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West Coast of Greenland  
Inshore Gill Netting and Tagging of Salmon - "Tornak", 1970

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Once again the viability of salmon caught and tagged from gill nets was investigated. The work was carried out from the research vessel "Tornak" in the Kigdlut Iluat area just south of Godthåb. In 1969 the results were inconclusive due to a scarcity of fish in that particular area. Although the catches in 1970 were not nearly so big as in 1966 it was possible during the experiment to place 45 salmon in a keep-net for varying lengths of time and note their condition.

The first salmon was caught in Kobbefjord on July 4th but the gill nets were not set in Kigdlut Iluat until August 25th.

For most of the period four gill nets were operating in Kigdlut Iluat with an occasional one near Qarajat just to the north and off Qeqertarssuaq, the island opposite the mouth of Kigdlut Iluat. Nets of varying mesh sizes from 55mm to 75mm were used and during the second half of the period some monofilament gill nets were employed. However, there appeared to be no significant difference in either the numbers caught or in the condition of the fish.

The U.K. representative did not arrive in Godthåb until the 17th September, by which time the Danish Workers had caught 107 salmon of which 17 had been tagged and released. The tags used were the same as those employed in previous years, i.e. two yellow plastic plates attached just below the base of the dorsal fin by means of silver or stainless steel wire.

The keep-net was set near the shore at the top of Kigdlut Iluat on 21st September.

Gill netting was carried out regularly from the 25th August until mid-November and the daily catches are given in the attached table. It will be seen that the biggest catches were made in September. By early November very few salmon were being caught and the nets were finally taken out on 18th November.

The length and scale samples were taken from every fish caught and the stomach

contents of every dead fish were noted. The weight and sex of each dead fish was also recorded. Blood samples were taken from 67 fish.

Altogether, 256 salmon were caught of which only 72 were alive. 45 of these were placed in the keep-net and the condition before and after and the length of time in the net were recorded. Details are given in the accompanying table.

The stomach contents consisted mainly of Mallotus or Sand-Eels or a combination of both although one or two contained Euphausiids and a few were empty.

An attempt was made to assess the condition of the gill net caught fish. A fish was classified as "good" if it remained reasonably active in the holding tank with relatively little scale loss and the absence of any external bleeding. The fish classified as "fair" would be more sluggish and there would be periods when it would remain inactive on its side, or there may be quite a scale loss. "Poor" fish were those which showed some sort of swimming movement from time to time but on the whole were very moribund.

The keep-net appeared to act as a clearing house. Salmon in various physical states were placed in the net but after periods of 24 hours or more the fish were either dead or very active. Although the latter were also classified as "good" many were no doubt equivalent to the "excellent" class of the "Cameron" fish.

Of the 16 salmon classified as "good" when placed in the keep-net only one was found dead after an interval of 24 hours. The dead fish had actually been in the keep-net together with three others which remained alive, for a period of over 4 days during which time there were storm force winds and heavy seas.

On the other hand, of the 10 fish classified as "poor" (5 of which were untagged) only two survived a period in the keep-net but these were very lively when released.

Of the 18 salmon classified as "fair", 13 survived a period in the keep-net and were released in a lively condition.

Up to late October, both air and water temperatures were higher than they were in 1969 and survival of fish in the keep-net appeared to be better in 1970. However, temperatures dropped considerably during the final two or three weeks which may have accounted for the higher mortalities of the fish tagged and placed in the keep-net towards the end of the experiment.

### Inshore Long-Lining

During the period of gill netting two attempts were made to catch salmon by means of long lines operated from "Tornak". The lines used were some of those previously worked from "Adolf Jensen".

Early in the morning of 24th September, 74 hooks baited with sprat were put out diagonally across Kigdlut Iluat from the anchor buoy of the outermost gill net situated near the northern point of the bay. The line was allowed to fish for eight hours of daylight before being hauled in. No salmon was caught - only one Cyclopterus (Lumpsucker) and one Anarhichas (Catfish). The gill nets did not catch any salmon during this same period.

A second attempt was made on 1st/2nd October but on this occasion the line was put out in the late afternoon. It again consisted of 74 hooks baited with sprat and it was set off the outer southerly point of Kigdlut Iluat. It was allowed to fish throughout the night and it was hauled at dawn. During the night an iceberg had removed the shore mooring and a number of the hooks were fouled. No salmon was caught but 34 cod were taken - almost one on every other hook. During that night 11 salmon were taken in the 4 gill nets operating in the area.

Summary of Fish Caught and Tagged

Number of Salmon Caught	256 (72 live, 184 dead)
Average Fork Length	64.7 cms
Average Weight	3.1 Kgms
Sex Ratio Females/Males	3.9 : 1
Number of Tagged Salmon Placed in Keep Net	40
" " " Released from Keep Net	30
Number of Untagged Salmon Placed in Keep Net	5
" " " tagged	
" " " Released/from Keep Net	1
Number of Tagged Salmon Released immediately without being placed in Keep Net	25
Total Number of Tagged Salmon Released	56

TOBNAX - 1970  
DAILY GULL NET CATCHES

<u>Date</u>	<u>No. Caught</u>	<u>No. Tagged</u>	<u>No. Released</u>	<u>Date</u>	<u>No. Caught</u>	<u>No. Tagged</u>	<u>No. Released</u>
4/7/70	1	0	0	19/10/70	0	0	0
25/8	6	1	1	21/10	1	0	0
26/8	5	1	1	23/10	5	2	0
28/8	25	7	7	24/10	5	4	1
29/8	4	2	2	26/10	2	0	0
31/8	11	1	1	27/10	3	1	1
1/9	1	0	0	28/10	6	4	4
2/9	4	0	0	29/10	1	0	0
3/9	4	0	0	30/10	3	0	0
6/9	15	1	1	1/11	3	0	0
7/9	4	1	1	2/11	0	0	0
8/9	1	1	1	3/11	0	0	0
12/9	2	0	0	4/11	0	0	0
15/9	20	1	1	5/11	0	0	0
16/9	1	1	1	13/11	0	0	0
17/9	3	0	0	18/11	0	0	0
18/9	16	3	3				
19/9	8	0	0				
21/9	18	2	2				
22/9	18	7	7				
23/9	3	0	0				
24/9	4	4	4				
25/9	0	0	0				
27/9	4	1	0				
29/9	9	1	0				
30/9	3	1	1				
1/10	2	0	0				
2/10	12	8	8				
3/10	4	4	3				
7/10	3	0	0				
8/10	5	4	2				
11/10	0	0	0				
12/10	1	0	0				
13/10	8	3	3				
14/10	1	0	0				
15/10	0	0	0				
16/10	0	0	0				
18/10	1	0	0				
				<b>TOTAL</b>	<b>256</b>	<b>66</b>	<b>56</b>

FORMAK, 1970  
SALMON TAGGING  
KEEP NET EXPERIMENT

<u>Fish No.</u>	<u>Condition</u>	<u>Tagged or Untagged</u>	<u>Hours in Keep Net</u>	<u>Condition When Released or Removed</u>
T 151	Good	T	31	Good
T 152	Fair	T	31	Good
T 153	Fair	T	31	Good
T 154	Good	T	31	Good
T 155	Good	T	31	Good
T 156	Poor	U	31	Good
T 157	Poor	U	31	Dead
T 170	Fair	T	24	Dead
T 171	Good	T	24	Good
T 172	Good	T	24	Good
' 73	Good	T	24	Good
T 174	Fair	T	24	Good
T 186	Fair	T	49	Dead
T 188	Fair	T	18	Dead
T 195	Good	T	32	Good
T 196	Fair	T	21	Good
T 197	Fair	T	21	Good
T 198	Fair	T	21	Good
T 199	Good	T	21	Good
T 201	Poor	T	21	Good
T 202	Fair	U	21	Good
T 204	Good	T	21	Good
T 205	Good	T	105	Good
T 206	Good	T	105	Dead
T 207	Good	T	105	Good
T 211	Poor	T	105	Good
T 212	Poor	T	79	Dead
T 214	Good	T	79	Dead
T 217	Good	T	76	Good
T 218	Fair	T	30	Good
T 219	Poor	T	30	Good
T 20	Poor	T	30	Good
T 228	Fair	U	30	Dead
T 229	Fair	T	24	Dead
T 233	Good	T	24	Dead
T 234	Fair	T	24	Good
T 235	Poor	T	24	Dead
T 236	Poor	T	24	Dead
T 240	Fair	T	24	Dead
T 241	Poor	U	24	Good
T 243	Fair	T	24	Dead
T 244	Fair	T	36	Good
T 245	Good	T	36	Good
T 246	Fair	T	36	Good