



Serial No. 626
(D. Res. a/58)

Document No. 27

ANNUAL MEETING - JUNE 1959

Norway. Fisheries Investigations in Greenland Waters 1958

by

Erling Bratberg

Introduction

In 1958 a Norwegian fleet of 77 vessels participated in the fisheries on the Newfoundland banks and the banks off West Greenland. 68 of these vessels were engaged in the cod fisheries while 8 fished exclusively for halibut. One vessel fished both for halibut and cod. In this year six Norwegian trawlers visited the area.

A total of 13,420 tons of salted cod was landed from the convention area in 1958. The catch of halibut amounted to 813 tons.

As in earlier years the fisheries off West Greenland started in early May in 1958. In June the fishery was relatively good on Fiskenes Bank and on the southern part of Fyllas Bank. As usual there was a slack period in the fishery in the first part of July. In late July there was a relatively good hand-line fishery on the banks between Faeringerhavn and Sukkertoppen, but the really good handline fishery off Holstensborg did not start before the middle of August.

In the first part of June the cod was of relatively small size and the liver content was rather poor while the fish mostly fed on benthic animals. Towards the end of June and the rest of the season the mean length of the cod grew larger. From the middle of July the liver content also increased while the fish began to feed heavily on sand eels.

Material was also this year sampled by an observer from the Norwegian Institute of Marine Research for the study of age- and size-composition of the commercial cod catches and for the study of the temperature conditions on the banks. The observer worked onboard a commercial fishing vessel.

Hydrography

Three temperature sections westwards from the banks were taken on July 5-6. Temperature registrations were also made where the vessel actually was fishing. All the temperature registrations were made by means of a bathythermograph.

Compared with earlier years the temperature sections showed no exceptional changes.

On Lille Hellefisk Bank, Figures 1 and 2, a core of cold arctic water with temperature 0.5 - 2° C covered the top of the bank and the upper part of the bank slope in a depth from 25 to about 220 m.

Also on Fyllas Bank, Figure 3, cold arctic water with temperature 0-2°C were found on the upper part of the bank slope from about 15-300 m, but here warmer water with temperature more than 2.5°C was lying on the top of the bank.

In the table below we find the registered bottom temperatures where the vessels were fishing, and we also see that satisfactory fishing only took place where the temperature was more than 2°C.

Table 1. Bottom temperatures and catch of cod by a Norwegian commercial fishing vessel during June 20 to July 4.

Position	Depth	Bottom temperature	Number of cod in the catch	catch/10 hooks
N 62°57' W 51°05'	360 m	> 2°C	370	1.6
N 62°54' W 51°05'	110 m	0.5°C	660	0.8
N 63°23' W 51°50'	161 m	0.9°C	250	0.6
Southern part of Fiskenes Bank				
N 63°03' W 51°50'	285 m	3.8°C	2400	2.0
N 63°00' W 51°52'	285 m	3.9°C	1750	1.9
N 63°00' W 51°54'	280 m	2.5°C	3550	2.4
N 63°00' W 52°02'	280 m	3.0°C	3400	2.3
N 62°58' W 52°05'	260 m	2.5°C	2600	1.7
N 62°58' W 52°05'	280 m	2.2°C	2700	1.6
N 66°28' W 54°20'	200 m	0.6°C	360	0.9
N 65°42' W 54°15'	120 m	0.6°C	620	1.0
N 62°59' W 52°00'	184 m	1.4°C	300	0.8
N 66°25' W 54°23'	120 m	1.3°C	360	0.7

Cod Investigations

In 1958 samples of cod caught on bottom longline only were collected. Altogether nine samples of cod were obtained from June 21 to July 4 in the area between the southern part of Fiskenes Bank and the northern part of Lille Hellefisk Bank. A total of 1353 length measurements and otoliths were collected.

The length frequencies of the cod in Subdivisions 1C, 1D and 1C + 1D are shown in Figure 4 (Data will be published in the Sampling Yearbook, Vol. 3).

Compared with 1957 the cod also in 1958 was of good commercial size for the Norwegian vessels. The mean length of the cod in Subdivision 1C was 73.50 cm, and in all samples the total mean length was 74.12 cm and the mean age 9.47 years. In 1957 the mean length of all samples was 73.57 cm and the mean age 8.85 years.

The age compositions of the samples are shown in Figure 5 (data will be published in the Sampling Yearbook, Vol. 3), and the age composition of the total samples 1958 compared with the age composition of the total samples 1957 are shown in Figure 6.

We still find that the 1947 year class (11 years old) and the 1950 year class (8 years old) are dominating in the fishery, and the 1947 year class is still the strongest one. The 1947 year class constitutes 26.31 per cent of all the samples. The total mean length of this year class in all the samples is 78.34 cm. The same figures for the preceding year were 34 per cent and 76.09 cm. The 1950 year class constituted in 1958 20.32 per cent of the total catch with a mean length of 72.28 cm. The same figures for this year class were in 1957 23.4 per cent and 70.29 cm.

The strength of both the 1947 year class and the 1950 year class has decreased as compared with the 1957 catch, but it is expected that these two year classes also will dominate the fishery next year and give catches of good commercial size for the Norwegian needs.

--oo0oo--

and in Subdivision 1D 76.20 cm.

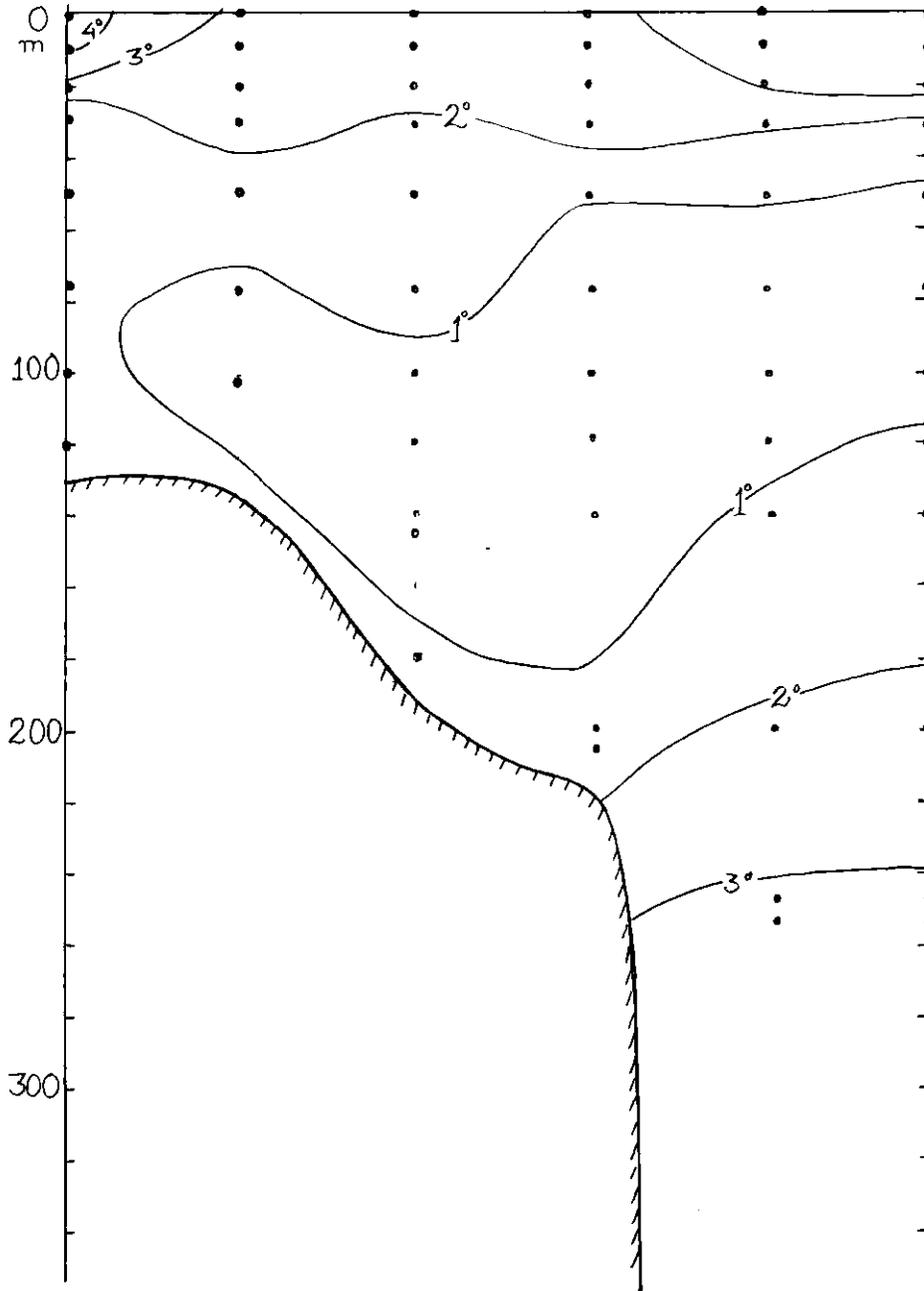


Figure 1. Temperature section from Northern part of Lille Hellefisk Bank Westwards. Bathythermograph 5 July 1958.

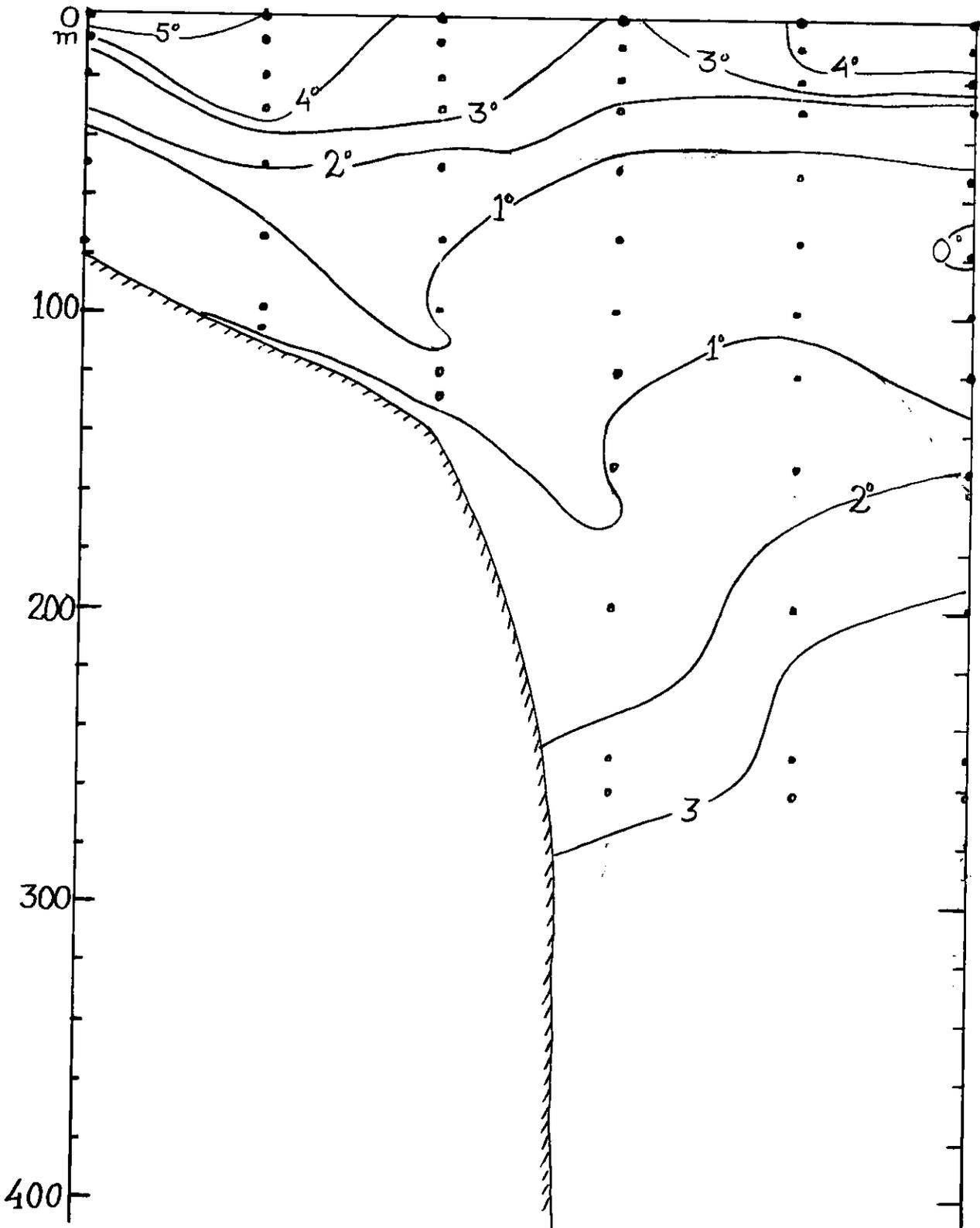


Figure 2. Temperature section across the middle part of Lille Hellefiske Bank and Westwards. Bathythermograph 5-6 July 1958.

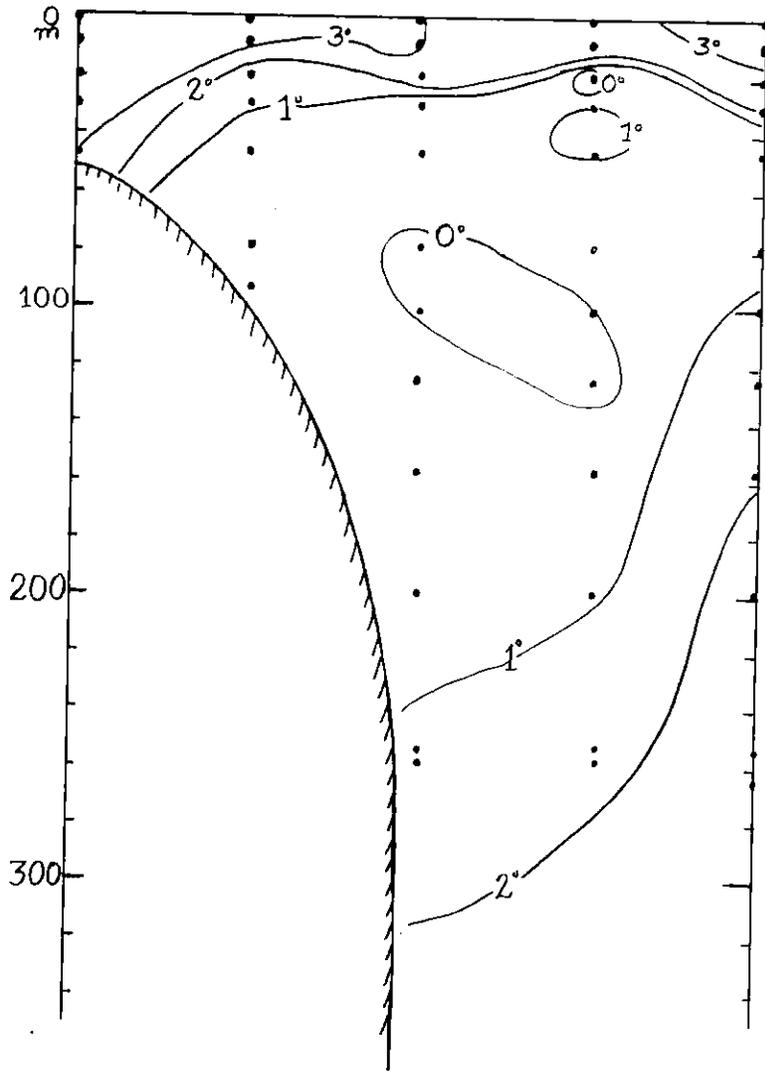


Figure 3. Temperature section from Fylla Bank Westwards. Bathythermograph 6 July 1958.

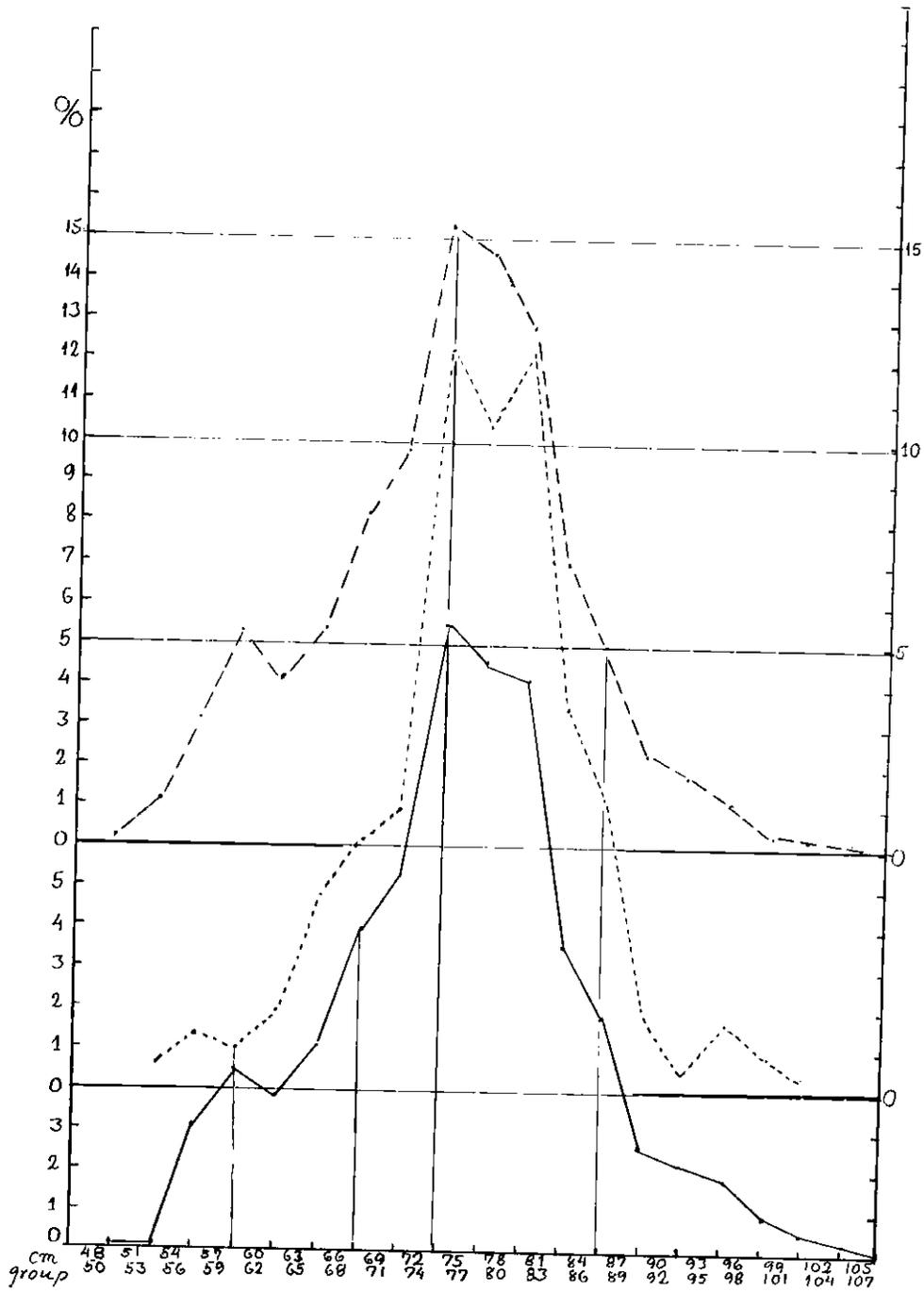


Figure 4. Length composition of cod caught on bottom long line off West Greenland June 20 - July 4 1958.

..... : Subdivision 1C
----- : Subdivision 1D
———— : 1C + 1D

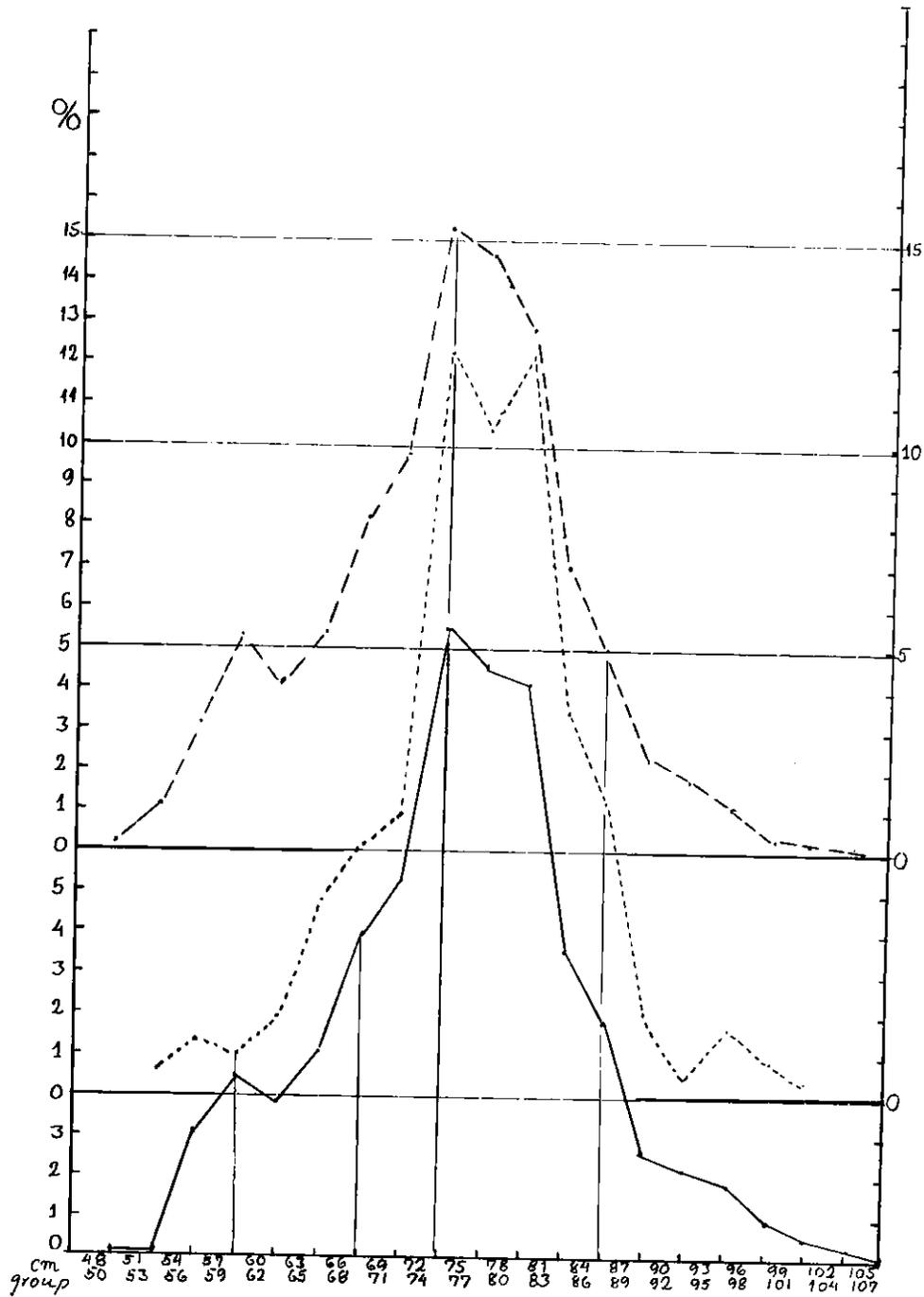


Figure 4. Length composition of cod caught on bottom long line off West Greenland June 20 - July 4 1958.

..... : Subdivision 1C
 - - - - : Subdivision 1D
 ——— : 1C + 1D

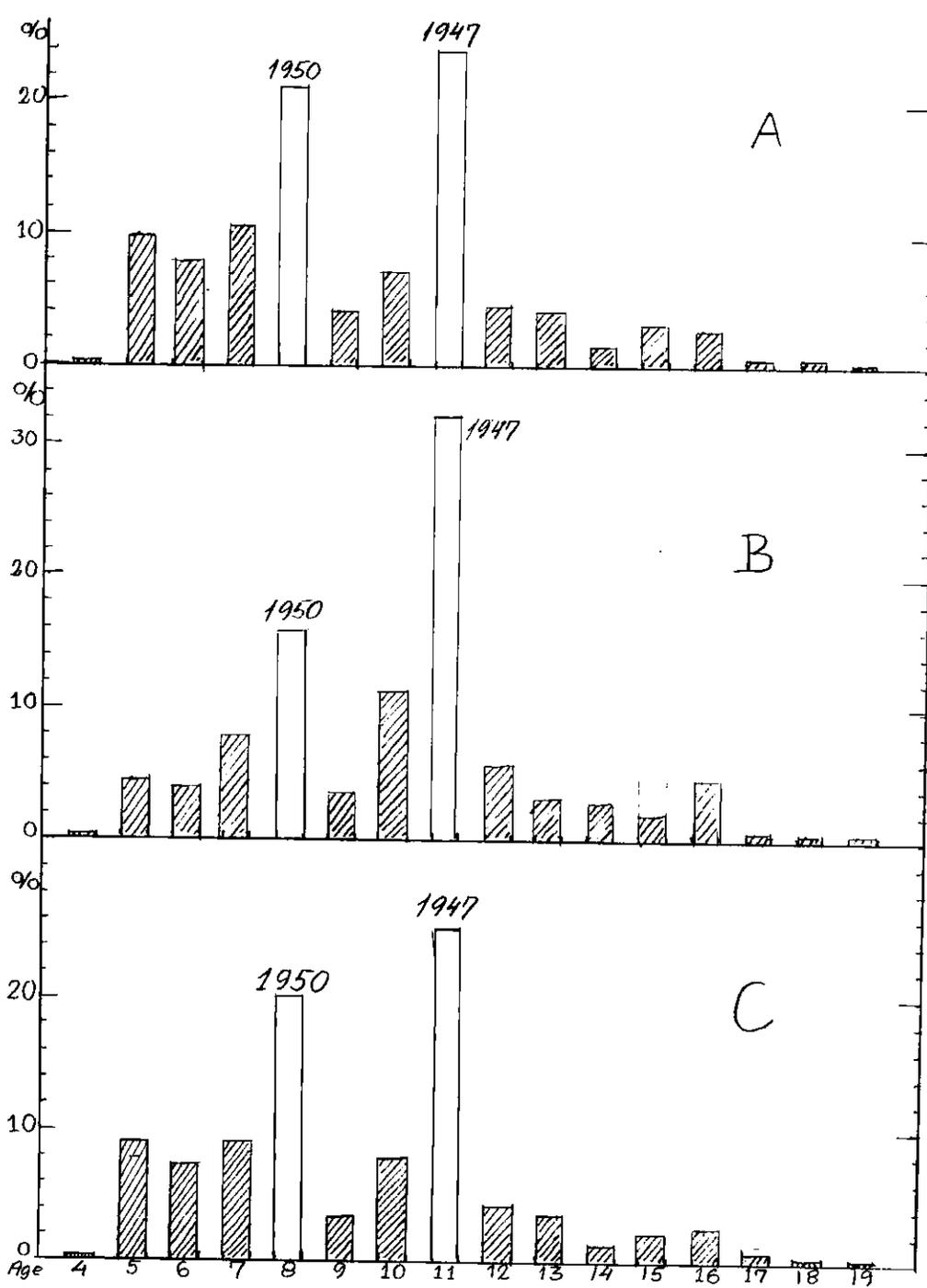


Figure 5. Age composition of cod caught on bottom long line off West Greenland June 20 - July 4 1958.

A : Subdivision 1D
B : Subdivision 1C
C : 1D + 1C

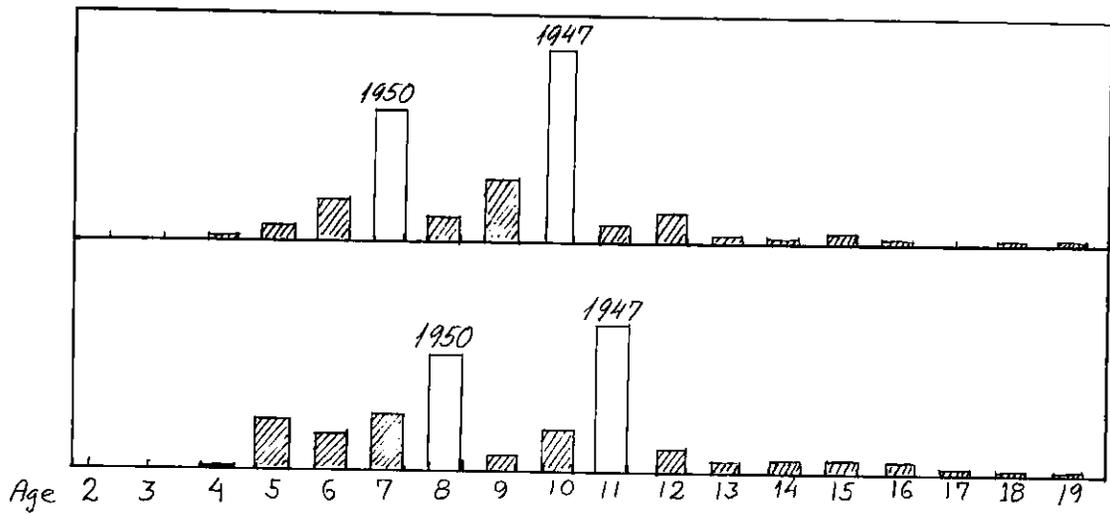


Figure 6. The age composition of cod in Norwegian commercial catches off West Greenland in 1957 and 1958.

