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Survey of the Danish Halibut Research in Subarea 1.

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1. Halibut larvae.

The research ship "Dana" has fished with 2 m stramin net for fish larvae on stations on the recommended sections over the fishing banks in the Davis Strait in 1925, 1950 and every year from 1952 to 1958. The places where halibut larvae have been caught are given in Figure 1. The catches of halibut larvae have been very few; in all 13 have been taken. With the exception of one taken on 19 June, 1925, all have been caught in July. The northernmost catch is from 65°41'N. and the southernmost from 59°38'N. Three are taken over the offshore banks, the others over great depths west of the banks. Among these, seven have been taken between 55°W. and 60°W. Six of the larvae are taken with 100 to 25 m wire out, two with 200 to 125 m wire out and one with 1600 to 1400 m wire out. The lengths of the larvae have been from 15 to 27 mm.

2. Age analyses. (See Figure 2)

Age determinations have been made on samples of halibut otoliths from West Greenland in the years 1935, 1936, 1937, 1938, 1947 and 1954. In 1958 a sample of 152 otoliths was collected from halibut catches taken by the research ship "Adolf Jensen" on offshore banks of East Greenland. This material has not yet been worked up. The samples from 1935 to 1954 have been taken from commercial catches. The rich year-classes have been 1922, 1924, 1926, 1929 and 1936, and perhaps the 1917 year-class has been a rich year-class. It is obvious that there is some agreement between this species and the stock of cod as to good and poor year-classes. In the small sample from 1954, however, the year-class 1937 seems to predominate. This year-class has not been of importance in the Greenland stock of cod.

The otoliths of big, old halibut have been rather difficult to read.

3. Tagging experiments.

Only few halibut have been tagged. The years of tagging, together with the numbers tagged, are given in Figure 3. A total of 54 halibut have been tagged off West Greenland. Some of the halibut have been taken by hand-line but mostly halibut caught by long-lines have been used for tagging. It has been rather difficult to get halibut caught by long-lines for tagging experiments. The big halibut are taken onboard by means of large hooks which spoil them too much. Usually the halibut swallow the hook and specimens which have done that have not been used for tagging. Medium-sized and small halibut are taken onboard by means of a landing net. They are measured and tagged immediately after taken onboard.

The Petersen disks have been used fixed by silver or stainless steel wire in the right operculum. Thirteen recaptures have been reported, which is 25%. The comparatively high percentage of recapture together with the long time between tagging and recapture

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show that this kind of tag is effective.

One has been recaptured in the tagging year, 2 in the 2nd year, 6 in the 3rd, 3 in the 4th and 1 in the 9th. The last must be considered with doubt according to date of recapture; 9 have been recaptured near the place where they were tagged, while 4 have been recaptured 30, 70, 100 and about 500 miles from the tagging place.

One recapture is of special interest. It is a halibut which was tagged 4 August, 1955 off West Greenland (65°32'N., 53°25'W.) and recaptured 716 days later, 7 July, 1957, between East Greenland and Iceland (65°30'N., 31°15'W.) by a Norwegian fishing vessel. When tagged the halibut measured 117 cm, total length. The length when recaptured was reported to be 110 cm. The difference in the lengths may be due to differences in the way in which the length of the fish has been measured from the nose to one of the tips of the tail fin. By recapture probably the fork length has been measured. The total length 117 cm corresponds exactly with the fork length 110 cm. (See Figure 4 in which the relation between fork lengths and total lengths is given).

In 1958, 17 halibut were tagged on the banks off Angmagssalik, East Greenland. Until now no recaptures have been reported from this experiment.

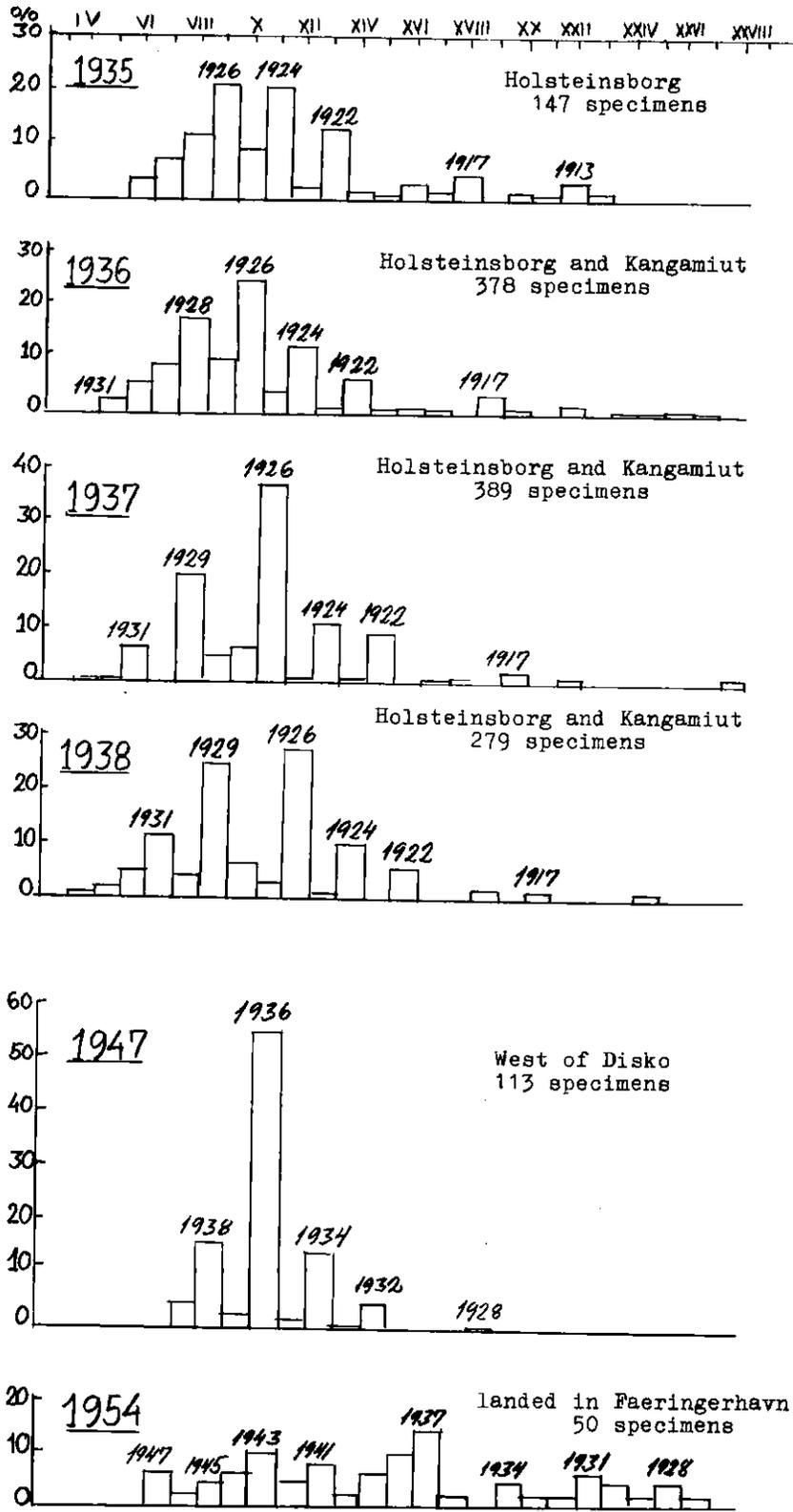


Figure 2

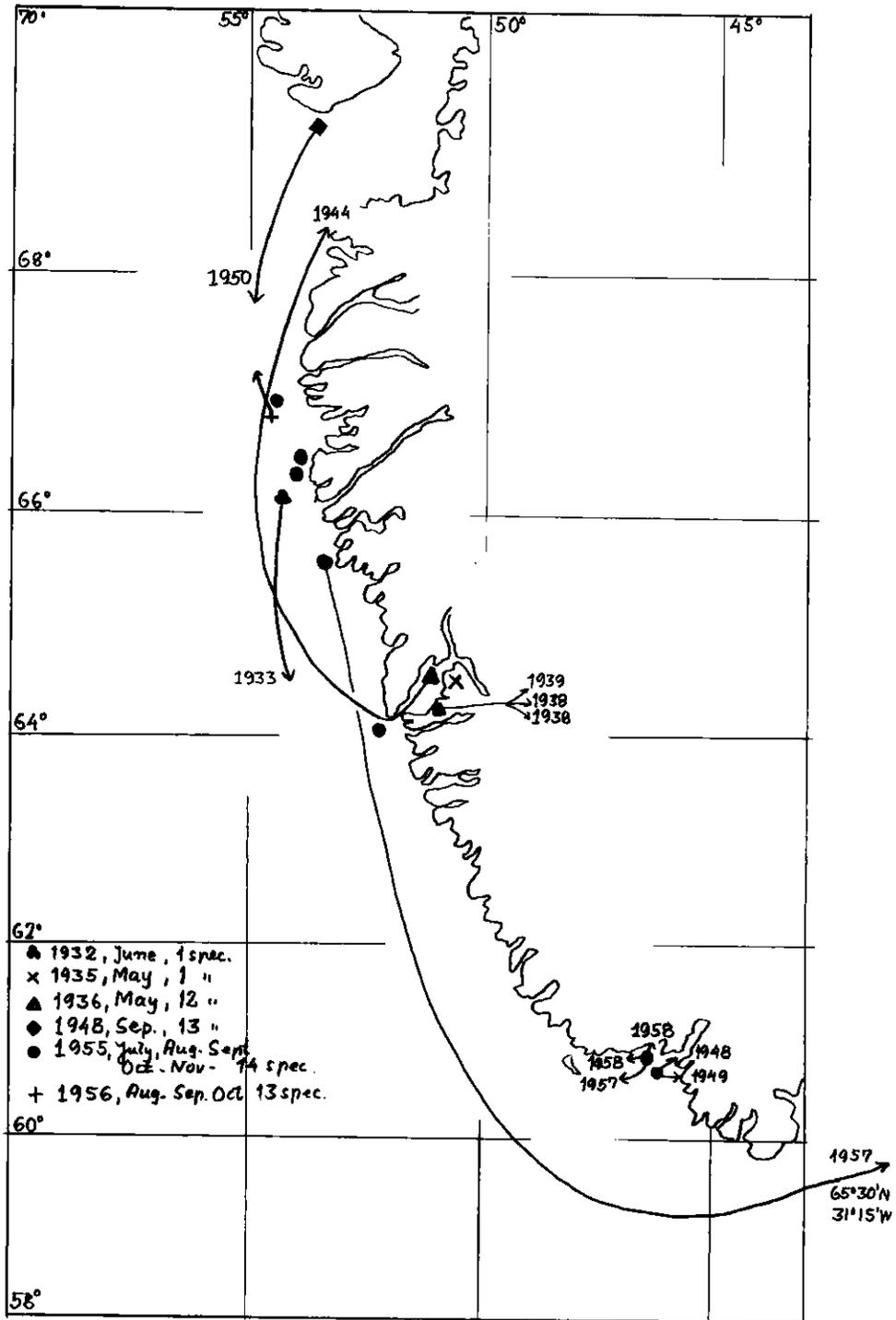


Figure 3. Halibut tagging experiments.

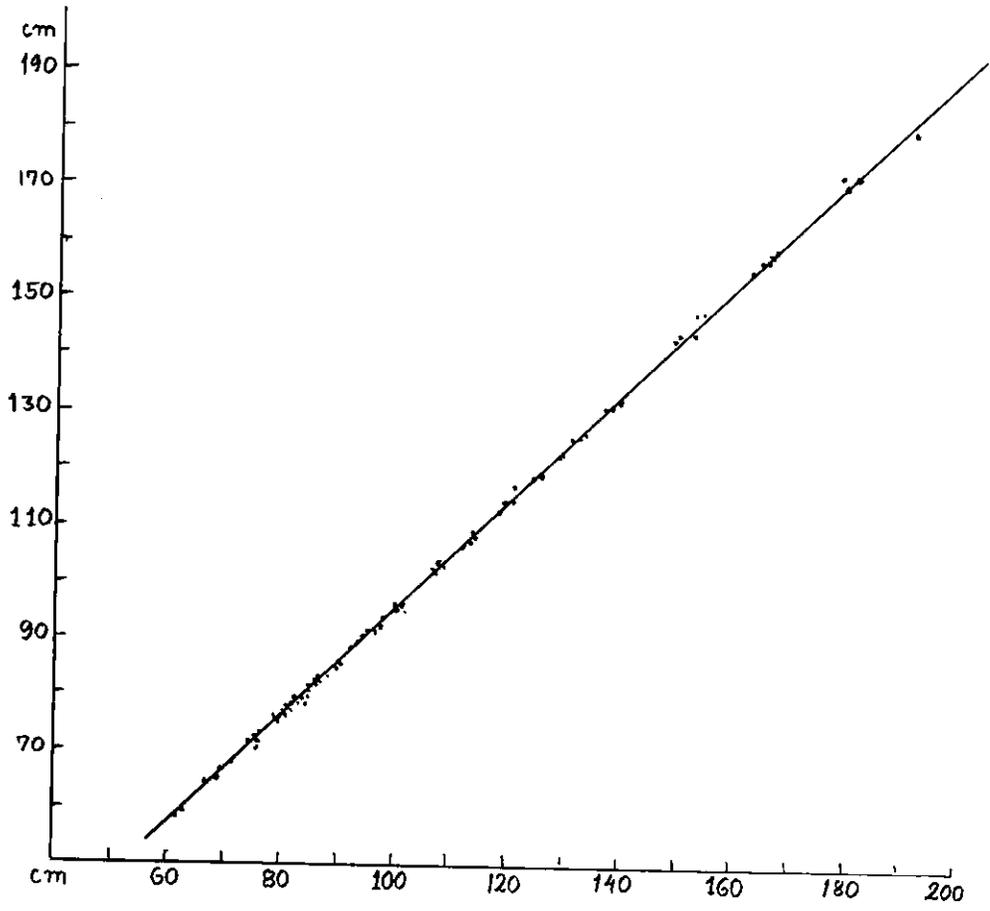


Figure 4. Halibut - Angmagssalik 1958, 153 specimens.