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Salmon survey in the southern part of the Irminger Sea, 1974.

by

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In connection with a cruise to West Greenland waters the Danish research vessel DANA carried out a salmon survey in the sea between Iceland and East Greenland in July and August, 1974. In both months 4 stations were fished. The stations fished in August were more southerly than the stations fished in July, see Fig. 1.

The gear used was drift nets of monofilament nylon each 25 fathoms long. At each station 52 to 55 drift nets were set. - 28 to 30 nets with a mesh-size of 130 mm and 24 to 25 with a meshsize of 150 mm -. All stations were fished during the night.

Table 1 gives position of stations, date, surface temperature, duration of fishing, number of salmon caught, total length of nets, and catch per unit effort (nautical mile-hour).

Table 1.

Position	Date Jul	Date Aug	Surface temp. C°	Fishing duration of hour	No. of salmon caught	Length of nets fathoms	Catch/effort
60°45'N- 24°41'W	9-10		10.8	10.6	7	1375	0.48
60°31'N- 28°44'W	10-11		10.7	10.8	11	1375	0.74
60°15'N- 32°30'W	11-12		9.7	9.8	7	1350	0.55
59°54'N- 36°54'W	12-13		8.5	9.5	1	1350	0.08
July					26		0.46
58°30'N- 42°24'W	9-10		8.5	9.5	2	1300	0.17
57°32'N- 39°14'W	10-11		9.5	10.5	0	1300	-
58°53'N- 36°47'W	11-12		9.8	10.3	1	1300	0.07
60°00'N- 22°33'W	14-15		12.3	9.8	3	1300	0.24
August					6		0.12
Total					32		0.29

The size of the salmon (total length, cm below) ranged from 56-84 cm, with an average length of 69.1 ± 6.0 cm (68.7 ± 5.8 and 72.7 ± 8.1 cm for 130 mm and 150 mm nets respectively). The sex ratio was 1.1 females to 1 male. The average condition factor ($100 \times W$ in gram / L^3 in cm) for all salmon was 1.02 ± 0.12 , which was higher compared to that of salmon caught in the Irminger Sea in 1973 (0.93 ± 0.11).

The most important food items were Paralepis sp. and the squid Brachioteuthis riisei.

A comparison between catch per unit effort in 1973 and 1974 in the Irminger Sea and at West Greenland 1972 and 73 is given in Table 2. A comparison with stations from 1966 is not relevant, because the drift nets used at that time were polyfilament nets and not monofilament nets as in 1972 - 74. The effort unit in this table is given as number of commercial nets shot. The nets used by research vessels have been converted to "commercial nets" by a factor 1.403 because of a difference in length.

Table 2: Effort, catch and catch per unit effort given for the Irminger Sea in 1973 and 1974 and for the West Greenland waters in 1972 and 1973 for the months July and August. (f=number of nets, C = number of salmon caught, C/f = number of salmon per 100 nets).

	Irminger Sea			West Greenland waters		
	Aug 73	Jul 74	Aug 74	Aug 72	Jul 73	Aug 73
f	196	305	292	259853	65290	226315
C	14	26	6	149430	29308	91641
C/f	7	8	2	58	45	40

If the catch/effort data here can be used as an index for the density of salmon the Table 2 then shows that the density of salmon in areas fished in August 73 and July 74 was much higher than the density in the area fished in August 74. This difference can be due to the more southerly position of the later area, see Fig 1, which shows all the salmon stations fished in Irminger Sea in the years 1966, 1973 and 1974, and the number of salmon caught on each station.

Table 2 shows for the months July and August separately the difference in catch per unit effort between the Irminger Sea and the Greenland waters. But the material from the Irminger Sea is very small compared to the material from the West Greenland waters. It is, therefore, at present not possible to judge with any precision the amount of destined "salmon" present outside the West Greenland fishing area. Although the density of salmon outside the fishing area seems smaller than inside the fishing area, the area to which this low density applies may have a considerable distribution.

REFERENCE

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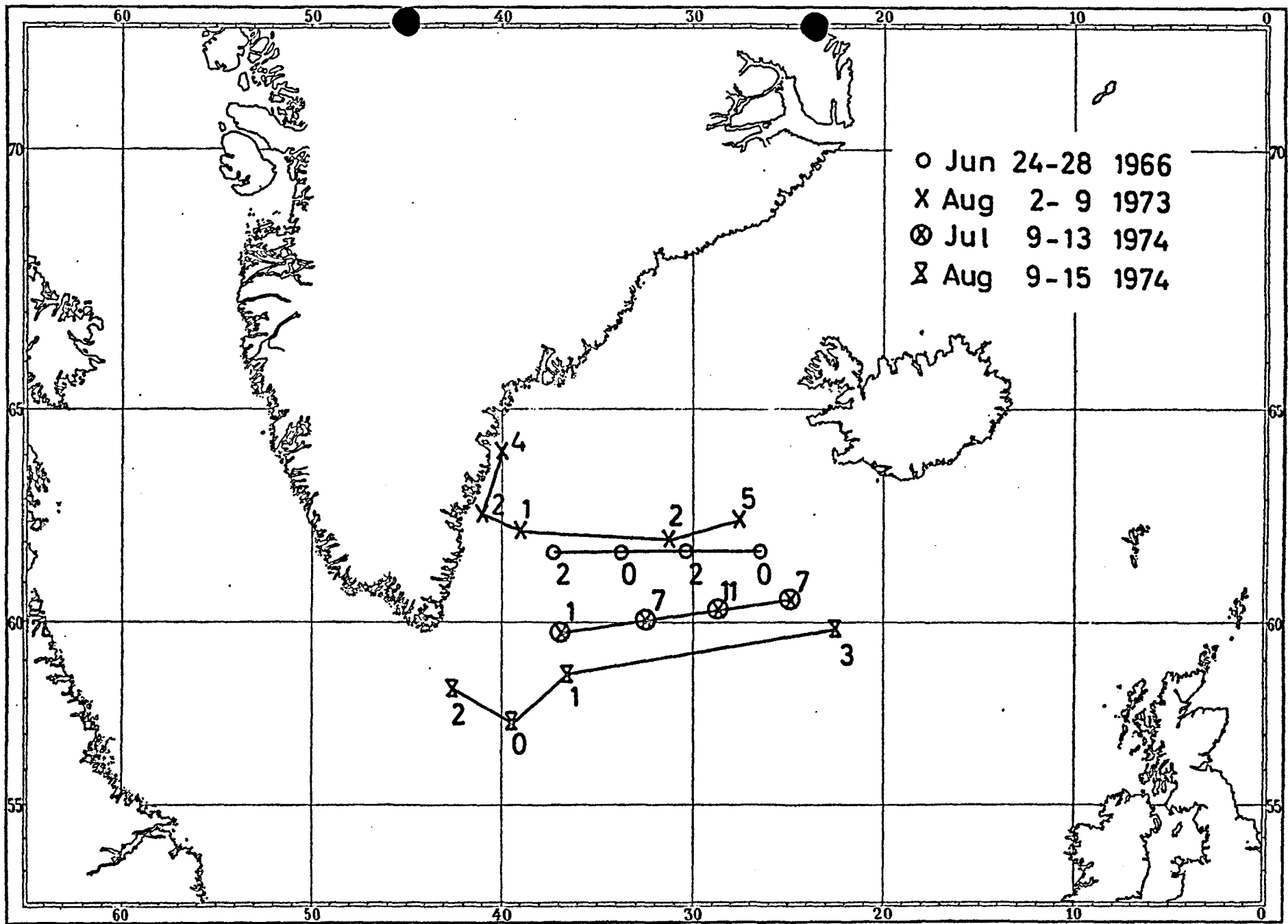


Fig. 1. The salmon stations in 1966, 73 and 74, and the number of salmon caught per stations.