

Common Fish Lice

Argulus, Lepeophtheirus and Caligus

The common term 'louse' has been given to a number of different fish parasites. These include species of *Argulus*, which are primarily freshwater parasites, and sea lice that live and reproduce at sea. Both can be found attached to salmon and sea trout that have returned to our rivers to spawn. At first glance, *Argulus* and sea lice can look similar, but there are a few simple differences that can help you tell them apart.



Freshwater lice *Argulus* (left) and sea lice (right) are common parasites of wild salmonids and are easily identified.

Freshwater fish lice, *Argulus* spp.

There are three species of *Argulus* that have been recorded in the UK. The most common is *Argulus foliaceus*, which is mainly found in still waters. *Argulus coregoni* prefers faster flowing conditions and is the largest of the three, measuring up to 10mm across. This is the species most frequently found on salmon and sea trout, as well as brown trout and coarse fish, in rivers. The third species, *Argulus japonicus*, is an introduced species and the least common. *Argulus* can be found anywhere on the external surface of fish, but in rivers they often seek shelter behind the fins, sometimes in tight clusters.



Sea lice

There are two common species of sea lice, *Lepeophtheirus salmonis* and *Caligus elongatus*. Although both are marine parasites, they are frequently found on salmon and sea trout entering freshwater. Sea lice cannot reproduce in freshwater, but can tolerate river conditions for as long as 2-3 weeks. The presence of sea lice on salmon and sea trout is therefore a clear indication that the fish has only recently entered freshwater. Sea lice are usually found attached to the skin around the head, dorsal fin and anal fin.



Telling lice apart



Argulus (left) are generally jelly-like, translucent and have paired, black eye spots. Sea lice (right) are often darker in colour, have extra body segments and often have long trailing egg strings.

There are a number of features that can help distinguish *Argulus* from sea lice. Firstly, the body of *Argulus* is disc-shaped, jelly-like in appearance, green-brown in colour and often translucent. In contrast, sea lice are usually darker, more robust looking and have extra body sections that give them a segmented appearance.

Secondly, *Argulus* have a pair of conspicuous black eye spots. Sea lice do not possess these, so if you find a parasite with two black eyes, it's an *Argulus*. Finally, sea lice retain their eggs in long strings that trail behind their body at certain times of the year. These 'tails' can measure up to 3 times the length of the parasite. *Argulus* lay their eggs on rocks or weed, so do not have these trailing egg strings.

Are fish lice damaging?

In natural environments, fish lice usually exist in low numbers and cause little serious damage to their host. However, both *Argulus* and sea lice are capable of severe damage if numbers proliferate. *Argulus* can be particularly damaging to still water trout fisheries, requiring specific management measures to limit infections (see our factsheet on *Argulus* in trout fisheries). Juvenile trout and salmon smolts can also be susceptible to *Argulus* infections, especially during periods of hot weather and low river flows. Sea lice are a major issue in salmon aquaculture, with potential knock on effects for wild salmonids.

Sea lice and *Argulus* can cause damage through their attachment and feeding behaviour. They feed on skin tissue, mucus and blood. In light infections, the skin can quickly regenerate but in heavy infections visible damage occurs to the skin with erosion and development of sores. Both sea lice and *Argulus* can be very irritating too, so infected fish repeatedly jump or rub themselves on rocks. Damaged skin can become secondarily infected with bacteria and fungus and badly affected fish can die, although such infections are unusual in the wild.

If you experience fish mortalities, or require more information about lice infections or fish diseases please contact: **Natural Resources Wales**

Email: fisheries.wales@naturalresourceswales.gov.uk

Customer Care Centre, Ty Cambria, 29 Newport Rd, Cardiff, CF24 0TP

Tel: 03000 65 3000 (24hrs)