

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

Introduction

The purpose of this advice note is to ensure:

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



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 White Sea region 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. Only one pink salmon has been formally identified in Wales in July 2019, when it was captured in the Chester fish trap on the river Dee. No pink salmon have been reported in Wales since then. Their increased abundance in the North Atlantic however means we may start to see more of them in Welsh rivers.

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 likely that we may see increased reports of Pink Salmon in rivers and coastal areas of Wales in 2023.



Non-native pink salmon caught on the River Dee July 2019

What have we learnt 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, which limits 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 our rivers in the future.

Norwegian environmental authorities have informed us that in 2021 pink salmon were found in exceptional numbers, estimated to be in the tens of thousands, in rivers in the far north of the Country. They were also found in larger numbers and further south and west than in previous years. Whilst it is difficult to predict what will happen in 2023, the available information suggests that more pink salmon may be observed over the coming months in our rivers. Fishery managers, anglers and nets licence holders are requested to remain vigilant particularly if fishing in the lower reaches of our river systems.

Recording and mapping any occurrences of pink salmon is essential to inform our understanding of the possible risks 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 Wales 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 absolutely confident that you have caught a Pacific pink salmon, the fish should be humanely despatched.
- If you are not absolutely confident that you have caught a pink salmon, then 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.
- Remember – it is an offence to take Atlantic salmon in any Welsh waters, and we will take enforcement action against anyone in possession of one.

If you capture a pink salmon or find a fresh, dead specimen, please contact the NRW incident hotline on **0300 065 3000** as this will enable the fish to be formally recorded.

To coordinate reporting across the British Isles, we are also recording captures on the Fisheries Management Scotland dashboard. See link below:-

<https://fms.scot/pink-salmon-in-scotland/>

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

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

If possible, please also:

- **take a photograph of the fish, preferably of the flank, tail and the mouth**
- **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.

For further information please contact: Fisheries.wales@naturalresourceswales.gov.uk

National Enquiries relating to pink salmon management

Dave Mee, Lead Specialist Advisor: Freshwater Fisheries Management

Phone number 03000653280 / 07770435339

Email david.mee@naturalresourceswales.gov.uk

Customer Contact Centre

[Report an Incident](#)

If you have a general fisheries enquiry please telephone our customer contact number on
or call us on 0300 065 3000 24 hours a day

**Croesewir galwadau yn Gymraeg neu Saesneg
Calls welcomed in Welsh or English**

Annex 1: How to identify a pink salmon:

Pink salmon (*Oncorhynchus gorbuscha*), also known as humpback salmon, originate from the northern Pacific Ocean.

The appearance of the species in European waters is of concern as it may impact on Wales' indigenous salmon and sea trout populations in the future. The potential impact of pink salmon is unclear at present; however, these fish may introduce parasites and pathogens not present in native salmonid fish. Interbreeding with Atlantic salmon is unlikely as pink salmon spawn in late summer whereas Atlantic salmon spawn in winter. However, competition for food and space in nursery areas between juvenile pink and Atlantic salmon is possible.

How to identify a pink salmon:

- Large black oval spots on the tail
- Bluish back, silver flanks, and white belly
- Much smaller scales than an Atlantic salmon of the same size
- Very dark mouth and tongue
- 40-60cm in length
- Breeding males develop a distinctive hump

In contrast, the native Atlantic salmon typically:

- Have no spots on the tail
- Usually larger (up 100cm in length)
- Pale mouth and tongue
- Larger scales
- One or two black spots on the gill cover
- Spots on the back above the lateral line
- Thicker base of tail than a pink salmon

Photographs helping identify pink salmon



Pink salmon: Ocean phase



Image courtesy of the Environment Agency

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: Freshwater phase – Male and Female Pink Salmon

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 dependent upon the time spent in the river.

Image courtesy of Helmsdale DSFB & River Dee Trust and Nigel Fell and from Atlantic Salmon Trust and Tweed Foundation

