

The Tweed Trout & Grayling Initiative

Federation of
Borders
Angling
Associations



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Fly Life Surveys

In 2007 the Tweed Trout & Grayling Initiative (TTGI) has continued its studies into the fly life of the Tweed catchment. Information on Tweed fly life has been collected from the angling associations waters by volunteers from the 13 clubs involved in the TTGI and by the TTGI biologist, who has been repeating a Tweed fly life study carried out in 1974 by Dr Derek Mills and Barbara Smith.

As the study is on-going the fly life data has yet to be fully analysed, but there already seems to be some interesting results coming from the information gathered. Whilst there have been no obvious declines in the abundance of Tweed fly life over the last 33 years, there have been some considerable changes.

Some of the flies that have been particularly successful over this period include the mayfly species *Heptagenia sulphurea* (the Yellow May dun) and the Caddis Fly *Brachycentrus subnubilus* (the Grannom).

In 1974 the Yellow May dun was only found in large numbers in the lower Tweed and, as a result, was only found in very small numbers upstream of Coldstream. In 2006 the Yellow May dun was found as far



The nymph of the Yellow May dun

up the River Tweed as Stobo and was found in large numbers throughout the lower and middle Tweed. As a lowland mayfly the success of this species is thought to be attributable to the increasing average river temperatures resulting from climate change.

The Grannom on the other hand poses a bit of a mystery; anecdotal accounts suggest that it was common in the upper and middle Tweed during the early and mid 20th century. The Grannom then seemed to disappear from the river in the 1970s (or so the 1974 fly life survey suggested). It is now common again in the upper Tweed with numbers peaking around the Stobo area and slowly reducing further down-stream, with small numbers being found as far down as Kelso.



The larvae of the Grannom

Some of the flies which appear to have been less successful over the last 33 years include non-biting midge larva/pupae (Bloodworms/Buzzers) and mayflies of the genus *Caenis* (Anglers Curse or White Midge). Unfortunately the reasons for these declines are not obvious. As both these groups of river flies show a preference for silt their decline could be attributed to a number of factors:- the river being cleaner; the river having a greater ability to remove silt from

the riverbed (due, perhaps, to changes in flows); or due to reduced silt input into the river, it may however, be due to an entirely unrelated factor (e.g. being out-competed by the river flies that are increasing in number).

One thing that is almost certain is that if the fly life has changed, both in species composition and numbers, as well as possibly in hatching time, the fish will have changed their behaviour to suit these changes. Exactly how the fish behaviour has changed is unfortunately far harder to assess than the changes in the fly life.

Electro-fishing

In Summer 2006 the TTGI electro-fished a large number of the trout spawning burns of the Upper Tweed in an attempt to assess and monitor juvenile trout numbers. The burns that were visited had been previously electro-fished in 1995 which allowed comparisons to be made. When fully analysed, the results of the electro-fishing showed that the overall trout fry numbers (trout less than one year old) were as good as, if not better, than those recorded in 1995. This suggests that either there are as many, if not more, adult trout spawning in the burns of the Upper Tweed or that there are at least still enough adults to fully stock the burns with fry. The trout parr numbers (juvenile trout over one year old) however were well below those recorded in 1995. Tweed Foundation electro-fishing has shown there to be large variations in trout parr survival, probably due to natural factors, which could suggest that the low parr numbers were due to the very low water levels and high water temperatures during summer 2006. However, although the low trout parr numbers were probably due to natural fluctuations in parr survival we'll be keeping a close eye on the juvenile fish stocks of the Upper Tweed, just in case.

In July 2007 our electro-fishing moves on to the trout spawning burns of the River Teviot and its tributaries. Again, the TTGI will be visiting burns that have been sampled by the Tweed Foundation in previous years which should allow good comparisons between present juvenile trout populations and those of the 1990s.

If you live near the River Teviot, or any of its tributaries, and would like to see what's in your local trout spawning burns, contact Kenny Galt to arrange a weekday or weekend afternoon's electro-fishing. Contact details are shown at the end of this newsletter.

Note: electro-fishing is a method of sampling juvenile fish numbers. It involves using a small generator (which often comes in the form of a portable backpack) which passes an electric current into the water. The current stimulates the muscles of any fish within the electric field and makes them swim towards a hand-held electrode where the fish are scooped up by nets. All fish captured during electro-fishing are returned, unharmed, to the water.



An electro-fishing sampling site on the Hopecarton Burn and, below, the trout captured during a three minute electro-fishing sample



Collecting Scales from Trout & Grayling

As part of a project being undertaken by the TTGI it is hoped that anglers can be recruited to collect scales from the trout and grayling they catch.

Reading scales from trout, grayling and salmon is a vital tool in fisheries management. Each scale contains a record of fish growth that is similar to tree rings (but is much more complicated). By studying the growth information on scales it is possible to work out fish age (by noting the number of bands of slower winter growth and the date of capture); growth rates (by comparing the length of the fish to the age); whether or not the fish has been to sea or not (fast growth is recorded on fish that have been to sea) and in some cases the number of times the fish has spawned (by counting the “spawning marks” on the scales of fish that have spawned).

On the Tweed there is the additional benefit of having information from trout scale studies that were carried out in the 1970s. The Initiative aims to compare modern trout growth rates with the growth rates recorded in the 70s. This will provide useful information on past and present food supplies and competition for food.

If you would like to help the Initiative by collecting scales from wild Brown Trout or European Grayling caught within the Tweed system the TTGI can show you how to safely collect scales, and provide packets to keep the scales in. For more information contact us.

Trout Spawning Burns Surveys



This bridge apron, which was found on a Jed Water spawning burn, prevents spawning trout from accessing the upper reaches of the burn. As a result, the burn upstream of the bridge apron doesn't produce trout which will eventually fall back and "stock" the main rivers.

One of the most important aspects of the TTGI is the trout spawning burns survey. Although Tweed trout spawning burns are generally in good condition (especially compared to some other rivers in the UK) they are far from perfect and, as such, working to restore trout spawning burns to their natural condition (or as close to their natural condition as we can get) has the potential to significantly increase the number of both Brown and Sea Trout within the Tweed catchment.

At present the TTGI biologist and a few angling association volunteers are carrying out trout spawning burns surveys whenever they can. Unfortunately their progress at present is slow as there are literally hundreds, if not thousands, of trout spawning burns within the Tweed catchment. If you would like to help the TTGI by accompanying the TTGI biologist on a trout spawning burn survey in your local area, please contact us.

The TTGI needs information on as many trout spawning burns as possible so that it can concentrate

effort, and carry out habitat works, in the places where it will make the most difference.

Help the TTGI by Going Fishing!

You can help the Tweed Trout & Grayling Initiative by going fishing! You can:-

- Fill in one of our catch log books. Over 1,000 were given out with season tickets for 13 local angling associations this year. If you didn't receive one, or have lost your log book, another can be provided on request.
- Join one of our angling surveys. In an attempt to gain more information on trout & grayling catches, sizes, and to collect trout & grayling scales, the TTGI will be approaching the 13 angling associations involved in the Initiative to organise fishing surveys on association waters. The surveys, which would run on weekday evenings from around 7pm to 10pm (dependent on the time of year), would involve getting six to ten anglers onto a half mile (approximately) stretch of angling association water. The anglers would be put in pairs, given keep nets and spread out over the stretch of water and would put any trout or grayling they caught into the keep nets. During the evening the TTGI biologist will walk up and down the stretch of water recording the fish in the keep nets, taking scale samples and talking to the participants. The anglers and the biologist would then meet up at a given location at the end of the evening's fishing session.



A lot of information can be taken from angler catches and scale samples can easily be taken from individual fish

If you are a member of one of the angling associations involved in the TTGI (the angling associations are listed below) and are interested in being involved in one of our fishing surveys, please e-mail Kenny Galt at:- kgalt@tweedfoundation.org.uk.

Most, if not all, of the angling associations involved in the TTGI will be contacted over the next month to organise a date for a fishing survey.

The Angling Associations involved in the TTGI include:-

Berwick & District Angling Association, Coldstream & District Angling Association, Earlston Angling Association, Gala Angling Association, Hawick Angling Club, Jedforest Angling Association, Kelso Angling Association, Melrose & District Angling Association, Peeblesshire Trout Fishing Association, Selkirk & District Angling Association, St Boswells, Newtown & District Angling Association, Whiteadder Angling Association.

Contact Details

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