

ANNUAL MEETING - JUNE 1955United Kingdom Research Report for the Year 1954

By C.E. Lucas and G.C. Trout

I. Fisheries Laboratory, Lowestoft by G.C. Trout

The main effort of English distant water market sampling at the Humber ports of Hull and Grimsby was again directed towards the Arcto-Norwegian cod. From Subarea 1, however, some 4,700 cod were measured during the year. Unfortunately, no material for age-determination was obtained.

No research vessel operated in Subarea 1.

The English Trawl Fishery at Greenland. During 1954 length measurements were obtained from samples of twenty cod landings derived from the five Subdivisions B, C, D, E and F of Subarea 1.

Table 1 and Figure 1 give the percentage of each length group of the raised total catches from each subdivision.

It will be seen that there is a progressive increase in the modal length of the samples from North to South. In the absence of any age data, and allowing for growth during the period under review, the differences in modal length are thought to reflect the continued predominance of the 1945 year-class in the Cape Farewell area - as was seen in 1952 and 1953 - whilst the 1947 year-class remains more important in the more northerly subdivisions. The shape of the percentage length frequency curve for the Cape Farewell area in 1954 is substantially similar to that of 1953. The general inference is that some measure of segregation between the southern cod population and the western bank populations continues.

During the year two cod, tagged at Cape Farewell in September, 1952, were returned from Iceland - making a total of five to date. Previously, three had been returned within the first year, after 222, 238 and 307 days respectively. Those returned during 1954 were at liberty for 649 and 805 days.

Table 2 and Figures 2, 3 and 4 give the hydrographic data for two sections made by the Ernest Holt in 1952.

II. Marine Laboratory, Aberdeen by C.E. Lucas

It so happened that there were no Scottish landings from I.C.N.A.F. subareas during 1954 so that neither sampling nor measurement was necessary.

That part of the laboratory's work concerning the halibut stocks between Iceland and East Greenland may be relevant. A special cruise to investigate these waters was made between 12th May and 20th June, 1954, extending from Iceland to the Ice Barrier. The report on this cruise will be appearing in the "Annales Biologiques" of the International Council for the Exploration of the Sea, Vol. XI (Distant Northern Seas Section), by A.D. McIntyre and J.H. Steele.

- THE END -

Table 1

% LENGTH - DISTRIBUTION OF WEST GREENLAND COD 1954

Area 5 cm. Groups	1B		1C		1D		1E		1F	
	Raised Total	%	Raised Total	%	Raised Total	%	Raised Total	%	Raised Total	%
40/44					1,011	0.4				
45/49			519	0.8	8,341	3.4			3,383	0.6
50/54	3,654	3.5	3,319	5.3	16,673	6.8	128	0.3	23,234	3.9
55/59	19,510	18.5	4,907	7.8	13,593	5.5	4,078	9.7	38,207	6.3
60/64	22,312	21.1	17,587	27.8	25,149	10.2	3,806	9.0	70,999	11.8
65/69	18,054	17.1	15,205	24.1	46,578	18.9	2,241	5.3	83,571	13.9
70/74	14,786	14.0	8,205	13.0	50,561	20.5	9,155	21.7	101,438	16.9
75/79	13,604	12.9	6,500	10.3	39,806	16.1	12,282	29.1	123,404	20.5
80/84	8,348	7.9	5,122	8.1	27,696	11.2	7,535	17.9	91,587	15.2
85/89	3,560	3.4	1,803	2.8	9,969	4.0	1,877	4.5	41,363	6.9
90/94	904	0.8			6,421	2.6	789	1.9	15,341	2.6
95/99	904	0.8			806	0.3	258	0.6	7,171	1.2
100/104					132	0.1			1,194	0.2
105/109									224	0.0
120/124									193	0.0
TOTAL	105,636		63,167		246,736		42,149		601,309	
No. of fish Measured	249		263		889		259		2,992	
No. of boats Sampled	1		1		4		1		13	
Catch of boats Sampled. Cwts.	3,951½		2,468½		11,822½		2,025		32,933½	

TABLE 2.

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UNITED KINGDOM. R.V. ERNEST HOLT CRUISE 5, 1952

Observations on Temperature and Salinity in the Area off  
South West Greenland, September 1952

<u>Station 56 - 60°12'N, 45°38'W,</u> <u>Depth--150 m., Date--9 Sept. 1952</u>			<u>Station 78 (contd). 58°57'N, 46°03'W,</u> <u>Depth--2520 m., Date--14 Sept. 52</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>	<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>
0	2.78	30.73*	940	3.38	34.85
10	2.70	30.73*	1130	3.42	34.83*
20	2.63	30.81	1418	3.42	34.92
30	2.28	31.00	1904	3.09	34.90
50	1.88	31.71	2393	2.34	34.90
75	1.63	32.11			
100	1.03	33.13			
140	0.96	33.66			
<u>Station 58 - 60°12'N, 46°09'W,</u> <u>Depth--91 m., Date--9 Sept. 1952</u>			<u>Station 79 - 59°11'N, 45°36'W,</u> <u>Depth--2120 m., Date--14 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>	<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>
0	2.31	31.51	0	7.72	34.88
10	2.02	31.59*	10	7.73	34.90
20	1.85	31.64	20	7.69	34.83*
30	1.78	31.73	30	7.61	34.83
50	1.18	32.59	50	7.64	34.97*
80	1.21	32.45	75	6.84	34.97
			100	5.85	35.01
			150	5.40	34.99
			200	5.14	34.99
			300	4.66	34.99
			400	4.27	34.95
			500	3.98	34.90
			600	3.84	34.91
			795	3.62	34.90
			993	3.50	34.88
			1192	3.46	34.88
			1490	3.45	34.90
			1987	2.94	34.90
<u>Station 61 - 59°59'N, 46°34'W,</u> <u>Depth--293 m., Date--9/10 Sept. 52</u>			<u>Station 80 - 59°17'N, 44°57'W,</u> <u>Depth--1870 m., Date--14 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>	<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>
0	2.61	30.86*	0	7.07	34.71*
10	2.56	30.93	10	6.93	34.80
20	2.49	32.31	20	7.01	34.86
30	1.66	32.96	30	7.01	34.84
50	2.20	33.39	50	7.10	34.86
75	2.83	33.92	75	6.80	34.86
96	4.15	34.63	100	6.43	34.95
143	3.42	34.49	148	5.84	35.04
191	3.60	34.22	197	5.75	35.02
263	4.58	34.79	295	5.25	34.99
			394	4.74	34.98
			492	4.48	34.99
			591	4.28	34.98
			763	3.96	34.91
			958	3.73	34.90*
			1154	3.56	34.88*
			1453	3.52	34.87
			1753	3.12	34.90*
<u>Station 78 - 58°57'N, 46°03'W,</u> <u>Depth--2520 m., Date--14 Sept. 52</u>					
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰/‰</u>			
0	7.78	34.44			
10	7.76	34.49			
20	7.74	34.49			
30	7.66	34.49			
50	4.98	34.87*			
75	4.24	34.87			
100	4.36	34.88			
150	4.38	34.90			
194	4.36	34.95			
291	4.01	34.92			
388	3.74	34.92			
485	3.66	34.92			
581	3.50	34.88			
751	3.43	34.90			

\* denotes analysis repeated

TABLE 2 (cont'd)

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UNITED KINGDOM. R.V. ERNEST HOLT CRUISE 5, 1952

Observations on Temperature and Salinity in the Area off  
South West Greenland, September 1952

<u>Station 81 - 59°24'N, 44°43'W,</u>		
<u>Depth--1100 m., Date--14 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰</u>
0	6.00	34.57
10	5.80	34.57
20	5.80	34.60
30	5.78	34.65
50	5.74	34.65
75	5.91	34.67
100	5.10	34.65
150	5.23	34.88
197	5.13	34.92*
296	4.88	34.92
395	4.73	34.92
494	4.62	34.92
593	4.46	34.96
792	4.22	34.96
991	3.94	34.90

<u>Station 82 - 59°31'N, 44°29'W,</u>		
<u>Depth--229 m., Date--14 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰</u>
0	0.59	32.95*
10	0.24	33.13
20	0.14	33.26
30	0.24	33.24
50	2.41	33.68
75	3.15	33.96
100	3.87	34.09
143	3.22	34.50
191	3.34	34.51
210	3.32	34.50

<u>Station 83 - 59°38'N, 44°15'W,</u>		
<u>Depth--172 m., Date--14 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰</u>
0	2.20	30.67*
10	1.84	31.34
20	1.68	31.67
30	1.72	32.54*
50	1.74	32.68
75	1.70	32.95
100	2.32	33.35
150	1.44	33.91
165	1.99	34.09

<u>Station 84 - 59°43'N, 44°01½'W,</u>		
<u>Depth--135 m., Date--15 Sept. 1952</u>		
<u>Depth (m)</u>	<u>Temp. °C.</u>	<u>Sal. ‰</u>
0	2.59	30.34*
10	2.34	30.37
20	2.03	30.79
30	1.79	31.35
50	1.46	31.83
75	0.46	32.79
100	0.66	33.06
125	1.13	33.55

\* denotes analysis repeated

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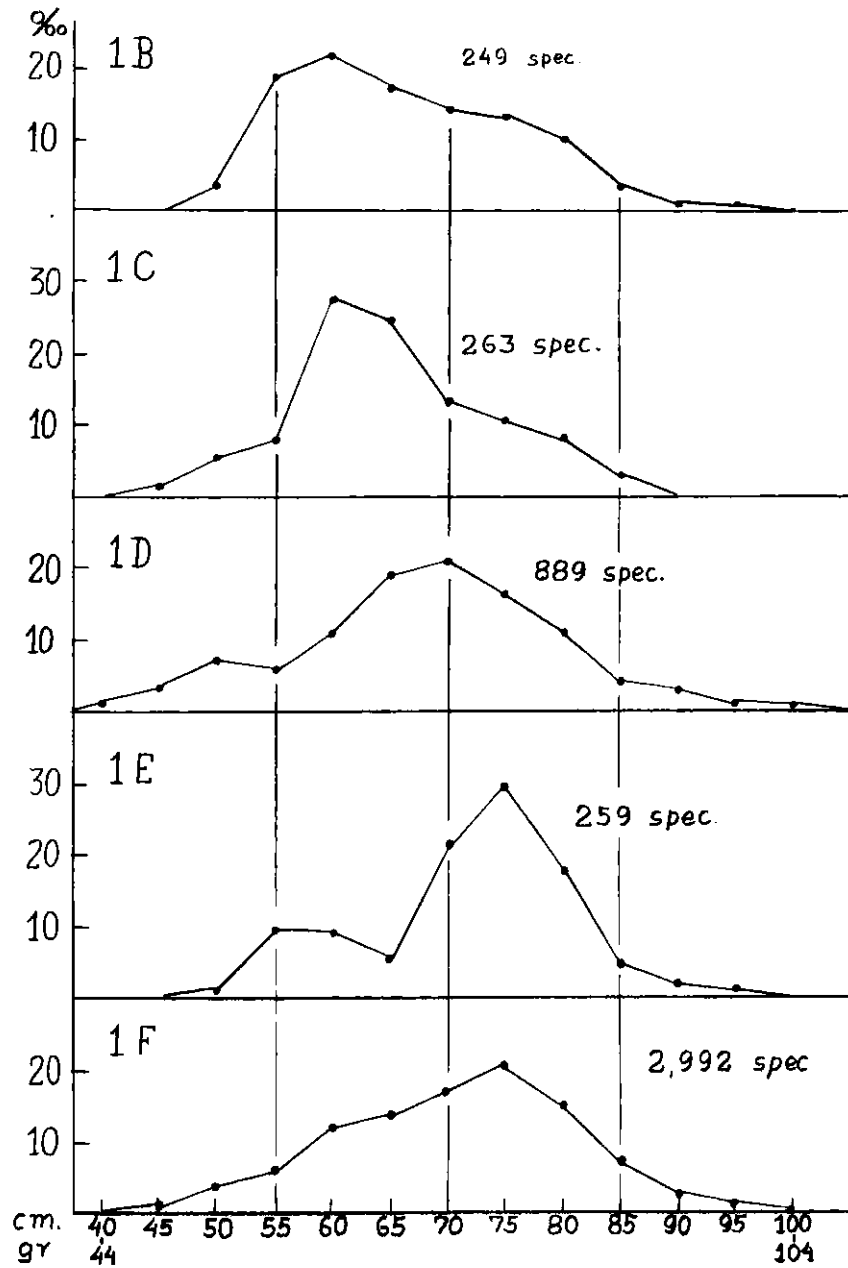


Figure 1. Length distribution by 5 cm. groups of cod caught by trawl in the various subdivisions, Subarea 1, 1954.

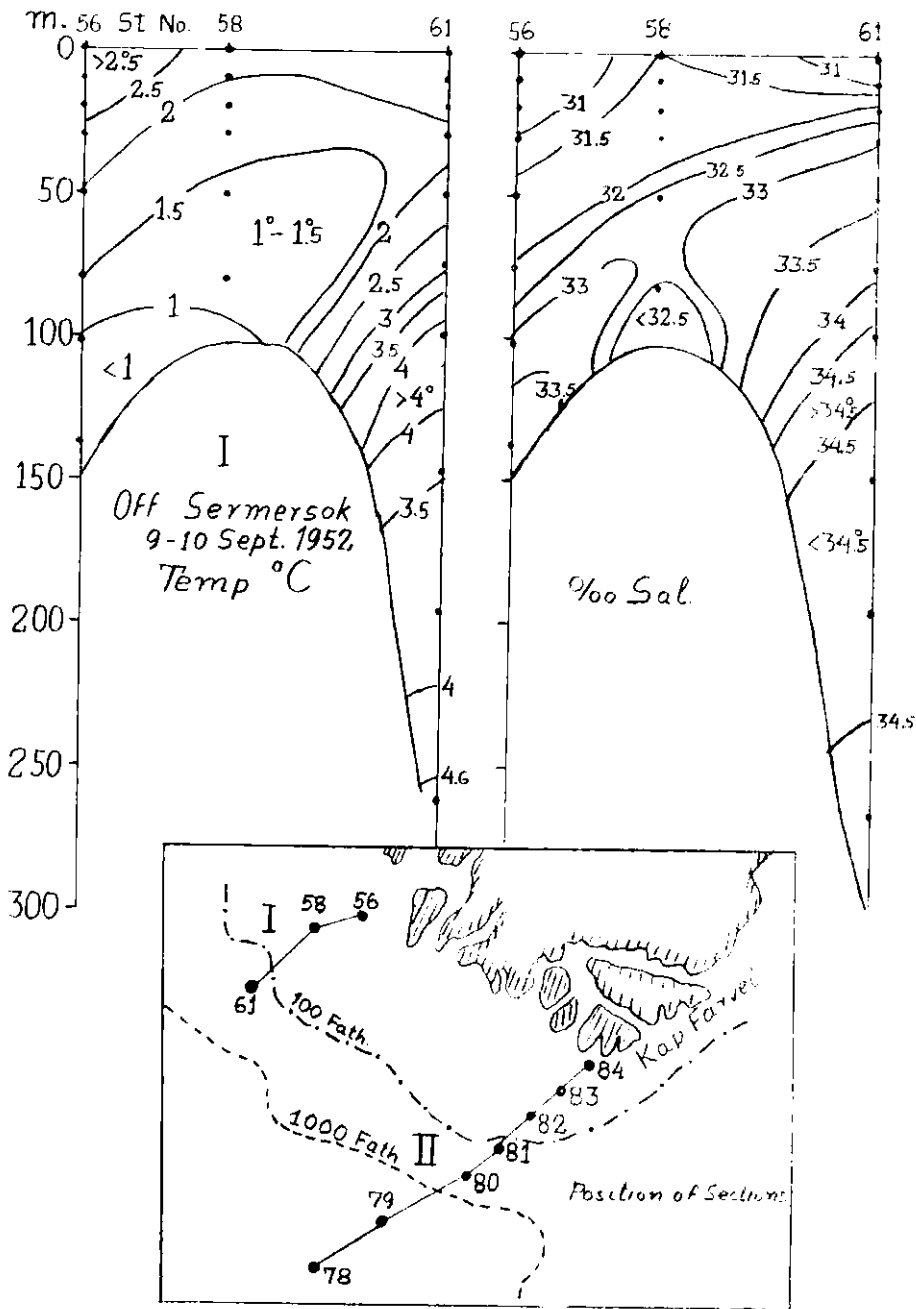


Figure 2. Hydrographic Section I, off Sermersok, 9-10 Sept. 1952. Temperature and Salinity. Inserted map showing location of Sections I and II.

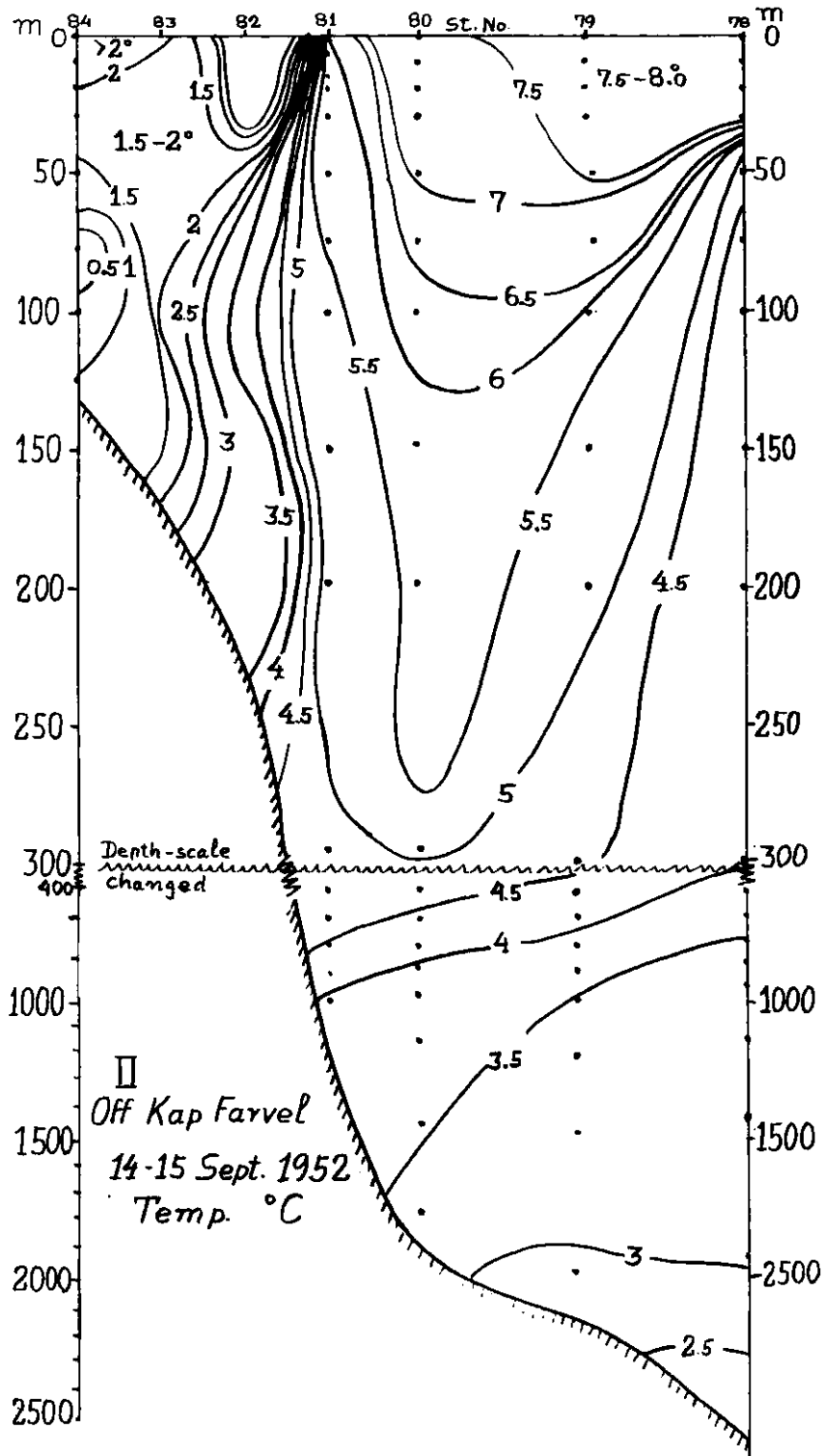


Figure 3. Hydrographic Section II, off Kap Farvel, 14-15 Sept. 1952. Temperature.

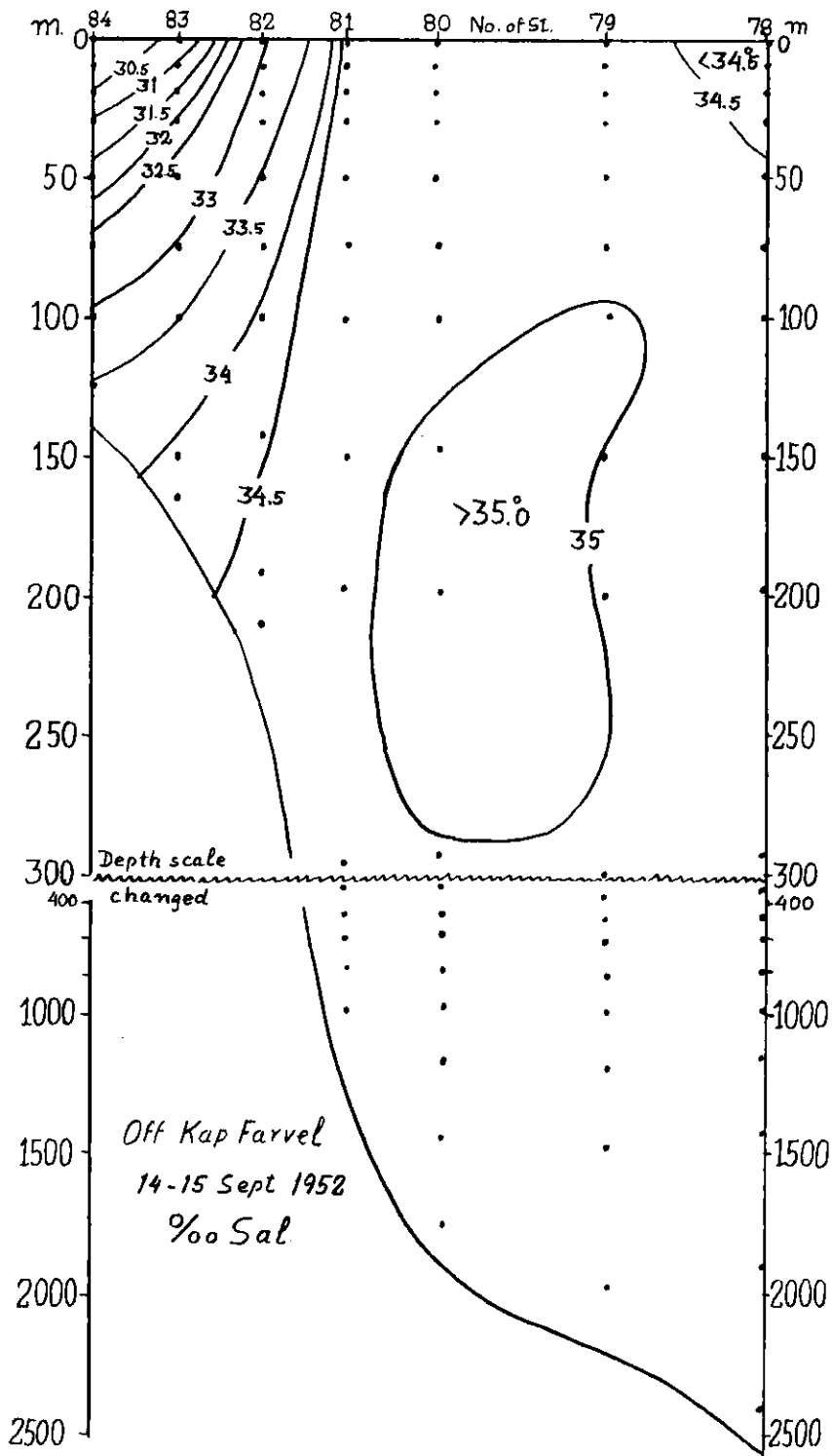


Figure 4. Hydrographic Section II, off Kap Farvel, 14-19 Sept. 1952. Salinity.