

ANNUAL MEETING - JUNE 1965Preliminary Report on Recaptures in Subarea 1 of SalmonTagged in Rivers in America and Europe

by Paul M. Hansen

1. The Greenland salmon fishery.

Until a few years ago the salmon fishery has been of very little importance to the Greenland fisheries.

Kapisigdlit in the inner part of the Godthåb Fjord is the only river where salmon is known to spawn. The Greenlanders have in many years fished for salmon in stone traps built across the river. In the fjords Amerdloq and Ikertoq (Division 1 B) the Greenlanders carry out gill net fisheries for salmon in the autumn months in the open fjord. These fisheries have been very modest and the catch has mainly been used for local consumption. In the thirties salmon occurred in the autumn along the coast and was caught occasionally in different places particularly near Napassoq in Sukkertoppen district (Division 1 C) but no commercial fishery was carried out. The Royal Greenland Trading Company which had monopoly of all trading in Greenland was not interested in buying salmon because the only possibility of curing the fish was salting, and salted salmon is a rather poor product. Furthermore the occurrence of salmon along the coast fluctuated much from year to year.

According to reports from French, Spanish and Faroese trawlers salmon were often caught in cod trawl in the autumn in the Davis Strait especially on Store Hellefiske Bank.

More detailed informations about the occurrence of salmon in Greenland waters have been given by Jørgen Nielsen (1961).

In recent years modern freezing plants have been built in the bigger Greenland towns which provide the possibility for production of frozen salmon which is a valuable product. Some few Greenlanders started a gill net fishery for salmon in 1959 near Napassoq (1 C). The output was modest, only 13 tons. In 1960 the production was 55 tons frozen salmon produced in the same freezing plant as in 1959. In 1961 salmon fishery was also carried out in Holsteinsborg, Godthåb and Frederikshåb districts. The total catch was 115 tons. The following year the output doubled to 220 tons. The best catch was obtained in Division 1 C with 162 tons. In 1963 the output increased to 420 tons. The distribution on districts differed from 1962. Holsteinsborg (Division 1 B) had the best result, 134 tons.

In 1964 the Royal Greenland Trading Company raised the prices for salmon in order to encourage the Greenland fishermen to intensify fishing for salmon.

The cod fishery which reached its peak in 1962 decreased abruptly in 1963 because the cod occurred in only very small amounts in the coastal region. Also in 1964 the occurrence of cod was poor, and the total catch of cod showed a heavier decrease than in the year before. The scarcity of cod together with the high prices for salmon gave rise to a more intensified salmon fishery. The total catch of salmon was 1386.2 tons. In Table 1 is shown the catch per division and per month in 1964.

The table shows that the Divisions 1 A, 1 B, 1 C and 1 F had their best catches in October and 1 D and 1 E in September. The biggest total catch was taken in 1 C.

In Table 2 are given the catches per division in tons of salmon of different weights.

It is obvious that most salmon weigh between 1.0 and 4.5 kg, which means that medium sized salmon predominate in the catches.

Fig. 1 shows the size distribution of 343 salmon from Greenland catches off Fiskenaeset (1 D) 3rd October, 1964, mainly between 60 and 77 cm and with maxima at 68 and 73 cm. Samples of scales have been taken of the salmon for age-determination but the material has not yet been treated.

Without doubt the occurrence of salmon has been unusually large in 1964. In many places salmon have been seen in large shoals in the surface.

It is impossible to give a true picture of how large the fishing activity has been in the Greenland salmon fishery in 1964. All persons who had a motor-boat or a rowing boat participated in the salmon fishery. An impression of the development in this fishery may be given by the numbers of gill nets sold in the last three years. In 1962 less than a thousand nets were sold, in 1963 1635 and in 1964 2560 nets. In 1965 the numbers of nets sold by the Royal Greenland Trading Company will possibly be 6000. It is obvious that the number of nets sold in a year is not the same as the number of nets used. If we suggest that about half of the nets sold in the previous years could be used, the number of nets used in 1964 has been about 3400.

2. Recaptures in Subarea 1 of salmon tagged in foreign rivers.

Jørgen Nielsen found that scales from salmon caught off Napassoq, Sukkertoppen district (1 C) generally show a much shorter river life as parr than found for the Kapisigdlit salmon. There was reason to assume that at any rate most of the Napassoq salmon were not of Greenland origin but belonged to salmon stocks from foreign rivers (Jørgen Nielsen, 1955 and 1956). A single recapture off Sukkertoppen in 1958 of a salmon tagged as parr in Kapisigdlit river two years before showed that Kapisigdlit salmon probably mix with the shoals of salmon found along the coast in the autumn.

In 1956 the first recapture of a salmon tagged in a foreign river was made in Greenland waters. It was a salmon tagged in a Scottish river in 1955. In 1960 another tagged salmon was recaptured. It was tagged in Miramichi River in New Brunswick, Canada, 1959. Both recaptures were caught in Sukkertoppen district (1 C). In all 64 salmon tagged in foreign rivers have been caught off West Greenland from 1956 to 1964. 25 were tagged in rivers in U.S.A. and Canada and 39 in rivers in Europe. This confirms Menzies' (1949) suggestion that salmon from America and Europe meet in the same feeding area in the North Atlantic.

Table 3 shows the distribution of recaptures of tagged salmon by divisions, years and countries where they were tagged and released.

The largest numbers of recaptures were taken in 1964, which is not surprising as the output of the salmon fishery in that year was much higher than in the other years.

The division where most recaptures were made was 1 C which had the best catches of salmon (see Table 1).

The largest numbers of recaptures have been of salmon tagged in Canada, England and Scotland with 23, 17 and 16 recaptures, respectively. It must, however, be mentioned that the numbers of recaptures cannot give any idea about how many salmon migrated from each country to the West Greenland area because we have no information on the numbers of salmon tagged by the different nations.

It is also possible that Table 5 which gives data on taggings and recaptures is not complete because some tags possibly are sent directly from the Fisheries officers in the places where the recapture was made to the

institute which has carried out the tagging without giving information about the recapture to the Greenland Fisheries Investigations. In this connection it must be mentioned that the list on salmon tagged in Canada and recaptured in Greenland in Table 5 differs from a similar list, Table 1, in the paper of Saunders, Kerwill and Elson (1964). The total numbers of recaptures are the same in the two tables namely 18, but the numbers 1, 3, 13, 17 and 18 in Table 5 are missing in the Canadian table, while five salmon tagged as smolts in 1963 in Canada and recaptured off Sukkertoppen (1 C) in October and November 1964 are missing in Table 5.

3. Stages of salmon when tagged.

Table 5 gives detailed information on the recaptured salmon. Among other things information on stage in life when tagged. The distribution of the different stages (smolt, grilse, kelt and big salmon) according to countries where tagged is shown in Table 4. The salmon tagged as smolts are in majority. This could indicate the stage following the smolt stage as the most common in the salmon shoals off Greenland, but also that it is more easy to tag smolts than salmon on other stages.

The weights of the recaptured salmon tagged as smolts are between 2.4 - 4.1 kg, mean-weight 3.2 kg (gutted, head on). Nearly the same mean-weights are found for 87.8% of all salmon caught in 1964 (see Table 2). It is therefore reasonable to presume that most of the salmon caught in 1964 in Subarea 1 belonged to the stage which were smolts the year before. Other evidence is the lengths of this group at recapture. The total lengths are between 60 and 77 cm with an average of 67-68 cm, this is in accordance with the lengths of 343 salmon caught by Greenland fishermen shown in Fig. 1.

4. Time in sea

Time from tagging until recapture for salmon tagged as smolts has been nearly the same in Canada as in Scotland and England, namely from 16 - 17 months. The four salmon tagged as grilse in Canada have been between 11 - 17 months in sea, in average 14 months. 5 salmon have been tagged as kelts in Scotland and England. They have been in sea from 6 - 11 months. Four big salmon tagged in Irish rivers were recaptured off Greenland 6, 7, 11 and 13 months after tagging.

5. Minimum distances of migration.

Minimum distances in nautical miles are given in Table 5. As we do not know by which route the salmon migrate from its home river to its feeding places in Greenland waters we cannot give the exact distance migrated.

The average minimum distances migrated (nautical miles) were the following: Canada 1600, U.S.A. 1900, Scotland 1850, England 2000, Ireland 1950 and Sweden 2300.

6. The growth of recaptured tagged salmon

The smolts tagged had total lengths from 10 - 20 cm. When recaptured 17 - 19 months after tagging they had lengths between 66 and 73 cm. The average increase in growth was about 54 cm.

Three salmon tagged as kelts were 64, 72 and 78 cm when tagged and 74, 82 and 95 cm when recaptured. This means that the two first had grown 10 cm each in 6 and 8 months respectively and the third 17 cm in 8 months.

Four big salmon tagged in Ireland had the following growth:

| Length tag. cm | Length rec. cm | Months in sea | Growth cm |
|-------------------|-------------------|---------------|--------------|
| 58.5 | 70 | 7 | 11.5 |
| 62.5 | 78 | 6 | 15.5 |
| 74 | 89 | 11 | 15.0 |
| 79.5 | 90 | 13 | 10.5 |

7. Food of the salmon.

The stomach content of salmon consisted mainly of euphausians and capelin (*Mallotus*) and in some cases also of sandeel.

Summary

An important gill-net fishery for salmon has developed from September to December in the last three years in coastal waters off West Greenland (Subarea 1). Shoals of salmon much larger than known before appeared especially in 1964, when the total catch was about 1400 tons. The majority of the salmon were of medium size with mean lengths from about 62-78 cm and weights between 1.0 and 4.5 kg. The largest total catch was obtained in 1 C.

Recaptures of 64 salmon tagged in Canada, U.S.A., Ireland, Scotland, England and Sweden showed that the salmon had emigrated from rivers on both sides of the Atlantic. Most of the recaptured salmon were tagged as smolts the year before recapture. This fact together with the length and weight of all salmon caught makes it probable that the largest numbers of the salmon appearing off Greenland in the autumn months are salmon which left their home rivers as smolts 13 to 19 months before.

The long migrations from about 930 to about 2270 nautical miles must be considered as a feeding migration. The stomach content was found to be capelin, euphausians and sandeel.

References:

- Allan, I.R.H. and M.J. Bulleid. 1963. Long-distance migration of Atlantic salmon. *Nature*, 200:89.
- Anonymous. 1962. Long distance migrations by salmon. *Scottish Fish. Bull.*, No. 17, p. 25.
- Carlin, Börje. 1962. Märkt lax återfångad vid Grønland. Laxforskningsinstitutts Medd., No. 8, 5 pp.
- Cutting, R.E. 1964. Atlantic salmon report. *Maine Fish and Game*, 6(1):21.
- Fabricius, O. 1780. *Fauna Groenlandica. - Hafniæ et Lipsiæ.*
- Hansen, P. 1964. Summary of research work carried out in Subarea 1 in 1963. *Int.Comm.Northw.Atl.Fish., Ann.Meet., June 1964, S.No. 1403, Doc. No. 107.*
- Hansen, P. and F. Hermann. 1953. *Fisken og Havet ved Grønland. Skr. Danm. Fisk. og Havunders. No. 15:1-128.*
- Jensen, Ad.S. 1939. Concerning a change of climate during recent decades in the arctic and subarctic regions, from Greenland in the west to Eurasia in the east, and contemporary biological and geophysical changes. *Kgl. Dansk. Vidensk. Selsk., Biol. Medd, 14(8):1-75.*
- Kerswill, C.J. and M.H.A. Keenleyside. 1961. Canadian salmon caught off Greenland. *Nature*, 192:279.
- Menzies, W.J.M. and W.M. Shearer. 1957. Long-distance migration of salmon. *Nature*, 179:790.
- Nielsen, Jørgen. 1961. Contributions to the biology of the salmonidae in Greenland I-IV. *Medd. Grønland, 159(8):1-75.*

Saunders, R.L., C.J. Kerswill and P.F. Elson. 1965. Canadian Atlantic Salmon Recaptured Near Greenland. J.Fish.Res.Bd. Canada. 22(2).

Swain, A., W.G. Hartley and R.B. Davies. 1962. Long distance migration of salmon. Nature, 195:1122.

Swain, A. 1963. Long-distance migration of salmon. Nature, 197:923.

Table 1. Catch of salmon (gutted, head on) in tons per division, per month in 1964.

| Division | Aug. | Sep. | Oct. | Nov. | Dec. | NK | Total | % |
|----------|------|-------|-------|-------|------|-------|--------|------|
| 1 A | - | 2.7 | 10.7 | 5.8 | - | - | 19.2 | 1.4 |
| 1 B | 0.4 | 13.4 | 152.5 | 105.5 | 3.3 | 19.0 | 294.1 | 21.2 |
| 1 C | 0.4 | 65.6 | 251.4 | 112.9 | 8.0 | - | 438.3 | 31.6 |
| 1 D | 8.1 | 63.0 | 40.4 | 19.7 | 2.5 | 30.7 | 164.4 | 11.9 |
| 1 E | 23.9 | 161.7 | 79.0 | 36.9 | 3.3 | - | 304.8 | 22.0 |
| 1 F | 0.5 | 31.6 | 34.1 | 25.4 | 3.8 | - | 95.4 | 6.9 |
| 1 NK | - | - | - | - | - | 70.0 | 70.0 | 5.0 |
| Tons | 33.3 | 338.0 | 568.1 | 306.2 | 20.9 | 119.7 | 1386.2 | |
| % | 2.4 | 24.4 | 41.0 | 22.1 | 1.5 | 8.6 | | |

Table 2. Catch in tons of salmon of different weights per division.

| Division | Weights of salmon in kg. | | | | Total tons | % |
|----------|--------------------------|---------|---------|------|------------|------|
| | 1.0-3.5 | 3.5-4.5 | 4.5-6.0 | 6.0 | | |
| 1 A | 3.7 | 6.2 | 2.6 | 6.7 | 19.2 | 1.6 |
| 1 B | 124.9 | 95.3 | 27.2 | 27.9 | 275.3 | 23.2 |
| 1 C | 231.7 | 165.4 | 30.3 | 10.9 | 438.3 | 37.0 |
| 1 D | 0.4 | 124.7 | 5.8 | 3.6 | 134.5 | 11.4 |
| 1 E | 156.2 | 50.5 | 11.8 | 4.2 | 222.7 | 18.8 |
| 1 F | 40.8 | 36.0 | 9.2 | 9.4 | 95.4 | 8.0 |
| Tons | 557.7 | 478.1 | 86.9 | 62.7 | 1185.4 | |
| % | 47.1 | 40.3 | 7.3 | 6.3 | | |

Table 3. Recaptures in West Greenland, Subarea 1, of tagged salmon, distributed on countries where tagged and released, division of recapture and year of recapture.

| Division | Recapture | | Canada | U.S.A. | Ireland | Scotland | England | Sweden | America | Europe | Total | % |
|----------|-----------|--|--------|--------|---------|----------|---------|--------|---------|--------|-------|------|
| | Year | | | | | | | | | | | |
| I B | 1961 | | 1 | | | | | | 1 | | | |
| | 1963 | | 4 | 1 | | | | | 5 | | | |
| | 1964 | | 2 | 1 | 2 | | | | 3 | 2 | 11 | 17.2 |
| I C | 1956 | | | | 1 | | | | | 1 | | |
| | 1960 | | 1 | | | | | | 1 | | | |
| | 1961 | | 3 | | 2 | 2 | 1 | | 3 | 3 | | |
| | 1962 | | | | | 2 | 1 | | | 5 | | |
| | 1963 | | 2 | | | 2 | | | 2 | 2 | | |
| | 1964 | | 6 | | 3 | 7 | 9 | | 6 | 19 | 42 | 65.6 |
| I D | 1963 | | | | 1 | | 1 | | | 2 | 2 | 3.1 |
| I E | 1963 | | 2 | | 1 | | | | 2 | 1 | 3 | 4.7 |
| | 1964 | | | | | | | | | | | |
| I F | 1962 | | | | | 1 | | | | 1 | | |
| | 1964 | | 2 | 1 | 2 | | | | 2 | 3 | 6 | 9.4 |
| Total | | | 23 | 2 | 4 | 16 | 17 | 2 | 25 | 39 | 64 | |
| | % | | 35.9 | 3.1 | 6.3 | 25.0 | 26.6 | 3.1 | | | | |

Table 4. Distribution of salmon by stages and when tagged.

| Nation | Smolt | Kelt | Grilse | Big fish |
|----------|-------|------|--------|----------|
| Canada | 17 | - | 4 | 2 |
| U.S.A. | - | - | - | 2 |
| Scotland | 14 | 2 | - | - |
| England | 14 | 3 | - | - |
| Ireland | - | - | - | 4 |
| Sweden | 2 | - | - | - |
| Total | 47 | 5 | 4 | 8 |
| % | 73.4 | 7.8 | 6.3 | 12.5 |

Table 5. Recaptures of *Salmo salar* off West Greenland

Tagged in CANADA:

| Tagging | Recapture |
|---|--|
| 1. Carlin tag. No. ?1616 May 22, 1959 Estuary of Miramichi River at Millbank, N.B. Smolt, 17.5 cm | October 10, 1960 Tasiussaq, Napassoq, Sukkertoppen 65°06'N. 52°08'W. 71 cm, 3.7 kg. ♂ |
| Biol.St., St. Andrews, N.B. | 1750 naut. miles |
| 2. Carlin tag. No. 5799 May 26, 1960 Camp Adams, NW Miramichi River, N.B. Smolt, 14 cm | October 16, 1961 Napassoq Fjord 65°13'N. 52°09'W. 66.5 cm, 3 kg., ♂. 3.1+ (4.1+) ? years old |
| Biol.St., St. Andrews, N.B. | 1760 naut. miles |
| 3. Plastic tag. No. S 5276 June 27, 1960 Little Codroy River, N.F. 47°46'N. 59°17'W. Grilse, 53 cm, 1.7 kg. 3.1 year old | November 30, 1961 Narssaq, Amerdloq Fjord, Holstb. 66°55'N. 53°13'W. 71 cm, 4 kg. ♀ |
| Biol.St., St. John's, N.F. | 1200 naut. miles |
| 4. Carlin tag. No. D.P.Q.20807 June (first week), 1960 Grande Riviere (Gaspé Sud), Quebec Smolt, 2 years old | November 1, 1961 Kangamiut, Sukkertoppen 65°49'N. 53°21'W. 73 cm, 3.3 kg. ♂ |
| St.Biol.Mar., Grande Riviere, Gaspé Sud | 1550 naut. miles |
| 5. Plastic tag. No. 14515 July 12, 1960 NW Miramichi River, N.B. Grilse, 55 cm | October 30, 1961 Kangamiut, Sukkertoppen 65°49'N. 53°21'W. 73 cm, 4 kg. |
| Biol.St., St. Andrews, N.B. | 1790 naut. miles |
| 6. Plastic tag. No. 14893 October 16, 1962 NW Miramichi River, N.B. Grilse, 79 cm | September 9, 1963 Kangamiut, Sukkertoppen 65°49'N. 53°21'W. 86.5 cm, 5.6 kg gutted |
| Biol.St., St. Andrews, N.B. | 1790 naut. miles |
| 7. Plastic tag. No. 29455 May 27, 1962 Miramichi River, N.B. Smolt, 13-15 cm | October 21, 1963 Holsteinsborg 66°55'N. 53°40'W. 63 cm |
| Biol.St., St. Andrews, N.B. | 1865 naut. miles |
| 8. Plastic tag. No. 18920 October 12, 1962 Miramichi River, N.B. Grilse, 62 cm | October 22, 1963 Holsteinsborg 66°55'N. 53°40'W. 75 cm |
| Biol.St., St. Andrews, N.B. | 1865 naut. miles |

(Cont'd).....

Salmo salar

Tagged in CANADA:

| Tagging | Recapture |
|--|---|
| 9. Carlin tag. No. 23035 May, 1962 Margaree River, Cape Breton, N.S. Smolt, 15 cm Biol.St., St. Andrews, N.B. | October 23, 1963 Holsteinsborg 66°55'N. 53°40'W. 68 cm 1275 naut. miles |
| 10. Plastic tag. No. 28104 May 24, 1962 NW Miramichi River, N.B. Smolt, 13-15 cm Biol.St., St. Andrews, N.B. | October 20, 1963 Sukkertoppen 65°25'N. 53°00'W. 63.5 cm 1775 naut. miles |
| 11. Plastic tag. No. 32612 June 3, 1963 NW Miramichi River, N.B. Smolt, 14.8 cm Biol.St., St. Andrews, N.B. | September 24, 1964 Arsuk 61°10'N. 49°35'W. 61 cm, 2 kg. 1540 naut. miles |
| 12. Plastic tag. No. 37978 May 28, 1963 NW Miramichi River, N.B. Smolt, 2 years old Biol.St., St. Andrews, N.B. | October 13, 1964 Amerdloq Fjord, Holstb. 66°55'N. 53°13'W. 78 cm, ♂, 3.27 kg gutted head off 1880 naut. miles |
| 13. Plastic tag. No. S 2339 November, 1963 St. Lawrence at Tadoussac, Saquenay River 69°45'N. 48°10'W. 82.5 cm, 3.7kg. 5 years old (3 years in fresh water) Dep. of Tourism, Fish and Game, Quebec | October 10, 1964 Amerdloq Fjord, Holstb. 66°53'N. 53°12'W. 91 cm, 8 kg gutted 1500 naut. miles |
| 14. Plastic tag. No. 46165 June 4, 1963 NW Miramichi River, N.B. Smolt Biol.St., St. Andrews, N.B. | October 10, 1964 Isua, Julianehab 60°20'N. 45°30'W. 67 cm, 3 kg, ♀ 1530 naut. miles |
| 15. Tag No. ?? August 5, 1961 Great Rattling Brook, Notre Dame Bay, N.F. 80 cm Biol.St., St. Andrews, N.B. | October-November, 1963 Holsteinsborg 66°55'N. 53°40'W. 95 cm 1030 naut. miles |

(Cont'd)....

Salmo salar

Tagged in CANADA:

| Tagging | Recapture |
|---|---|
| 16. Plastic tag. No. 42542 June 3, 1963 Margaree River, Cape Breton, N.S. Smolt Biol.St., St.Andrews, N.B. | November 3, 1964 Arsuk 61°10'N. 48°35'W. 65 cm, 3.5 kg., ♂ gill net 930 naut. miles |
| 17. Plastic tag. No. 41431 May 30, 1963 NW Miramichi River Smolt Biol.St., St. Andrews, N.B. | September 17, 1964 off Napassog 65°00'N. 52°30'W. 67 cm, 2.4 kg 1750 naut. miles |
| 18. Plastic tag. No. 34863 June 6, 1963 NW Miramichi River Smolt Biol. St., St. Andrews, N.B. | October 12, 1964 Eqalugarssuit, Julianehåb dstr. 60°35'N. 45°55'W. 68 cm, 3 kg 1530 naut. miles |

Tagged in SCOTLAND:

| | |
|--|--|
| 1. Hydrostatic tag. No. ? November 23, 1955 Loch na Croic, Blackwater River, Ross-shire Kelt Pitlochry | October 15, 1956 Eqaluk, Sukkertoppen 64°56'N. 52°02'W. 80.5 cm, 5 kg. ♀ Gill net 1865 naut. miles |
| 2. No. Sc 07829 April 25, 1961 River North Esk Smolt, 13 cm, 3+ years old Pitlochry | Autumn, 1962 Sukkertoppen district 3.2 kg gutted The tag was found in a cold storage plant, "Scancold", Hedehusene. 1865 naut. miles |
| 3. No. Sc 1781 March 28, 1962 River North Esk Smolt, 16 cm, 2+ years old Pitlochry | November 8, 1963 Qornoq Fjord, Frederikshåb 62°10'N. 49°50'W. 47 cm ? ♀ 1650 naut. miles |
| 4. No. Sc 08070 April 27, 1961 River North Esk Smolt, 13 cm Pitlochry | November 2, 1962 Napassog 65°00'N. 52°30'W. 66 cm, 3.4 kg ♀ 1870 naut. miles |

(Cont'd).....

Salmo salar

Tagged in SCOTLAND:

| Tagging | Recapture |
|--|--|
| 5. No. M 3300 December 4, 1962 Pouлары Impoundment, Inverness-shire Kelt | October 31, 1963 Fiskenaasset 63°05'N. 51°00'W. 93 cm, 7 kg ♀ |
| Pitlochry | 1750 naut. miles |
| 6. Silver wire with red bead May 10-23, 1963 River North Esk Smolt, 10-19 cm | September 16, 1964 Isortoq, Sukkertoppen 65°20'N. 52°25'W. 71 cm, 2.6 kg, ♂ gill net |
| Pitlochry | 1900 naut. miles |
| 7. Silver wire with red bead May 10-23, 1963 River North Esk Smolt, 10-19 cm | September 24, 1964 South of Sukkertoppen 65°15'N. 52°50'W. 62 cm, 3 kg. 1890 naut. miles |
| Pitlochry | 1900 naut. miles |
| 8. Silver wire with red bead May 10-23, 1963 River North Esk 10-19 cm Smolt | October 3, 1964 Sukkertoppen district The tag found loose |
| Pitlochry | 1900 naut. miles |
| 9. Silver tag. No. Sc N 60 May 10-23, 1963 River North Esk Smolt, 15 cm, 2+ years old | October 11, 1964 South of Sukkertoppen 65°10'N. 52°30'W. 66.6 cm, 3.2 kg. |
| Pitlochry | 1885 naut. miles |
| 10. Silver wire with red bead May 10-23, 1963 River North Esk Smolt, 10-19 cm | November 5, 1964 Sukkertoppen 65°25'N. 53°00'W. 77 cm, 4.1 kg. |
| Pitlochry | 1900 naut. miles |
| 11. a single Silver wire with blue bead May 30, 1961 River Conon, Ross-shire Smolt | September 13, 1964 Isortoq, Sukkertoppen 65°20'N. 52°25'W. 83 cm, 3.9 kg. ♀ |
| Pitlochry | 1920 naut. miles |
| 12. Plastic tag. No. 55 M April 6, 1963 River Tummel Smolt | October 29, 1964 Igaliko Fjord, Julianehåb 60°48'N. 45°40'W. 59 cm, 3.5 kg. ♂ |
| Fisheries Lab. London | 1420 naut. miles |

(Cont'd).....

Salmo calar

Tagged in SCOTLAND:

| Tagging | Recapture |
|--|---|
| 13. Plastic Tag. No. B 51 April 25, 1963 River Conon, Ross-shire Smolt Fisheries Lab. London | October 16, 1964 Aqigsserniaq, Egedesminde 67°50'N. 53°40'W. 2135 naut. miles |
| 14. Plastic tag. No. G 68 April 29, 1963 River Conon, Ross-shire Smolt Fisheries Lab. London | The letter dated November 10, 1964 Kangamiut, Sukkertoppen 65°50'N. 53°21'W. 1935 naut. miles |
| 15. Silver tag. No. Sc T 63 May 10, 1963 River North Esk Smolt, 13.5 cm Pitlochry | October 10, 1964 Eqalugarssuit, Julianehåb dstr. 60°35'N. 45°55'W. 67 cm, 2.6 kg. |
| 16. Silver wire with red bead May 10-23, 1963 River North Esk Smolt, 10-19 cm Pitlochry | November 16, 1964 Amerdloq Fjord, Holsteinsborg 66°53'N. 53°12'W. 70 cm, 3.5 kg. |
| <u>Tagged in ENGLAND:</u> | |
| 1. Silver tag. No. E1 7462 April 27, 1960 Estuary of River Usk, Monmouthshire near Newport, Bristol Bay Rescued smolt Fisheries Lab., London | October 19, 1961 Kangamiut, Sukkertoppen 65°50'N. 53°21'W. 73 cm, 2.4 kg. ♂ 2060 naut. miles |
| 2. Carlin tag. No. E 1197 April 20, 1960 River Axe, Colyford, SE Devon Smolt, 16 cm Fisheries Lab. London | October 26, 1961 Sukkertoppen 65°25'N. 53°00'W. 73 cm, 4 kg. ♂ 2010 naut. miles |
| 3. Silver tag. No. E5 1802 April 5, 1961 River Wye at Brockhampton, near Hereford, N. of Bristol Smolt Fisheries Lab. London | October 1962 Sukkertoppen 65°25'N. 53°00'W. 2035 naut. miles |
| 4. No. E 3 8172 April 11, 1961 River Axe, Colyford, SE Devon Smolt Fisheries Lab. London | November 19, 1962 Kangerdluarssorujak, Julianehåb 60°40'N. 45°45'W. 94 cm, 4.7 kg. ♀ Gill net 1625 naut. miles |

(Cont'd)....

Salmo salar

Tagged in ENGLAND:

| Tagging | Recapture |
|---|--|
| 5. Silver tag. No. E5 5348 April 23, 1962 River Severn at Gloucester Smolt Fisheries Lab. London | October, 1963 Napassoq 65°00'N. 52°30'W. about 4 kg. 2010 naut. miles |
| 6. Silver tag. No. E 6 4215 May 7, 1962 River Axe, Colyford, SE Devon Smolt, 13.5 cm Fisheries Lab. London | October 19, 1963 Ikatoq, Sukkertoppen 65°52'N. 53°03'W. 70 cm, 2.7 kg. ♂ 2045 naut. miles |
| 7. Hydrostatic tag. No. EA 3177 March 26, 1963 River Axe, Colyford, SE Devon Kelt, 64 cm Fisheries Lab. London | September 29, 1963 Fiskenaasset 63°05'N. 51°00'W. 74 cm, 4 kg. ♂ 1875 naut. miles |
| 8. Plastic tag. No. WTRB 133 April 20, 1961 River Wear, Durham Smolt, 13 cm Wear and Tees River Board, Darlington, Durham | October 16, 1962 Upervivik 64°32'N. 52°20'W. 67 cm, 3.3 kg. ♀ 2515 naut. miles |
| 9. Silver tag. No. E9 5450 May 5, 1963 Estuary of River Usk, Monmouthshire, Newport, Bristol Bay Smolt Fisheries Lab. London | September 19, 1964 65°20'N. 52°25'W. Isortoq, Sukkertoppen 73 cm, 2.8 kg. ♀ Gill net 2030 naut. miles |
| 10. Hydrostatic tag. No. EA 4128 February 23, 1964 River Axe, Colyford, SE Devon Kelt, 78 cm Fisheries Lab. London | October 16, 1964 Amarqoq, Sukkertoppen 65°30'N. 53°00'W. 95 cm, 8.6 kg. ♀ 2015 naut. miles |
| 11. Silver tag. No. E7 5790 May 11, 1963 River Usk, Pant-y-Goitre, Monmouth- shire Smolt Fisheries Lab. London | October 27, 1964 Sukkertoppen 65°25'N. 53°00'W. 74 cm, 4 kg. 2035 naut. miles |
| 12. Hydrostatic tag. No. EA 4159 February 23, 1964 River Axe, Colyford, SE Devon Kelt, 72 cm Fisheries Lab. London | October 21, 1964 Napassoq 65°00'N. 52°30'W. 82 cm, 4.5 kg. ♀ 1980 naut. miles |

(Cont'd).....

Salmo salar

Tagged in ENGLAND:

| Tagging | Recapture |
|---|---|
| 13. Silver tag. No. E1 1046 May 25, 1963 River Severn at Gloucester Smolt | November 5, 1964 Sukkertoppen 65°25'N. 53°00'W. 69 cm, 3.1 kg. |
| Fisheries Lab. London | 2035 naut. miles |
| 14. Silver tag. No. E6 6514 April 15, 1963 River Axe, Colyford, SE Devon Smolt, 15 cm | November 8, 1964 Sukkertoppen 65°25'N. 53°00'W. 71 cm, 3 kg. |
| Fisheries Lab. London | 2010 naut. miles |
| 15. Silver tag. No. E8 2534 May 4, 1963 River Wye near Hereford Smolt | November 6, 1964 Sukkertoppen 65°25'N. 53°00'W. 71 cm, 3.6 kg. |
| Fisheries Lab. London | 2035 naut. miles |
| 16. Plastic tag. No. 2419 May 4, 1963 River Ribble, Lancashire Smolt | November 25, 1964 Sukkertoppen 65°25'N. 53°00'W. |
| Fisheries Lab. London | 1800 naut. miles |
| 17. Silver tag. No. E8 1205 April 11, 1963 River Wye near Hereford Smolt | September 17, 1964 Off Napassog 65°00'N. 52°30'W. 70 cm, 3.1 kg |
| Fisheries Lab. London | 2015 naut. miles |
| <u>Tagged in IRELAND:</u> | |
| 1. Hydrostatic tag. No. 1770 September 12, 1963 Carrowmore Lake, C. Mayo Clean fish, 74 cm, 4.7 kg. | October 21, 1964 Sukkertoppen 65°25'N. 53°00'W. 89 cm, 6.2 kg. ♀ |
| Dublin | 2025 naut. miles |
| 2. ? No. ? September 5, 1963 Carrowmore Lake, Co. Mayo 79.5 cm, 5.8 kg. | October 6, 1964 Julianehab 60°40'N. 46°15'W. 90 cm, 8 kg. |
| Dublin | 1645 naut. miles |

(Cont'd)

Tagged in IRELAND:

| Tagging | Recapture |
|--|--|
| 3. Hydrostatic tag. No. D 164 April 20, 1964 Burrishoole River 62.5 cm Dublin | October 17, 1964 Kangamiut, Sukkertoppen 65°49'N. 53°21'W. 78 cm, 4.6 kg. ♀ 2050 naut. miles |
| 4. Hydrostatic tag. No. D 178 March 25, 1964 Burrishoole River 58.5 cm Dublin | October 18, 1964 Kangamiut, Sukkertoppen 65°49'N. 53°21'W. 70 cm. 4 kg. ♀ 2050 naut. miles |

Tagged in U.S.A.

| | |
|--|---|
| 1. Plastic tag. No. 215 September 10, 1962 Narraguagus River, E. Maine 44°38'N. 67°38'W. 74 cm. 3.6 kg. Atlantic Sea Run Salmon Commission, Orono, Maine | October 2, 1963 Amerdloq Fjord, Holstb. 66°55'N. 53°13'W. 80 cm. 7 kg. ♀ 1890 naut. miles |
| 2. Plastic tag. No. 377 September 11, 1963 Cherryfield Narraguagus River, Maine 44°38'N. 67°58'W. 75 cm, 3.3 kg. Atlantic Sea Run Salmon Commission, Orono, Maine | November 13, 1964 Amerdloq Fjord, Holstb. 66°55'N. 53°13'W. 84 cm, 5.3 kg. ♂ 1890 naut. miles |

Tagged in SWEDEN:

| | |
|--|--|
| 1. Carlin tag. No. Sm 36069 April 30, 1960 Nydala, Högvaldsån, Hallands län 17.3 cm Drottningholm | November 26, 1961 Sukkertoppen 65°25'N. 53°00'W. 2270 naut. miles |
| 2. Carlin tag. No. Sm 38725 April 13, 1961 Högvaldsån, Hallands län 13.7 cm Drottningholm | Autumn, 1962 Isortoq, Sukkertoppen 65°20'N. 52°25'W. 2.1+ years old 2265 naut. miles |

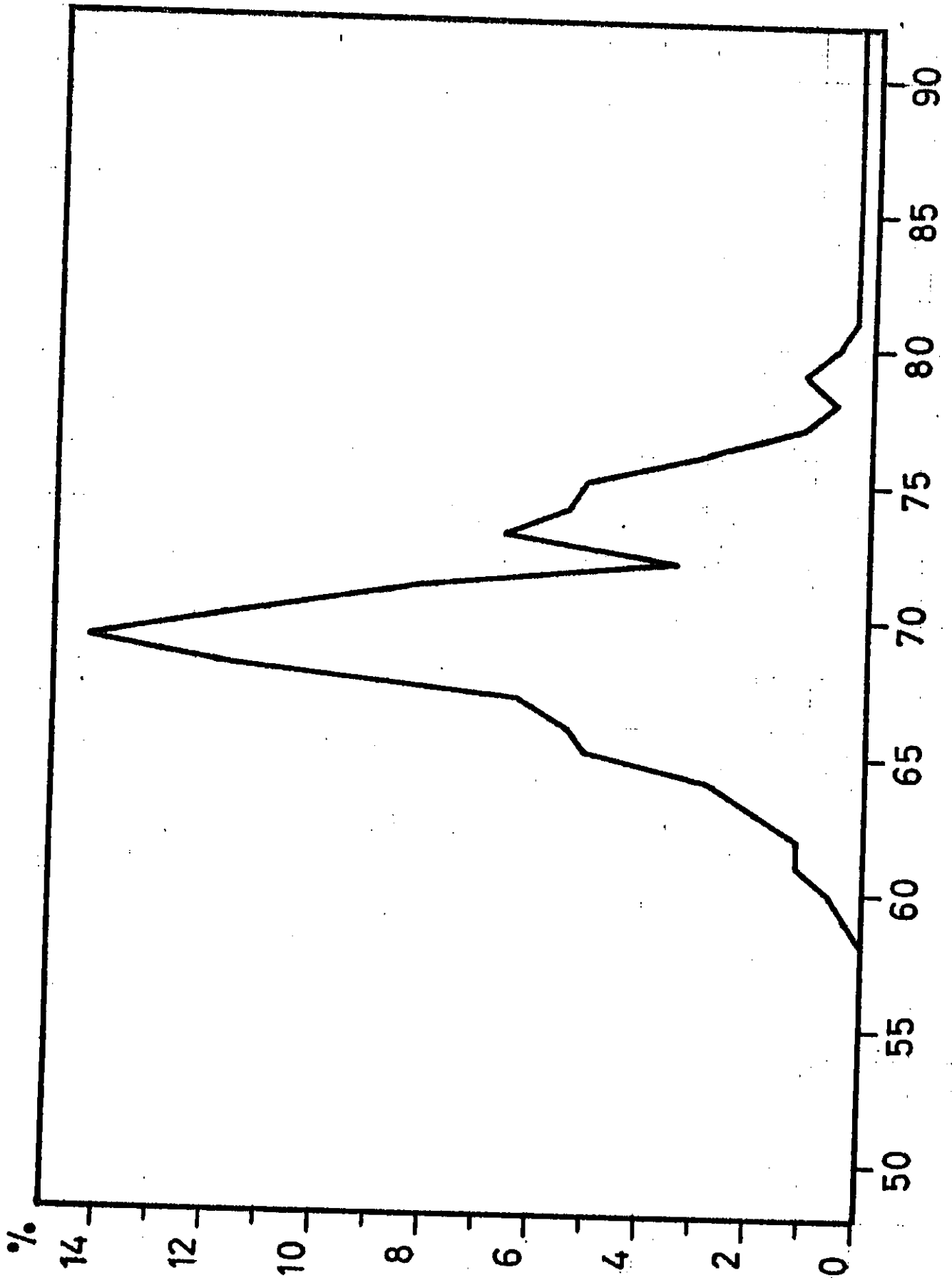


Fig. 1. Length frequencies. Salmon from Fiskemasset (1 D), 3rd October, 1964.

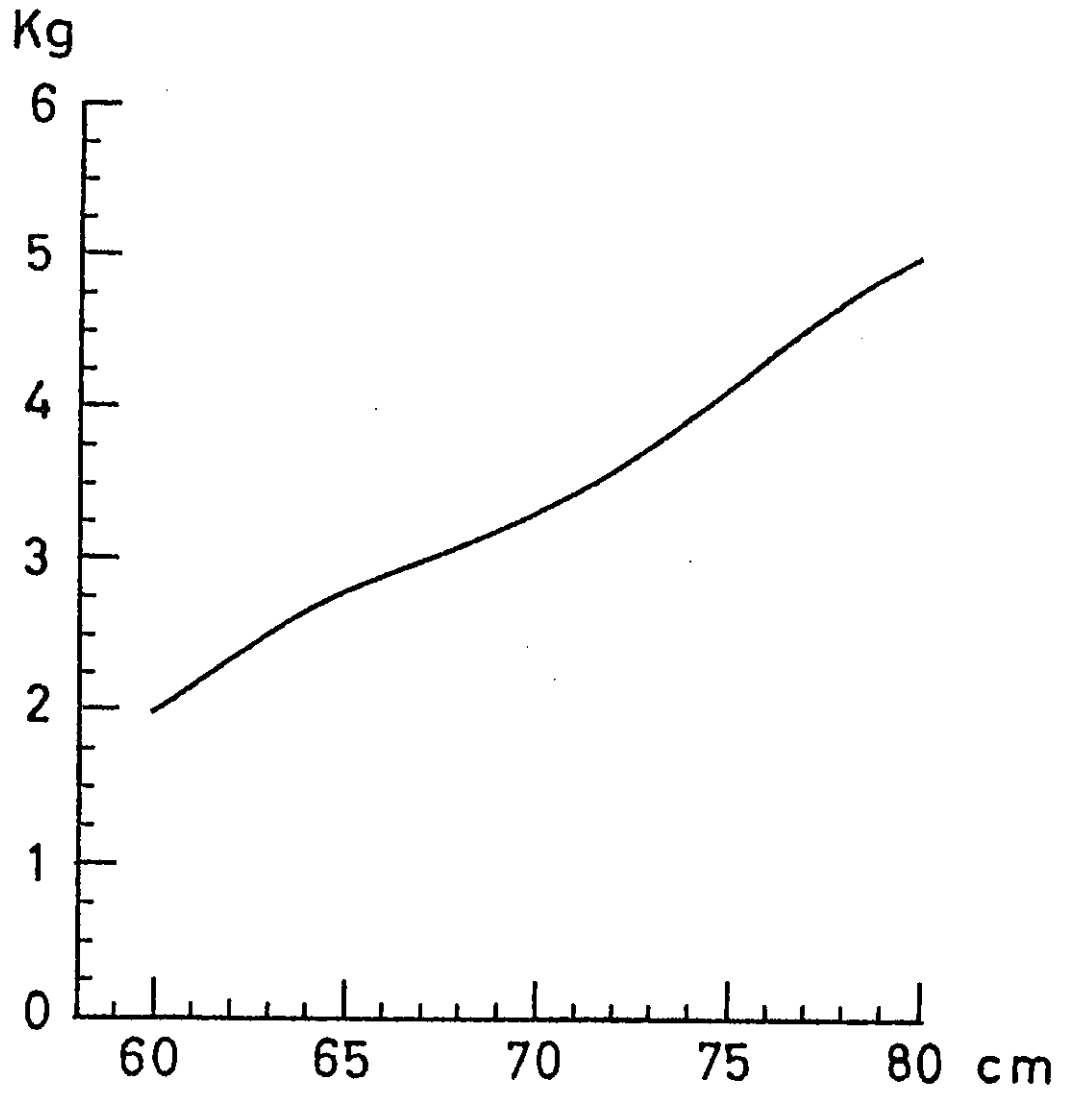


Fig. 2. Length/weight curve. Salmon from Fiskebasset (1 D), 3rd October, 1964.