



PINK SALMON

Oncorhynchus gorbushcha



BIOLOGY & ORIGINS

1. They are the smallest of the five Pacific Salmon species, but the most numerous. About half of all Pacific Salmon are Pinks.
2. Their natural distribution is from California to the north coast of Alaska and on the Asian side of the Pacific from the Chinese-Russian border up to eastern Arctic coast of Siberia.
3. Most of their spawning areas are at the bottom of rivers, even in to tidal zones, and the fry emigrate to sea almost as soon as they hatch, most not feeding at all in freshwater. They do not therefore have a Parr stage in fresh water, reaching the sea as Fry of 25 to 40 mm.
4. Spawning is from mid July to October, from 16°C down to 10°C for later runs.
5. Hatching occurs from late December to late February and emergence in April and May (exceptionally in late February).
6. They almost all live for only two years (three very rarely), so the odd and even year runs are completely segregated and do not overlap.
7. Both runs can be found in the same streams, but sometimes one will be much larger than the other. In some rivers, the different runs use different tributaries and spawning grounds.

- 8 Even within its natural range, some rivers can be missing one of the years, e.g. the Fraser River has an odd-year run, while offshore in the Queen Charlotte islands, they are even year.
- 9 Wandering of adults is known, some tagged fish have been found 400 miles from their home stream.
- 10 Most are from 2 to 7lbs, and fish over 11lbs are rare.

INTRODUCTIONS

- 11 Despite the fact that they are considered the poorest quality of the Pacific Salmon for eating, entering rivers shortly before spawning, a number of attempts have been made to introduce them to new areas. It was only when food was needed in the First World War that they started to be exploited commercially to any great degree.
- 12 Most of deliberate introductions, however, have failed:-
 - a) To the rivers of the Hudson Bay in the 1960s – failed.
 - b) To Lake Superior, where they became dwarfed and landlocked in the Great Lakes. They are not in very large numbers now, but are the basis of a fishery.
 - c) Newfoundland, 1950s /60s : failed to establish.
 - d) Rivers of the Kola Peninsula, 1956. The stock was brought from Sakhalin Island and in just a few years, tens of thousands of adults were being caught but when hatchery stocking stopped after 20 years the fish died out, so this was another failure despite the considerable effort. This was attributed to the use of stock from the southern part of their range on the Pacific coast of Siberia, so that water temperatures on the Kola were too cold for them.
 - e) A second introduction to the Kola was made in 1985, using fish from a more northern stock, and it is this that has established itself and has spread to 11 rivers in Northern Norway and to some in Arctic Finland.
- 13 The commercial fishery in the White Sea catches Pink Salmon along with Atlantic, the total catch of Pink being 139 tonnes in 2009, about double that of the Atlantic.
- 14 In the 1990s, attempts were made to establish an even year population, but this failed, despite using fish from the same area as the odd-year population. There is no commercial fishery for Pink Salmon in even years therefore.

RECORDS IN THE TWEED AND ELSEWHERE

- 15 The very first was in 1960, at the Altens nets at Aberdeen, the second record was in 1965 at Norham. Why this first record was in an even year is not obvious – the first introduction to the Kola was of an odd year population.

- 16 There were a few other British records in 1967 and in 1973 and then no more: this matches the first stocking in the Kola peninsula that failed to establish.
- 17 The first record from the second attempt on the Kola was in the R. Leven, Dumbartonshire, in 2003.
- 18 The next records were in 2007, one in the R Camel, in Devon, the others from Boleside and Norham.
- 19 There were no Tweed records in 2009, then two turned up in 2011: one at the Paxton nets, the other in the fish shop in Kelso, which had been caught in drift nets off Amble.
- 20 There were no Tweed records in 2013, then in 2015 a female full of eggs was caught at Canny.
- 21 However, 2017 has produced 12 records from the Tweed and probably more have been caught and not recognised, although once they start to colour up and the males develop humps, they are very obvious. Fresher fish, when still silvery, could be misidentified.
- 22 There have been seventy or so records from 18 other rivers, particularly in the north. There have also been reports of Pinks from Iceland, Denmark and Germany.
- 23 For the first time in Scotland in 2017 there were observations of actual spawning, in the Spey, the Ness, the Nairn and the Dee. Film clips of Pink Salmon spawning can be found on the website of the Ness and Beaully Board at:
https://www.facebook.com/pg/FishtheNess/videos/?ref=page_internal
- 24 There have been no confirmed reports of spawning activity in the Tweed, though high water prevented investigation of some possible redds in 2017. Sea-lamprey redds will also have been made in the river in July and August and there could be some confusion with these.
- 25 The issue now is whether they can establish. As said above a number of introductions have failed, so long-term establishment is not inevitable, even if spawning occurs. The Kola stock is of a northern origin, and it may be too warm here for them – hatching in Scotland could be as early as the beginning of November.
- 26 In 2017 Marine Scotland asked Trusts to take tissue samples for genetic and isotopic analysis. The genetic samples were to see if the fish were coming from any particular population in Russia, Norway or Finland, or even direct from the Pacific and the isotope analysis could show where they feed at sea.
- 27 The question of direct movement from the Pacific is of interest. The North-west passage over northern Canada is now open in summer and there are only 600 miles between the Pacific salmon populations of the north coast of Alaska and the Atlantic Salmon populations of Hudson's Bay.
- 28 The passage across the north of Siberia is also opening up and there has clearly been direct contact with the Pacific across this route in the past as there is a population of Pacific Herring (*Clupea pallasii*) in the White Sea around the Kola Peninsula (the European Herring is *Clupea harengus*).

- 29 In 2017, Trusts were also asked to undertake egg-basket trials: stripping and fertilising Pink Salmon eggs or taking eggs from redds and then placing them in secure baskets in streams to see if they hatched and with what success.
- 30 Any Pink Salmon caught on the Tweed should be killed and reported to The River Tweed Commission or The Tweed Foundation for the appropriate samples to be taken and reports to be made. Any found dead should also be reported for sampling and reporting.