National Trout and Grayling Strategy

2012 Newsletter

Introduction

In this year's newsletter we would like to give you a flavour of the range of work we and some of our partners have been involved with over the previous year, to protect and improve trout and grayling stocks and fisheries.

We aim to:

" conserve and improve wild stocks of trout, sea trout, char and grayling, while enhancing the environment for all types of fisheries for these species in England and Wales" and " to enhance the social and economic benefits derived from these fisheries."

Full details of the Strategy and our previous newsletters can be found at the following link: Environment Agency - National trout and Grayling Strategy. If you would like further information on any of the articles in this newsletter or share your views with us on the Strategy then please email us at trout@environment-agency.gov.uk **.**

Conserving and improving fish stocks - working with existing resources

Rossett and Gresford flyfishers GO WILD….

The Rossett & Gresford Flyfishers Club has been fishing the River Alyn since 1906. The Alyn, a major tributary of the Welsh Dee, ought to be a productive limestone trout fishery, but the ecology has been, and sadly still is, threatened by all the usual suspects: sewage treatment effluent, weirs, overgrazing, habitat loss, industrial and diffuse agricultural pollution and severe reduction of flow due to swallow holes in its upper reaches.

Minor riparian works have been undertaken for a number of years, mainly to make the river fit to fish.

In 2002, the Club sought advice from the Wild Trout Trust, which resulted in the preparation of short and long-term work plans for the overall environmental improvement of the fishery. The Club ceased heavy stocking of ‘takeable’ trout and instituted a limited regime of yearlings; no more than 250 fish per season over the 2.5 miles of the fishery.

An example of bank improvement works

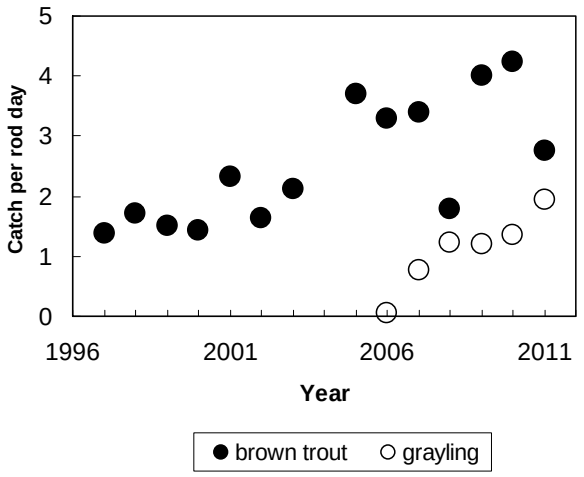
Club members have planted trees and shrubs to increase shade, created islands of willow and planted ranunculus to provide cover for fish. They have pollarded large and over-shading trees and regularly harvest the new willow growth for replanting.

The Club’s volunteer and ageing work force have used existing timber, mainly crack willows and alder, to restore degraded bank habitat. Access for hard stone filling is impractical, so they have used groins of timber, hinged trees and large woody debris to create riffles and pools. The sinuosity of lengths of river canalised when adjacent road works had cut out natural meanders has caused silt to be trapped in backwaters, the channel narrowed and new vegetation established.

New bank habitat for wild brownies.

The fish appear to be rewarding the anglers for their efforts. Brown trout catches are improving, and in 2006 grayling appeared in club waters, and are breeding, for the first time in living memory. Last year the new arrivals accounted for 40% of the catch. Encouraged by the fruits of their labour, the committee voted in 2012 to cease stocking for a three-year trial period.

"Combined with barbless hooks and voluntary catch-and-release, the members hope that their habitat work has helped to create a sustainable wild trout fishery" - Howard Stevens, Club Chairman.



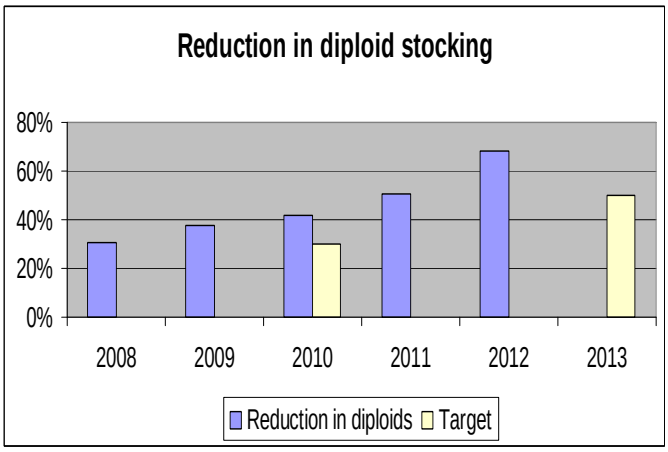
Trout and grayling catches

The 17th century weir at the lower end of the fishery now has a new fish pass that should improve the movement of fish through the Alyn catchment. The high waters of the last winter and unusually, June and July of 2012, when the levels rose 8ft, have provided the work force with additional problems. In-stream structures have been damaged and large amounts of the substrate have moved. The energy exerted by this river makes habitat improvement ever problematical and should keep the club members on their toes for years to come. Fortunately each major flood provides, not only the disappointment of work being destroyed, but a learning process of how to prevent it happening again**. Like angling itself, habitat work may take a lifetime to learn but the time spent learning, is never wasted and always enjoyable.**

Howard Stevens - Chairman, Rossett and Gresford Flyfishers.

Conserving and improving wild trout by switching to triploid stocking

One element of the Environment Agency Strategy is to discontinue the stocking of fertile farm strain (diploid) brown trout into rivers and other unenclosed waters by 2015. From then on, stocking should be with non-fertile (female triploid) farm reared brown trout or the progeny of local brood-stock reared under a suitable regime. Up until 2015, we are encouraging a voluntary switch to female triploid brown trout stocking with the aim of seeing 30% fewer fertile farm strain brown stocked by 2010 and 50% fewer by 2013.



We have been analysing the trends in stocking over the last five years. Our stocking records show that we have achieved the target of 30% fewer diploid trout stocked by 2010. In conjunction with this decrease in diploid stocking there has been an overall increase in the number of triploids being stocked. The data from this year's stockings is indicating that we have already met our 2013 objective of achieving a voluntary 50% reduction in diploid brown trout being stocked.

Conserving and improving wild trout by habitat creation.

The Environment Agency works with a variety of partner organisations to improve fish populations. Several examples from this year are highlighted below. If you would like further details on any of the projects mentioned, please email trout@environment-agency.gov.uk .

Gravel makes spawning riffles in the Churn

We have created a new brown trout spawning riffle on the River Churn, North Cerney, Gloucestershire. At South Cerney, on the same river, we used 7.5 tons of gravel to drown an existing weir which was a barrier to fish migration, and create a spawning riffle for brown trout.

Gravel introduced to Churn

Woody debris helps clean gravel in the Loddon.

We have completed the first phase of a package of works to address poor habitat on the River Loddon at Old Basing, to the east of Basingstoke.. This includes the installation of small woody debris structures along the channel bed. By increasing flows and deflecting sediments, these structures will improve the reach by creating areas of clean gravels suitable for trout spawning .

Woody debris structure

"Woody debris and fallen trees are important natural features of all watercourses. They provide habitat to fish, insects and birds"

Habitat improvement is not always easy but it is sustainable - and there is good practice and expertise available - just ask your local fisheries contact.

Answering the age old question: - what makes a trout become a sea trout?

Some rivers are well known for producing good runs of sea trout, whereas trout populations in other rivers are mainly resident brown trout. As part of the Celtic Sea Trout Project, we are investigating the reasons behind this, and developing a model which can be used to predict sea trout production in a given catchment based on physical characteristics such as river gradient, altitude and length.

Stirling work on triploid trout

We are funding a PhD at the University of Stirling to carry out research into the farm production of triploid brown trout, and aspects of their behaviour. The student, Andrew Preston, is currently looking at the feeding behaviour of triploid trout, and comparing that with farm bred diploid fish.

The work is taking place at the University of Glasgow research facility at Rowardennan, near Loch Lomond. Andrew is using the excellent 'flume' facilities to observe the behaviour of pairs of triploid and diploid brown trout when floating food is introduced to a section of flume. The research will help fish farmers to develop the optimal rearing conditions for producing triploid brown trout for restocking.

Triploid trout caught on the Itchen

from the Wild Trout Trust….

Is habitat work effective?

Paul Gaskell, of the Wild Trout Trust, has been reading up on scientific studies which looked at whether habitat improvements for trout actually work.

There are a large number of studies which have examined whether a particular habitat will provide the optimum environment for each of the life stages of trout – spawning, juveniles and adults. This means that enough data exists to be able to make predictions about the effect of changes on trout populations.

For spawning, trout need gravel that is not clogged by fine sediment (which reduces the oxygen available for eggs) or contains fine clay particles which can coat the eggs. Larger gravel may provide better flow but allows bullheads to enter redds and eat eggs; and larger gravel is harder to move by spawning fish. Additionally, cover from trees or in deeper pools is needed for spawning adults.

Juvenile trout need cover to reduce predation, but 'foraging habitat' – where the young trout can find food – is also necessary. Juvenile trout put a lot of effort into holding their position in the current and fighting for territory, so submerged cover such as tree roots or coarse woody debris will be of benefit.

It has long been known that adult trout need cover (e.g. from bankside trees or bushes) and pools to thrive. The overwinter survival of adults depends on the presence of such cover within a pool habitat.

The study looked at the potential for habitat improvement to assist in the recovery of trout populations. The two main conclusions were:

- pollution, major land use or other 'landscape scale' impacts over-ride any benefits from localised habitat improvements and prevent recovery;

- failure to identify and address the correct habitat bottleneck and/or over-riding impact results in failure to improve trout populations.

Some of the studies suggested that habitat improvements, such as creating in-stream structures, is not merited where the impacts from pollution or damaging land use regimes cannot be addressed.

However, there are many well designed habitat restoration projects that correctly identify and address physical habitat bottlenecks that show significant improvements to salmonid fish populations over both short (1-2 years) and long timescales (>20 years).

In summary, successful habitat restoration depends upon:

- Accurate diagnosis of conditions (and causal factors) that are adversely affecting habitat

- Absence or removal of large scale impacts e.g. pollution
- Significant changes to physical habitat to within the range of ideal conditions

Book review

Trout in Dirty Places: 50 Rivers to Flyfish for Trout and Grayling in the UK's Town and City Centres - by Theo Pike

Shaun Leonard, Director of the Wild Trout Trust, reviews Theo Pike's latest book.

"Trout in Dirty Places is a great read and much more than just a fishing book. Alongside fishing tips, seasons and permits and how to get to each of the rivers, it takes the reader on a journey along 50 urban rivers in the UK. He lays out the history that wrecked them and the people, organisations and circumstances that are helping to restore the rivers and their trout.

Take for example, Glasgow's River Kelvin, with its history of flour production, cotton mills, alum, paper, snuff, malt, nails and pottery, that would variously run blue, green and red. Now, with the involvement of a host of local groups, the river's transformation is indicated by the presence of iconic species like trout and otter. Its dirty legacy only remains in the names of its pools, such as the 'Sanitary Towel' and the 'Petrol Pool'!

Illustrated by stunning eye-catching photographs throughout, Theo Pike who is the chairman of the ground-breaking - and river mending - Wandle Trust and wild trout conservationist, has produced an excellent read, full of interesting facts and anecdotes.

I recommend that you add Trout in Dirty Places to your bookshelf and with every purchase a donation will be given to the Wild Trout Trust and the Grayling Society".

Published by Merlin Unwin Books www.merlinunwin.co.uk 253 pp. Hardback £20.

The views expressed in the review are those of the reviewer. This review previously appeared in 'FISH', the magazine of the Institute of Fisheries Management.

Please forward this newsletter to anyone you think may be interested. They can subscribe to receive future issues by emailing trout@environment-agency.gov.uk .

Perfect…..a wild brown trout (photo courtesy A Worthington).