

Spey Sea Trout – Scales Point to Change!

In our May 2008 briefing we reported on the Moray Firth Sea Trout Project which is a three year collaborative project combining the efforts of District Salmon Fisheries Boards, Fisheries Trusts and Angling Associations around the Moray Firth to address the decline in sea trout stocks. The River Spey supports significant sea trout stocks and is often in the top three sea trout rivers in Scotland. However, recent catches have been considerably below average. The Spey Fishery Board has fully supported this initiative since improving sea trout stocks in the river is a key management target.

Data on the Spey sea trout catch has been collected since 1952 but to date little additional work on understanding the life history of this important fish has been completed. A joint study between the Spey Foundation and the Moray Firth Sea Trout Project, part-funded by Scottish Government through Rivers and Fisheries Trusts, Scotland (RAFTS), was initiated to explore the changes in the life history of River Spey sea trout across three historical scale collections.

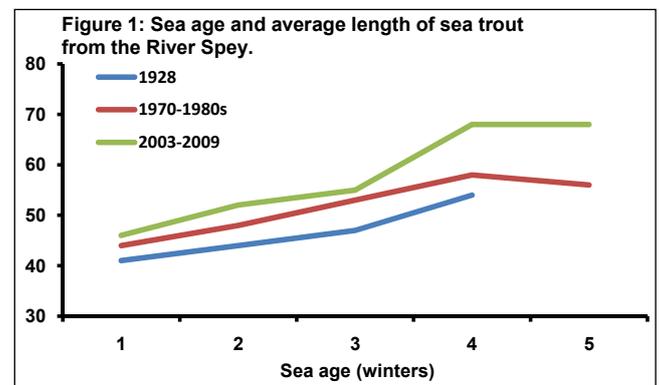
Dr Andy Walker (formerly Fisheries Research Services, Pitlochry) has compared the results obtained by G. H. Nall (Fishery Board for Scotland) from sea trout collected at the Tugnet netting station at the mouth of the Spey in 1928 with sea trout collected by Fishery Research Services (now Marine Scotland Science) in 1976, 1984 and 1985 at the same netting station. These two collections have then been compared to a third set collected by volunteer anglers and the Spey Foundation from 2003-2009.

Key aspects of sea trout history that can be deduced from scales include age at smolt migration, age at first spawning, overall age, number of spawning migrations and growth performance, especially at sea. Each of these biological aspects may vary from stock to stock and may change over time.

The analysis of these three collections of Spey sea trout scales indicate a trend towards faster juvenile development leading to younger average age at smolt migration, as well as better overall growth at sea (Figure 1), earlier onset of sexual maturity and possibly shortened lifespan. The evidence for shorter lifespan is fairly weak, as it depends on limited numbers of larger/older fish.

A reduction in mean smolt age of sea trout could be due to climatic warming and prolonged growing seasons, environmental enrichment through increasing agriculture, forestry and urbanisation, or better food availability through reduced fish population densities. It is reasonable to envisage related changes in brown trout stocks (which are the same species as sea trout) going on at the same time, although we have no means of detecting such changes at present. Accelerated juvenile development and earlier maturity of trout overall could result in proportionately more brown trout and fewer going to sea.

An additional finding is that the Spey sea trout are maintaining their growth at sea and arguably sea trout in recent years are showing slightly greater size for the age (Figure 1). This is surprising given the low catches of sea trout in recent years and possible poor quality feeding currently thought to prevail in the marine environment.



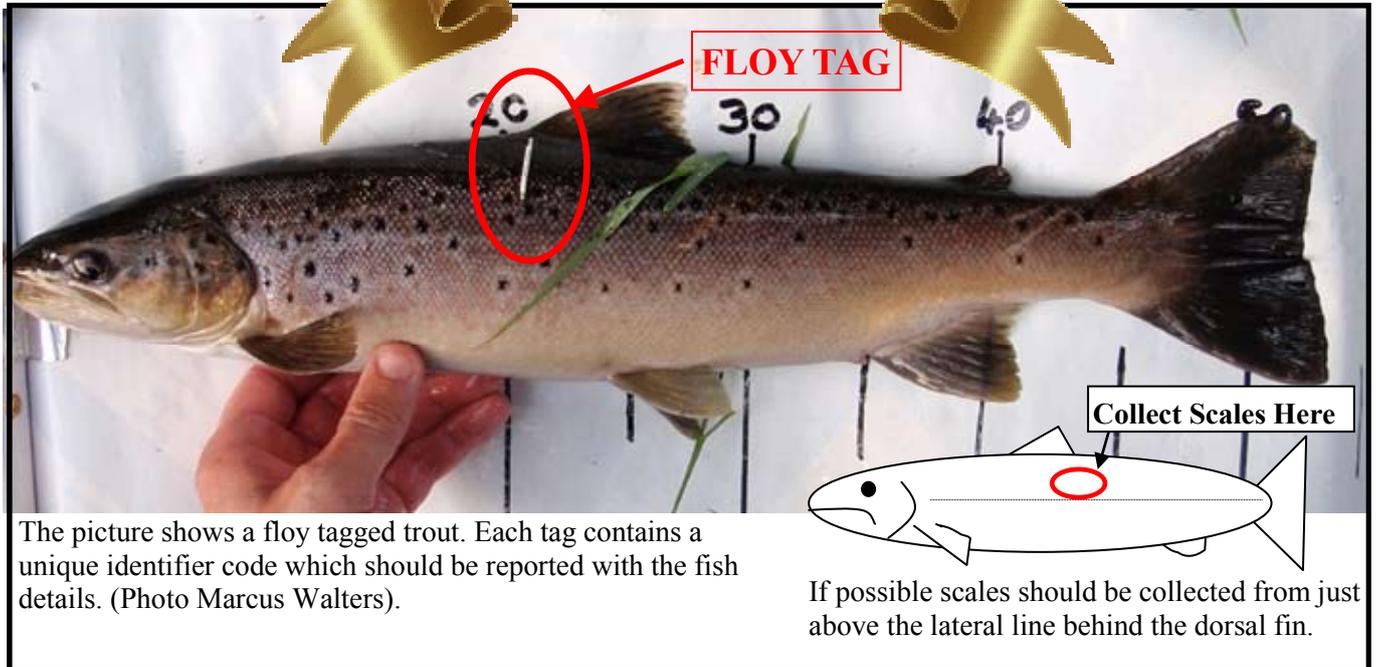
This study has provided a unique opportunity to examine growth rates in sea trout over a wide timescale but perhaps more questions have been raised about the life history of the sea trout than have been answered. However, it is clear that collections of scales are extremely valuable and should be continued. To achieve this we now need more anglers to collect scales from both sea trout and brown trout not only from the Spey but also from other rivers in the Moray Firth. If you would like to participate please contact Marcus Walters (Project Officer) for scale packets and instruction mfstp@googlemail.com.



(Photo: Marcus Walters) To improve our understanding of sea trout a number were Floy tagged during October 2009. This 60cm female sea trout was caught and tagged in the River Livet. Scales indicated that the fish was 7 years old, it left the river as a smolt after 3 years, it returned to spawn after its maiden year at sea and then in the two following years. After tagging the sea trout was released to spawn for the 4th time! Information from these tagged trout will be valuable in understanding migration patterns and growth rates. Any anglers who catch one will receive a reward (see overleaf).

REPORT A TAGGED TROUT AND CLAIM A

REWARD



The picture shows a floy tagged trout. Each tag contains a unique identifier code which should be reported with the fish details. (Photo Marcus Walters).

If possible scales should be collected from just above the lateral line behind the dorsal fin.

What do you do if you catch a tagged fish?

1. Record where and when the fish was caught, the species and sex, length or weight and if possible take a scale sample (see diagram).
2. Record the tag colour and number before releasing the fish.
3. If you can't read the tag please retain the tag with the fish's details
4. Occasionally tags can be found on the river bed - please retain these and note where you found them.
5. Return all information and any retrieved tags to the following address:

Spey Research Office, 1 Nether Borlum Cottages, Knockando, Aberlour, AB38 7SD

Tel: 01340810841,

Email: research@speyfisheryboard.com

REWARD

All reported or returned tags will be rewarded with:

- A dram of Speyside malt
- All under 18s will receive a copy of the excellent SNH book about the River Spey - *River Runners*
- 3 sea trout flies in a presentation box
- Full tagging details for the fish

