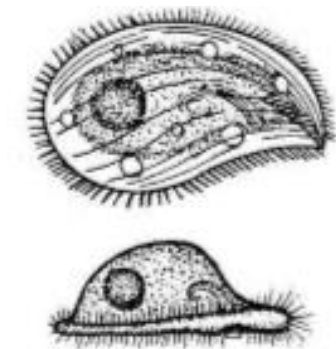
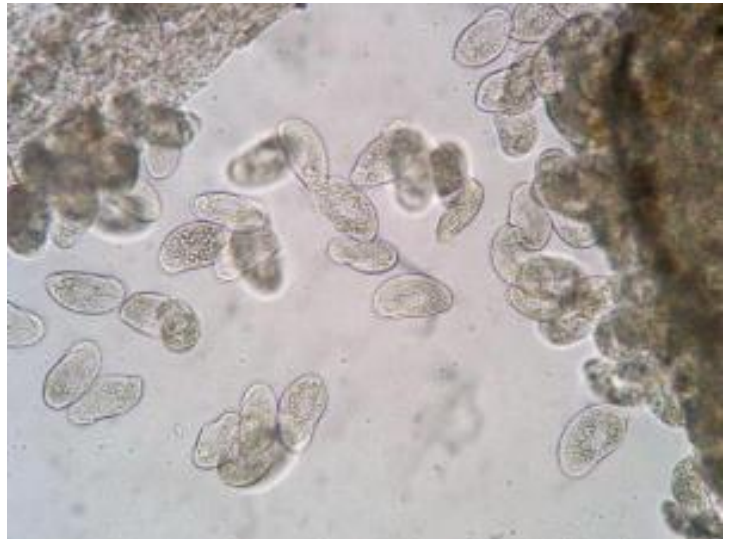


Chilodonella

Chilodonella is a very common freshwater parasite found all over the world. This takes the third position on the kill list. The most well-known genus is “Chilodonella Cyprinii”. This is a parasite that feeds off the epithelial (skin) cells including in the gills. It is a broad leaf shaped ciliate parasite, meaning it propels itself along with little hairs along its body, one end is wider than the other and tends to have a little dimple at the larger end. It is around 40x50 microns in size. It is often found on a weak koi that has other ailments that have already taken a toll on it. Unfortunately, as with many other parasites, Chilodonella appears to be building a resistance to some treatments.



Symptoms

Laboured breathing, lethargy, heavy mucous over the body, clamped fins, flashing, hanging at the surface gulping for air, they may have instability when swimming to the point you can push them over or lift them out, the fish will appear to be very distressed. In later stages there may be secondary bacterial infection. It is not uncommon for severely weakened fish to not survive the treatment period.

Identification

A skin mucous scrape is required. Chilodonella is visible at x150 magnification. It can be more tricky to see as it's movements are not as erratic or frantic like that of costia or trichodina. On closer inspection at a higher magnification, you will be able to see the “nucleus”; a larger circular object near the broad end and two “contractile vacuoles”; much smaller lighter spots. These would be much clearer by staining the slide using methylene blue or methyl violet.

Lifecycle

It reproduces by binary fission (splits in half), sometimes they may join together to exchange their genetic material; this is called “conjugation”. This fortunately means there are no eggs to be dealt with. Chilodonella can lay dormant until the right environment





occurs. The optimum temperature for this critter is 5 -10°C which also means the koi's immune system is not at its peak. It can reproduce extremely quickly in the right environment. If the host dies it will leave to find another victim. Poor water quality and stressed fish work in favour of Chilodonella.

Treatments

The most effective treatment to eradicate Chilodonella is Malachite Green and Formalin.

- Malachite Green 2% - 10mls per 176 Gallons (800 Ltr).
Formalin 30% - 10mls per 150 Gallons (682 Ltr); check your temperature as dosage may be increased in warmer water. A second dose may be required after a week.
- Potassium Permanganate (PP) 1.5 grams per 220 gallons or 1.5ppm. Keeping the water purple for 4 hours, additional 1/4 or 1/2 doses may be required in ponds with heavy bio load. When water starts to go brown the PP is spent and not doing anything else. To neutralise PP either Hydrogen Peroxide (HP) or Sodium Thiosulphate (ST) can be used. Always add lots of extra air to a pond when treating with PP as it is an oxidising agent. Where possible avoid feeding for 24 hours prior to using PP. it is usually a good idea to do a deep clean of the filters and system to avoid having more organic matter in the pond for the PP to consume.
- Chloramine T. *Kusuri* 15-20 grams per 1000 gallons for 4 doses. Not effective in temps below 11°C.
- Acriflavine with Salt.
5 grams Acriflavine powder per 220 UK gallons.
14 grams salt per UK gallon.

Remember NOT to use salt if Formalin or PP is in the pond already. Use an accurate salt meter to ensure the percentage or ppt is safe. 0.3% starting dose to slowly increase to 0.6% over 24 hours. Any further salt increases should be done slowly. Remove any Zeolite from the filters as the salt will release ammonia from it.

Before adding any treatments, it is essential that you make a positive identification of the parasite causing the problems.

Test your water parameters for Ammonia (NH₃), Nitrite (NO₂-), Ph, KH and Temperature.

Any treatments added are done so at your own risk. It is your responsibility to know your pond volume and to calculate dosages correctly. Always check the product labels. Turn off UVs if it states to do so. Add extra air.

The YKS will not accept responsibility for deaths of stock resulting from incorrect usage of chemicals/medication.

Videos

<https://youtu.be/Rzi6C4ZIOho>

<https://youtu.be/RuqRNLaSNLE>

<https://youtu.be/CRnA37tZ7ul>

<https://youtu.be/gh5kJmRp6M8>

<https://youtu.be/RAD40uC-l0s>

References

<http://www.koiquest.co.uk/CCyprinii.htm>

<http://www.koihealth.info/chilodonella.html>

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