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The Greenland halibut fishery in Subarea 2 and Divisions 3K & 3L¹

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The general distribution of Greenland halibut in the Northwest Atlantic ranges from Arctic regions to Georges Bank; however the only fishable concentrations are in Subareas 1 and 2 and in Divisions 3K and 3L.

During the 1950's and early 1960's the only real fishery for this species in Subareas 2 and 3 was by Canada in the coastal bays of Newfoundland where the catch was salted and sold primarily on the Canadian market. The main areas of production were in White, Notre Dame, Trinity and Fortune Bays (Fig. 1). In 1965 with the development of a fresh fish market for this species there was an intensification of the fishery principally in Trinity and Notre Dame Bays. Long-lines were used first but in more recent years these were almost entirely replaced by monofilament gill nets (6½-8 inch, i.e. 165-203 mm mesh). The Canadian fishery, which is considered to be an inshore operation, use boats mostly less than 50 tons. With the apparent reduction of stocks in the coastal bays the Canadian fishery has ranged farther offshore and a larger proportion of the catch is now taken inside the Convention Area (Table 1). However, with regard to total removals, the European fleet now take the largest quantities from the stock (Table 1).

Two tagging programs, with Greenland halibut, were conducted by the St. John's Biological Station, 238 fish were tagged in White Bay in 1969 and 410 in Trinity Bay in 1971. Preliminary results from this tagging (Fig. 1) would appear to support the consideration of Subarea 2, and Divisions 3K and 3L as a single stock. Migrations from the White Bay tagging site to as far north as Hamilton Inlet Bank (Division 2J) and southward to Trinity Bay (Division 3L) and additionally recoveries northeastward towards the edge of the continental shelf appear to confirm the probability of a single stock. The Trinity Bay tagging while not yet producing many recoveries from outside the bay nevertheless give some indication of a seaward migration. Further tagging was carried out by the A. T. Cameron both in offshore and inshore localities during October 1973.

Unpublished data at the St. John's Biological Station (W. H. Lear, personal communication) indicate that very few mature fish were taken in coastal waters of the areas considered here. This suggests the possibility that major spawning occurs in offshore areas possibly deeper than 600 metres.

According to Lear (1970) the ages of fish in the Canadian commercial fishery in Divisions 3K and 3L generally ranged from 6 to 20 years with lengths in the approximate range of 38-100 cm. From Fig. 2 it is evident that the inshore fishery because of the larger mesh size take fewer of the smaller sized fish than the otter trawlers in offshore localities. Greenland halibut grow at a relatively slow rate being on the average 30 cm at age 4, 60 cm at age 8 and 80 cm at age 16 (Lear, 1970, unpub. MS).

Total removals for 1966-71 have averaged about 30,000 tons (Table 1); however, substantial quantities were from inshore localities outside the Convention Area. Thus within the Convention Area landings for members have averaged in the vicinity of 14,000 for the same period and reached 18,000-21,000 tons in 1968-71. As previously pointed out inshore fishermen have been forced to fish at increasing distance from the coast and the once lucrative Trinity Bay fishery in particular has produced relatively small catches in the past few years. Thus the proportion taken by Canada outside the Convention Area has declined.

Although we have no proper assessment of the stock at this time it would appear from the history of landings from this fishery that a TAC of 30,000 tons from the total stocks seems appropriate here with 5000-7000 tons outside the Convention Area.

¹ Presented to the Special Commission Meeting, FAO, Rome, January 1974, as Res.Doc. 74/2.

References

Lear, W. H. 1970. The biology and fishery of the Greenland halibut (*Reinhardtius hippoglossoides*) (Walbaum) in the Nfld. area. M. Sc. Thesis Memorial University of Newfoundland, 132pp.

1970. Catch statistics, length and age composition of Greenland halibut in the Nfld. area. Technical Report 179. Fish. Res. Bd. of Canada. 27pp.

Table 1. Greenland halibut ICNAF Subarea 2 and Divisions 3K and 3L

Year	Canada		Den	Ger	Ice	Nor	Pol	Rom	USSR	UK	GDR	Non Mem	Total Stock
	Inshore	Total											
1962	527	586	-	-	-	-	-	-	42	2	-	77	707
1963	698	776	-	10	-	-	-	-	143	-	-	266	1195
1964	1581	757	-	35	-	-	1907	-	317	-	-	2396	6412
1965	6466	8082	-	-	-	-	583	-	501	-	-	1249	10415
1966	12967	16209	-	-	-	-	1114	-	279	-	-	1324	18926
1967	13283	16604	-	42	-	-	3296	-	5584	-	-	1415	26941
1968	10658	13322	-	4	-	-	5806	-	8739	-	-	4122	31993
1969	6354	11553	-	202	-	4	5406	40	9279	-	10014	-	36498
1970	5888	10706	-	13	-	-	8266	225	7384	-	9158	-	35752
1971	5174	9408	-	-	2	-	5234	7	9094	-	647	-	24392
1972	4924	8952	970	87	-	1387	6986	18	10183	731	401	-	29715

Non-member catches 1962-65 based on 1969-70 GDR proportion of plaice, witch and Greenland halibut (Sum Doc. 73/3).

Non-member catches 1966-68 reported as halibut considered to be Greenland halibut.

Non-member catches 1969-70 from Sum Doc. 73/3.

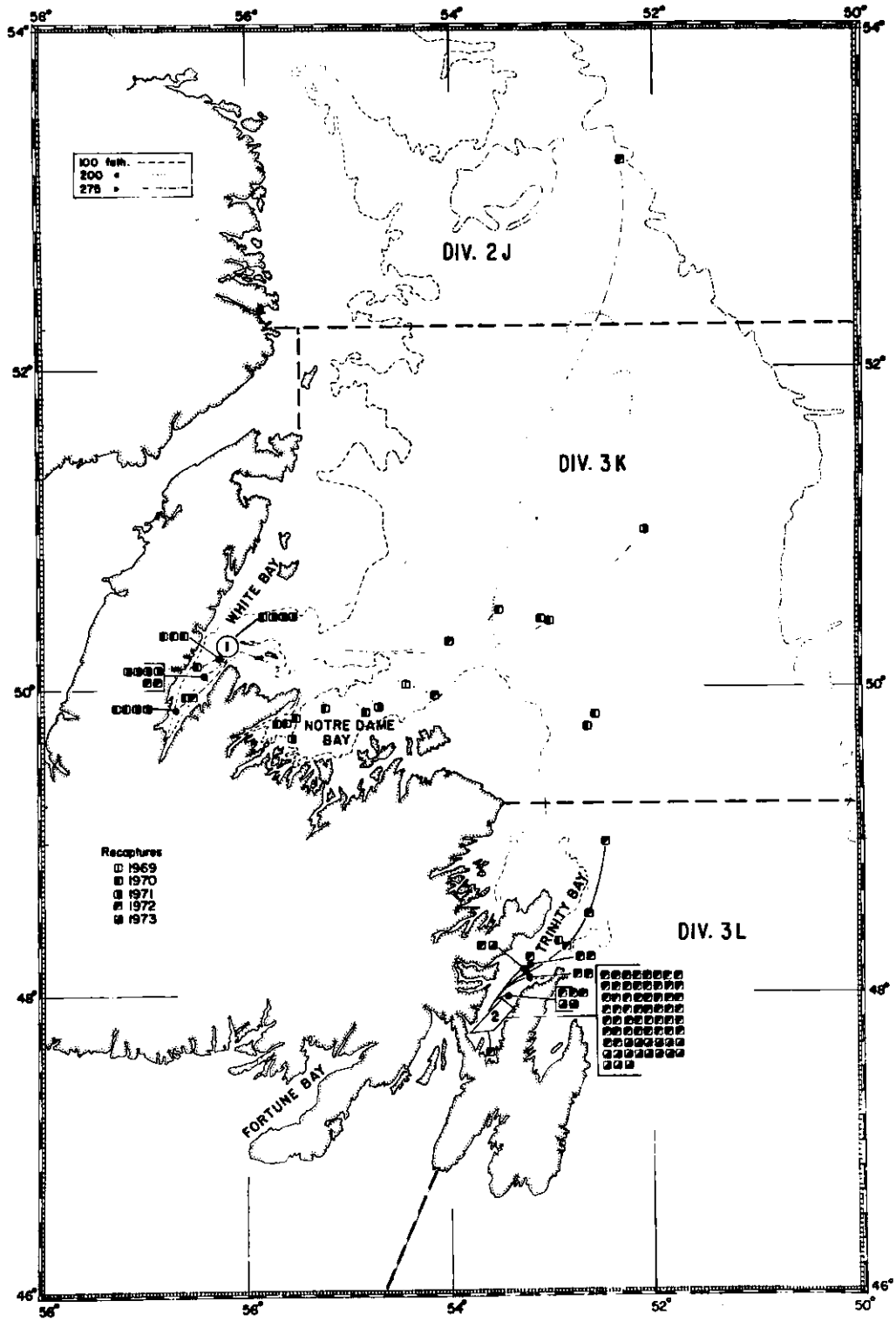


Fig. 1. Tagging results from two tagging programs with Greenland halibut by the St. John's Biological Station.

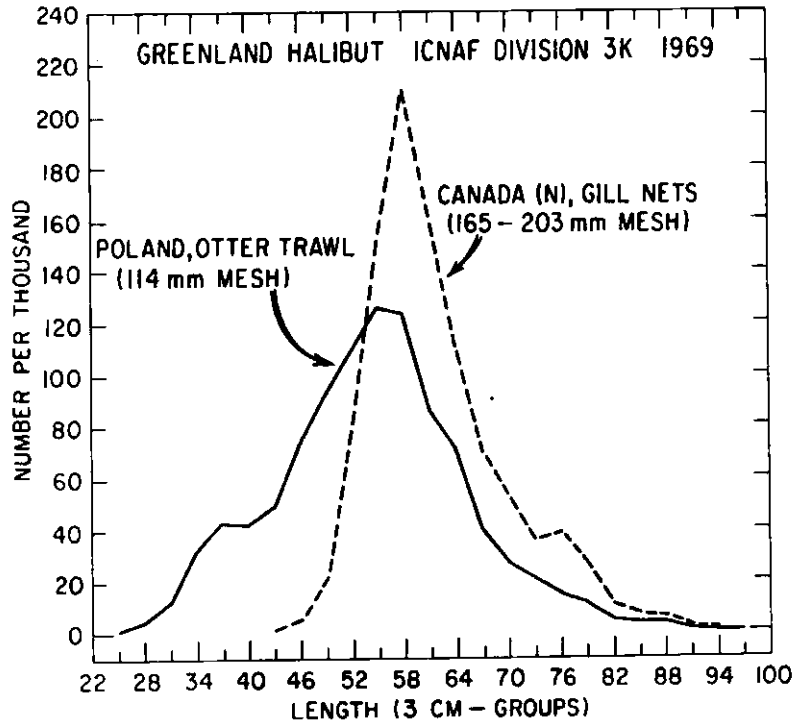


Fig. 2. Comparison of sizes of Greenland halibut taken by Canadian inshore gillnets and Polish otter trawls. (Canadian data from Lear, 1970, Polish data from ICNAF sampling year book Vol. 14, 1971).