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Some Observations on Cod (*Gadus*
Morhua L.) of Western Greenland
-Summer 1970

BY

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Experimental catches with bottom trawl were conducted in the first half of June 1970. The observations aimed to establish stock composition of cod with respect to length, weight, age, percentage in the catches and the depth of occurrence. The observations on this species were carried out in Divisions 1C, 1D and 1E. 2092 otoliths of cod were read for age and 3585 individuals measured.

Cod caught in Div. 1C were 30 - 89 cm in length, though majority of fish were of the length 42 - 53 cm (60.4%); mean length was 51.5 cm and mean weight 1323 grams.

In Div. 1D occurred fish of the length 24 - 110 cm with predominance of individuals 57 - 77 cm in length (50.3%); mean lengths - 61.3 - 75.4 cm and mean weights 2093 - 3818 grams.

In Div. 1E the most abundant were fish 54 - 68 cm; mean length 59.3 cm, mean weight 1818 grams.

In Div. 1C occurred cod in the age from 4 to 10 years with predominant majority of 5 and 6 years old fish (83.0%) Figure 1.

In Div. 1D encountered cod were in the age from 3 to 13 years and the most abundant groups made individuals 6, 7 and 8 years old (64.0%).

In Div. 1E age of cod ranged 4 - 13 years, whereas the basis of the catches made fish from 5 to 8 years old (77.8%).

On the basis of otoliths readings was established linear rate of growth. The curves plotted with these data showed great similarity of growth characterizing cod from various Divisions, though the best rate of growth was noted in all age-groups of cod from the Division 1D. This section of the curves which related to older age-groups shows considerable fluctuations. This may result from insufficient representativeness of data for these age-groups. As we may note the growth of cod is of a similar rate until the ninth year of life of this species (Figure 2).

In the examined catches cod made up nearly 55% of the total mass of fish. Among other species a rather considerable part made American plaice - 11.2%, spotted wolffish (*Anarrhichas minor*) - 5.1% and other species.

During the period of observations cod did not gather into dense concentrations and therefore the fishing yields were very low. This may be seen from the data given in the Table 1.

T a b l e 1

Fishing yields from trawl catches
with respect to particular depths
in June / kg per 1 h trawling/

Species	D e p t h /m/			
	101-200	201-300	301-400	501-600
Atlantic cod	386	223	180	300
Spotted wolfish	8	6	45	451
Atlantic wolfish	17	27	8	-
Wolfish	4	9	30	300
Redfish /type marinus/	8	1	30	-
Redfish /type mentella/	-	-	-	450
American plaice	130	37	7	-
Other species	39	59	22	-
T o t a l	592	362	322	1500

Most of cod occurred at the depth from 101 to 400 m /55.9 - 65.2%. Though at the depth of 501 - 600 m were obtained the best fishing results, of the magnitude 1500 kg per 1 h fishing, the participation of cod was here only 20%. Rather good yields at this depth are probably connected with the occurrence of warm waters. Worth attention is the abundance of spotted wolfish here /30.0%/ and of redfish /type mentella - 30.0%. Also wolfish was quite abundant here /20.0%.

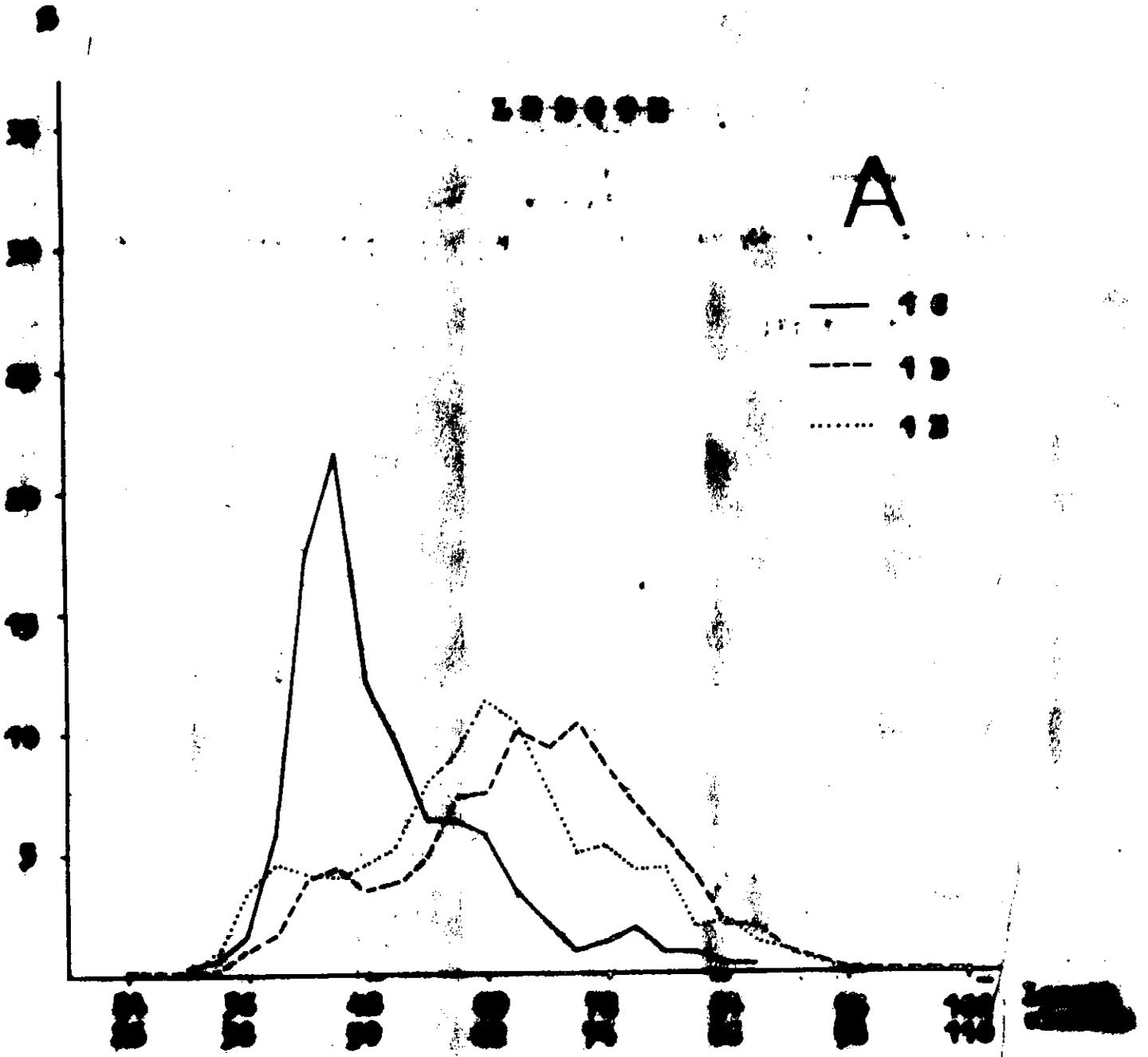


Figure 1A. Length of Cod from Western Greenland

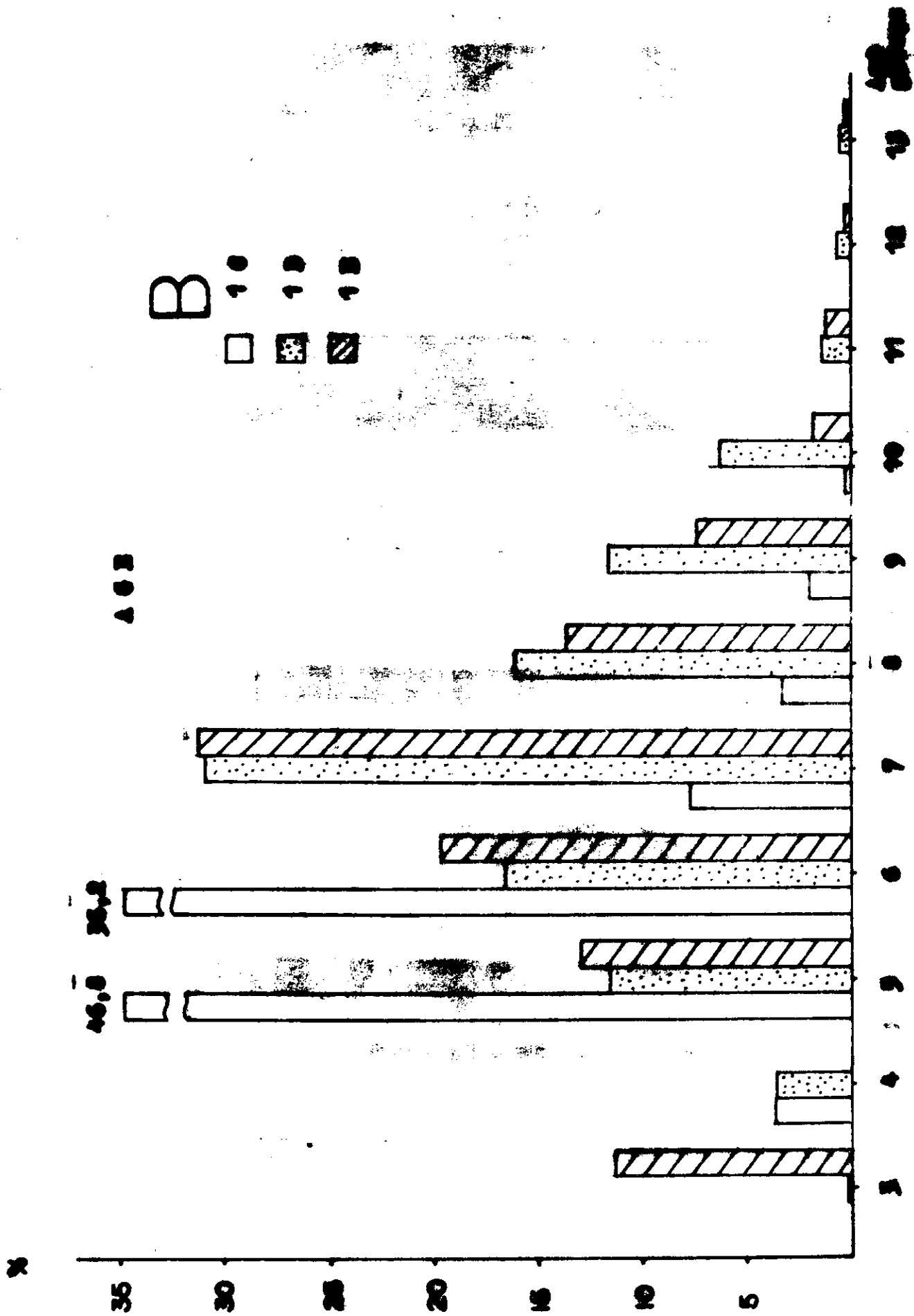


Figure 1B. Age of Cod from Western Greenland

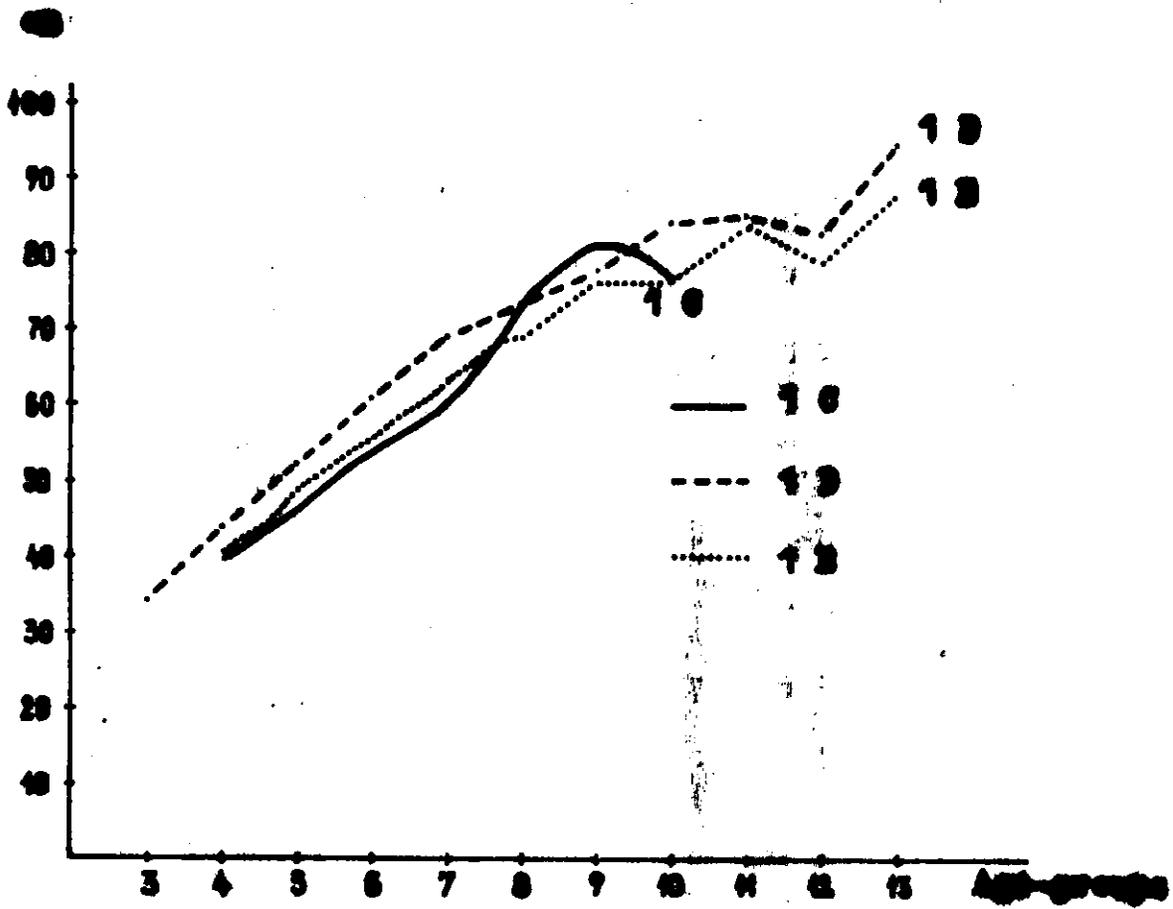


Figure 2. Linear rate of growth of cod from Western Greenland (from direct readings)