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Age Determinations of Samples of Cod, Haddock,  
Pollock and White Hake.

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The material dealt with here was collected from the vessel "Vendaval" during the research cruise in March 1953 in Newfoundland waters. The samples were taken at the south corner of the Grand Bank (8 March), on the southwest edge of the Grand Bank (18 March), in the Halibut Channel (22 March), and off the south part of St. Pierre Bank (25 March).

The otoliths of 37 specimens of cod were aged. In spite of the small material the results correspond well with those from earlier researches. In figures 1 and 2 are shown age and length. The size of the cod is rather small, most specimens having a length of about 41-45 cm. (see document 8, page 5 and figure 3). They are culled mainly as small. These small cod belong mostly to the year-class 1949.

The growth curve in figure 2 is based on the same 37 specimens. Apart from a small deviation this curve corresponds well with that given by A. Fleming for cod from the south and east part of the Grand Bank.

The curve shows a rapid growth between the 4th and the 9th year. After the 9th year the curve is somewhat irregular (owing to the very small number of individuals aged), the growth during these later years is only small.

The scales were used for the calculation of the age of the haddock. The age distribution is shown in figure 3, it is rather uniform, obviously owing to the selective effect of the trawl, eliminating the small individuals. The year-classes 1945, 1946 and 1949 are very close to one another in abundance.

The growth curve, figure 4, coincides almost exactly with the observations made by the Fisheries Research Station in St. John's. The small disagreement found is thought to be due to a too small number of individuals investigated. The sample comprises 45 specimens.

For the pollock also the scales were used. They are more easily read than the scales of haddock. The sample consists of only 46 specimens. No material for control exists in the Fisheries Research Station in St. John's.

Therefore the present results must be regarded with some reservation and a further study is needed.

A comparison with the growth curve for haddock shows that the growth rate of the pollock (figure 6) is considerably stronger than that of the haddock.

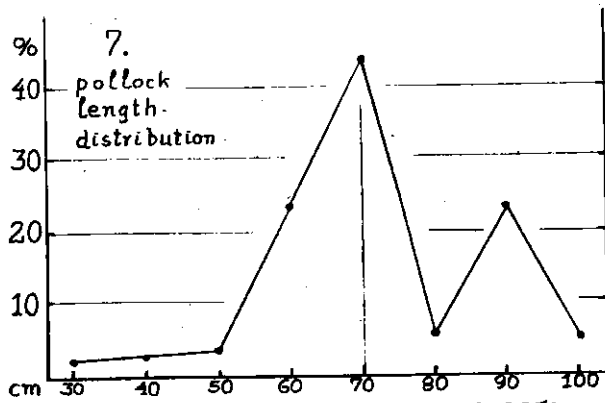
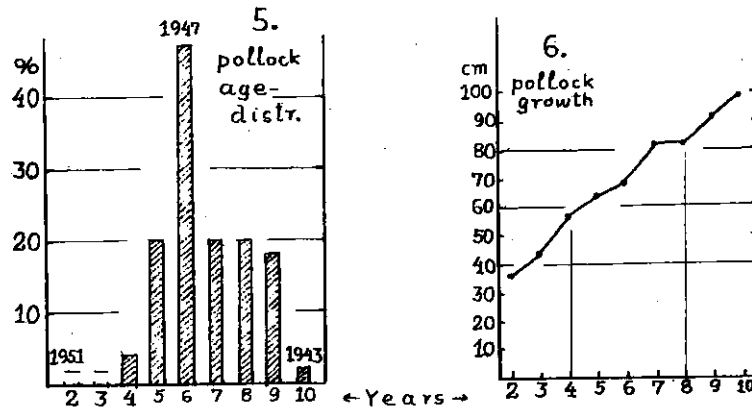
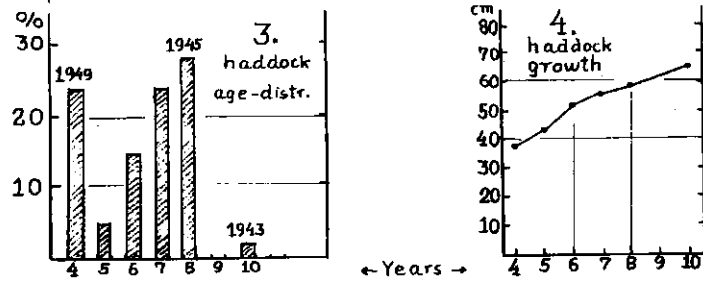
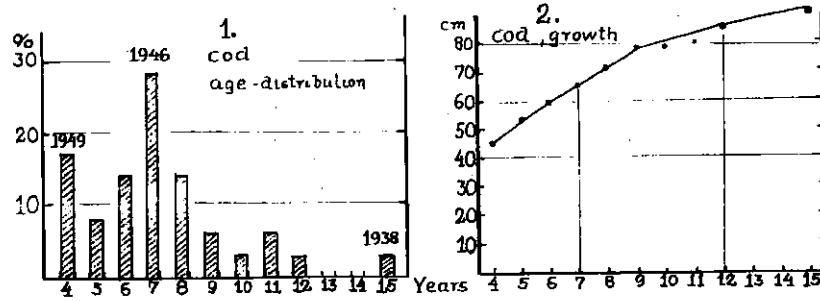
The most abundant year-class in the sample is that of the year 1947 (figure 5), now 6 years old.

The length distribution of 52 pollock is shown in the curve of figure 7. The curve has two maxima, one at 70 cm. and another at 90 cm.

Finally the age of a small number of white hake was investigated by means of the scales. The reading of the scales of this species is difficult. For the observation in the microscope it is recommended to place the scale a little outside the focus, this making the rings show a little better. The following lengths were observed for the different age groups:

Age group	3	-	45 cm.
"	"	4	- 61 cm.
"	"	5	- 50, 55, 56, and 57 cm.
"	"	6	- 61, 66 cm.
"	"	7	- 55 cm.
"	"	8	- 92 cm.

- THE END -



Figures 1-7. Spanish researches, March 1953. Grand Bank - St. Pierre Bank. Age distribution and growth of cod (1 and 2) haddock (3 and 4), and pollock (5 and 6). Pollock length distribution (7).

