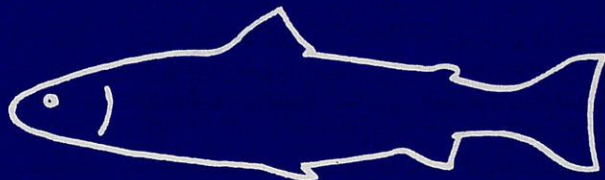
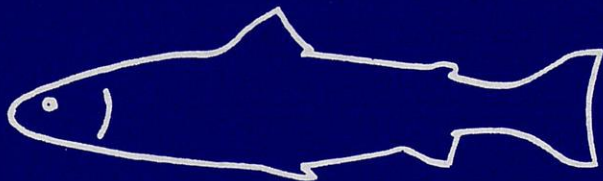


Atlantic Salmon Trust

Progress Report

August 1982



The Atlantic Salmon Trust
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Mr. D.J. Kinnersley, M.A. (National Water Council)
Mr. E.D. Le Cren, M.A., M.S., F.I.Biol. (Freshwater Biological
Association)
Dr. D.H. Mills, Ph.D., (Dept. of Forestry and Natural Resources,
Edinburgh University).
Observers: Mr. B. Stott (Ministry of Agriculture, Fisheries
and Food)
Mr. A.V. Holden (Dept. of Agriculture and Fisheries
for Scotland)
Mr. H.J. Killick (Natural Environment Research Council)

INTERNATIONAL ADVISORY GROUP (EUROPEAN SECTION)

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Dr. Nils Johansson	Sweden
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Sir Richard Levinge	U.K.

PROGRESS REPORT - AUGUST 1982

Aims and Objectives of The Trust

The prime objective of the Trust remains the conservation and improvement of Atlantic salmon stocks. The Trust acts solely on behalf of Atlantic salmon throughout the North Atlantic and is not concerned merely with the well-being of Atlantic salmon of U.K. origin. In order to achieve its objective effectively it acts as a focal point for the collection and dissemination of new knowledge and factual information about salmon. Furthermore, it identifies dangers and potential threats to the salmon resource and works in the closest co-operation with other organisations currently striving for better management and improvement of salmon stocks. Provided funds are available it will continue to sponsor research and travel fellowships and to organise special conferences and working groups to deal with specific subjects or problems.

The Management of The Trust

During the period since the publication of the last Progress Report (December 1981), the Trust welcomed the following new members to its Council and Committee of Management:

Mr. D.W. Nickson
Mr. Moc Morgan

and Mr. A.P. Tallents, previously a member of the General Council and a member of the Trust's Executive Appeal Committee since its foundation, has agreed to serve also on the Committee of Management. Professor R.W. Edwards, until recently Chairman of the Honorary Scientific Advisory Panel, has decided to resign from the Committee of Management in view of his increasing involvement with other official committees.

The Committee of Management held meetings in London during February and June 1982. As in 1981 it is planned to have a meeting of the Committee, to which all General Council Members will be invited, in Edinburgh during October of this year.

Honorary Scientific Advisory Panel

The Panel was due to meet in London on 24 June, 1982, but unfortunately the state of the City's transport during that period forced the postponement of the meeting.

The Appeal Campaign

Mr. David Clarke, Chairman of the Appeal Committee, has supplied the following report:-

"The total so far raised, including grossed up Covenants is now in excess of £400,000. Wing Commander Peter Dodson has been extremely active and has enough work to occupy him well into the New year in England and Wales alone.

It is hoped that he will be able to tackle Scotland during 1983.

A Scottish Appeal Committee is being set up and they will have as their objective the provision of funds to provide a Scottish headquarters with offices in the Edinburgh area. This would be especially desirable in view of the fact that the North Atlantic Salmon Conservation Organisation is to have its Headquarters in Edinburgh.

The Trust will be represented at the Game Fair, the Royal Welsh Show and the Highland Game Fair at Dochfour.

The Duke of Wellington very kindly lent Apsley House for a Dinner Party given by the Trust in aid of the Appeal at the end of July. H.R.H. the Prince of Wales graciously consented to attend.

The Appeal is proceeding extremely well; however, it must be noted that because most of the gifts are covenanted the Trust is likely to be short of income for some years to come."

Finance

The accounts for the year ending 30 June, 1982, had not been completed by the time this report was sent to the printers, but will be reported in full in the next Progress Report. The Trust appointed a small Investment Committee which met during May, 1982, to review the position of its investments and to consider future policy. The Committee recorded its appreciation of the valuable work undertaken by the Hon. Edward Davies in connection with the Trust's investment portfolio. In general the Trust's financial position remained satisfactory.

Public Relations

The Trust continued to receive the advice of Mrs. J. Botsford as its Public Relations Consultant, and as a result of her work considerable publicity was obtained in respect of the Trust's visit to the Faroes Salmon Fishery by Dr. Derek Mills and Mr. Noel Smart, and in connection with its views on a Salmon Sales scheme for the United Kingdom and on

the proposed new North Atlantic Salmon Conservation Organisation.

An article on the work of the Trust, written by Mr. Graham Swanson in the Shooting Times and Country Magazine in March 1982 was also very well received, while much publicity was given to a lecture by Mr. Peter Jarrams, the first holder of the joint Atlantic Salmon Federation and Trust's Bensinger-Liddell Memorial Salmon Fellowship, on his visit to North America.

Atlantic Salmon Federation

One of the significant events in salmon conservation during the early part of 1982 was the agreement in North America of the International Atlantic Salmon Foundation and the Atlantic Salmon Association to join together and to pursue their aims together through a single organisation which will be called the Atlantic Salmon Federation. The new body will not be incorporated and both organisations will retain their present structures and legal identities. The Trust has, since its inception, maintained a very close link with the International Atlantic Salmon Foundation through its Executive Director and Vice President, Dr. W.M. Carter, and this excellent liaison is likely to continue because Dr. Carter will also be Vice President and Executive Director of the new joint Federation. In addition, of course, the relationship between the Foundation and the Trust is cemented by the fact that Dr. Carter is a member of the Trust's Committee of Management whilst Vice-Admiral Sir Hugh Mackenzie and Mr. David Clarke are Directors of the Foundation.

North Atlantic Salmon Conservation Organisation

As the previous Progress Report was going to press in January, 1982, the announcement about the formation of the North Atlantic Salmon Conservation Organisation was made at a diplomatic conference held in Reykjavik, Iceland. A note about the new Organisation was put inside each Progress Report for the information of the Trust's supporters. It is understood that ratification of the Convention establishing the new Organisation should be completed by the end of August, 1982, and until that date the extent of support for it can only be the subject of speculation. In answer to a parliamentary question posed by Mr. Cranley Onslow (M.P. for Woking), Mr. Alick Buchanan Smith, Minister of State, replied, inter alia, as follows:

"When (the Convention) comes into force the Convention will provide for the first time an international forum for the control of intercepting fisheries, and will prevent the establishment of new maritime fisheries by the adhering parties outside 12 miles".

In fact, the new Organisation to be established by the Countries ratifying the Convention will have some positive aims, since its objectives are

stated to be "To contribute through consultation and co-operation to the conservation, restoration, enhancement and rational management of salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal states in the North Atlantic".

As it is proposed that the new Organisation should have quite extensive responsibilities, the Trust feels that at a very early stage it should prepare a policy document outlining what it believes is required for the proper management and improvement of Atlantic salmon stocks. Initially the Trust will consult the Atlantic Salmon Foundation through Dr. Carter, and if necessary arrangements will be made for a meeting of the International Advisory Group (jointly sponsored by the International Atlantic Salmon Foundation and the Trust) to consider the matter. It seems to the Trust that the Group, which includes salmon experts from every major salmon producing country is the ideal body to advise the new international Organisation on all matters relating to salmon conservation, and particularly on projects for research and study.

The Council for the proposed new Organisation, apart from providing a forum for discussion and arranging necessary research on salmon with the International Council for the Exploration of the Sea and other organisations, can make recommendations to States and the Commissions on salmon matters, including the enforcement of laws and regulations. Commissions will have the opportunity to propose regulatory measures for fishing "in the area of fisheries jurisdiction of a member, of salmon originating in the rivers of other Parties". In other words the regulations would in the first place be designed to regulate salmon fishing by the West Greenlanders and Faroese.

It is unfortunate that whereas in the North American Commission area "fishing patterns in salmon fisheries shall not be altered in a manner which results in the initiation of fishing or increase in catches of salmon originating in the rivers of another Party", the same does not apply to the West Greenland or, more particularly, to the North East Atlantic Area. Thus it would seem as if any further development of the Irish Drift Net Fishery cannot be controlled in this manner.

It is important to note that the new Council can ask each Party to provide it with copies of laws and programmes, etc. relating to salmon conservation, and that each Party must notify the Council of commitments by the responsible authorities (in our case government departments and Regional Water Authorities) concerning measures to conserve or manage salmon stocks. The 'Party' in our case will be the E.E.C.

The European Economic Community and the European Parliament

Since the publication of the last Progress Report, the Trust has had no direct contact with the European Commission. However, the Director was invited once again to participate in a meeting of the European Parliament's Working Group on Fisheries, which is chaired by Mr. Robert

Battersby, M.E.P. In view of the Community's 1981 fishery agreements with Canada and the Faroes, both of which include provisions relating to salmon quotas, and the international agreement to establish a new North Atlantic Salmon Conservation Organisation, this particular sub-committee of the Parliament has been much concerned with salmon management. The Director's attendance at a meeting of the Group at the end of May, 1982, was thus most opportune, particularly as he was invited to address the members on matters of salmon interest. It was also very satisfactory that the Director was able on this occasion to make direct contact with important members of the Group, including Mr. James Provan, a strong supporter of the Trust, Mr. Finn Lynge, an important political figure in Greenland, Mrs. Joyce Quinn, whose constituents include North-East of England's drift netmen, Mr. Kent Kirk of Denmark, who is much concerned with fishing interests in both Greenland and the Faroes, and Mr. Neil Blaney, one of the Irish members who represents many of his country's drift netmen in Co. Donegal. The Trust is confident that the liaison with the Working Group on Fisheries is one of great importance and it hopes to ensure that it will continue to offer to it advice and expertise on salmon matters.

The Faroes Salmon Fishery

The recent most significant event in the Trust's calendar was the visit by its delegates, Dr. D.H. Mills of Edinburgh University and Mr. Noel Smart, Director of Messrs. Johnston & Sons, Montrose, to the Faroes in March of this year. Notice of the visit, which was made at the invitation of the Faroes Home Government, was given in the last Progress Report.

The visit was not intended in any way to be a scientific investigation since Irish, Icelandic and Scottish Scientists, working under the banner of the International Council for the Exploration of the Sea, were allowed on board the Faroese salmon boats during the 1982 season for the collection of scales, tags and other vital information required for determining the age and origin of the salmon caught by the long-line fishery. Instead the Trust's delegates were asked to report, among other things, on the procedures adopted to implement the 1982 catch quota and the likely effect on the fishery of a further reduction in the quota for the 1983 season.

The delegates' report was published during June, 1982, and has proved to be an interesting and authoritative document. Dr. Mills and Mr. Smart considered that the present regulations for controlling the fishery and implementing the quota system appeared to be satisfactory. They felt, however, that more research was needed before a realistic quota figure could be achieved. Of importance to the future was the statement by the authors that salmon farming was likely to play a major role in the future, but that there was a need for advice and expertise from the home salmon producing countries. One disturbing item in the report revealed that Swedish and Finnish long-line fishermen were apparently fishing for salmon beyond the 200 mile fishery limits.

In their recommendations Dr. Mills and Mr. Smart suggested that future arrangements for reaching an agreed Faroese quota should not be considered in isolation and account should be taken of the Faroes' contribution to the salmon fishery. They hoped Faroese fisheries personnel would be invited to other salmon-producing countries to study the extent of salmon conservation and restoration programmes and hoped such countries would assist the Faroes in river management. One recommendation which may cause concern in the United Kingdom was the proposal that salmon producing countries should give thought to the practicability of imposing local rod and net quotas on salmon catches.

As a result of the October 1981 E.E.C. - Faroes fisheries agreement, salmon catch quotas for the Islands were fixed as follows:

1981-82:	750 m.t.
1982-83:	625 m.t.

Some of the interesting items from the report include the following:-

- (a) The acceptance of the catch quotas may mean a much later opening of the fishing season - January instead of the previous October.
- (b) The local Sport Fishing Association runs two hatcheries with a capacity to rear 150,000 smolts, while the Faroes Fisheries Research Institute has been rearing, mainly in cages, as many as 240,000 smolts.
- (c) It is the policy of the Government to encourage salmon farming and three have been established so far.
- (d) The ocean ranching of salmon is being developed.

The Trust, after studying the report, accepted its conclusions and recommendations in principle, and announced that it would endeavour to see that the recommendations were implemented as far as was possible.

The Trust noted with satisfaction that two delegates from the International Atlantic Salmon Foundation, Mr. W.S. Brewster and Mr. A.L. Meister, visited the Faroes at the same time as Dr. Mills and Mr. Smart, so that the close link between the two bodies was again demonstrated.

The thanks and appreciation of the Trust are due to Dr. Mills and Mr. Smart for undertaking the tour at short notice and for submitting such a comprehensive report, and to Unilever P.L.C. for generously meeting a large part of the costs involved.

The Greenland Fishery

Following the publication of the last Progress Report, there have been significant changes in connection with the Greenland Fishery which reflect well on the report submitted by the Trust and the Foundation on the Joint Expedition to Greenland in 1980. The joint delegation, it will be recalled, considered in some detail their proposal that there should be a delayed opening date for the fishing season so as to allow the fish to grow more and be in a better condition at the time of their capture. For the fishermen such a change would mean better salmon prices. It would thus be realistic to increase the quota, which has always been expressed in units of weight, provided the number of fish captured was not also increased. A team of international scientists tackled this problem and their findings resulted in an international agreement setting the quota at 1270 m.t., a new opening date of 25 August and the use of larger meshes in the drift nets used in the fishery.

Although some fears have been expressed that the quota system will be in jeopardy following Greenland's decision to leave the E.E.C., there are grounds to believe that the country is concerned about future conservation of Atlantic salmon stocks, and will accept international control of its fishery.

In May of this year the Trust's Director made initial arrangements through Mr. Finn Lynge, Greenland's member of the European Parliament, to invite a team of Greenlanders to the United Kingdom next year to inspect the salmon fisheries here. It is hoped that the proposed visit will go a long way to create a better understanding between Greenland and salmon producing countries.

United Kingdom Salmon Management

National Salmon Policy. As readers of the last Progress Report will know, the Trust and the Salmon and Trout Association joined forces in not only producing a 'National Salmon Policy' for the United Kingdom but also in replying to the Consultation Paper on the Inland and Coastal Fisheries published by the Ministry of Agriculture, Fisheries and Food. In March of this year representatives of both organisations met officials of the Ministry to consider the Review Paper. The meeting did not give much encouragement to the two delegations as it was felt that the Ministry had no intention of trying to deal with the anomalies in the law which had been highlighted in the 'National Salmon Policy'. As a result a letter protesting this point was signed jointly by the Chairmen of the two organisations and sent to the Minister expressing the deep concern of the two organisations about the future policies of the Ministry. Although the Minister replied to this joint letter, both the Trust and the Association felt that a meeting with Mr. Alick Buchanan Smith was necessary. The meeting took place in July and the Minister assured the joint delegation that he was concerned about the administration of inland fisheries but until he had completed

the consultative process he would not commit himself to any particular line of action. Mr. Buchanan Smith said that no date for the publication of any further government paper on the matter could be given at present.

Monofilament Nets and Drift Netting

The Trust has continued its campaign for a prohibition on the use of monofilament nets and for the phasing out of all forms of drift netting. Both these subjects have been taken up by United Kingdom members of the European Parliament, and Mr. Richard Cottrell, M.E.P. organised a press conference on the subject in July on the banks of the River Severn at which the Trust's director displayed and commented on the various types of monofilament nets presently used. In view of the fact that the Ministry have not been able to accept the fact that monofilament nets are damaging to the fish they capture or which may escape through the nets, the Trust is seeking Government approval for the holding of special sea trials which might evaluate the effect of drift netting and monofilament nets in particular on the actual salmon itself. It is believed that the European Parliament is in favour of such a study and might well support it financially.

Salmon Sales Control

The need to adopt a system to control the sales of salmon, so long advocated by the Trust and the Association, is now widely accepted throughout the country. In order to implement the proposals a National Water Council special Committee, of which the Trust's Director is a member, has been considering schemes operated in Canada and Ireland. The Chairman of the Committee, Mr. Gordon Bielby (South West Water Authority), and Mr. Warwick Ayton (Welsh Water Authority) travelled to Canada to see the Canadian salmon sales tagging scheme in operation. Their report on their visit is due to be considered by the special Committee at an early date.

The Association of Scottish District Salmon Fishery Boards has also drawn up proposals for the licensing of salmon dealers in Scotland which bear some resemblance to the existing Irish salmon sales legislation. In addition the Civic Government (Scotland) Bill recently discussed in Parliament provides for the licensing by Scottish District Councils of a wide range of activities and it is believed salmon sales could be included by Statutory Order.

For its part the Trust welcomes all these developments since it believes that it is essential for the United Kingdom to operate an effective control on the sale of salmon and thus reduce the facilities available to poachers for the disposal of their illegal catch. However, the Trust has expressed concern that the adoption of three different salmon sales schemes in Northern Ireland, England and Wales, and Scotland respectively may create difficulties and perhaps provide

loopholes in the legislation to the advantage of the illegal fishermen. It will be essential to ensure that such fishermen cannot benefit from the provisions of, say, the Scottish legislation to evade those operating in England and vice-versa.

Economic Evaluation of the U.K. Salmon Resource

Reading University Project. As reported earlier, the Trust and its Scientific Advisory Panel are anxious to promote some evaluation studies of the salmon resource in the United Kingdom. During this year Reading University submitted a two-year project for an overall evaluation of the U.K. Salmon Fishery. The object of the study would be to establish an authoritative and accepted estimate of the Fishery's value - not only to inform policy and management discussions at both national and international levels, but also to clarify in a more general sense the significance of the resource to the Community. The Trust is now seeking a sponsor for the project and has approached the Ministry which previously expressed support in principle for such a study.

Manchester University Project. Manchester University has also submitted a project to study the effect on the U.K. Wild Salmon industry of the recent development of salmon farming. As well as studying the impact on wild salmon prices due to increased supplies of farmed salmon reaching the markets, the project also proposes to consider the effect of such supplies on the employment sector. The Trust is considering the proposals and if they are accepted by the Scientific Advisory Panel a sponsor will be sought. In this connection, there is a possibility that the E.E.C. would be interested in the study and might support it financially.

Portsmouth Polytechnic Project. On the subject of a study into the gross expenditure by anglers on their sport, the Portsmouth Polytechnic drew up an ideal scheme to enable each Water Authority to conduct its own survey, or alternatively to appoint the Polytechnic to do the work on its behalf. Although the cost of each study was not large, very few Authorities felt that the proposals should have any high priority in their programmes, and many felt it was the responsibility of the Central Government to obtain the required information. There is, however, a possibility that the subject will be discussed in the Fishery Advisory Committee of the National Water Council as the result of the initiative of the North West Water Authority.

Welsh River Survey. Following the recommendation of the Scientific Advisory Panel, the Trust is hoping to make arrangements with Professor R.W. Edwards of the University of Wales Institute of Science and Technology to study the loss of natural spawning and nursery areas for salmon in Welsh rivers as a result of natural or artificial barriers. It is believed that the project will result in the scheduling not only of the various impassable obstacles which exist, but also the areas of unused spawning gravel and salmon rearing areas. As it is hoped that the proposals will be of benefit to the

Welsh Water Authority, its support and co-operation is being sought by the Trust.

The Acquisition and Use of Salmon Data for Management Purposes

It will be recalled that the Trust hosted a specialist 'Workshop' to study the collection and use of salmon data at the Freshwater Biological Association's Ambleside Laboratory in November, 1981. The proceedings of the Workshop were submitted to the Government Departments and Regional Water Authorities in the hope that some co-ordinating action would be taken to improve the provision and analysis of the salmon data obtained each year. Although most of the Authorities expressed support for the Trust's views on this subject, they did not feel it was their responsibility to take any action on the matter. It is to the credit of the National Water Council that it decided to initiate action by asking its special Salmon Sales Group to consider and report on the subject and this is being done presently.

Bensinger-Liddell Memorial Salmon Fellowship

The report by Mr. Peter Jarrams (Severn and Trent Water Authority), the first holder of the Bensinger-Liddell Memorial Fellowship established by the International Atlantic Salmon Foundation and the Trust, on his visit to North America was published recently by the Water Authority. It makes interesting reading and it provides a great deal of factual information on Atlantic Salmon resources in both Canada and the United States of America.

The 1982 Fellowship was awarded to Mr. A.L. Meister, Chief Biologist for the Maine Atlantic Sea Run Salmon Commission, to study the impact of the Atlantic salmon fishery around the Faroe Islands on the salmon stocks of Europe and North America. Mr. Meister travelled to Europe in March/April of this year and with Mr. W.S. Brewster of the Foundation, was in the Faroes during the visit of Dr. Mills and Mr. Smart.

Applications for the 1983 Fellowship will be sought by the Trust in the autumn of this year and will be in respect of a United Kingdom resident visiting North America or other Atlantic salmon producing countries to further his studies.

Atlantic Salmon News from Abroad

Iceland

The following report for 1981 has been sent to the Trust by Thor Gudjonsson, Director, Institute of Freshwater Fisheries, Reykjavik:-

"The Salmon Catch 1981

The salmon catch in 1981 was lower than that of last year, which was the lowest for more than a decade. The catch was 46.881 grilse and salmon weighing 163,4 metric tons, the average weight of fish being 3,5 kg. (7.7 lb.). The total number of fish was 27% lower than that of the average number caught during the previous decade. The angling catches were 59% of the total, the net catches 31% and the remaining 10% were returns to ocean ranching sites. The run of salmon was unusually poor in 1981 whereas the grilse run in 1980 was small pointing to a small smolt run migrating out of the rivers during the cold spring and summer of 1979 especially in North-eastern Iceland. Some blame the small catches of 1980 and especially of 1981 on the fast growing catches of salmon in the sea off the Faroe Islands, although direct evidence is not at hand. Recovery of three tags of Icelandic salmon caught off the Faroes is taken as an indication that Icelandic salmon migrate into the Faroe area. These tags were of one salmon caught in 1968 and two in 1975.

Investigations

Juvenile salmon density and habitat assessment studies were continued. They were carried out in many rivers in various parts of the country. Emphasis has been put on stream surveys of river areas above unsurpassable waterfalls in order to find out if such areas are suitable for rearing of salmon parr and if the parr or later smolts can pass unharmed down the waterfalls. In 1981 700-800,000 salmon parr have been released into suitable areas above unsurpassable waterfalls and into lakes. Study of releasing of salmon parr into lakes is also under way.

Artificial propagation

The work at the Kollafjordur Fish Farm was continued. In the spring of 1981, 40,000 salmon smolts were released at the Fish Farm of which 19,500 were tagged, 17,500 with micro tags and 2,000 with Carlin tags. The smolts were kept in two ponds and a cage in a pond with sea water before being released. 7,000 smolts were kept in freshwater release pond, 7,000 in a pond where they were gradually adjusted to sea water before release and 5,500 were kept in a cage in a sea water pond. The mortality while the smolts were kept in the mentioned places was very low.

During the summer of 1981, 3140 grilse and salmon returned to the ponds of the Fish Farm, about 80% being grilse. The return of grilse from the smolt release at the Fish Farm in 1980 was 6 - 7% and the total return of grilse and salmon from the smolt release in 1979 amounted to 7 - 8%.

Ocean Ranching

Experiments with ocean ranching were started in 1977 at three new locations, the Kollafjordur Fish Farm being used as a control. The fourth location was added in 1980. In the spring of 1981 25,000 micro-tagged salmon smolts were released at the four locations. 19,000 of these were from the Kollafjordur Fish Farm whereas 6,000 were from the Laxamyri station in Northeastern Iceland.

The return from the ocean ranching experiments in 1980 varied greatly. The best results were had at Laros in Western Iceland where the grilse returns were close to 11%. The return of grilse at Sugandafjordur, Northwestern Iceland was 3,5% with returns of 2-year salmon pending in 1982. No returns were had at Fossa a Skaga, Northern Iceland, and Berufjordur in Eastern Iceland.

Tags from West Greenland

One Icelandic tag was returned from the West Greenland fisheries in 1981. A salmon smolt of 16,1 cm. in length was tagged at the Kollafjordur Fish Farm 23 March 1980 and was caught off Holsteinsborg, West Greenland, during the fishing season of 1981."

United States of America

Mr. Richard A. Buck, Chairman of Restoration of Atlantic Salmon in America, Inc., has submitted the following account of salmon restoration work in Connecticut. To increase returns of salmon from 1 to 865 in eight years is a remarkable achievement.

"An Atlantic salmon restoration in any particular river can be said to be complete when the available spawning beds are substantially utilised. At this rate, the Connecticut River Restoration still has some way to go, considering that migrations to the spawning beds in the big upriver tributaries, like the White River in Vermont and the Wild Ammonusuc in New Hampshire, are still blocked due to lack of fishways around dams on the mainstem. Yet great progress has been made, because runs are now able to reach Bellows Falls in Vermont - thus all of the lower and middle system system can support migrating salmon.

Water Pollution

Unfit until the late 1970's to support salmon, almost all of the river and its principal tributaries now carry a "B" classification, as a result of extensive Federal, State and local water abatement programs undertaken during the late 1960's and early 1970's. A "B" classification means that man can swim in the river, boat in it, even drink the water (after simple purification). And salmon can inhabit it, migrate through it, and spawn in it.

Fishways

The building of Fishways has been the principal bottleneck. They cost in the neighborhood of 5 million dollars apiece, and by Federal Statute are an obligation of the utilities that operate the dams for power. As a result of the invoking of the licensing powers of the then Federal Power Commission, and of pressure brought by private groups, such as our own RASA and others, the utilities finally undertook the construction of fish ladders and elevators. Thus fishways are now in place, and operating, at Leesville on the Salmon River and at the Rainbow Dam on the Farmington, both tributaries in Connecticut; at Holyoke and Turners Falls (3 fishways) in Massachusetts; and at Vernon, Vermont. Construction of the fishway at Bellows Falls should commence this May and be complete in 1984. The fishway at Wilder Dam in Vermont should be in operation in 1986, thus completing the whole 300-mile system.

Hatcheries

Artificial spawning and rearing of salmon in hatcheries will always be required to supplement the natural reproduction of "wild" salmon that will utilise spawning beds in the tributaries. The Federal Government has constructed probably the most modern salmon hatchery in the world, at Bethel, Vermont, on the White River tributary. It is operating, with an annual capability of up to 600,000 smolts. Small State hatcheries are used to supplement the output of this specialised operation.

Release Pens

Just before smolts demonstrate the urge to go to sea, it is necessary to "imprint" them with the instinct that will compel them, on their return to the river after one or more winters in the ocean, unerringly, with few exceptions, to the very stream in which they were planted. The first experimental release pen was made possible by a grant from RASA to the Commonwealth of Massachusetts in 1973. Seven facilities of this kind are now located throughout the system.

Holding Facility

There is a need for a continuing hatchery enhancement program to maintain adult returns to the river at a level of 4,000 - 6,000 per year, because as stated above the eventual natural reproduction will not be able to sustain a continuing population of this magnitude. So a "National Salmon Station" at Sunderland, Massachusetts is planned which can hold up to 800 "broodstock" adult Atlantic salmon, awaiting artificial spawning. This will supplement an existing facility already in operation in the Peoples State Forest near Winsted, Connecticut - one capable of holding up to 300 salmon. The eggs will be used to supply federal and state smolt production hatcheries.

Adult Returns

Now we begin to see the result of all the labor and investment!

1974 - 1; 1975 - 3; 1976 - 2; 1977 - 7; 1978 - 90; 1979 - 58;
1980 - 175; 1981 - 529; Total - 865.

The salmon are coming back!"

Ireland

The estimated catch for 1981 was 685 tonnes. Included in this figure is 50% of the Foyle area catch (estimated at 60 tonnes) which for statistical purposes is divided equally between Ireland (Republic) and Northern Ireland. There was a marked reduction in the reported catch in 1981, which was the lowest recorded for the period from 1960 to 1981 with the exception of 1961. The shortfall in catches in 1981 occurred mostly in the 1+ sea winter fish. There was a reduction in multi-sea winter (mostly 2 sea winter) fish when compared with 1980, which had been somewhat better than the average for the period 1972 to 1980.

As in previous years the majority of the fish, approximately 75%, excluding the Foyle catch, were taken by coastal and inshore drift nets. A further 19% were taken by other commercial engines, e.g. seine nets, snap nets, etc. The rod catch accounted for 6% (almost 10,000 fish). The commercial fishery for grilse got under way earlier in 1981 than in previous years, but was on the decline by the 2nd week in July. The average weight of the combined catch of salmon and grilse was 3.40 kg. (7.5 lb) compared with 3.14 kg. (6.9 lb.) in 1980. This increase was attributed mostly to 1+ sea winter fish which despite the fact of their earlier arrival were of a higher average weight than in previous years. The multi-sea winter fish were on average 4.4 kg. (9.7 lbs) which is the same as that recorded for a number of years.

The inland fisheries administration was reorganised in October 1980 under the Fisheries Act, 1980. The seventeen Boards of Conservators and the Inland Fisheries Trust were dissolved and were replaced by the Central Fisheries Board and seven Regional Fisheries Boards. The purpose of the reorganisation is to secure the more effective conservation, protection and development of inland fish stocks. The protection staff of the Regional Boards were assisted by the Naval Service who provided boats and personnel for sea patrol and on land by the Gardai (police force), in the protection of the salmon fishery.

The 1982 news from Ireland is that while the grilse run appears to be satisfactory, a large number of watchers have decided to work to rule and as a result there is little protection for the salmon during the hours of darkness. A more encouraging item of news, however, is the announcement by the Electricity Supply Board, which has a considerable statutory interest in salmon, that it is to increase its

salmon smolt production to a figure of 2 million smolts a year. This action is being taken by the Board in response to a Government request, and it has been decided that the fish will be released into rivers needing restocking in accordance with a national plan.

Norway

Mr. R.J. Brooks, whose reports on the Laerdal River and fishing generally in Norway are well known, has written that one satisfactory development has been the reduction in net marked 2 sea winter salmon seen in the rivers from nearly 90% in 1975 to only 10% in 1981. However, a large proportion of the 1 sea winter grilse are still to be found with net marks on them when they reach their home rivers. The Government has taken considerable legislative action in recent years to improve the stock position. In 1969 long lining for salmon was prohibited; in 1977 the number of drift nets per boat was restricted; in 1979 drift netting was operated for the first time under a licensing system; in 1980 the sea fishing season was restricted to the period 1 June - 5 August, thus providing much greater protection to the 2 sea winter salmon. Current reports indicate that returns of large salmon to the rivers have increased, probably as a result of these new measures.

Norway is particularly concerned with the development of the Faroes Fishery because it has been estimated that some 3 - 400 tons captured off the Faroes are of Norwegian origin.

Salmon News from Nearer Home

The Thames Water Authority Area

In a recent report the Authority has summarised the sightings and captures of adult Atlantic salmon following the adoption of a policy to try to restore the salmon stocks of the river. The report shows sightings and recaptures as follows:

1974 - 1	1979 - 1
1975 - 2	1980 - 8
1976 - 2	1981 - 10
1978 - 1	1982 - 5 (to end of May)

In August 1981, one fish, a cock grilse, in good condition, was retrieved soon after it died at Caversham Bridge, Reading. It was a hatchery-reared fish which had negotiated twenty-one weir-lock systems during the worst possible period of the year. The Authority is concerned that many of the fish are dead when recovered but consider that the increasing number of fish sighted leaping at weirs is encouraging. The Authority accepts that the only way to measure accurately their rehabilitation work is by trapping all incoming fish.

Part of the recommendations of the Thames Migratory Fish Committee Report of 1977 was that such a trap should be constructed at Molesly Weir. On 29 July, 1982, electro-fishing of the pool below the weir produced the staggering total of 16 live grilse; a wonderful achievement.

River Wye

Welsh Water Authority

The comprehensive report on the 1981 season for the River Wye makes interesting reading as usual. Although the rod catch increased from 4,195 fish in 1980 to 5,691 with an increase in the average weight of fish caught from the 1980 figure of 10.26 lbs. to 12.00 lbs in 1981, the report estimates that at least 3,000 fish were taken illegally out of the river. In spite of close co-operation between the Water Authority staff, the police and anglers, illegal fishing in 1981 assumed a dangerous predominance and Mr. Staite, the Fishery Officer for the area, after reporting on incidents when as many as 64 salmon were recovered following the detection of poaching, writes that "there can be little doubt that exploitation of the salmon runs to this extent by illegal means, not only adversely affects the legal catch but will also, if allowed to go undetected, considerably endanger the Wye as a first class salmon river". Fortunately Mr. Staite was able to report that 1981 turned out to be a very good spawning year.

South West Water Authority

The most disturbing news received from a Water Authority during the year was the report of a court case involving the South West Water Authority and four unsuccessful applicants for net licences. In 1980 the Water Authority made an order, which was confirmed by the Ministry, limiting the issue of net licences to 14, provided that in the eventual allocation of licences preference was given to persons who were dependent on fishing for their livelihood and who held licences in the previous year. The issue considered in Court was the definition of the phrase "dependent on fishing". It was the Water Authority's view that the phrase referred to fishing as an exclusive source of income or to something fairly significant, but they gave licences only to full time fishermen. The Court ruled that although a person had another source of income he could still properly be said to be dependent on fishing for his livelihood and allowed the appeal of the four applicants against the Water Authority's decision. To qualify for a licence under the Act a person's occupation had to be that of a fisherman, but that did not mean it had to be exclusively that of a fisherman, provided the person relied to a substantial extent on fishing for his family's ordinary living expenses.

Thus an attempt made by the Authority to regulate the exploitation of the salmon stocks in its own area has been hindered and the limitation order rendered ineffective. The judgement is, of course, an important one which could well affect all future net limitation orders made by Water Authorities.

Northumbrian Water Authority

The Chief Fisheries Officer, Mr. Tony Champion, has reported that in 1981 more salmon were taken by rods in the Wear than either the Coquet or the Tyne, and neither the Tyne nor the Coquet had a bad year for catches. The sea trout population was below average and net catches well down on the previous year. Mr. Champion also reports that in 1981 the Authority reared nearly 500,000 salmon parr at its Keilder Hatchery and 60,000 of them were sold to the Thames Water Authority for the restoration programme.

It is interesting to learn that with the construction of the Keilder Dam and the new hatchery there, the Authority will be in a much better position than before to net brood salmon stock and strip them of their eggs for future restocking of the many tributaries of the Tyne. In previous years Scottish salmon eggs were used in the restocking programmes but it is now felt that stock produced from local sources will produce more effective results.

Southern Water Authority

In general salmon and sea trout catches have continued to improve since 1976 and in 1981 the sea trout catches were the best on record. Mr. Chandler, Principal Fishery Officer, has reported that work on restoring two derelict fish passes on the River Stour in Kent has been completed recently, and two electronic fish counters commissioned for use on the Rivers Test and Itchen.

STOP PRESS

Canada

Supporters of the Trust will be interested in the following extract from the Atlantic Salmon Newsletter published by the Atlantic Salmon Federation, since it considers the possible causes of the decline in the 1982 salmon runs:

"Two-Sea-Year Salmon Scarce

A serious shortfall in salmon returns to rivers around the North Atlantic is being attributed to a lack of 7-15 pound salmon, fish that have spent two years at sea prior to their first spawning migration. No immediate cause for this phenomenon has been identified, although it has been variously attributed to poor nursery conditions in 1978, a cold spring in 1982, questionable feeding conditions on the highseas and - most predominantly - longstanding commercial harvesting regulations that have selectively removed too many of these fish from salmon stocks.

Two famous salmon rivers, Canada's Ristigouche and Scotland's Tweed had reported angling totals only 25% of last year's as of July 1. Elsewhere catches were commonly down 30-60% in the early weeks of the season, when two- and three-sea year fish normally comprise the bulk of the run. Notable exceptions were the Moisie River in Quebec and the Penobscot River in Maine where mid-sized salmon were observed and caught in above average numbers. In a few rivers, normal numbers of three-sea-year fish were reported.

The strong grilse runs now appearing in Europe and Canada may, fishing conditions permitting, bring annual angling totals up to average levels but there is little likelihood that commercial catches will reach normal tonnages. Nor, facts reveal, will the grilse be able to replace the lost spawning potential of the missing two-sea-year fish who usually provide most of the eggs for future year's stock. The majority of grilse are males that contribute little to the spawning pool; the remainder are small females capable of laying less than 30% of the eggs per fish than the larger two-sea-year salmon.

The trend toward smaller salmon - predominantly the less productive grilse - led the Boston Globe some months ago to predict doomsday for the Atlantic salmon. While there is agreement that this "grilse factor" is not the sole reason for the salmon's decline, it is clear that the extraction of massive numbers of multi-sea-year salmon by the commercial salmon fishery, over a long period, has had a major impact upon spawning potential. This factor can and should be addressed by obtaining better projections of expected escapement of different salmon year classes, and by adjusting traditional commercial fishing patterns.

PUBLICATIONS

The Trust has the following publications available from its Farnham office:-

'Atlantic Salmon Facts'	Free
'Report of the Joint Greenland Expedition 1980'. Compiled by Henrik Kreiberg. (Very few copies available)	£1 per copy
'Salmon in Iceland' by Thor Gudjonsson & Derek Mills	75p per copy
'Report on a Visit to the Faroes' by Derek Mills & Noel Smart	£1 per copy All post free

