

Pacific Pink Salmon (*Oncorhynchus gorbuscha*) Advisory note - 2023 update

Introduction

The purpose of this advice note is to ensure:

1. That all fishery stakeholders, including fishery managers, anglers and net licence holders, are alert to the possibility of the return of pink salmon to English rivers during 2023.
2. To ensure that fishery managers, anglers and migratory salmonid net licence holders know what to do should pink salmon be observed or captured in England.



Pacific Pink Salmon (male) in spawning condition

Illustration by Timothy Knepp - U.S Fish and Wildlife Service

Background

Pacific pink salmon were originally introduced into a number of Russian rivers in the 1960s and have slowly spread westwards subsequently colonising a number of rivers in northern Norway.

Occasional reports of captures of Pacific pink salmon (*Oncorhynchus gorbuscha*) in England and Wales have been made historically extending back to the 1960s. Most recent reports of pink salmon have been of occasional, isolated specimens which have occurred in odd years (e.g. 2007, 2009 and 2015) consistent with the fish originating from established populations of pink salmon in northern parts of the Russian Federation and northern Norway.

Pink salmon have a distinct two year life cycle and stocks can be distinguished by their year of return. Some stocks return in “even” years and others return in “odd” years. Russian and Norwegian pink salmon are derived from “odd-year” stocks and all of the reports in England have occurred in “odd” numbered years. It is therefore highly likely that we will see increased reports of Pink Salmon in English rivers and coastal areas in 2023.

What have we learnt about Pink Salmon to date

Pink salmon spawn at a different time of year to Atlantic salmon (July through to mid-October), usually on the main river channel in the lower reaches of rivers, although they have been observed in upstream tributaries. Juveniles hatch within 3 to 4 months and then quickly migrate to sea limiting their potential interaction with native salmonid species.

It was previously thought that the environmental conditions present in UK rivers would not be favourable for colonisation by Pacific pink salmon. However, evidence from Scotland now indicates that pink salmon have spawned and established viable populations. We therefore need to remain alert to the possibility that populations of pink salmon could now become established in English rivers in the future.

In 2017, there were widespread reports of pink salmon captures across North Atlantic countries (ICES, 2018). Relatively large numbers of pink salmon (around 200) were taken in the English north-east coast salmon fishery and there were also reports of fish being captured in a number of river catchments across England, predominantly in the north-east from the Tyne, Wear and Coquet. In 2019, far fewer pink salmon captures were reported in England and Wales, with three captured in the north-east coast coastal sea trout net fishery and one at the Chester Weir fish trap on the River Dee in Wales. No reported captures of pink salmon were made in 2020. The closure of the north-east coastal drift net salmon fishery in 2019 is likely to have resulted in a reduced number of pink salmon being recorded in England.

In 2021, there were 26 reported captures of pink salmon in England but none in Wales. All pink salmon in 2021 were captured in north-east England with the exception of one specimen recorded at Gunnislake fish trap operated by the Environment Agency on the River Tamar. This fish represented the most southerly capture for England and Wales since 2007 when a single male specimen was recorded by a recreational angler fishing in the tidal reaches of the River Camel in Cornwall.

The Environment Agency received notification from Norwegian environmental authorities in 2021 that pink salmon were found in exceptional numbers, estimated to be in the tens of thousands, in rivers in the far north of the country and were found in larger numbers and further south and west than in previous years. Whilst difficult to predict what will happen in 2023, the available information suggests that more pink salmon may be observed over the coming months in English rivers. Fishery managers, anglers and nets licence holders are requested to remain vigilant particularly if fishing in the lower reaches of our river systems. Many of the migratory salmonid net fisheries in the northeast are now closed and therefore we will be more reliant upon reports from anglers.

From the specimens that have been captured and recovered by the Environment Agency, no notable disease or novel parasites have been detected on pink salmon. However, we need to remain vigilant and continue to map occurrences and investigate the possible risk of undesirable consequences arising from the presence of this invasive species.

Fisheries management organisations across the UK are sharing information and advice to ensure that any appearance of pink salmon in England can be monitored and managed appropriately. This will include ongoing advice to stakeholders, awareness raising and liaison with other UK and international fishery managers to exchange information on any new situation.

Please also be vigilant for any early or unusual spawning activity particularly during late July, August and September when pink salmon are most likely to be active in spawning areas – particularly in

shallow, gravelly glides and runs. Any suspected activity should also be reported to us as soon as possible.

What should you do if you see or capture a Pacific pink salmon?

Pacific pink salmon are usually clearly identifiable from Atlantic salmon particularly when mature and in spawning condition – Please see **Annex 1**.

- If you are confident that you have caught a Pacific pink salmon, the fish should be humanely despatched. This guidance applies to rivers with mandatory catch and release for Atlantic salmon in England.
- If you are not confident that you have caught a pink salmon the fish should be released back to the river alive where it was captured. This is to ensure that no Atlantic salmon are retained in error.

If you capture a pink salmon or find a fresh, dead specimen, please contact the Environment Agency on **0800 80 70 60** as this will enable the fish to be formally recorded. Please also consider logging your capture onto the new Fisheries Management Scotland reporting app which will also now capture information for England and Wales. See link below:-

[Pink Salmon \(arcgis.com\)](https://arcgis.com)

In recording the capture or sighting of a pink salmon, please collect and report the following details:

- **date of capture or sighting;**
- **location (grid reference or “what3words” if possible), the river and details of the site;**
- **if caught, the method of capture;**
- **if caught, the sex of the fish.**

If possible, please also:

- **take a photograph of the fish, preferably of the flank, tail and the mouth (if possible, showing the tongue);**
- **obtain a scale sample from the captured fish and store these in a paper envelope;**
- **obtain a fin clip (an adipose fin clip or a clip from any other fins) as well as a sample of dorsal muscle tissue (at least 2cm x 2cm);**
- **the weight and fork length measurement of the fish;**
- **freeze and store the fish whole as soon as possible after capture.**

Recovered or retained pink salmon can also be stored in a suitable, sealed plastic bag in a standard domestic freezer before collection. Please also store the capture details together with the fish in a separate sealed plastic bag if possible. Please contact the Environment Agency so that we can arrange collection of the samples.

For further information please contact:

National Enquiries relating to pink salmon management

Simon Toms, National Fisheries Management Team Leader, Environment Agency

Mobile: **07778 991603** Email: simon.toms@environment-agency.gov.uk

Reporting of captured pink salmon by anglers and migratory salmonid net licence holders

Please contact Jonathan Shelley who is co-ordinating reports from anglers

Contact details for Jonathan Shelley are:

Mobile: **07979 704 281** Email jonathan.shelley@environment-agency.gov.uk.

National Customer Contact Centre

If you have a general fisheries enquiry please telephone our National customer contact number on **03708 506 506**.

Annex 1: Identification of Pink Salmon

Pacific pink salmon, when fresh from the sea, are steel blue to blue-green on their backs, silver on the flanks and white on their bellies. There are large black spots on the backs, upper flanks, adipose fins and tail – some of the spots on the tail can be as large as the fish's eyes. They are very uniform in size, reaching only 40 to 60 cms in length. It is possible that at first sight, a fresh pink salmon may be confused with a small Atlantic salmon.

Pink salmon: Ocean phase



Image – Environment Agency

Pink salmon: Freshwater phase – Male and Female Pink Salmon



Images courtesy of Helmsdale DSFB & River Dee Trust and Nigel Fell



Image from Atlantic Salmon Trust and Tweed Foundation

Note the shape of the tail, spots on tail and dark mouth. Breeding males are immediately identifiable because of their “hump” and they will almost certainly be running milt when close to spawning. Their black tongues and heavily spotted tails are also very obvious. Females will also have heavily spotted tails and adipose fins. The fish may have pinkish-brown hue on the flanks dependant upon the time spent in the river.