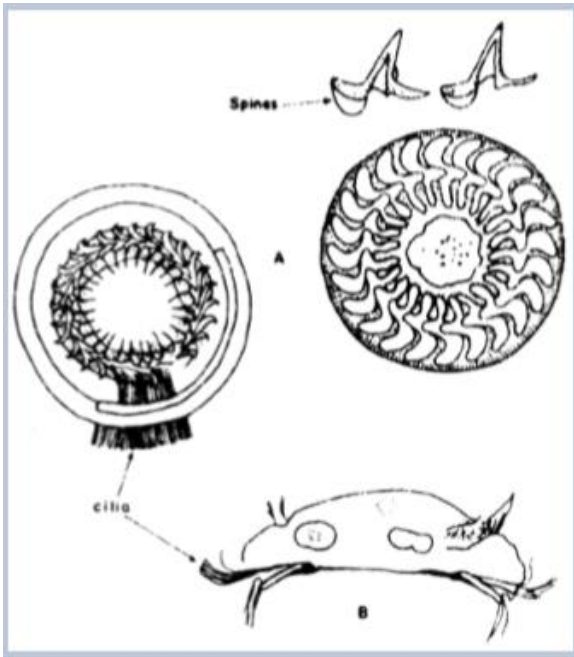
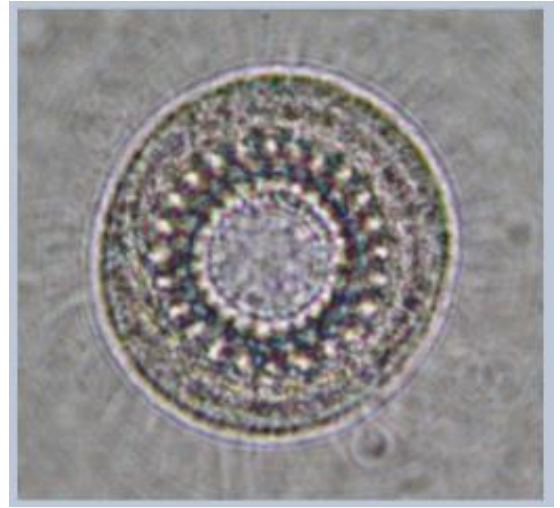


Trichodina

This pesky little critter is one of the most common ciliate parasites. Usually when you see your pride and joy bouncing off every surface they can find, usually has something to do with Trichodina or Trich for short. Due to this it means your koi can damage themselves and succumb to secondary problems like raised scales and ulcers which can weaken them so



other parasites can become

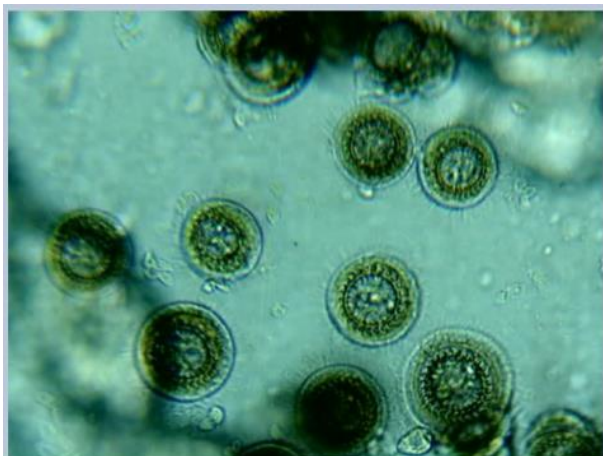
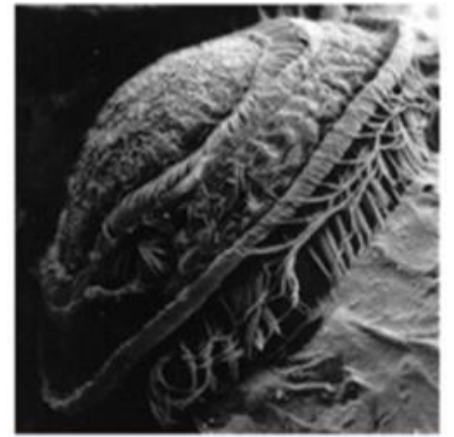
prevalent. To make matters worse there are approximately 200 strains of Trich but a positive fact is that it is relatively easy to treat. Trich can be found in marine fish as well as their freshwater cousins. Trich does not feed off the koi itself so therefore is not a true parasite. It likes dirty areas too; such as the places where muck gathers; filters, dirty pond bottoms and creases in liners. It can survive without a host and be transported from other places on frogs and toads etc. Heavy infestations are generally due to poor pond hygiene and water quality.

Symptoms

Vigorous Flashing, redness, excess mucous production, loss of appetite and sluggishness. Respiratory difficulty and damaged fins in koi with heavy infestations in the gills.

Identification

As usual a mucous skin scrape needs to be performed in order to positively identify any parasite. Trichodina is easily



identifiable at the lower magnification. Trich is disc shaped and 50microns in size, it looks very much like a little flying saucer when it zooms around. Underneath there are numerous teeth called "denticles" which point downwards and it uses to secure itself to a koi's skin. Around the edge of the parasite there are many fine cilia that Trichodina uses to swim with, when looking at it through a microscope you can see it spinning around. See videos at the end of article.

Lifecycle

Trichodina reproduces by binary fission or division. This makes treating easier as it kills all stages of the parasite in one go.

Treatments

Trichodina has various options of treatment. They are in order of the best method.

- Potassium Permanganate (PP) 1.5 grams per 220 gallons or 1.5ppm. Keeping the water purple for a minimum of 2 hours should effectively kill Trich, the general rule is to keep it 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.
- Malachite Green (MG) and Formalin (F). Not to be used below 13°C MG 2% 10ml per 176 UK gallons F 30% at 10ml per 140/150 UK gallons
- Chloramine T. *Kusuri* 15-20 grams per 1000 gallons for 4 doses. Not effective in temps below 11°C.
- Salt. 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. Bear in mind that Trichodina also thrives in marine environments. Remove any Zeolite from the filters as the salt will release ammonia from it.

Keeping on top of pond and filter maintenance will help reduce the occurrences of Trichodina.

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/FTX9GYBowxM>

<https://youtu.be/pGB854VihD4>

<https://youtu.be/z2BVQpbCWks>

<https://youtu.be/S1m1VHcPC88>