Report on licensed activity to capture Pink salmon *(Oncorhynchus gorbuscha)* in Scotland during 2023

[Reference: NatureScot Animal Licence No 236582]

1. Introduction

Migrations of invasive, non-native Pink salmon *(Oncorhynchus gorbuscha*) have been observed in Scotland in recent years, most notably and in increasing numbers during 2017, 2019 and 2021. Significantly less reports were received in 2023, and further details of management measures undertaken this year under licence are provided below.

Working with the Marine Directorate, NatureScot, the Scottish Environment Protection Agency (SEPA), District Salmon Fishery Boards (DSFBs) and Rivers and Fisheries Trusts, Fisheries Management Scotland co-ordinated efforts to collect data on pink salmon, including captures through fishing and sightings of these fish. Guidance is available to assist with this process, and publicity and communications were designed to encourage reporting of these fish through our web-based reporting app.

As well as surveillance and collection of data, one priority was to collect additional data on what management measures might be appropriate, and it was agreed to trial new methods to examine what might be feasible in terms of removal of these fish. Fisheries Management Scotland secured appropriate licences from the Marine Directorate and NatureScot to allow named agents to undertake targeted fishing and legally be in possession of captured pink salmon. Pink salmon are an invasive non-native species, and therefore fishing for and retaining pink salmon (i.e. to have one in your possession or under your control) without a licence is an offence under the Wildlife and Countryside Act 1981. Whilst licences are required to permit targeted fishing, a number of fish recorded were incidental captures taken by anglers legitimately fishing for other species.

We are required, as a condition of licence, to provide a report on the activity undertaken to manage pink salmon and this summary report provides the information required to comply with this condition.

2. Results of licensed management activity

Due to lower reported observations of these fish in 2023, there was significantly less targeted management action required. A summary of the actions are provided below.

Only two rivers conducted licensed activity.

River Beauly - Five pink salmon spawning sites (redds) were destroyed on the Lower River Beauly on the 9th, 11th and 16th August. Two redds were destroyed at locations NH 51202 43692 and NH 52199 44241 and one redd destroyed at location NH 51471 43606. No adult Pink salmon were observed or caught during this activity. Prior to undertaking this, advice was sought from NatureScot to ensure that there was confidence that the redds were made by Pink salmon (due to the potential for sea lamprey spawning sites occurring at the site). As a result, the redds were positively identified as Pink salmon, based on the shape, size of substrate and timing that these redds appeared.

River Thurso – A bespoke fish trap was deployed on the River Thurso on 6th August and was removed on 26th August. The trap was located on the lower river just upstream from Thurso at location ND 11496626. Only one Pink salmon was caught and dispatched on 12th August. No redds or other Pink salmon were observed. The River Managers are planning to deploy the trap again in 2025. Due to more favourable water levels for fish migration, a number of Atlantic salmon entered the trap, these were observed on the live feed cameras set up for continuous surveillance and all fish were carefully released to continue safe passage upstream. In the event, there was no requirement to remove the trap as there was no accumulation of wild Atlantic salmon observed below it. The Pink salmon which entered the trap came in with a shoal of grilse, and this behaviour has been observed in these fish elsewhere.

Figure 1 - Thurso River trap

Figure 3 – Pink salmon captured in Thurso River trap

Figure 2 – Pink salmon redd in the River Beauly

3. Captures of Pink salmon in Scotland

Information on captures was collected with the aid of our app. The tool was publicised through the Fisheries Management Scotland website, via the membership and on social media channels across the UK. An interactive dashboard on the same webpage allows stakeholders to view reports of pink salmon captures in real time. 46 captures and sightings of fish were recorded on the app this year, however it should be noted that this figure includes an unverified sighting of around 30 fish observed in the River Tweed in the Kelso area. Some fish have been retained frozen for possible tissue analysis.

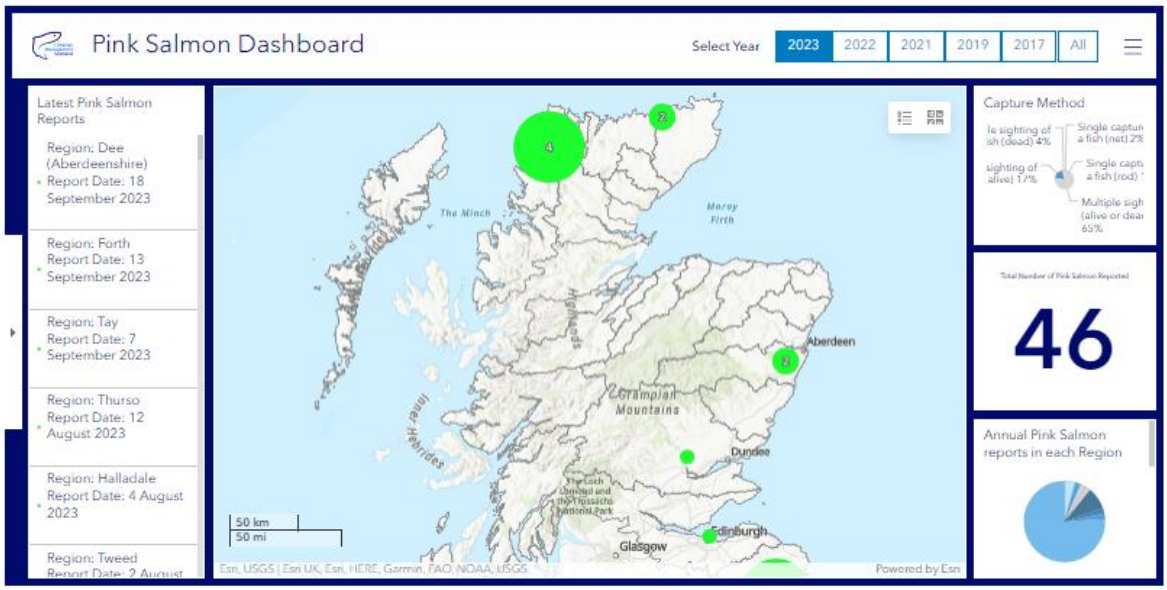

Figure 4 - Interactive dashboard displaying the latest Pink salmon capture/observation data

4. Other work

A comprehensive programme of eDNA sampling for Pink salmon was initiated this year through two projects. The first of these was baseline monitoring undertaken at a series of sites agreed by the Pink Salmon Task Group and delivered by SEPA staff. The second was a more in-depth eDNA sampling programme across a range of river systems delivered by the Fisheries Management Scotland member network. The results are anticipated shortly, and the findings will provide a scientifically robust dataset of the distribution of these fish in 2023 which will help direct future management actions. It is hoped that sampling programmes will be embedded into the surveillance and management strategy on an ongoing basis.

5. Summary

Management action such as targeted capture presents a number of challenges. In terms of practical matters, much will depend on the prevailing river and weather conditions. Higher water levels, which we experienced during the anticipated time of Pink salmon arrival this year may have hampered the ability to detect these fish and successfully capture them. At a local level, the topography and characteristics of the river will determine whether capture is feasible and will dictate what methods may be most effective.

A significant issue for consideration is resourcing of future management action. The financial and logistical challenges should not be underestimated. The opportunities presented for recapture will

very much depend on active surveillance for these fish and the ability to respond quickly to local incidences. The current resources held by the network of DSFBs and trusts and the ability to deploy these at short notice will remain a challenge in managing future incidences, and a longer-term, sustainable approach to supporting management efforts should be agreed.

Bearing in mind the above, Fisheries Management Scotland consider it a desirable objective to plan a longer-term strategic approach for Pink salmon management. This should, amongst other things, identify appropriate resources given the financial and logistical challenges for the DSFB and trust network.

Acknowledgements

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- The Pink Salmon Task Group for informing the development and delivery of the management and surveillance strategy.