



# scalereadings

Summer 2003

The newsletter of The Atlantic Salmon Trust

## From the Chairman

A great deal has been happening since the beginning of the year in the affairs of wild salmon. The most obvious event has been the agreement by 52 of the remaining 68 North East Coast drift netmen to surrender their licences. This agreement, which will reduce the effect of this fishery by some 80%, is the very satisfactory outcome of a campaign in which the Trust has been actively engaged since 1967. We have consistently argued against the operation of mixed-stock interceptory fisheries, which take fish from more than one river, as those fisheries greatly inhibit the increasingly important management of individual river populations. In its advice to the inter-governmental North Atlantic Salmon Conservation Organisation, the International Council for the Exploration of the Sea continues to state that mixed-stock fisheries in the area which includes the United Kingdom and the Republic of Ireland pose a very significant threat to conservation.

The North Atlantic Salmon Fund (UK) has been justly praised for its exemplary conduct of the successful buyout negotiations, and for its strenuous and continuing efforts to raise the balance of the compensation payments, over and above the increased DEFRA contribution of £1,250,000. The Trust played a major part in making the case both for the early phasing out of this drift net fishery and for the substantial element of Government support. The work will not be over until the second payment is made in Spring 2004, but it is clear that a consequence has been an

increase in pressure to reduce the effect of the much larger and more damaging international effect of the Irish drift net fishery. There is, however, a little encouraging news from Ireland – the Fisheries Minister has announced quota reductions which are committed to continue annually in order to reflect scientific advice by 2005.

Elsewhere in this issue, we discuss how the new Scottish aquaculture strategy was developed, and explore its implications. We describe the appointment of our Field and Research Biologist, John Webb, to co-ordinate scientific and practical advice and technical support to assist Scottish West Coast Fishery Boards and Trusts in their work to restore wild salmon and sea trout populations in the West Highlands. Among other developments, we also report on the progress made at the recent NASCO Council meeting, and on the growing influence of Fishery Trusts both north and south of the Border. Finally, I am pleased to announce the publication of the Proceedings of last year's very successful Sixth International Salmon Symposium, held in Edinburgh. These proceedings have been edited by Dr Derek Mills with his customary skill and attention to detail. They will be a fitting culmination of his thirty years dedicated service to the Trust and its Scientific Advisory Panel.



Photo: North News and Pictures

### THE ATLANTIC SALMON TRUST

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Executive Director:  
Jeremy Read

Deputy Director:  
Tim Hoggarth  
(with special responsibility for matters in  
England & Wales)

Finance Director:  
John Gray

Field and Research Biologist:  
John Webb

## What the Trust does

The Atlantic Salmon Trust is a voluntary organisation whose primary objective is to promote the conservation, protection and improvement of wild Atlantic salmon and sea trout stocks in the countries bordering the North Atlantic Ocean, for the public benefit.

It seeks the improvement of scientific knowledge, and its application to support salmon management decisions with the best possible information. The Trust works in the UK, and internationally, for positive action both at public and private levels for the benefit of salmon and sea trout.

To achieve this, the Trust:

- promotes and sponsors practical research
- organises workshops and conferences to investigate specific problems
- issues regular and special reports, and publishes the results of its work
- advises Government Departments, Members of the Parliaments and Assemblies, and fishery authorities

## Funding the Trust – how you can help

- By a single donation – cash or cheque.
- By regular contributions through a Banker's Order:
- If you sign a Gift Aid declaration, your donation will be worth almost a third more to us at no extra cost to you – for every £1 you donate, we can claim an additional 28p from the Inland Revenue. (We can only reclaim tax if you are a UK tax payer.)
- By gifting stocks and shares to the Trust. You will receive relief on Capital Gains Tax and personal income tax for the value of the gift.
- By remembering the Trust in your Will. A bequest to charity is free of Inheritance Tax.

Please contact us on 01796 473439 for more information on any of these points. The Trust has no official funding and is financed entirely by private contributions, so you can be sure that your support is needed and will be greatly appreciated.

## Scientist with a snorkel

The AST helps to launch a low technology approach to counting salmon

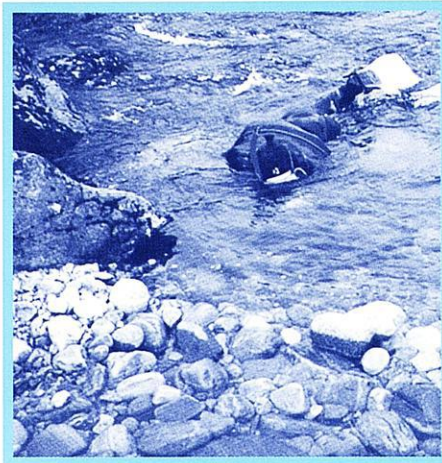


Photo: Nicola Bissett

In very wintry conditions in November 2002 Jon Watt, biologist of the Lochaber and District Fisheries Trust, climbed into a dry suit and stoically took to the water in three Lochaber Rivers. Equipped with snorkels, Jon and some intrepid volunteer assistants conducted surveys of the numbers of adult fish in the Rivers Cona, Scaddle and Nevis.

This was a pilot project, partly funded by the Atlantic Salmon Trust, which was aimed at investigating the validity of this method of estimating salmon populations in small rivers. The success of the snorkel

surveys was extremely encouraging. The accuracy of the technique was rigorously assessed during the analysis of the results of the fieldwork, and Jon Watt is confident that it works. Amongst the benefits that he cites are low cost and ease of operation. The technique has previously been employed to good effect in the United States, but not to any extent in the United Kingdom. It has particular potential for application in West Coast rivers, where there are very few fish counters or traps, and where it has up to now rarely been possible to measure the numbers of returning fish.

He now hopes to carry out an intensive electric-fishing survey in Autumn 2003. This second phase of the project will make an assessment of the total juvenile salmonid (salmon and brown trout) population. There is widespread concern over the decreasing proportion of salmon that return from their time at sea; with data on both returning adults and numbers of juveniles, the Lochaber Trust will for the first time be able to investigate the degree of marine survival of the salmon from these rivers.

The Atlantic Salmon Trust has welcomed the detailed report of the project with enthusiasm. It was well received at the meeting of the Honorary Scientific Advisory Panel in early May 2003. The practical guidance for the safe and accurate conduct of snorkel surveys, which forms the final part of the report, will be particularly valuable for other rivers interested in the employment of this technique. Indeed, it has already aroused the interest of the Environment Agency, which is considering its application to appropriate rivers in England and Wales. The project is a good example of the way in which the AST seeks to support investigative practical studies whose results can lead to much wider application.

*Copies of the report may be obtained from Nicola Bissett, Lochaber & District Fisheries Trust, Arieniskill, Lochailort, PH38 4LZ.*

*Tel: 01397 703728*

*Email: ldft\_do@hotmail.com*



Photo: Sue Scott

# Salmon and freshwater fisheries in England and Wales

The Chairman's Introduction describes the Trust's involvement in the long-awaited achievement of a buyout agreement for the North East Coast drift net fishery, and its significance as a substantial move towards the ending of all mixed stock salmon fisheries in the North Atlantic. Three quarters of the netmen, who took 80% of the catch, have now stopped fishing for good. The total cost of the deal is £3.34 million, of which the first half was paid at the end of May 2003 from contributions already received by the North Atlantic Salmon Fund (UK). These included the first instalment of the increased DEFRA contribution of £1.25 million, and a number of generous donations from Fishery Boards, River Associations and many organisations and individuals from all over the United Kingdom. More contributions toward the second and final payment have been pledged, but at the time of writing of this report there remains a shortfall of £400,000 in the amount needed by May 2004.

NASF(UK) is appealing to all those with an interest in the future of the nation's wild salmon to support them in reaching this target. Donations will be gratefully received by Andrew Whitehead, the Secretary of NASF(UK), who can provide amplifying information and will also supply Gift Aid forms for those who wish to contribute through the Migratory Salmon Foundation (MSF), a charity set up with the primary object of eliminating mixed stock fisheries around the UK, which is associated with this appeal. His address is:

Andrew Whitehead, NASF(UK)  
Mawmill House, Cleish, Kinross KY13 0LN  
Tel/Fax 01577 850376  
e-mail: [andrew.whitehead@tiscali.co.uk](mailto:andrew.whitehead@tiscali.co.uk)

## An Inland Fisheries Bill

Readers will be aware that Professor Lynda Warren was appointed by the Government in April 1998 to chair a wide-ranging Salmon and Fresh Water Fisheries Review. The findings of the Review Body were published in February 2000, and the Government's response appeared in February 2001. Good progress

has been made with regard to those recommendations which do not need Parliamentary action, but a number of the recommendations do require primary legislation. This is needed to make provision for the Government and the Environment Agency to have the means to achieve its conservation objectives in relation to fisheries, and for regulatory measures associated with fishing, control of fish farming, action to deal with obstructions, and enforcement. In responding to the Review, the Government acknowledged this need and undertook to bring forward proposals at an appropriate opportunity. More than two years later, the Atlantic Salmon Trust has joined other wild fisheries organisations in the Moran Committee in pressing for a Fisheries Bill to address these issues, and the matter was firmly raised in a lively debate in the House of Lords in April. Particular points needing action are:

- The simplification of byelaw-making procedures.
- The replacement of the Net Limitation Order system by a more flexible byelaw approach.
- Banning of the sale of rod caught fish.
- Consideration of the introduction of carcass tagging.
- Up-dated regulations on the use of fishing gear.

Professor Warren, our Chairman and Lord Moran (who is effectively leading on this issue

in his capacity as chairman of the Moran Committee) have all written to Elliot Morley MP, in his previous capacity as Minister for Fisheries, Water and Nature Protection, to urge him to introduce a Fisheries Bill as a matter of urgency. The Minister, before his recent promotion to Minister of State at DEFRA, indicated that he would be happy to consider a way forward. He offered a meeting to Lord Moran, which it is hoped will be undertaken at an early date by Ben Bradshaw, the new Fisheries Minister:

## International Sea Trout Symposium

Planning for this event, to be held at Cardiff University on 6-8 July 2004, is now well in hand. It will cover all aspects of sea trout stock description, ecology and biology and will explore how new knowledge in these areas may influence fisheries management. The seminar will include both the presentation of scientific papers and an interactive series of breakout sessions, aimed at developing an improved awareness of sea trout populations and positive proposals for better management of stocks and for future research areas. It will conclude with a tour of fisheries in Wales. The Trust is represented by the Deputy Director on the planning committee, and is assisting with financial sponsorship. Applications for registration forms can be made now to: Samantha Emmott, Conference Co-ordinator Cardiff University, Southgate House Bevan Place, PO Box 533, Cardiff CF14 3XZ Tel: 02920 875117, Fax: 02920 874990 e-mail: [Sea-Trout-Symposium@Cardiff.ac.uk](mailto:Sea-Trout-Symposium@Cardiff.ac.uk)



Photo: David Hay

# Developments in Scotland

## Legislation and Policy

The Water Environment and Water Services Act was passed early in the year. This legislation implements the European Water Framework Directive in Scotland. It will have an impact on all aspects of the planning and implementation of river catchment management. It introduces 'River Basin Management Planning' and provides a framework for the control and improved monitoring of activities that impact on the water environment.

Despite the rejection of a Trust-inspired proposal to include activity causing the excessive production of parasites within the definition of pollution, the Act contains two significant provisions for the regulation of aquaculture. One extends local authority planning powers to cover the establishment or expansion of marine fish farms. The second will give Ministers authority to enforce adherence to officially approved codes of Best Environmental Practice for operations such as fish farming. This will allow current voluntary codes, which have made considerable progress in aspects such as sea lice control, to be improved and adopted on an industry-wide basis.

## Aquaculture Strategy

Following this, the Strategic Framework for Aquaculture was formally launched in March. It was developed with the support of a working group, chaired by the Fisheries Minister, in which the wild fishery viewpoint was represented by the Association of Salmon Fishery Boards (ASFB). Although there was difficulty in reaching absolute consensus across the wide range of interests involved, the document points toward action on most issues of concern to wild fisheries. These include: the enforcement of codes of practice (as described above, and emphasised by the Minister at the launch), sea louse control, prevention of escapes and the marking of farmed fish to identify the origin of fish that do get into the wild environment, action to identify and implement relocation of fish farms at inappropriate sites, and the development of planning guidelines. It will now be important to urge and monitor the following up of the actions recommended by

the working group, and to continue to press for the gaps to be filled.

## EU Support bid

Work is continuing on the preparation of the multi-million pound bid for funding, through the LIFE scheme, which was described in the Winter Report. The formal submission has to be made by October, and the development of the amalgamated applications for financing work to enhance salmon conservation, in river systems designated as Special Areas of Conservation (SACs), has been led by the ASFB with the support of the Scottish Executive and Scottish Natural Heritage. A professional project manager is now directing the conduct of the bid on behalf of the participating Fishery Boards and Trusts.

## Tripartite Working Group

Funding has been secured to support work on the implementation of Area Management Agreements in the three regions (West, North West and Western Isles). The appointment of John Webb, the Trust's Field and Research Biologist, as Co-ordinator for the provision of scientific support to stock conservation and restoration projects was announced at the beginning of April. He is in the process of setting up the network of resources that will be needed to supply the range of advice, guidance and project assessment services whose provision he will arrange. In due course, he will be based at the Freshwater Laboratory, Faskally, but for the time being he can be contacted at the Marine Laboratory Aberdeen (Tel: 01224 295346).

## Sea Lice

After last year's achievement of remarkably low levels of sea lice infestation in a number of areas, some reports have been received in recent months of high sea lice counts on sea trout smolts, despite the operation of agreed control practice in local salmon farms. At the time of writing, the pattern of occurrence and its relation to farm lice levels is not consistent or clear, and urgent investigations are in hand to clarify the situation and identify appropriate measures.

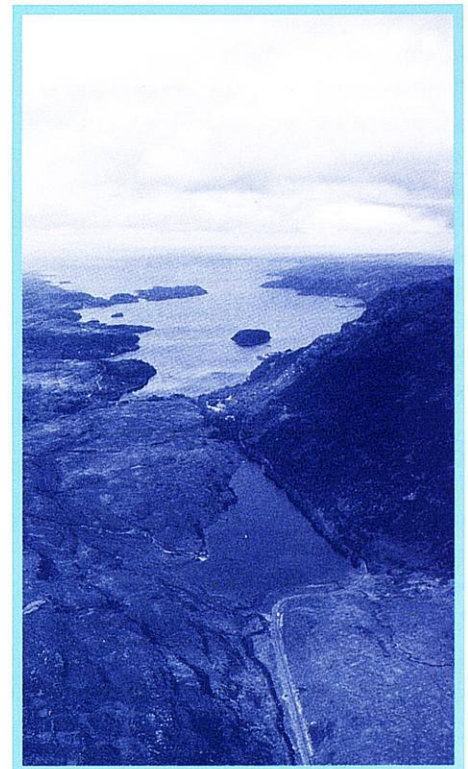


Photo: David Hay

## Seals

The Scottish Executive has convened a Seals Forum, which includes the whole range of interested parties and organisations. Among other issues, it is seeking to establish means of quantifying the damage to salmon stocks (see the report on the seal scat project in 'Support of research' on Page 5 of this newsletter), and to identify effective and selective point defence methods. It will look especially at the difficulty of managing both predators and prey in areas where both species are designated for protection. A small working group has been set up to focus on the development of new deterrent or control techniques, and the conduct of appropriate research.

## Liaison with Rivers Trusts in England and Wales

The ASFB organised a meeting between representatives of the Association of Rivers Trusts (whose work was described in the Winter Report) and Scottish biologists and fishery managers. The value of the exchange of information and experience was clearly established, and the establishment of more formal links is in hand.

## NASCO 2003

The Council meeting, held in Edinburgh at the beginning of June, was encouragingly constructive. The Non-Government Organisations (NGOs) have achieved greater prominence, and Andrew Wallace, Director of the Association of Salmon Fishery Boards, was included in the EU delegation. Chris Poupard (Chairman of the European Anglers' Association) represents the NGO group on the new International Salmon Research Board, of whose Scientific Advisory Group Dr Dick Shelton, Chairman of our own Scientific Advisory Panel, has become a member.

The Greenland quota was again restricted to "local subsistence" (estimated last year at 20 tons) with no commercial fishing allowed for export. In practice, this reflects the agreement reached last year with the North Atlantic Salmon Fund, which is still in force. Scientific sampling of the catch is to be continued, with effort to be provided by participating nations.

No formal quota was set for the Faroes, but the Faroese Government again announced its intention of respecting the scientific advice to NASCO, which had recommended that there should be no exploitation, other than a possible official research fishery.

NASCO is now concentrating much of its efforts on the improvement of the management of wild salmon stocks, through the application of the precautionary approach. Several previous initiatives have been co-ordinated into a single collection of harmonised documents. These include the definition of measures to minimise the impact of aquaculture, to control introductions and transfers of fish throughout the region, and to provide guidance for the rebuilding of depleted stocks. There was an especially welcome preliminary statement of the principles governing the stocking of wild salmon.

## Supporting research

Support has been provided or committed for the following projects since 2001. They illustrate our continued involvement in practical research to improve the management of wild salmon and sea trout, especially in assisting 'pump-priming' projects which will subsequently support major work.

### Lifetime fitness of spring salmon – the Baddoch project

This is the Trust's principal research project. It has involved the DNA identification of individual "families" of fish in an upland stream over five years, to investigate and compare their productivity and survival in fresh and salt water; in relation to their habitat. Detailed analysis of the fieldwork, which is continuing, is resulting in the production of scientific papers on a number of aspects. The work is now contributing to the SALGEN project (see below). The biologist's work is being supported by an extremely generous grant from the Westminster Foundation.

### Predation and scavenging along spawning streams in Scotland

This investigated the extent of predation in upland streams, primarily by otters at spawning time, and its significance in affecting spawning success. The final report revealed a significant level of predation and examined the implications for the assessment of spawning targets.

### Long-term salmon changes in relation to plankton and climatic viability

Two consecutive studies have established correlation between data on plankton distribution and falling trends in catches, and suggested possible linked causes for the increase in salmon mortality at sea. Possible follow-on work is being recommended to the NASCO International Atlantic Salmon Research Board.

### The use of DNA to identify salmonid material in seal scats

This study has validated the use of DNA analysis techniques in identifying soft remains from salmon and sea trout in seal faeces. These techniques avoid the current reliance on detecting salmon otoliths (small bones in the head), and should help to identify the location of predatory activity as well as providing better quantitative assessments. The work is now being followed up by Fisheries Research Services, who are collecting a substantial number of field samples in the Moray Firth area.

### Indices of marine survival and freshwater productivity: a low-tech approach

This project, which validated the use of snorkelling techniques to estimate populations in West Highland rivers not equipped with counters or fish traps, is described in the article on Page 2.

### Relationships between stream morphology and micro-habitat requirements for spawning in upland streams

Following earlier research on the relationship between water flow and spawning performance, this work is nearing the development of a general tool for assessing the quality of different spawning habitats.

### Interpreting rod catch data: River flow, catchability and angler effort

This builds on the Trust's Catch Data Workshop, and will seek to improve ability to make use of raw catch data in the estimation of trends in population levels.

### The SALGEN Project

The Trust is acting as co-ordinating agent for this important EU-funded project (total budget £164,000) launched in October 2001, and running until October 2003. It comprises a major programme to review international salmon genetic studies and to develop a consensus view on management implications. This will increase understanding, and improve the effectiveness of wild stock conservation and rebuilding programmes. A principal product will be an AST Blue Book giving guidance for fishery managers on genetic issues in stock management and restoration.



Photo: David Hay

## Show appearances 2003

Because of clashing show dates and the impending withdrawal of the Trust's display caravan, it has only been possible to make two full appearances this year:

5-6 July	Game Conservancy Scottish Fair, Scone
1-3 August	CLA Game Fair, Harewood House, Leeds (in <i>Salmon &amp; Trout Association Enclosure, by kind permission, as for last year</i> )

The Deputy Director has also visited the Chatsworth Angling Fair in May and the Welsh Game Fair in June, to ensure we remain in touch with current trends and our supporters who attend these events.

The show programme for 2004 is under review.

## The best worker in Europe

Ted Hughes was a staunch supporter of the Atlantic Salmon Trust. This is a unique opportunity to acquire a rare and special edition of his work, while helping a cause which he held dear. In 1985, the Trust published a limited edition of 156 copies of a poem specially composed by him, in which he contrasted the wonder of the migration and return of the salmon smolt with the desperate hazards that threatened it then, and still do. The numbered copies, hand-set and printed on mould-made paper, illustrated by Charles Jardine and signed by both Author and Artist, were for sale in aid of the Atlantic Salmon Trust's work for wild salmon and sea trout. **Only 39 copies remain unsold.** They are offered, together with a newly drawn additional sketch generously contributed by Charles Jardine – also signed and numbered – at the price of £125. To order, please contact the AST office.

## 2002 Symposium Proceedings

The Proceedings of "Salmon at the Edge"; the 6th International Atlantic Salmon Symposium, which was held in Edinburgh in July 2002, are being published in July by Blackwell Scientific. Edited by Dr Derek Mills, copies are expected to cost £50, and may be ordered through the AST office.

## Selected publications

Full list available from the Trust's Office or on the website ([www.atlanticsalmontrust.org](http://www.atlanticsalmontrust.org)) £

<b>Atlantic Salmon Facts</b> D. Mills, G. Hadoke, R.G.J. Shelton, J.B.D. Read	f.o.c
<b>Genetics and the Management of the Atlantic Salmon</b> T. Cross	2.50
<b>Fish Movement in Relation to Freshwater Flow and Quality</b> N.J. Milner	2.50
<b>Acidification of Freshwaters: The Threat and its Mitigation</b> R. North	3.00
<b>The Measurement and Evaluation of the Exploitation of Atlantic Salmon</b> D.J. Solomon and E.C.E. Potter	3.00
<b>Surveying &amp; Tracking Salmon in the Sea</b> E.C.E. Potter and A. Moore	3.00
<b>Spring Salmon</b> A. Youngson	3.00
<b>Enhancement of Spring Salmon</b> (Proceedings of a one day Conference held in London in January 1996) Edited by D. Mills	12.00
<b>Water Quality for Salmon and Trout</b> (second, revised edition) J. Solbé	3.50
<b>The Industrial Fishery for Sandeels</b> A.D. Hawkins, J. Christie, K. Coull	3.00
<b>Fish Counters</b> (Proceedings of an AST/IFM Seminar held in Perth in April 1997) Edited by A.V. Holden and G. Struthers	3.00
<b>The Ocean Life of Atlantic Salmon</b> (Proceedings of a Workshop held in November 1998) Edited by D. Mills	29.75
<b>Habitat Restoration for Atlantic Salmon</b> D.W.J. Smart	12.50
<b>The Interpretation of Rod and Net Catch Data</b> (Proceedings of a Workshop held at CEFAS, Lowestoft in November 2001) Edited by R.G.J. Shelton	7.50
<b>Predation of Migratory Salmonids</b> (Assessment of a Workshop held in Edinburgh in April 2000) By the Chairman, Professor Fred Last	1.00