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Length Composition of Cod in Samples caught by Dories in Greenland Waters.

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(Translated from: Composição, por Comprimentos, das Populações do Bacalhau Pescado por Dóris na Groenlandia).

In June and July of 1953 we had the opportunity of carrying out on board the dory vessel "Capitão João Vilarinho" samplings of cod from Greenland waters (the Davis Strait). 4,206 cod were sampled and length measurements and sex determinations carried out.

These fishes were caught by hand lines from dories worked by one single man. The samplings were made on board the mother vessel on the afternoon of the day on which the catch had taken place. The sampling lasted for 3-4 hours. A larger majority of the material in the samples was composed of cod from two of the principal banks off Greenland. From the Fyllas Bank 1,990 cod were investigated and from the Store Hellefiske Bank 1,949. A relatively small sample of only 267 specimens was taken from a one day fishing on the Fiskenas Bank.

The main results of these samples expressed in absolute figures as well as in percentages are shown in the three diagrams attached to this paper. Through a consideration of the graphs it is seen that in the two samples of nearly the same number from Fyllas Bank and Store Hellefiske Bank the means of the lengths differ to some degree: the length group with the largest accumulation of specimens is that of 0.70-0.74m. for Fyllas Bank against 0.55-0.64m. for Store Hellefiske Bank. In the considerably smaller sample from Fiskenas Bank more to the south the greatest accumulation is found for the size group 0.75-0.79m.

The results of these three samplings consequently permit the conclusion that the means are found in a higher length group in the southern samples than in the northern ones, that is the mean size decreases from south to north.

Unfortunately we do not have corresponding data from the material collected in the same waters from our trawling vessels. Therefore it is not possible to assess the special selectivity by the method of fishing from our dories. There are admittedly results from samples taken by long line fishing of other countries; these results, however, refer to earlier years. Thus it is obviously too soon to compare the effects of the fishery carried out by our dories to those carried out by for example, Faroese and Norwegian long liners.

Our office has only just started the studies on the recruitment of the year-classes constituting the length groups from the various banks considered in this work. Therefore we cannot yet establish a possible correlation between length and age.

It can be anticipated as a hypothesis and with some reservation that the peaks of the length curves for the three areas considered correspond to year-classes very close to one another, although well separated as to their mean length. This supposition can, however, be regarded as true only in case the growth rate is decreasing from south to north (in the present case, as the material on hand indicates, from Fiskenes, over Fyllas Bank to Store Hellefiske Bank).

In a short time the studies that are now carried out on about a thousand pairs of otoliths will be finished. These otoliths were collected by us from the same populations and at the same dates as the length measurements considered here. When age determinations by means of these otoliths can be compared with the present length studies it will be possible to provide data that could either strengthen or weaken the above mentioned hypothesis. However, only a continuation of the studies of this nature in the following years, and a comparison with the results of the research work carried out by other countries in the same areas and in the same seasons, will allow an interpretation of the biology of the populations of these banks, populations which are subjected to losses from the fisheries as well as from natural mortality.

- THE END -

Length group distribution of cod by dory fishing from "Capitao Joao Vilarinho" in Greenland waters in June and July 1953.

J.M. Figueiredo.

Portugal, Subarea 1
Store Hellefiske Bank
% Length Composition
1,949 Cod
Dory Hand Line
14 July - 20 July 1953

Portugal, Subarea 1
Fyllas Bank
% Length Composition
1,990 Cod
Dory Hand Line
29 June - 6 July 1953

Portugal, Subarea 1
Fiskenes Bank
% Length Composition
267 Cod
Dory Hand Line
13 June 1953



