

Fish Leeches

These wriggly nasties are very difficult to get rid of and can be devastating to a pond and its inhabitants. Their scientific name is "*Piscicola geometra*" and is the most common in the UK and feeds on fish. There are a number of species in this family including some variants that are saltwater species. Much like a vampire, it drinks the blood of its victim. Unlike the majority of other parasites the leech only needs a host when it requires food. It does not need to live on a host continuously. When it has a full belly it will live amongst the plants and rocks in the pond. They



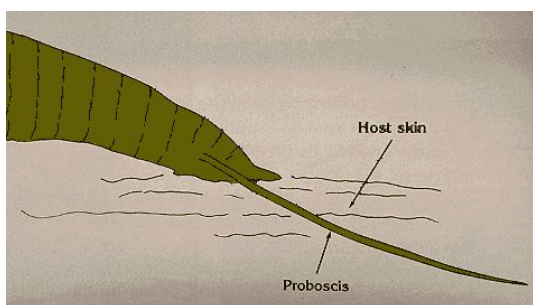
can be brought into a pond via

plants, fish or rocks collected from other lakes/ivers.

Its appearance is typically "leechy", it wriggles and will feel around and reach for something to attach itself onto. Leeches are very strong swimmers and will follow their prey. Leeches can survive for weeks without feeding and is often introduced into a pond on plants.



On closer inspection, the leech is actually quite pretty! It has a banded pattern along the length of its body and lots of tiny little spots. It is usually varying shades of brown. At each end of the leech is a sucker, this allows them to hold onto things and attach themselves firmly to the host fish. The larger sucker is the tail of the leech and the small sucker is the head end where its mouth is located. They have what is called a "proboscis", this is a long thin needle like organ that pierces the skin. It then uses this much like a straw to suck up the blood.



Symptoms

Because the leech feeds on the blood of the host fish this causes a number of problems. Firstly, as the leech is breaking the skin the fish may get secondary infections at the puncture site. This can cause ulcers, fungus, swelling and bleeding. Leeches have been found to be one of the causes for the spread of SVC (Spring Viremia of Carp). The second issue, the



fish may be completely listless due to blood loss, when there are exceptionally high numbers of leeches attached to a single fish this can very quickly result in death of the host due to hypovolaemic shock (too little blood to circulate and oxygenate the tissue/organs).

As with any irritant, leeches can cause the host fish to flash off the sides of the pond or any objects in order to remove the irritant. They may also stop feeding, become lethargic, listless, or sit on the pond bottom with their fins clamped. The host fish may overproduce skin mucous so can appear milky in colour.



Identification

Microscopic examination is not necessary to see leeches, however it is advisable to take a sample to check for other parasites.

Leeches are visible to the naked eye. They can reach lengths of 25mm. They are usually seen attached to the flanks and belly of the fish, they are also found in the more sheltered areas of a fish such as the gills and in the mouth. They may not be noticed by the hobbyist until the

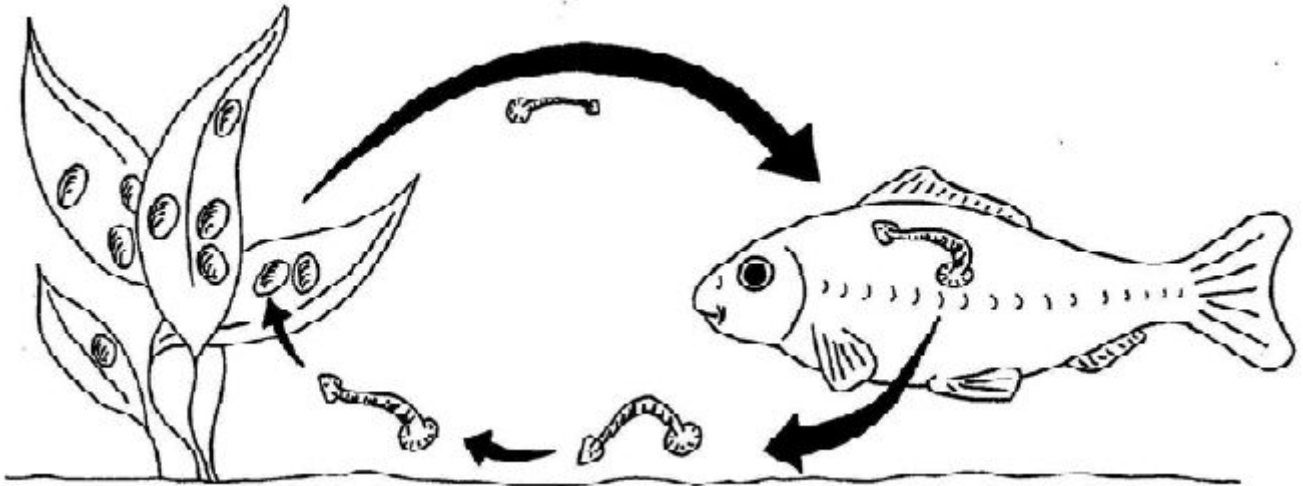
leech is mature or there are high numbers of them. It is not uncommon to find a host fish with numerous leeches attached to its body, fins or eyes. Gills seem to be a popular place for the leeches to feed from due to the high concentration of tiny blood vessels close to the surface of the gill filaments.

It is important not to confuse leeches with mayfly or gnat larvae (below), these are much smaller and often darker, they are also harmless and a good protein source for your fish. Leeches on the other hand are quite a formidable enemy.



Lifecycle

The Leeches life cycle is fairly simple in comparison to other parasites. They are actually hermaphrodites, this means they have both male and female reproductive organs. However, they still require another leech in order to reproduce and allow cross fertilisation or introduction with another leeches biological code.



Once the leech has filled up on blood of is full of eggs, it then leaves the host fish. The egg laden leech will find a place to lay its eggs, usually on plants or rocks. They lay their eggs in dark brown “cocoon” firmly stuck in place. The eggs can develop and hatch in as little as a week to thirty days from being laid. The newly hatched leech will then set off in search of a host to feed on. They can go for a number of days without feeding. Their whole life cycle takes just four weeks.

Treatment

Unfortunately, the most effective treatments for leech infestations are now banned in the UK. These chemicals are Organophosphates; Dimilin, Masoten and Malathion.

Masoten: 1 gram per 395 litres (87 Gallons) when 18.3°C and over, weekly treatments for 4 weeks. For temperatures 18.2°C and under use 6/8 grams per 4546 litres (1000 gallons). Dimilin: may be another option.

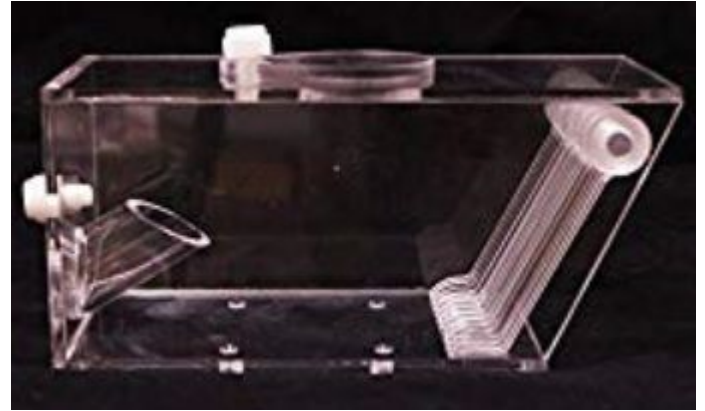
There are however a number of options to try eradicate a leech infestation.....

1. The manual removal of each leech from each fish. This can be a very labour intensive procedure which is stressful to an already weakened fish.
 - A quarantine setup with its own filters will be required with the capacity to house all the fish in the affected pond.
 - You will need: Sedation, bowl and catching equipment, tweezers, forceps, cotton buds, a jar with water (to put the leeches in), antiseptic spray/gel (to reduce risk of secondary infections). As an extra precaution Malachite Green (MG) or Acriflavine can be applied to the removal sites with a cotton bud. A

sturdy comfortable workspace (you will be here a while). A table lamp, head torch or good light source. A magnifying glass. Towels (soaked in pond water).

- Sedate each fish one at a time.
 - Once sedated lift the fish onto the work surface with a damp towel under it.
 - Start at one end and carefully pick off each leech you find using the tweezers. To make seeing them easier ensure the light is in a suitable position and use a magnifying glass to spot smaller leeches.
 - Once the leech is removed, drop it into the jar with water. The water encourages the leech to let go of the tweezers.
 - Apply some antiseptic to the site and if you wish a dab of MG or Acriflavine. However, Do not apply them to the gills or eyes.
 - When you get to the gills, use a large pair of forceps to lift up the gill plate so you can check inside, do the same with the mouth.
 - Be aware that the gills are delicate and may bleed but this should eventually stop.
 - When you have done one side, turn the fish over and do the same on the other. Remember to check the towel for any escaping leeches before turning the fish over.
 - If the fish starts to wake up you can return it to the sedation for a short time.
 - Once you are happy you have removed the leeches, put the fish in the quarantine facility to recover. Using a QT makes it easier to catch them again if further leech removal is needed, it also allows you to closely monitor them for signs of secondary infection.
 - Do not feed them while in quarantine as the filters are unlikely to be at their optimum.
 - Salt may be added to help aid recovery and to reduce secondary infections.
2. After removing the fish and following step 1, drain down the pond completely. Remove all plant and allow them to dry out. Allowing the pond and plants to dry out will kill off any remaining leeches in the plants and pond. They are unable to survive out of water for long. Leaving it all dry for about a week should be long enough. This option is relatively easy for a smaller pond but may be impractical for a lake or larger pond.
 3. Another option is to again remove all fish from the pond and follow step 1. The pond may remain full with any plants left in situ. The pond must remain free from any fish for at least a month. This will mean that there is no food source for the adult and newly hatched leeches. They will die from starvation.

4. Salt: Once the pond is empty and if you wish to keep it full, you can salt the pond to 3% salinity. Please be aware that this is likely to kill any plants that are in the pond.
5. In larger ponds/lakes a piece of bloody meat may be hung in the water. This will need to be changed daily with fresh meat. It will not get rid of the problem but may help control the numbers of leeches. (I have tried this method and did not find it effective).
6. Leech Traps. Usually used in aquariums, you could bait these traps with bloody meat (like liver) in the box section. The leeches will then (hopefully) be drawn to the meat and enter through a small tube but then be unable to find their way out. These traps will need checking and the bait replacing daily.



There are some chemical treatments that may work in treating a leech infestation. One of them is only available as an aquarium treatment and can work out very expensive!

Interpet Anti Crustacean Parasite Plus (Aquarium)

Treatment of anchor worm, fish lice, gill maggots and fish leeches. It comes in 100ml bottles which treat 500 Litres.

1 ml per 5 Litres.

Having had the unfortunate luck to have had these horrid things in a previous pond I can be certain this treatment does work. I did not need a repeat treatment (Thankfully!!).

This will also kill snails in the pond.



Kockney Koi Yamitsu Pond Medic ParaKill

Claims to treat Leeches, Trichodina, Slime, Lice, Flukes and Anchor Worm. Available in 250ml, 500ml and 1 Litre.

10ml per 750 Litres (150 Gallons) Repeat 5 days later then again after a further 5 days.

For a short term bath (5 minutes max) use 10ml per 10 gallons (50 Litres).

A half dose may be used if Orfe or Rudd are present in the pond.

Switch off UV.

Videos

<https://www.youtube.com/watch?v=-Q558gErBsk>

<https://www.youtube.com/watch?v=p0y-6fa5D1c>

<https://www.youtube.com/watch?v=8ILGwq2RKXM>

References

http://freshwaterlife.org/imagearchive/main.php?g2_view=tags.VirtualAlbum&g2_tagName=Fish+leech&g2_itemId=3916

<http://www.fishhelpline.co.uk/health/leeches.html>

<http://www.koiquest.co.uk/Fish%20leech.htm>

<https://sussexwildlifetrust.org.uk/news/a-bunch-of-suckers>

<https://www.scribd.com/document/209143224/Leeches>

<http://www.aquaticcommunity.com/disease/parasites.php>

<http://www.pond-life.me.uk/fishhealth/piscicolageometra>

<https://www.interpet.co.uk/Products/Test-Treat/Fish-Treatments/Anti-Crustacean-Parasite-Plus-100ml#keyfeatures>

<https://pondinformer.com/pond-leech-treatment-guide/>

<https://www.inaturalist.org/taxa/483956-Piscicola-geometra>