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## Introduction

Greetings! 2007 was a very busy but interesting year for the Trust working across the Galloway river catchments. There have been a number of staff changes. Jozef Durok now runs the Bladnoch CASS project (see Bladnoch Newsletter) and Rowan Armstrong (pictured below) joined after Catriona Stevenson left. Rowan works on many Trust projects but particularly works on the Dee fish counter, pH monitoring equipment, fishgalloway.co.uk website and various habitat works.

Although spring salmon catches were disappointing, encouraging numbers of salmon entered most rivers from early August onwards. Reports of large salmon came from many local rivers. Hopefully the closure of the Irish Drift Net fishery has helped! Sea trout continue to be a concern across Britain including the Solway rivers. Locally, 2007 appeared to fare a little better than recent years and the Trust collected over 200 sea trout from a pool one morning on the Fleet! The Trust increasingly studies various rare fish species and advises on the management of many stillwater fisheries. The continuation of ERDF funding until mid 2008 and the securing of 3 years of Heritage Lottery Funding has assisted greatly in our planned work programmes.



## Red Vent Syndrome

The prevalence of salmon found with red or bleeding vents this past year has been of some concern to anglers and biologists alike. Red Vent Syndrome (RVS) was investigated by FRS and it was found to be caused by nematode worms of the *Anisakis* species. These parasites were found in high numbers throughout affected fish that were tested (e.g. gills, pyloric caeca, heart, pancreas and around the vent). RVS affected fish were found throughout the Galloway rivers (a Bladnoch salmon is shown left), however some rivers around Scotland reported that up to 80% of salmon caught were affected. No direct mortality of fish appeared to be caused by RVS. GFT also found both wild spawning and broodstock stripping did not appear to have been affected. We will keep an eye on further news from FRS and advice from the Food Standards Agency.



## Sparling Re-introduction

Regular readers of GFT newsletters will know that the Cree supports the last west coast population of sparling, or smelt (*Osmerus eperlanus*). These fascinating fish live in the Solway Firth for most of the year but ascend on mass to spawn over a few spring days in the lower Cree. Sparling have been heavily studied by GFT and the Fish Conservation Centre (FCC) for many years and we have a good understanding of their biology, life history, population status and threats.

Numbers of Cree sparling are very limited compared to historical densities and there are concerns for the long term survival of the species. It was felt prudent for GFT and FCC to implement a 3 year re-introduction programme on the River Fleet (considered the most suitable local river). Gravid Cree sparling are collected and eggs stripped onto suitable substrate which is then relocated to the lower Fleet. Work in 2007 was challenging due to high river flows and as a consequence few eggs were moved but we are more hopeful for spring 2008 (weather permitting!). This important project is funded by GFT, SNH and Solway Heritage.



## Vaki at Tongland Ladder

Galloway Hydro Scheme was constructed in the early 1930's and situated at its lowest reservoir; Tongland Dam is the first barrier that migratory fish must pass to access the Dee. To assist fish getting above the 70ft-high dam, a fish ladder of 33 pools winds up 200m to allow fish access. Since 1962, a fish counter has been in place to monitor numbers of fish accessing Tongland ladder.



This data helps to understand the implications of the hydro scheme on migratory salmonids in the Dee.

The fish counter, a Resistivity Counter, records fish "Ups" and "Downs" using resistivity changes as fish pass over a series of electrodes. A third reading known as an "event" occurs when the counter cannot recognise the resistor change as up or down. Increasing "event" registers over the years cast doubt over the validity of the counters data and it was recognised that this data was limited. The need to consider getting a new counter became imperative.

Thankfully, funding from Scottish Power became available and last year our dream came true! On the 28th June 2007, the Vaki Riverwatcher Fishcounter was installed at Tongland, within a holding pool in the upper part of the fish ladder (see above).

Created in Iceland; Vaki fish counters have an excellent reputation and have been a success on rivers elsewhere in Scotland, including the Tweed and Spey. Once installed in a place where fish will have restricted passage (ideally suited for use in the fish ladder) they work by registering a fish as it passes through a beam of infrared light at the front of the Vaki. As it breaks this beam, a silhouette of the fish is formed and used to calculate fish size (depth and length). At the same time, a camera is triggered and as the fish passes towards the back of the Vaki, a series of photos (or a video) are taken and stored. As each fish passes (up or down) this process takes place and a file is created including data on: date/time of passage, depth (mm), length (cm), direction (Up or Down) and speed (m/s) of that fish.

Very straightforwardly, this data is used to identify the fish (as salmon or sea trout) using the size measurements, speed and silhouette. But the important feature of the Vaki that sets it apart from many other fish counters is its ability to photograph the fish clearly. With the aid of a clear photo, all sorts of information can be gathered about the fish. For instance, the sex and species can be identified using head-end and tail-end photos (see below). Maybe there is a need to look at the fish's condition and this is possible by observing scale damage and colour of the fish (colouration determines the length of time a salmonid has been in freshwater). This allows exciting scope for further investigation in the future. In the meantime, we now have very precise data on fish movement within Tongland ladder. The total number of salmon counted ascending the



A healthy hen salmon from July 2007.

Dee in 2007 was 1048. Watch this space for future trends and discoveries about the Dee salmonid populations!!



The tail of a salmon with thin wrist and inward curvature.

## PIT Tagging

The GFT are continuing the Passive Integrated Transponder (PIT) tagging project on the Kirkcudbrightshire Dee this year. The aim is to track the movements of adult salmon through Tongland fish ladder to assess any areas where they have problems. Fish are caught in a specially designed fish trap in the lower river, tagged (see below), and then released to continue upstream. 12 PIT detectors are strategically placed at intervals throughout the fish ladder, which is situated about 1 mile upstream from the trap. Some good data was obtained from tagged fish in 2007 and we hope this trend continues. GFT are working with Scot-tish Power, the Dee DSFB and FRS on this important project.



## ERDF

Since 2002 the GFT have received European funding (from the European Regional Development Fund (ERDF)) to pay for 50% of a Fishery Development Officer to cover Dumfries & Galloway. Catriona Stevenson filled this post until the start of 2007 before leaving to work abroad. Additional funding was provided for a year so the GFT is continuing to provide a Fishery Development Service locally. The service is aimed at fishery owners, both running and stillwater, and provides advice and assistance on a wide range of management such as fish stocking, weed management, constructing disabled facilities, pond construction, promotion/marketing, fish grid design, water testing and predator management.



## Sulwath Connections is go!



In autumn 2007 the GFT, Heritage Lottery Fund (HLF) and Scottish Natural Heritage funded project was at last given the green light to commence! Many years of hard work and planning for the three year £185,000 project which covers six rivers, has paid off — we are now in the early implementation stage! A range of habitat enhancement and restoration works are planned for the Piltanton Burn, Rivers Luce, Cree, Water of Fleet, Kirkcudbrightshire Dee and Urr. Already some works have been carried out on the Cree — including high pruning of overhanging branches, conifer felling near water-courses and brash removal (pictured below). Some fences are to be imminently erected in areas where GFT habitat surveys have highlighted that the exclusion of livestock would benefit the riparian zone. Rock addition, cleaning of spawning gravels and tree planting are also planned to take place in the near future. The GFT are looking forward to a busy year with much work taking place on the ground, as well as completing some 'Salmon in the Classroom' projects with local Primary Schools.



This year also marks the start of the Esk and Liddle HLF project which GFT are overseeing on the Border Esk. Much work has again been planned for across the Border Esk catchment, including the easing of passage over barriers for fish, tree planting and bankside fencing. A busy year for the Trust lies ahead!

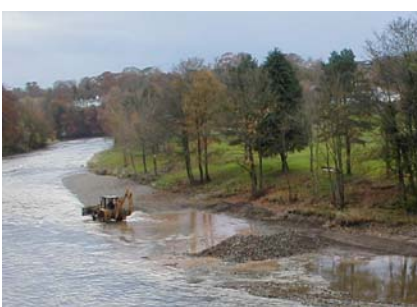


## Fisheries Management Plans

The GFT are working very hard at the moment writing Fisheries Management Plans (FMPs) for the Water of App, Piltanton Burn, River Luce, River Bladnoch, River Cree, River Fleet, Kirkcudbrightshire Dee and the River Urr. These are being written in conjunction with RAFTS and with some financial assistance from FRS (Scottish Government). These plans will demonstrate that Fisheries and Rivers Trusts around Scotland can provide the necessary level of information and expertise required to adequately manage Scotland's rivers and freshwater fish resources. A key part of the FMPs is the inclusion of 'all species' fisheries management. Although much work is done by GFT on migratory salmonids, we already carry out various work on all fish species across Galloway (e.g. shad, lampreys, eels, sparling, pike) as it is part of our remit. GFT will be writing these plans with each DSFB and also undertaking wider consultation through the summer. The production of the FMPs across Scotland will help harmonise current fisheries management and ensure that Scotland's rivers are all managed sustainably for the future.

## Life after CAR!

Many fishery management organisations were concerned when the Controlled Activities Regulations (CAR) were implemented in 2006. It was feared that, although there were certain instream activities which would benefit from further control (see photo of winter gravel extraction below), the new legislation would impact upon important habitat restoration and enhancement projects. The concerns were that these schemes would be delayed by unnecessary paperwork, increased costs and potentially not be permitted. GFT is pleased to report that from our experiences in Galloway there has been no great problems at all and SEPA have taken a very sensible and pragmatic view when implementing these regulations. Charges are not required under "environmental service" which covers environmental restoration projects. GFT are presently involved in a large number of habitat restoration projects across the region (HLF project on 6 Galloway rivers / Border Esk and Bladnoch CASS) and SEPA quickly comment and have permitted all requested works to date. SEPA have also consulted closely with GFT on numerous other construction and repair works that they are regulating now. This has included various bridge re-



pairs / replacements, pipe laying across watercourses, pond cleaning / construction, burn re-alignment, house building and road improvement schemes. GFT input varies on each project but includes commenting on plans, providing fish data to highlight sensitivities, performing fish rescues, undertaking electrofishing surveys and considering fish access issues.



## Solway Sea Trout

There continues to be concerns relating to the apparent decline in sea trout stocks around the Solway rivers. Similar declines are being reported around the UK and the reasons for recent falling catches is not clear. There appeared to be some improvement locally in 2007 with slightly improved catches and good numbers caught for broodstock on the Fleet in September.

## Evening of Genetics!

Fish genetics is a fascinating and rapidly changing subject and tool for fisheries management. The potential uses of genetic information are vast. Expert speakers have been arranged to speak on the evening of the 14th March 2008 in Gatehouse of Fleet. All are welcome, please contact GFT for time and venue.

## River Urr Habitat Survey

The full catchment habitat survey has now been completed and written up by GFT. As the tributaries had not all been walked previously by GFT the survey gives us a great insight into the current status of all the main burns and their suitability for the various life stages of fish. Information gained in the survey will not only greatly assist in prioritising habitat works on the ground but it will help facilitate the production of the Urr Fisheries Management Plan. Copies of the report have been distributed to interested parties on the Urr.

## Hatchery Update

This year was very successful in terms of egg collection for the local hatcheries. GFT's Gibb Hatchery is full, with salmon and sea trout eggs from the Bladnoch, Cree and Fleet. The hatchery is currently holding 115,000 salmon eggs from the Bladnoch, over 180,000 salmon eggs from the Cree, 25,000 salmon eggs from the Fleet and 38,000 sea trout eggs from the Fleet. The Dee have had their most successful year since the completion of their new hatchery, holding around 120,000 salmon eggs. The Dalbeattie Angling Association on the Urr have also done very well, managing to collect around 44,000 salmon eggs for the Urr hatchery. Numbers have also fared well on the Luce, with around 95,000 salmon eggs having been collected. As weather has been fairly mild this winter (some of you may disagree!) the eggs are developing relatively steadily with the first salmon (spawned from Minnoch salmon) having hatched already in the Gibb hatchery. In order to minimise potential problems of limited water in the hatchery later in the year, the GFT aim to carry out some planting of eyed ova, as well as the stocking of fed fry this year.



## In Brief.....

- Salmon in the Classroom project is being run in 7 Galloway Primary Schools in 2008.
- The 5 year Kirkcudbrightshire Dee Salmon Management Plan has recently been written by GFT and The Carnie Consultancy. Funded by Scottish Power.
- GFT undertook Wild Trout Trust advisory visits on Lochnaw (to return the trout fishery), Piltanton Burn and Moneypool Burn (both to improve sea trout stocks).
- GFT organised an evening seminar in Newton Stewart on 3rd October discussing the threat from *Gyrodactylus salaris* and necessary precautions to protect Scotland. Guest speaker was Charles Allan from FRS.
- A very successful Dinner Auction was held at Lochinch Castle in September 2007. Approximately £30,000 will be shared by GFT, Galloway Talking Newspapers and Marie Curie Cancer Care. The event was sponsored by Scottish Power.
- GFT now sit on the South Scotland Regional Forestry Forum where issues such as acidification are examined.
- The [www.fishgalloway.co.uk](http://www.fishgalloway.co.uk) angling website continues to grow and will shortly be offering a range of trout and coarse fish angling across Galloway.
- Callum Sinclair, a former GFT senior biologist, is now the Director of River and Fisheries Trusts of Scotland (RAFTS).
- GFT continue to input on various proposed wind farms across Galloway and in 2007 have completed fish surveys for 6 proposals on the Luce, Bladnoch, Cree, Dee, Annan and Urr.
- Following concerns from some of the lower Cree proprietors of a lack of resident salmon in their waters, John Webb (AST biologist) undertook a redd survey of the spawning beds in the lower river where he found extensive spawning had occurred. A detailed early season electrofishing survey will examine the survival of eggs to fry and fry dispersal rates.
- Construction of the offshore Robin Rigg Wind Farm in the Solway Firth started in 2007. Monitoring is organised by GFT for salmon, sea trout, shad, sparring and sea lamprey.
- GFT monitor the fish stocks for the Glendoe Hydro Scheme (River Ness) which is the largest hydro scheme built for 50 years.
- GFT took part in a TV documentary about the Cree.
- Bladnoch Angling Competition was well attended. 3 salmon and numerous pike were caught.
- GFT responded to the important consultation 'A strategic framework for Scottish freshwater fisheries'.
- The new SNH Species Action Framework sets out a strategic approach to species management in Scotland. There are 32 species identified for the focus of new action and importantly mink and American signal crayfish are included under the invasive non-native species list.
- GFT continues to sit on and play a key role in the Solway-Tweed Area Advisory Group for the Water Framework Directive.
- Dumfries & Galloway Wildlife Festival will run from 21st March to 13th April 2008. GFT are hosting two hatchery open days (28/3/08 & 7/4/08).
- Bank protection work on the upper Water of Minnoch was completed to mend excessive erosion scar. Work completed in conjunction with Forestry Commission (Scotland) in this particularly important spawning area.

To find out about GFT visit!  
[www.gallowayfisheriestrust.org](http://www.gallowayfisheriestrust.org)



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