

Cromarty Firth Fishery Board Meeting Update: October 2021 – March 2022

Loch na Croic Adult Trap

In 2020, to combat declining catches, the adult Fish trap at Loch na Croic was opened two weeks earlier resulting in the highest trap catch since 2012. After the successful operation in 2020, the board opened the trap a further week earlier in 2021, opening the trap on the 7th of October. The broodstock operation went smoothly, with <2% mortalities and good fish health across the season. The end number of fish caught was above the 5 year average, with an end catch of 861 fish.

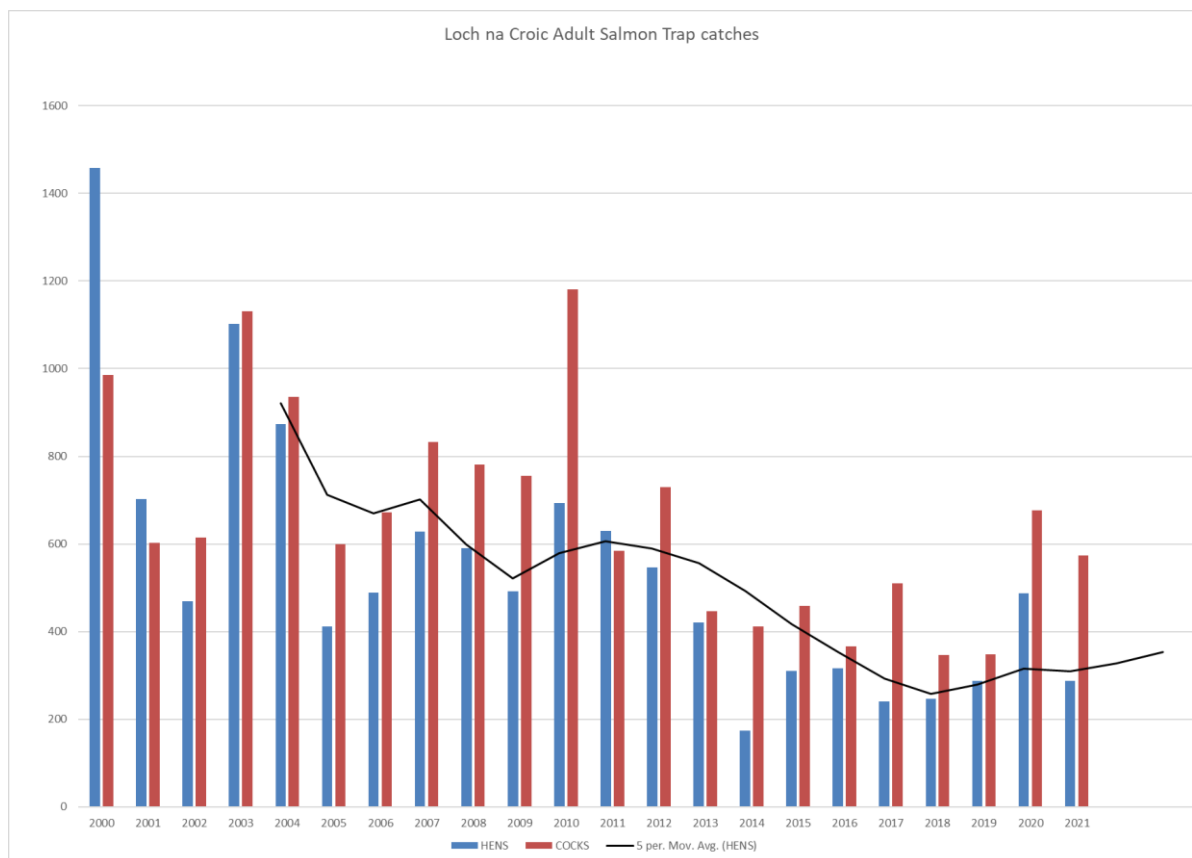


Figure 1. A chart showing the number of hen and cock salmon caught annually at Loch na Croic since 2000.

There has been a steady shift in the ratio of male: female fish caught at the adult trap with more male fish caught at the trap than hens. 2021 was a particularly prominent year with only 33% of the fish caught at the adult trap being hens (see Figure 1).

The Loch na Croic broodstock facility has automated alarms that inform on-call staff of any power or pump failures with staff on call 24/7. 2021 highlighted the importance of the on-call system, with 8 incidents of power or pump failure during November and December. Staff responded quickly and effectively, managing to ascertain and respond to each issue resulting

in a continuous supply of freshwater to all the tanks. SSE are replacing both water supply pumps as well as completing some additional maintenance/ improvement works.

Board staff were assisted by ghillies from Upper Fairburn and Coul, Fairburn, and Brahan Fishings. This provided a great opportunity to discuss the work of the Board and to form good working relationships with individuals that are involved in day-to-day work on the River Conon. Board staff greatly appreciate the hard work of the ghillies during this time.

Contin Hatchery & Stocking

The success of the broodstock operation has led to an estimated 963,838 salmon eggs being laid into the flow through hatchery in Contin. 32% of these eggs were produced by multi-sea winter salmon. The eggs were checked daily and “shocked at 280°C days⁻¹. This process allowed staff to remove any blind (unfertilised) eggs. Overall hatchery mortality was better than 2020 at 2.97%, see Figure 2. This may be due to the improved fish condition observed in 2021.

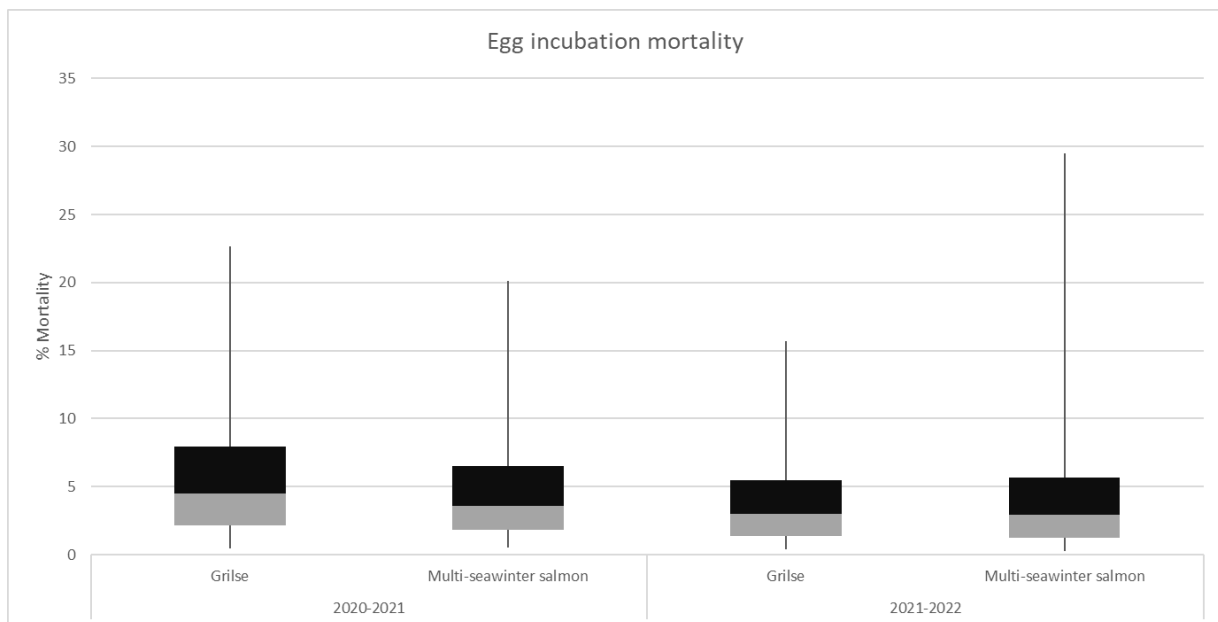


Figure 2. A box and whisker plot showing the egg mortalities in 2020 & 2021 split between multi-sea winter and grilse eggs.

Similar to 2021, stocking took place at the eyed-egg stage rather than the fry stage. This allows alevins to hatch into a natural river environment where they are immediately exposed to factors that are key to their survival. Egg stocking took place between the 11th of February and the 9th of March. These were stocked out earlier than in 2021 due to the unseasonably warm winter meaning the first eggs are estimated to start hatching by the 4th of March.

Smolt capture, Tagging, Tracking and Survival

Salmon smolts captured at the Achanalt and Meig traps are transported and released below Tor Achilty to improve poor survival rates associated with dam passage. Smolts have been historically released during daylight hours, and in recent years, concerns have been raised about their susceptibility to visual predators (e.g. trout and pike). In 2021, the Board alongside Glasgow University

PIT tagged >2700 smolts on the Meig and approximately 1000 smolts on the Bran and released half during the day and half at night. The first adult grilse returners are due in 2022 and should be counted by the PIT tag decoders in the Borland Fish lifts. The returning adults will be compared for day and night releases. Results from this study will be used to inform smolt trapping and trap-and-transport operations across Scotland. The Board are hoping to repeat the day versus night trial for 2022 and tag a similar number of fish on the Bran and Meig.

Rotary Screw Traps: Meig

The smolt trapping operation on the River Meig utilises Rotary Screw Traps (RSTs) which capture a proportion of the smolts on their migration. A feasibility study was conducted in 2021 to investigate if it was possible to install a wolf trap, which would facilitate the capture of the entire run of smolts on the River Meig. Unfortunately, the conclusion of the report highlighted unsuitable hydrological conditions. The board have investigated alternative methods of improving the capture efficiency of the existing RSTs. The Cromarty Firth Fishery Trust is now funding the installation of two motors to the existing RSTs. These motors will be activated in low water conditions, causing the RST drum to rotate at a rate of at least 6 revolutions per a minute. This should improve the capture efficiency of the RSTs under low water conditions, improving smolt survival rates. These are currently undergoing initial fitting with the motors due to be commissioned by Mid-April. These will be fitted insitu during the smolt run.

Bailiff Report

Regular patrols looking for illegal fishing within the district took place throughout the close season. These focused primarily on the lower reaches of the Conon, Alness and Peffery, but the Balnagown and Alt Graad were also checked along with the lochs in the western part of the district around Strath Bran.

A small number of reports were received from members of the public about suspected illegal fishing by rod and line. Staff attended all incidents reported to them, but nothing was seen. One incident dealt with during a patrol resulted in two males being spoken to, with the advice given.

Liaison with Police Scotland regarding joint patrols has been ongoing. One patrol scheduled for earlier this year had to be cancelled due to bad weather, but one has been rescheduled for March.

Pollution incidents

The board were contacted by SEPA in relation to a fuel incident on the lower River Peffery. An illegal activity led to fuel entering the watercourse and saturating the surrounding soil. A walkover survey was conducted to determine if there were any direct ecological impacts. Fortunately, wet conditions diluted the pollutants and there were no direct visible ecological impacts.

The Board were informed of illegal waste disposal adjacent to a water course, with visible siltation of a stream. A SEPA enforcement officer investigated the site and the board highlighted issues of special concern, including local knowledge of protected species in the vicinity. A clear up of the area was underway within a week.

SISI

The Fishery Board had advertised for a seasonal projected officer with the Scottish Invasive Species Initiative. Initial sifting of applicants took place on the 21st of March with interviews due on the 28th of March. The successful applicant will work a 5-month contract between May 2022 to September 2022. This post is funded by National Lottery Heritage Fund and NatureScot through the Scottish Invasive Species Initiative.

Meetings

Meeting	Purpose
AST Missing Salmon Project	Moray Firth tracking steering group meeting
AST Missing Salmon Project	Planning for 2021 acoustic tagging / tracking on River Conon
Riverwoods landowner engagement talk	Discussing carbon credits and riparian tree planting
Scottish Angling National Development Strategy (SANDS).	Setting up a East highland angling steering group.
Fisheries Management Scotland	AGM
BTO Winter sawbill trial	Citizen science trial for monitoring sawbill numbers
SSE, CFFB biannual meeting	Discussing planned mitigation work and maintenance.
SSE	Discussing Stocking Targets for the River Blackwater
Scottish Invasive Species Initiative (SISI)	Steering group meeting
Scottish Invasive Species Initiative (SISI)	Extension to SISI project & available budget for CFFB
SFCC	Two-day meeting of Board and Trust biologists
CFFB Health and safety bi-annual meeting	Staff meeting to discuss health and safety and improvements for 2021 & 2022