	30	6.27	31.98	25.16	.095	0.468
Depth 52.5	40	6.00	32.01	25.22	.123	0.464
	47	5.94	32.01	25.22	.142	0.461
Station 127						
57° 06' N, 163° 03' W (1)	0	9.33	31.76	24.56	.000	0.561
0610 GCT, 8 September 1938	5	9.39	31.71	24.51	.017	0.564
Wea. o,f Bar. 29.23	10	9.42	31.71	24.50	.034	0.560
Wind NNW,6 Sea NW,6	20	7.94	31.76	24.76	.067	0.538
Temp: dry 51, wet 51	30	4.68	31.98	25.34	.097	0.476
Depth 62 m.	40	4.61	31.98	25.35	.123	0.477
	50	4.61	31.98	25.35	.149	0.475
	57	4.53	32.00	25.37	.168	0.477
Station 128						
56° 50' N, 163° 22' W (1)	0	9.63	31.60	24.38	.000	0.549
0816 GCT, 8 September 1938	5	9.65	31.58	24.37	.018	0.550
Wea. o,d Bar. 29.26	10	9.69	31.56	24.34	.036	0.537
Wind NW,6 Sea NW,6	20	9.65	31.60	24.38	.072	0.552
Temp: dry 51, wet 50	30	3.67	31.96	25.43	.102	0.468
Depth 72 m.	40	3.61	31.98	25.45	.128	0.470
	50	3.68	31.96	25.43	.153	0.468
	60	3.67	31.96	25.43	.179	0.465

CURRENT MEASUREMENTS

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
1	020	0930 0920	5 18	.42 .50	034 329
2	000	1140 1130	5 40	.47 .28	029 354
3	255	1410 1404	5 55	.30 .26	084 204
4	233	1620 1610	5 55	.66 .14	129 139
5	147	1910 1855	5 67	.74 .28	219 309
6	107	2135 2120	5 69	.58 .67	279 329
7	090	2350*	5 56.5	.79 .67	224 349
8	240	0155*	5 57	.38 .29	039 349
9	242	0345*	5 55	.78 .58	114 129
10	255	0624 0618	(5) 48	.98 .79	119 139
11-1	242	0840 0832	5 41	.52 .22	109 179
11-2	125		D8 5 41		305 229 269
11-3	---	1350 1330	D8 5 41.5	.73 .59	095 219 244
11-4	---	1550 1540	D8 (5) 41	.07 (.28)	120 199 209
11-5	---	1845 1830	D8 5 41	.29 .40	048 079 064

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
12	008	2030 2020	D8 5 51	.48 .21	139 179 019
13	098	2300 2250	D8 5 46	.85 .30	262 319 279
14	120	0130 0118	D8 5 43.5	.58 .93	205 189-209 079
15	045	0340 0330	D8 5 39.5	.97 .97	135 139 099
16	208	2035 2010	D8 5 27	.83 .58	043 092 135
17	207	2245 2225	D8 5 37	.29 .25	072 319-019(340) 074
18	110	0110 0059	D8 5 43	.67 .41	237 303 309
19	150		D8		295
20	197		D8		035
21	210		D8		040
22	020	1555 1540	D8 5 43	.13 .38	230 014 351
23	000	1800 1745	D8 5 57	.38 .57	210 076 139
28	290		D8		020
29-1	290	1110 1050	D8 5 36	.87 .48	110 124 121

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
29-2	310	1255 1245	DS 5 36	.12 .39	045 309 245
29-3	098	1525 1453	DS 5 36	1.58 .80	288 219 269
29-4	108	1640 1623	DS (5) 36	1.57 .91	295 159-219 (190) 284
29-5	192	1905 1843	DS 5 36	.76 .42	342 209 309
29-6	281	2037 2025	DS 5 36	.46 .32	064 099-169 (145) 066
29-7	287	2345 2320	DS 5 36	.80 .38	127 101 092
29-8	---	0050 0035	DS 5 36	.33 .14	125 096 099
30-1	242	2220 2155	DS 5 66.5	.64 .29	042 109-179 (153)
30-2	195	0055 0045	DS 5 66.5	.41 .25	007 135 199-239 (211)
30-3	056	0101 0145	DS 5 66.5	.34 .38	261 Variable 289-349 (327)
30-4	050	0410 0400	DS 5 66.5	.47 .44	230 029-079 (063) 279-029 (350)
30-5	150	0555 0545	DS 5 66.5	.24 .20	100 069-119 (096) 059-189 (149)

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
30-6	---	0742 0732 0702 0725 0707 0710 0715	12 15 16 17 18 19 20	(.59) /3/ (.49) /3/ (.40) /1/ (.48) /7/ (.44) /1/ (.42) /1/ (.47) /4/	
30-7	203	0840 0830	DS 5 66.5	.84 .40	028 135 155
30-8	223	0920 0915	DS 5 66.5	.99 .42	055 139 165
30-9	218	1153 1140	DS 5 66.5	.72 .27	038 132 189
30-10	106	1415 1400	DS 5 66.5	1.29 .53	246 219-299 (257) 306
30-11	092	1605 1550	DS 5 66.5	.72 .53	252 358 341
30-12	111	1810 1747	DS 5 66.5	.66 .35	269 209-279 (257) 005
31-2	163 185	1110 1122	DS DS		303 350
31-3	222	DS	DS		032
31-4	237	DS	DS		042
33-1	073 084	2135 2145	DS DS 5 10		238 254 (1.40) /2/ (1.12) /4/

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
33-3	225		DS		305
33-4	248	0336	DS	(1.70) /4/	333
		0347	5	(1.56) /4/	
		0353	10	(1.23) /3/	
37	215		DS		020
38	005		DS		220
39	275		DS		075
42	115		DS		270
43	225		DS		035
44	237		DS		057
45	245		DS		335
46	240		DS		045
47	135		DS		045
48	077		DS		025
49	075		DS		255
50	195		DS		285
51	221		DS		056
52	193		DS		358
53	310		DS		040
54	050		DS		215
55	065		DS		235
56	000		DS		215
57	230		DS		035
58	252		DS		072
59	245		DS		060
60	257		DS		177
61	058		DS		238
62	060		DS		230
63	035		DS		220
64	319		DS		159
65	315		DS		125
66	305		DS		080

MBL WHOI Library - Serials



5 WHSE 01308

