



the River

News from Tweed Fisheries Management: The River Tweed Commission & The Tweed Foundation

Rainfall gets fish moving

In contrast to September, rainfall at the beginning and end of the month throughout the catchment has helped Salmon and Trout up into the tributaries of the Tweed. Biologists at The Tweed Foundation have been keeping a close eye on the fish counters which are located on the Ettrick, Gala and Whiteadder. Up to the 20th October, over 3,000 fish have been counted up the Ettrick and over 2,000 up the Gala Water. Using the video camera installed with each counter, we then identify fish as Salmon or Trout to produce annual totals for each species.

How do Tweed fish counters work?

The three Tweed fish counters are Vaki infrared scanners, mounted in a stainless steel box that controls the position of the fish, allowing video clips to be taken for species identification. Out of the limited range of fish counters available, the Vaki counter produces the best quality of data, but it is limited to operation in narrow gaps found in fish passes.

The first counter was installed on the Ettrick in 1998. With the current limitations of technology at the time, there was no camera recording system and the counter was powered by a car battery that had to be replaced every week.

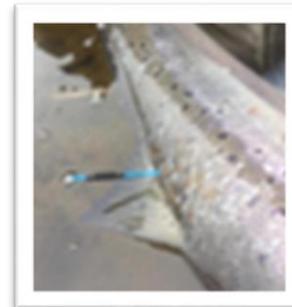


The first scanner in 1998

Progressive improvements have been made to our three counting systems to improve the quality of the videos that are recorded and the software that allows us to check the counters are working properly. We now have remote connection from the office which allows us to check the counters on a daily basis.

With prolonged periods of low water and high temperatures from late Spring to early Autumn becoming more likely due to climate change, rod catches will become less representative of Salmon abundance as fish are more difficult to catch in these conditions. Our fish counters are therefore essential for providing an objective assessment of fish stocks.

Our first detection of floy tagged Salmon carrying a PIT tag



In 2020 and 2021, boatmen have been floy tagging Salmon to see how many are recaptured. An interesting trial in 2021 has been the attachment of PIT tags to the floy tag to see if any of the Salmon floy tagged in the main river go up the Gala Water where we have a detection antenna for these tags. One fish has been detected so far, which was caught on the 29th May at Bemersyde and detected on the 7th October going up the Gala Water. As this fish was caught on the boundary between Spring and Summer, we cannot say whether this fish is a true early Springer or an early Summer Salmon.

Fish rescues

Every year, authorised river works take place throughout the catchment that typically involve engineering activities to stabilise eroding banks or modify existing structures such as bridges or culverts. On a larger scale, remeandering work carried out by The Tweed Forum requires fish in existing channels to be relocated before remeandered sections are opened up.

Through a good working relationship with SEPA and Nature Scot, it has become standard practice to consider fish rescues in every application, with numerous fish rescues taking place every year from the beginning of May through to the end of September. As fish are typically hiding under rocks and the riverbank, it is very easy to underestimate the number of fish that are present. Many hundreds of juvenile Salmon and Trout are removed each year from affected areas using electro-fishing equipment and relocated nearby.

There are also incidences of fish being stranded after flooding, with several incidence that have already occurred on the Leader Water in October this year. In both cases, an efficient response has allowed thousands of juvenile Salmon and Trout to be rescued and relocated.



A site on the Leader Water which breached its banks in October this year. Emergency bank protection work was work was carried out, restoring the river to its original course. Over 1,000 Salmon and Trout were rescued from the flooded field.

Sampling adult Salmon

With major changes in run timing of Adult Salmon over the last ten years, from most fish returning in Autumn to now returning in early Summer, there are also changes in the sizes and ages of fish. Analysis from two key beats on the Lower and Middle Tweed shows that the average size of fish is now larger and more of the fish spend two years at sea rather than one.

Ageing fish is carried out by examining scales removed from fish below the dorsal fin under a microscope, allowing us to determine river age, number of winters at sea, growth and any previous spawning. Due to increasing catch and release, the number of samples we receive has been decreasing, making it harder for us to analyse changes in the ages of Tweed Salmon and Sea Trout.



Netting at Paxton

With funding from Marine Scotland Science, we participated in a national sampling programme for adult Salmon this year, with scale samples and data on length and weight collected from our monitoring stations at Paxton and from fish killed by rod fisheries. 109 Salmon were sampled this year, which will provide a much more representative assessment of age structure than in recent years.