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On the Norwegian Long-line Fishery  
for Cod in Greenland Waters.

by

Birger Rasmussen

*complementary to those carried out by the panel*

The Norwegian fishery for cod in Greenland waters started in 1924. The fishery has been prosecuted on the off-shore banks mainly between Cape Farewell and Disco Island. After World War II the fishery has been of increasing importance.

Norwegian fishery investigations in Greenland waters have been carried out only since 1948. Material bearing upon the size of Cod and the age composition in commercial catches has been collected during the years 1948-1952.

General distribution of the cod population.

On the off-shore banks in the Davis Strait the Norwegian long-liners pursue the fishery for cod from Cape Farewell region northwards to the Hare Island in the Disco region. Further north the fishery has proved unprofitable although cod are present. Our tagging experiments seem to indicate that the bank population of cod largely is separate from the cod found in the fjords and inner Greenland waters. *migration to Iceland*

The Norwegian long-liners generally fish on the western slopes of the banks from early October. In the middle of the season, in July and August, the fishery usually ~~has~~ been less profitable because the fish left the bottom and formed shoals in the upper strata of the sea. Since 1951, however, a new type of fishery has been developed. In the summer season the Norwegian ships fish with pelagic long-lines, thus catching the fish feeding near the surface and in the upper layers down to 50 and 60 fathoms. This fishery is mainly carried out in the Holsteinsborg Deep between Lille Hellefiske- and Store Hellefiske Bank. Although tagging experiments have been performed we have as yet no certain information as to the origin of the pelagic cod in the Holsteinsborg Deep. The type of fish seems to indicate that it can be coastal cod undertaking a feeding migration.

Spawning grounds.

Before 1920 we can say that cod was not fished commercially in Greenland waters. Cod was detected on the banks in 1923. The first fishery by Norway was started in 1924. As the fishery has been carried out only in summer, no spawning has been observed on the banks in subsequent years. However, in the spring of 1952 and 1953 fishermen and foreign trawlers going to West Greenland waters have reported spawning shoals of cod on the western slope of the Fiskenes Bank and Fylla Bank. In late March and throughout April in 1953 the cod had formed spawning shoals along the western edge of these banks in depths between 60 and 90 fathoms. The fishery in these localities was very rich at that period. During the first week of May, cod with running roe and milt could be found near the bottom of the banks. Probably more thorough investigations will prove the presence of spawning shoals also in other localities along the off-shore banks. *Temperature - yield of fishery - seasonal migration.*

Age and length distribution.

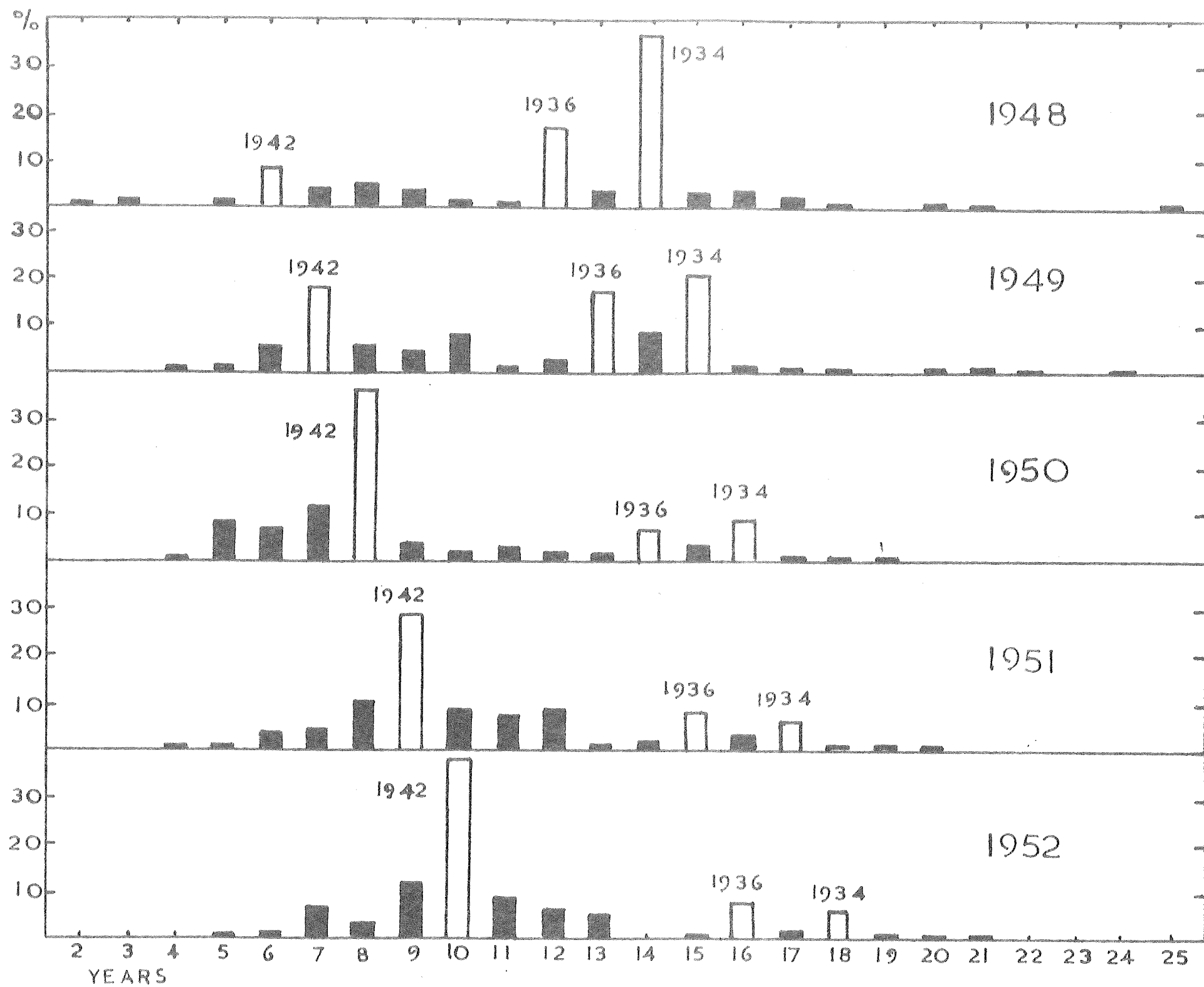
In Table 1 is given the age distribution of cod as caught during the long-line fishery on the off-shore banks in the years from 1948 till 1952. In the Norwegian fishery particularly three year-classes have given a great yield. These are the year-classes 1942, 1936 and 1934. A rich year-class seems to keep its strength through a great number of years. Thus in 1952 the 16 and 18-year-old fish born respectively in 1936 and 1934 give a considerable contribution to the catch. The year-class 1942 is still rich and will probably still contribute a great deal to the long-line catches in coming years.

From trawl samples it is recognized that the year-class 1947 is extremely rich both on the banks and in inshore waters of Greenland. However, as five-year-old individuals the cod belonging to the 1947-class have not entered into the line catches by 1952. Probably the 1947-class will be of minor importance to the long-liners until 1954.

The length distribution of the cod taken with long-lines on the banks is shown in Table 2. The long-line gear seems to be very selective as regards the size of fish caught on the hooks. Most of the cod have a size between 70 and 85 cm. During the years 1948-52 the catches contain from 69 to 87 % of cod between 70 and 85 cm.

West Greenland, Distribution of Line-caught Cod  
on off-shore Banks, Norwegian Vessels.

	Year	1948	1949	1950	1951	1952
Age	Age					
Age Distribution	2	0.4	-	-	-	-
	3	0.2	-	-	-	-
	4	-	0.9	0.1	0.1	-
	5	1.3	1.3	9.0	0.9	0.5
	6	8.7	5.5	7.5	4.5	1.3
	7	4.8	18.4	11.8	4.9	6.2
	8	5.1	6.4	36.2	11.0	4.5
	9	4.3	5.1	4.6	29.4	12.3
	10	2.0	8.3	2.3	9.7	38.0
	11	1.5	1.5	3.4	7.9	9.5
	12	17.3	2.5	1.3	9.0	6.2
	13	8.1	17.1	1.4	1.0	5.3
	14	36.6	8.8	6.8	2.2	-
	15	3.5	20.4	3.8	8.0	1.6
	16	3.5	2.1	9.6	3.3	7.8
	17	1.7	1.0	0.3	6.6	1.4
	18	0.4	0.4	0.8	0.6	5.2
	19	-	-	0.1	0.6	0.2
	20	0.4	0.1	-	0.2	0.2
	21	0.2	0.1	-	-	0.1
	22	-	0.1	-	-	-
	23	-	-	-	-	-
	24	-	0.1	-	-	-
	25	0.2	-	-	-	-
		Total No.	544	1363	1089	1301
	Year	1948	1949	1950	1951	1952
Length Distribution	cm.					
	40	-	0.1	-	0.1	-
	45	-	0.2	-	0.2	0.1
	50	0.4	1.3	0.5	0.9	0.3
	55	0.7	1.9	5.5	2.2	0.5
	60	2.8	5.7	9.6	3.3	1.1
	65	6.2	14.5	11.9	8.9	6.3
	70	10.9	19.6	20.7	19.0	19.3
	75	21.6	26.4	22.8	24.4	30.0
	80	23.9	20.2	16.5	22.2	23.5
	85	20.7	7.2	9.0	11.1	14.2
	90	7.3	1.4	2.6	4.3	3.5
	95	2.5	0.3	1.0	2.4	0.7
	100	0.5	0.3	0.2	0.6	0.6
	105	0.2	0.3	-	0.5	0.2
	110	-	0.2	-	0.2	0.1
	115	0.2	0.1	-	0.2	-
120	0.4	0.1	-	0.2	-	
125	0.4	-	-	-	-	
130	0.4	0.1	-	-	-	
135	0.4	0.1	-	-	0.1	
	Total No.	561	2119	1089	1301	1060



WEST GREENLAND, AGE COMPOSITION OF LINE-CAUGHT COD  
ON OFF-SHORE BANKS, NORWEGIAN VESSELS.