



## Tweed Trout & Grayling Initiative Newsletter

### No. 13 – Spring 2015. Middle Tweed

#### 2014 Middle Tweed Brown Trout Catch Summary

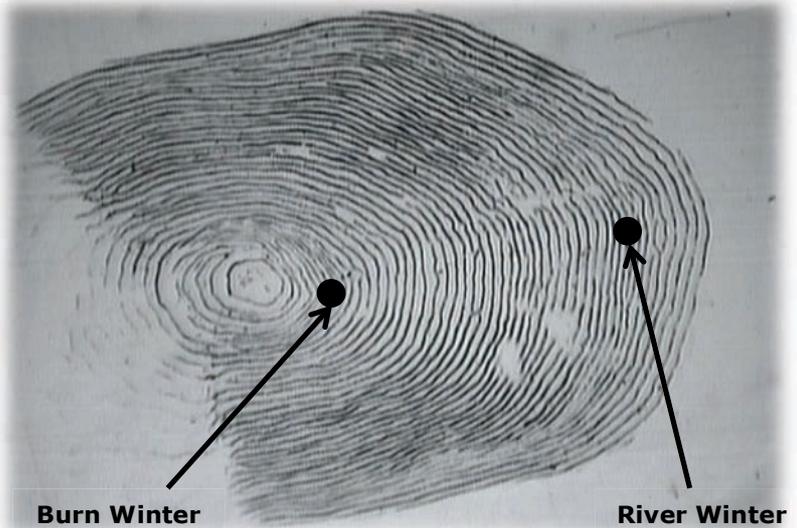


**A 3lb Brown trout from Middle Mertoun – catches of trout of this size were average during 2014. However catches of smaller "oversize" trout were well above average.**

A total of 16 anglers submitted catch returns for the Middle Tweed for 2014, covering 203 fishing trips and 634 hours of angling effort. The average catch rate of oversize (10" and over) Brown trout was the highest recorded during the nine years that the TTGI has been collecting catch records and was 47% higher than the modern average. The catch rate of undersize trout (under 10") was also above average by 7%. However, unlike the oversize catch, previous years have recorded better catches of undersize trout. The monthly variation in catch rates shows that the good average catch rate for 2014 was in large part due to an exceptional (by modern standards) May and early June. Most other months also produced above average catch rates (bar September), but not to the same extent as May (for the following months this may have been, at least partly, due to prolonged low flow periods). Interestingly, the improved catches of oversize trout were not seen, to the same extent, across all size classes, with the increased catches being mostly as a result of a big increase in the number of 10" to 14" fish (although some of these were up to 16" in length in the second half of the season as trout grow quickly during the fishing season). The increase in this size range of trout is explained in more detail on the right. The release rate of oversize Brown trout during 2014 was 98%.

#### Brown Trout Scale Collection

Last year we appealed to Tweed anglers to collect scale samples from the Brown trout they catch. The purpose of this was to collect tissue samples that could be sent away to have the sex of the fish genetically identified (an important part of understanding the relationship between Sea-trout and Brown trout). Trout scales also contain a record of the fish's growth with scales being a bit like tree rings, but instead of having one ring per year these are multiple, with wide spacing between rings indicating fast growth (summer) and narrow spacing indicating slower winter growth (as such trout are aged by the number of winters they've survived). As a result, the scale samples collected by volunteers allowed us to age the 10" to 14" trout which were the main part of the improved catches in 2014. The majority of these trout shared one thing in common; they had just survived their first winter (2013/2014) in the main stem of the Tweed (Brown trout start off in small spawning burns then migrate into the larger channels after one or two winters). At present it looks as though particularly good survival of 1<sup>st</sup> river winter trout over the winter of 2013/2014 was the reason for the good catches in 2014 and this is backed up by reports of very good catches of 1<sup>st</sup> winter Grayling (Grayling are spawned in the river so don't have a burn life). However, further data is required (and is currently being sought) before we can say more confidently why this is the case.



**A scale from an 11½" Lower Tweed trout caught in May 2014. Note the two areas of narrower banding indicating slower winter growth (marked with black dots). As such, this trout is two winters old. Also note the much wider banding after the 1<sup>st</sup> burn winter (compared to before) indicating very fast growth. This is as a result of the trout dropping out of its spawning burn and into the main stem of the Tweed where food is more readily available.**



## Tweed Foundation Website

The Tweed Foundation has a new website. It's bigger, better and easier to use. Visit:-

[www.tweedfoundation.org.uk](http://www.tweedfoundation.org.uk)

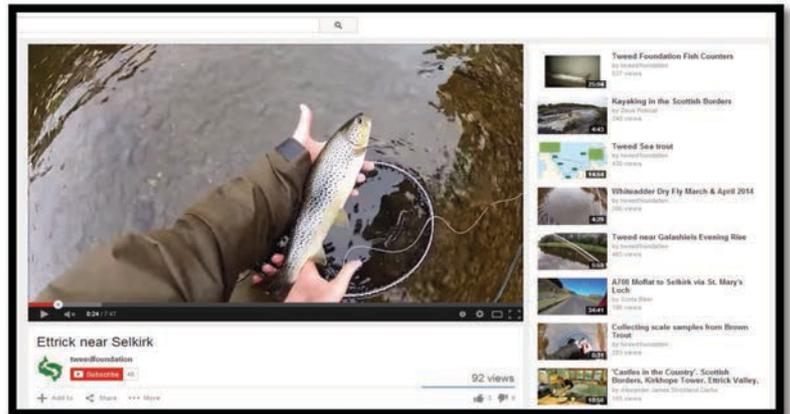
## River Tweed News

For the latest information and blogs on the Tweed Foundation, Tweed Trout & Grayling Initiative, the River Tweed fishery and related matters visit River Tweed News:-

[www.rivertweed.org.uk](http://www.rivertweed.org.uk)

## The Tweed Foundation on YouTube

Either click on the "Resources" button on our website or search for "Tweed Foundation" on YouTube. The page includes clips of presentations given by the Foundation; educational and promotional clips; film of fishing and other activities associated with the River Tweed fishery.



## Tweed Stable Isotope Study

In 2012, 2013 and 2014 the TTGI/Tweed Foundation, in collaboration with Napier University, took samples of trout fry from a number of Tweed trout spawning burns to map the distribution of female Brown trout and female Sea-trout spawning within the system. It is possible to do this because much of the mass of a young trout fry has come from the egg it developed from, and eggs produced in different environments (freshwater or marine) have different ratios of Stable Isotopes of Nitrogen and Carbon relating to their environment, therefore allowing the maternal parent of young trout fry to be identified.

The first of the results have started coming through with the rest to follow over the next year or two and should represent a significant milestone. Being able to map the areas of Sea-trout and Brown trout spawning within parts of the Tweed will be a big step forward in our understanding of the relationship between Brown trout and Sea-trout; how Brown trout production varies throughout the catchment and what each area's type of trout production contributes to the Brown trout rod catch.



***The Glentress Water in the Upper Tweed (Leithen Water tributary). Stable Isotope analysis has shown that most of the juvenile trout in the Glentress are the offspring of female Brown trout. This is despite Sea-trout being recorded much further up the Tweed. Will these trout contribute to Middle Tweed Brown trout catches? The TTGI hopes to answer this by looking at the sex ratios of Middle Tweed Brown trout (currently in progress) and through tagging studies (commencing over the next few years).***