

International Council for
 the Exploration of the Sea.

C.M. 1955,
 Baltic-Belt Seas Committee
 No. 33, D

Swedish Salmon Fisheries in the Baltic precincts in
 the last years.

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I. The Yield and its changings.

The yield of the Swedish Salmon fisheries in the Baltic has decreased rapidly in the years 1950 to 1953 as will be seen from the following figures.

Swedish salmon-catches in tons in the Baltic precincts.

Year	Total sea fisheries	Baltic	Botnian bay	Baltic rivers
1950	1,401	961	440	351
1951	1,080	749	331	210
1952	790	460	330	226
1953	419	270	149	174
1954	472	353	119	130?

In the year 1954, however, an increase followed, principally depending on the Gotland and Blekinge fisheries, the most important Salmon fishery provinces at the Baltic coast, giving much better results as in the year 1953. In the northern provinces, especially in the Botnian Bay, however, the decrease continued in the year 1954.

The Salmon fishing in the Baltic by the Gotland and Blekinge fishermen is going on in the hole year besides in the real summer months, July and August. The most important fishing periods are in Gotland the late autumn and in Blekinge the spring.

Salmon catch in Gotland and Blekinge (% of weight) in
 different months (Averages for the years 1950-54).

	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Gotland	9,6	6,1	5,8	11,2	12,5	4,-	-	-	4,8	14,8	17,6	13,6
Blekinge	1,5	0,9	4,5	28,6	27,2	6,4	0,8	1,3	10,9	8,8	5,2	3,9

The most common gear for salmon are anchored and drift lines, which are used in the whole season, as well as drift nets, which are used only in the spring. The later ones are more common in the Blekinge province than in the other Swedish provinces. The number of these gear in the total Swedish Baltic salmon fishery amounted to:

Year	Lines	Nets
1940	6.021	37.286
1945	36.363	42.149
1950	220.130	52.940
1951	236.820	55.490
1952	256.200	55.900
1953	254.200	55.100
1954	254.906	53.000

Thus in the last five years only very small changings have occures in the number of these gears, while in the forties a tremendous increase, especially regarding the lines, mostly drift lines, is to be noticed.

The use of the drift lines, often with rather small hooks, has - as is the case also in the salmon fisheries in other Baltic countries - led to larger captures of very small salmon than in the earlier years. This is especially the case in the years 1953 and 1954. The number and percentages of salmon weighing up to 3 kg. (in Sweden called group IV) in the total Gotland-fishery can be seen from the following figures.

<u>Year</u>	<u>Number</u>	<u>Number in % of all salmon caught in the year.</u>
1948	2,400	9
1949	7,039	18
1950	9,175	20
1951	5,760	18
1952	4,864	21
1953	5,508	38
1954	14,128	46

In the fishing season 1953-54 lots of salmon weighing only 0,5 - 1 kg. were caught, it is to say young salmon who had left their breeding rivers in the earlier summer 1953, and which had lived in the sea for only about half a year. Generally, however, the IV group salmon have a weight from 1,5 to 3 kg, that is salmon which have lived 1,5 - 2 years in the sea. These salmon of the IV group are mostly caught in the winter months, while the larger salmon principally are obtained in the months of October, April and May. The figures below show that this is the case, and furthermore that the above mentioned increasing capture of small salmon in the years 1953 and 1954 especially is due to the increased catches of such salmon in the last months of the year.

Number of IV salmon in % of all salmon caught in the months of:

<u>Years</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>
1950-51	4	15	20	34	43	46	12
1951-52	1	8	31	30	38	37	15
1952-53	19	25	31	34	42	52	16
1953-54	15	49	54	54	62	58	27
1954-55	40	51	61	56	54	62	13

The size of the salmon stock.

The catches of salmon in the Baltic were still greater in the last 1940 years than in the 1950 years. The decline in the yield surely is due to a corresponding decline in the size of the salmon stock. The survival of the year classes from some of the 1940 years, thus, must have been larger than has been the case regarding the later year-classes.

The above mentioned increase in the yield of the Swedish salmon fisheries in 1954, however, sometimes is supposed by the fishermen to depend on an increase in the salmon stock. In this connection it should be taken into consideration that an increase of the yield in the year 1954 is still more pronounced in the salmon fisheries in the other Baltic countries.1)

Salmon catches in tons.

<u>Year</u>	<u>Denmark</u>	<u>Germany</u>	<u>Poland</u>
1953	753	75	71
1954	962	121	144

Probably a rise has occurred in the Soviet fisheries too, but no figures are available from this country.

In the foregoing it was pointed out that the number of the gear, mostly used by the Swedish salmon fishermen has not changed in the last years. Nevertheless the yield has increased. Then it must be of interest to get some information regarding the number of fishing days and lifts. Unfortunately such figures are not available for the total Swedish salmon fishery. From several fishermen at Gotland and Blekinge, however, it has been possible to get records concerning the number of gear used and the number of lifts in the different years of fishing seasons. The mean figures from these records are as follows.

1) Figures from 1954 kindly obtained from Mag. Knudsen, Dr. Kändler and Dr. Fruczek.

Year	Catch, in number, per unit of effort	
	Gotland (1.000 hooks)	Blekinge (100 nets)
1950	30,0	16,9
1951	29,9	8,0
1952	29,0	7,7
1953	27,2	4,4
1954	41,6	4,5
1955	-	6,6

As will be seen from these figures the catches per unit of effort have increased rather much at Gotland in the year 1954 and at Blekinge in the year 1955. Yet, one is not from this rather small material justified to pretend that the rising abundance figures certainly are due to an increase in the salmon stock in the last time. The fact that the figures for the abundance rise at the same time as the yield of the total fisheries in the Baltic shows an increase, however, may indicate an, probably only incidental, increase in the Baltic salmon stock.

Is the salmon fishing in the Baltic dangerous
for the salmon stock?

The main part of the salmon stock in the Baltic nowadays has its breeding places in the Swedish rivers. The yield of the salmon fishing in these rivers shows, as may be seen from the figures above, a continued decrease also in the year 1954, and so did the yield of the salmon catches in the Bothnian Bay. This discrepancy between the Baltic fisheries on the one side and the fisheries in the Bothnian Bay and in the rivers on the other side, is not in accordance with the figures in earlier years. Then mostly an increase or decrease in the yield of the salmon fisheries in the Baltic was accompanied by an increase in the river fisheries.

As a result of the continued decline in the yield of the river fisheries the relation between the yield of the river and the Baltic salmon fisheries has changed considerably. Thus in earlier years the weight of the Salmon caught in the rivers amounted to about 36 % of the total Swedish salmon fisheries. In the last five years this figure varied between 16,3 and 29,3 %, with an average of only about 22 %.

One must, therefore, be entitled to say that - in spite of the possibility of an incidental increase in the salmon stock in the Baltic - the salmon catches in the southern Baltic in the last years take away such a great part of this stock that in the future the escape for spawning possibly may be too small in maintaining the stock. This danger is especially great, if the big catches of very small salmon in the winter months will continue.