



RIVER BLADNOCH NEWS

LIFE04NAT/GB/000250



Conservation
of Atlantic Salmon



Introduction

The River Bladnoch catchment was first designated in 2001 as a candidate 'Special Area of Conservation' (cSAC) for its internationally important population of Atlantic salmon, as listed under Annex II of the European Habitats and Species Directive (1992). While there have been noticeable benefits from the cSAC designation, we are happy to finally report the River Bladnoch, Tarf and key spawning tributaries received full SAC status from the European Commission (EC) on 17th March 2005.

A lot of important work programmes are now being undertaken across the river aimed at protecting and enhancing the salmon population (in particular the spring salmon sub-population) and associated habitats. Later in this newsletter, you will see that in addition to the usual work of the GFT, an exciting 4 year EU LIFE project and writing of a salmon catchment management plan both started in 2004. To ensure that all interested individuals and parties are kept up to date on these work programmes, the GFT will be producing a six monthly newsletter exclusively covering work on the Bladnoch. We hope you enjoy it!



The first spring fish of the season

We are pleased to report that good numbers of spring fish have been caught on the river since the angling season first opened on 11th February. Jonathon Haley, of Mochrum Park captured the first spring fish, weighing nearly 9 lbs on 13th March. Further fish, up to 10lbs, were reported later in March. Catches in April have also been encouraging. Most rod caught fish have been carefully released.

The Bladnoch LIFE Project

In August 2004, the GFT and River Bladnoch District Salmon Fishery Board (BDSFB) received the excellent news that their application for funding, as part of a larger EU LIFE project entitled 'Conservation of Atlantic Salmon in Scotland' which covers 8 SAC rivers, had been successful. Extensive works, worth around £300,000 will be completed over 4 years. Half of this cost of these projects is being met by LIFE, the EU financial instrument assisting with the conservation of natural habitats and species under the Natura 2000 network, with the remainder being covered by Scottish Natural Heritage, Scottish Executive, GFT, Forestry Commission (Scotland) and BDSFB.

This project involves the undertaking of a detailed monitoring and research programme covering water quality analysis, egg box experiments, analysis of scale samples, electrofishing / habitat surveys and smolt tagging. A wide range of practical enhancement works are planned across spawning and juvenile nursery areas. A hatchery programme focusing on spring salmon will be undertaken in the headwaters. The Forestry Commission (Scotland) and GFT have identified key fishless areas of the upper river which historically supported spring salmon spawning and where careful restructuring of the present forestry should produce significant environmental benefits and a return of fish. Further instream and riparian works are planned elsewhere, including planting of deciduous trees, fencing of overgrazed banks, control of excessive erosion, creation of pool-riffle sequences, rock placement and cleaning / creation of spawning beds.

Atlantic Salmon Catchment Management Plan (ASCMP)

Another important piece of work being produced for the River Bladnoch catchment is the ASCMP. This document is one of the first of its kind within the British Isles. GFT were commissioned to produce this by Scottish Natural Heritage and the document should aid in the enhancement of the salmon population through better land management, both on agricultural and afforested land. Presently, a description of the entire catchment has been produced as well as an explanation of the major land uses within the catchment.

While the two most extensive land uses within the Bladnoch catchment are forestry and agriculture, the plan will also examine many other issues such as windfarm development, anticipated road construction and still water fisheries. It is anticipated that many sectors within the community shall utilise the ASCMP.



A particularly important part of the plan is the identification of issues facing farmers who own riparian land. Information is collected through a confidential questionnaire distributed to riparian farmers throughout the catchment. The project is ongoing and results are being analysed by GFT. It is a good opportunity for local farmers to express their views about the SAC designation. So far, GFT have had very positive feedback from all farmers contacted. The final report is due for completion in December 2005.

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As part of our ongoing research on the Bladnoch salmon population we would like to collect scale samples from as many rod caught fish as possible throughout the season. A side of smoked salmon is available for anglers who return a spring fish up until 1st of June (kindly donated by Uniq Prepared Foods (Pinneys of Scotland)). To collect the reward please give a scale sample to the GFT. We are also keen for scale samples collected from summer and autumn fish. The information that these scales provide gives important details on the age structure of the salmon population and presence of any farm fish. Remember scale samples can be collected from both live and dead fish.



An April Bladnoch springer



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Smolt Research

Knowing the health and number of the salmon smolt population leaving the Bladnoch is essential. During spring 2004 the smolt run was examined through the trapping of 1997 smolts in a fyke net set at Torhouse Trout Farm. These fish are tagged and used in a mark-recapture experiment to estimate the total smolt numbers. Scales taken from every fifth fish indicate age structure. Please contact us for detailed results.



The 2005 smolt run is currently being studied. The fyke net is set again to monitor the total smolt production. To study the smolt production from the upper river, which would be expected to return as springers, the GFT have purchased a Rotary Screw Trap from Canada, with co-funding from the LIFE Project. This floating trap (the photo shows the trap on dry land) is designed to collect samples of smolts which are stored in a specialised box at the rear until collection. Following the capture of a dead sheep the trap is presently being repaired!

Egg Box Experiments

This year, as part of the EU LIFE Project, egg box experiments were completed at 6 sites across the upper river, in areas where the level of acidification was known to be deadly to eggs. It was hoped that restructuring of forestry plantations and improving air pollution levels would show in improved egg survival levels compared to similar work completed in earlier years.



In these experiments, 100 eyed eggs are placed in each mesh container and buried in suitable clean gravel. At each site 3 mesh containers are used. The mesh allows water to aerate the eggs but keeps in eggs or alevins. The egg boxes are checked after hatching to assess what number of eggs died or hatched successfully. The egg hatch stage is known to be particularly sensitive to low pH and occurs at a time of year when acidification is likely to occur, thus egg box experiments are useful to give an indication as to whether water quality is acceptable for natural spawning.

In early 2005, it was encouraging to find good hatch rates in the main river (below Loch Maberry and near Waterside Farm), upper Polbae Burn (above trees), mid Black Burn and lower Malzie Burn (control). Disappointingly, all eggs failed to hatch in the lower Polbae Burn. This project will be repeated annually.

With the exception of the Malzie Burn, all these sites are located in watercourses where previously the water quality was too poor to support a salmonid populations. As there have been improvements in the water quality of these areas, GFT are carrying out these experiments to see if they could potentially once again support a salmonid population.

Habitat Enhancement Works

An extensive programme of riparian and instream habitat enhancements have begun. In 2001, the GFT completed a SFCC habitat survey across the whole Bladnoch catchment which detailed areas on the watercourses where habitat was degraded and in need of improvement. This spring GFT staff have carried out riparian broad-leaved tree planting (using willow, hawthorn, bird cherry, alder and rowan) over approximately 8600m of bank side.



This work was completed on the upper Bladnoch between Glassoch Bridge and Loch Maberry. Instream conditions were also improved by undertaking boulder placement in sections of the Beoch Burn and Barhoise Burn which had previously been dredged. This work has improved the instream environment for spawning and juvenile salmonids, in at least 1750m of burn.



Alevins in hatchery troughs coming onto first feed

HATCHERY

Broodstock for the hatchery were collected from two sources during October-December 2004. Fish came from anglers donating rod caught fish and surplus fish caught in a trap on the Barhoise Burn. A number of anglers undertook angling in the upper river aimed specifically at catching multi-sea winter brood stock. A total of 85 000 eggs were collected and these will be stocked as fed fry in areas of the headwaters e.g. Polbae Burn, Black Burn and main stem above Glassoch Bridge. Thanks to all those who assisted in collecting fish.

ELECTROFISHING

Electrofishing surveys were completed at a number of sites across the Bladnoch catchment during the summer of 2004, to monitor wild stocks. Four sites were surveyed which drain Artfield Fell to monitor possible impacts from the construction of a windfarm. The upper river continues to suffer from acidifications which is limiting natural spawning especially in the Polbae Burn and upper main stem near Waterside. Further downstream low levels of natural spawning occurs near Glassoch Bridge. The mid and lower main stem and associated tributaries typically support good numbers of juvenile fish eg Barhoise Burn, Clugston Burn and Malzie Burn. The main river, near Spittal Bridge, contained very healthy densities (268 fry and 20 parr per 100m² water). Two burns (Grange Burn and an unnamed burn beside Little Torhouse), recorded their first natural salmon populations since surveying began in 1988. An extensive habitat enhancement programme was recently completed by the GFT on the Grange Burn.

BRIEF UPDATES:

- The River Bladnoch District Salmon Fishery Board, as part of the EU LIFE project, will be securing a 99 year lease of the remaining salmon netting rights present within the main river. As the EU funds only provide 50% of the cost, the BDSFB is currently carrying out several fundraising projects to raise the remaining money, including a raffle. Get your tickets quickly!
- A new set of Constant Monitoring Equipment has been installed on the river near Waterside Bridge. This equipment will monitor the pH, height and temperature of the water, in an area at risk from acidification, every 20 minutes.
- A 15 turbine windfarm has been constructed on Artfield Fell, over the last year. The Fell is drained by 4 burns which ultimately drain into the Tarf. Some of these burns support important salmonid populations. The GFT have monitored these surrounding fish populations during the construction works and are pleased to report no apparent problems to date.