



Serial No.2219  
(B.g.14)

ICES/ICNAF Salmon Doc.69/9  
(also ICNAF Res.Doc.69/64)

ANNUAL MEETING - JUNE 1969

Scottish Research Program for Greenland  
and High Seas Salmon Investigations, 1969

by D.A.F.S., Pitlochry and Aberdeen

(a) Investigations in Home Waters

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1. Smolts will again be tagged in some of the major east coast river systems during the spring migration. The river systems represented will be the Tay (at least two sites), the North Esk, the Aberdeenshire Dee and the Conon (two sites). Approximately 2,500 smolts reared at Invergarry Hatchery (Inverness-shire) will be tagged and released in the lower reaches of the North Esk and the Spey and in the Catterline Burn (Kincardineshire).
  2. Observations will be continued through the netting season on the commercial catches of the River North Esk and the less intensive sampling of the commercial catches on the Rivers Tay and Tweed will be continued and, this year, samples will also be taken of the commercial catches on the River Spey.
  3. Adult salmon from Scottish rivers will be examined specifically for the larvae of Anisakis spp. The fluorescent behaviour and protein patterns of these larvae will be compared with these characteristics in specimens collected from Canadian salmon, British herring and Canadian herring.
  4. No smolt sampling for parasite fauna is planned, but some time will be spent examining adult salmon collected in West Greenland in previous years and in analysing the results obtained on the general parasite fauna of salmon.
  5. Evaluation of absorbed agglutinating antisera, used in West Greenland in 1968, will be continued on salmon from Scottish rivers, particularly the North Esk and the Tweed. Any blood samples received from Canada will be similarly tested.
  6. Electrophoretic analysis of liver esterases from Scottish, English and Canadian salmon will be continued. In addition, livers from Norwegian, Swedish and Irish salmon will be analysed if material is available.
  7. The search for suitable polymorphic enzyme systems in various tissues of Scottish salmon and deep-frozen salmon from West Greenland will be continued and further attempts will be made to elucidate the genetics of the serum protein variants observed in Scottish and Canadian salmon.

(b) Investigations in Greenland

8. Investigators from the Marine Laboratory, Aberdeen and the Freshwater Fisheries Laboratory, Pitlochry will again collaborate with Danish investigators and with investigators from the Salmon and Freshwater Fisheries Laboratory of the Ministry of Agriculture, Fisheries and Food, London in studies of the salmon fisheries on the west coast of Greenland. Investigators from the laboratory of the Fisheries Research Board of Canada at St. John's, Newfoundland are also planning a programme in Greenland, carried out with the A. T. Cameron and collaboration with this investigation will be arranged as necessary.

(over)

9. The inshore tagging programme will be resumed, again on a collaborative basis, but, this year, staff from the Ministry of Agriculture, Fisheries and Food will carry out a programme using the Tornak, whereas the programme for the Pitlochry staff will be carried out using the Adolf Jensen. The Tornak's programme will principally cover gill-netting in the vicinity of Godthab but, this year, fish caught in the gill-nets (some tagged, some untagged) will be impounded for short periods before release to assess the effects of tagging and gill-netting.

W.R.Munro  
G.Struthers  
(Pitlochry)

10. The main item in the programme for the Adolf Jensen will be a further investigation of the possibilities of pelagic long-lining together with drift-netting in the areas fished by long-line as an indication of the local abundance of salmon. This programme will probably extend from early October to mid-November. If necessary, long-lining will be carried out over two periods, an early period of about two weeks at the beginning of the programme and a period of similar length towards the end of the programme. This plan will only be adopted if the early period of long-lining is unsuccessful and, if there is an interval, it will be occupied by sampling the commercial catches by drift-nets at Holsteinsborg and perhaps in sampling commercial catches at other ports. If the early period of long-lining is successful, attention will be concentrated on this method of fishing throughout the period.

J.W.Smith  
(Aberdeen)

11. If the investigations planned on Anisakis larvae in home waters are successful (see para. 3), a visit will be paid to West Greenland specifically to study this subject. In any event, salmon collected during the tagging programme (principally from the catches made by the Tornak (see para. 9) will be deep-frozen for examination for parasites later.

W.P.Wilkins  
G.I.Sangster  
(Aberdeen)

12. The scope of work on the biochemical studies will be decided on the basis of the results obtained on home water stocks this summer (see paras. 5-7) but plans are being made for the continuation of some biochemical work in Greenland this year.

(c) Investigations in other Sea Areas

W.R.Munro  
G.Struthers  
(Pitlochry)

13. With the kind permission of Mr. J. S. Joensen, Fiakiramaðknarstovan, Faroe Islands, arrangements have been made for two members of the Pitlochry staff to participate in the research cruises which the Faroese investigators are planning in April, during which they will carry out long-lining for salmon.

Aberdeen  
staff  
Pitlochry  
staff

14. If practicable, the Explorer (Aberdeen) will carry out long-lining for salmon in the Faroe area during the course of her cruise in this area during the second half of June. Members of the Pitlochry staff will join this cruise if necessary.

15. At the date of drafting, some of the items in this programme, particularly those for work in West Greenland and in other sea areas, are tentative in some respects. Final details will be settled in collaboration with others taking part in this programme.