

THE CELTIC SEA TROUT PROJECT 2009-2012

INTERREG IV

GUIDANCE ON COLLECTING SCALE SAMPLES

Introduction

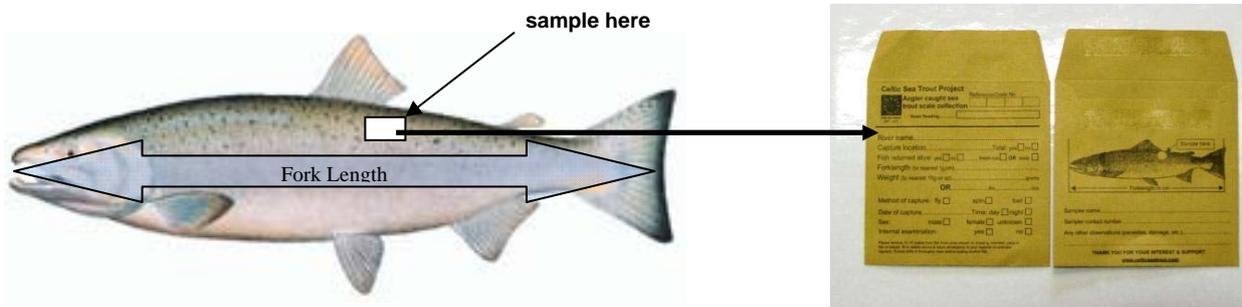
One of the most important parts of the CSTP programme is the collection of sea trout scale samples from 100 rivers, estuaries, coastal waters and further offshore, over the three years of the project. 20 rivers have been targeted for detailed sampling and this protocol is designed to assist anglers in accurate collection of scales for use in subsequent scientific analysis, e.g. stock structuring and distribution (from genetics and scale micro-chemistry) and features such as age and sex composition, life history, growth and survival.

For scale samples the target is 300+ sets of scales per river, to be collected over a two year period, starting in 2009. The samples must be collected in a scientifically unbiased way to ensure that the sample is representative of the stock. This means that fish of all sizes (smallest to largest) and spread throughout the entire angling season should be sampled.

Anglers are being asked to collect scales and take a length measurements and other relevant information from each sea trout that they catch according to the protocol below. The fish do not need to be killed; scales can be taken harmlessly from live fish and, with due care, fish can be returned alive having been scaled and measured safely and accurately. The sample required for analysis is about 10-15 scales per fish which should be placed in an individual scale envelope/scale packet.

Step 1 – taking a sea trout scale sample

- To measure length place the fish flat on top of the measuring device (board, tape etc). If the fish is being sampled on the river bank to return alive. Use a plastic sheet or if suitable the landing net to protect its flank. Ensure tape is fully extended and taut **under** the fish to record length accurately. Measure from the **tip of the snout** to the end of the **middle** rays of the tail (i.e. fork length), preferably in centimetres. Fork length to the nearest mm is preferable but to the nearest 0.5 cm is acceptable.
- Scales should be sampled from the left side just behind the dorsal fin and above the lateral line. The scale sample must be taken with a clean knife or forceps, to prevent mixing of scales from other fish.



- Anglers should handle **live fish** with wet hands and ensure the measuring device is wet to minimise damage to the fish. Placing a wet hand or damp cloth over the head of the fish when being measured will calm the fish thus allowing for the sample to be taken.
- The knife or forceps used must be totally clean (no scales/mucus/dirt etc) before taking scale sample. The sample (10-15 scales) should be taken by running the knife across the sampling area in the direction of the head to loosen scales and then lifted with the tip of the knife and transferred to the scale envelope and left to dry. Repeat until the desired number of scales obtained. Skin sections should not be cut out.
- As far as practicable, the scales should be spread across the inside of the envelope to prevent clumping. Clumping and poor storage can lead to fungal growth and scale degradation.
- Scale samples or filled envelopes should not be stored in plastic bags as the scales will rot. Filled scale envelopes should be stored in dry conditions as soon as possible to ensure that the scales will remain viable for the different analyses. Once fully dry the scales will provide genetic material for many decades if stored under good conditions.
- When sampling sea trout stored in a bag with other sea trout/fish cross-contamination must be avoided. Run the back of the knife over the sampling area in the direction of the tail to remove loose scales from the other fish which

may be sitting on the skin/mucus of the fish to be sampled. Then clean the knife thoroughly and take the sample as detailed above.

- For live fish rubbing mucus from the surrounding skin to the sampling area with one's finger will restore mucus to the area where the scale sample was taken.

Step 2 – information to be recorded on each scale envelope

Details to be included are:

1. **Name of fish** (i.e. finnock, sea trout etc)
2. **Length** refers to fork length (in centimetres) from tip of snout to fork in tail. Please **record to the nearest 0.5cm**. State measurement unit used, if not centimetres.
3. **Weight** (if measured): whole fish, preferably weighed on electronic balance (to nearest gram, or state other units if applicable).
4. **Sex (external or internal examination, note Int or Ext)**
5. **Location of capture:** Name of tributary/fishery, river or lake, Region, Country
6. **Captor name and contact No.**
7. **How caught** – fishing gear used (fly, lure, bait etc)
8. **Date of capture-** day/month/year

The minimum details required are 1, 2, 5 and 8 above

Step 3 – scale envelope forwarding

Retain envelopes in dry conditions to prevent scales deteriorating. Do not store in refrigerator. On a regular basis (monthly?) please post any scale samples you have to your regional or river coordinator, or use whatever arrangements have been made locally:

Postage costs will be reimbursed to all participants at the end of the sampling season.

Feedback

The project aims to give feedback on results as practicable and all participants will receive updates on progress.

Thank you for your help. Your assistance is extremely important to the success of this project and is very much appreciated.

Contacts

The overall CSTP sampling Coordinator is Dr Willie Roche, Central Fisheries Board, Dublin (Tel: 00-353- 87-6620479).

The contacts list on separate sheet give the names and details of local contacts.