



Alert heightened around non-native fish species in Welsh river systems

July 2021

Natural Resources Wales appeals to anglers for continued help in identifying and reporting pink salmon catches.

The purpose of this advice note is to ensure:

1. That all fishery stakeholders, including fishery managers, anglers and netsmen, are alert to the possibility of the return of pink salmon to Welsh rivers during 2021.
2. To ensure that fishery managers, anglers and netsmen know what to do should pink salmon be observed or captured in Wales.

In 2017 numerous capture reports were made around the UK especially in Scotland and off England's north east coast. Pink salmon were also recorded spawning in eastern Scotland, however there were few reports from the UK western coast and none in Wales.

These fish are believed to originate in Russian aquaculture activities and to have "strayed" from rivers in northern Norway and Russia. The unusually high numbers of pink salmon observed in 2017 are thought to have originated from a particularly strong year class with good marine survival. Lower numbers of pink salmon were observed around the UK 2019, though NRW did record a single capture in the salmonid trap on the River Dee in North Wales.

This biannual pattern is due to the two-year life cycle of the fish. Recent reports (July 2021) now suggest a recurrence of observations in UK waters, with 20 Pacific pink salmon reported in Scotland this summer, as well as reports of smaller numbers from north east England and from Ireland.

Risk

Our biggest concern is that pink salmon may carry diseases that threaten the health and wellbeing of our native salmon. The other unknown is whether the growing incidence of these invasive salmon might lead to damaging competition with our native salmon populations.

Our own Atlantic salmon are in a depleted and perilous state at the moment with widespread population declines, so we don't want another pressure that could negatively affect them.

Fisheries management organisations across the UK are sharing advice to ensure that any appearance of pink salmon can be monitored and managed appropriately. This will include

ongoing advice to stakeholders, raising of awareness, and liaison with other UK and international fishery managers to exchange information on any new situation.



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

Advice for anglers and netsmen

We are concerned about the state of our native Atlantic salmon stocks: this is why **all** Atlantic salmon caught in Welsh waters must be returned alive and well.

Pacific pink salmon are usually easily distinguished from Atlantic salmon, particularly when mature and in spawning condition.

- If you are confident that you have caught a Pacific pink salmon, the fish should be humanely dispatched. Please report the capture as soon as possible to NRW on 0300 065 3000 (24 hours day) as this will enable the fish to be formally logged.
- 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, preferably having been photographed and later reported to NRW. This is to ensure that no Atlantic salmon are retained in error.
- If you have found a fresh, dead pink salmon, please retain the fish if possible and report this to the Incident Hotline 0300 065 3000 (24 hours day)

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) and details of the site,
- method of capture,
- sex of fish.

If possible, please also:

- take a photograph of the fish,
- obtain a scale sample from the captured fish and store these in a paper envelope,
- freeze and store the fish whole as soon as possible after capture,
- the weight and fork length measurement of the fish,

- Preferably, also take a small fin clip sample (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),

Recovered or retained pink salmon can also be stored in a suitable, sealed plastic bag in a standard domestic freezer before collection by NRW for further examination. Please also store the capture details together with the fish in a separate sealed plastic bag if at all possible.

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.

This information you can provide will help establish the abundance and extent of distribution of the species in Welsh waters.

How to identify a pink salmon:

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



Pacific Pink Salmon in spawning condition

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

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



Distinctive spotting pattern on tail



Ocean phase