



ANNUAL MEETING - JUNE 1973

The Danish salmon fishery at West Greenland in 1972

by

O. Christensen

Danmarks Fiskeri-og Havundersøgelser, Charlottenlund, Denmark

The present paper deals exclusively with the fishing by vessels registered in Denmark (Mainland).

1. Fishing area. In 1972 salmon vessels from Denmark were operating off the coast of West Greenland between the latitude  $61^{\circ}00'$  and  $70^{\circ}00'N$  and rarely farther offshore than 20 naut.miles (Fig. 1). Within this area the distribution of the fishery was extremely heterogenous as also demonstrated by Table 1. The activity was especially concentrated between Føringehavn and Frederikshåb and to a less extent off Sukkertoppen and west of Disko.

As a consequence of unsatisfactory catches from the end of August the abundance of salmon outside the usually exploited area was investigated. Following regions were surveyed:

- 1) Northwest of Disko ( $70^{\circ}15' N$ ,  $55^{\circ}10' W$ ) and in Umanak fjord ( $71^{\circ}00' N$ ,  $53^{\circ}30' W$ ), early September.
- 2) Davis Str. ( $62^{\circ}55' N$ ,  $59^{\circ}40' W$  and  $66^{\circ}30' N$ ,  $57^{\circ}30' W$ ), late September and early October.
- 3) Eastcoast of Greenland in the coastal water between the latitude  $62^{\circ}41'$  and  $65^{\circ}29' N$ , in late September and early October.
- 4) Labrador Sea between the latitude  $59^{\circ}40'$  and  $60^{\circ}30' N$  and between the longitude  $45^{\circ}15'$  and  $54^{\circ}10' W$ , late September.

From a commercial point of view the efforts were unsuccessful. The highest yield was obtained in the Labrador Sea (7 salmon per 100 nets). In the other regions the catches per 100 nets amounted to less than 4 salmon.

2. Fishing season. The fishery started about 1 August, and 22 October the last nets were hauled. The majority of the vessels however stopped fishing during first half of October.

3. Vessels and gear. 12 vessels registered in Denmark participated in the fishery.

Apart from a few tentative long line shots in the Davis Str. - with poor results (3 salmon per 1000 hooks) - only drift-nets were operated.

4. Effort, catch and catch per unit effort.

The distribution of effort and catch by areas and half monthly periods is set up in Table 1.

Special attention shall be paid to the facts;

that nearly half of the total effort was made in area V resulting in 58.2 % of the total yield;

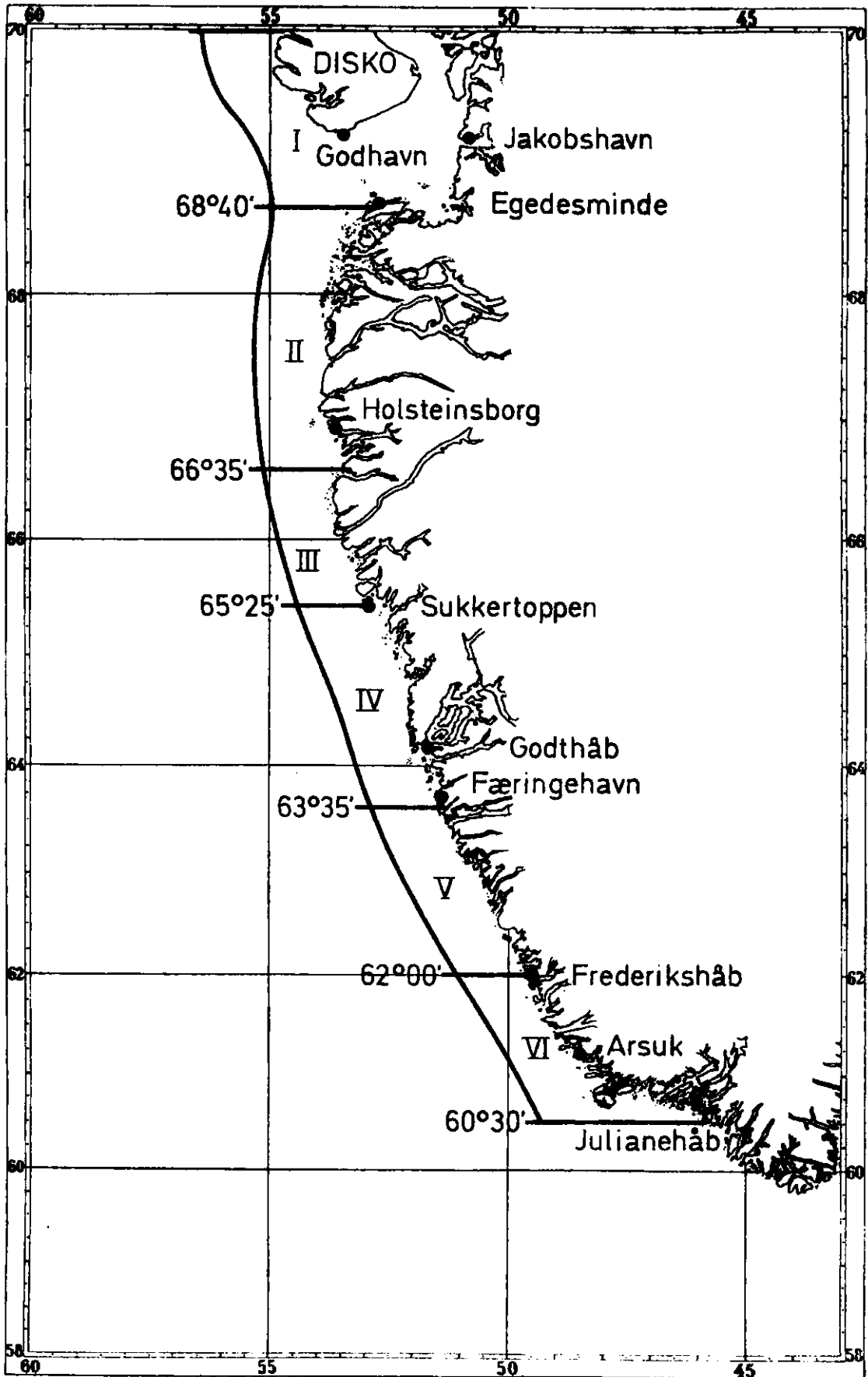
that 49.9 % of the total catch was obtained during the first two weeks of the season;

that even if catch per unit effort showed a nearly continual decline from the beginning to the end of the season, the decline was especially pronounced from first half to second half of August pointing to a sudden change in abundance and/or availability of salmon on the fishing grounds. A gale in area V and adjacent areas in the middle of the month followed by decreasing surface temperature from 4.5<sup>o</sup> to 2.0<sup>o</sup> C may be a concurrent cause.

Preliminary information on Greenland catches suggests however that abundance of salmon in coastal and offshore waters of West Greenland in the salmon fishing season 1972 did not show the same trends.

Table 1. Distribution by areas and periods of effort, catch and catch per unit effort in the Danish salmon fishery at West Greenland in 1972. (f: number of nets x sets, C: number of salmon, C/f: number of salmon per 100 nets).

Areas	Periods			August			September			October			Total per area
	f	C	C/f	1 - 15	16 - 31	1 - 31	1 - 15	16 - 30	1 - 31	1 - 15	16 - 31	1 - 31	
I	f			9415		27718	1080						38213
	C			4816		9825	375						15016
	C/f			51		35	35						32
II	f			8540		600	600			1300		600	20581
	C			5269		81	100			102		19	7208
	C/f			62		14	17			8		3	35
III	f			15195		1000	11600			2000			37095
	C			10847		117	1514			292			15447
	C/f			71		12	13			15			42
IV	f			1000		8500	4300			4600		500	23425
	C			279		4933	2261			1254		74	10355
	C/f			28		58	53			27		15	44
V	f			39484		7248	19950			13720		1800	109806
	C			46577		2600	4376			3912		249	73800
	C/f			118		36	22			29		14	67
VI	f			1765		4300	4740			400			12805
	C			320		2209	1522			24			4949
	C/f			18		51	32			6			32
Total per half-months	f			65984		49366	42270			22020		2900	241925
	C			63292		19765	10148			5584		342	126775
	C/f			26		40	24			25		12	52



**Fig. 1.** Division of the sea at West Greenland with a view to distribution of the offshore salmon fishery.