

# Chilodonella

## *Chilodonella cyprinii*.

Causative organism: Ciliated protozoan parasite viz: *Chilodonella cyprinii*.

Synonyms (alternative names): None

Geographic distribution: Worldwide

Water type: Fresh water.

Typical signs of infection: *Chilodonella cyprinii*.

**Water.** Poor water quality can bring on the reproduction of the parasite, as the fish become stressed.

**Behavior.** Labored breathing, and fish may appear at surface gasping for air. Fish will evidence lethargy, and may from time to time, try to "scratch" of the organisms, by rubbing against an object of some kind in the aquarium. Distress is visibly obvious.

**Fins.** Fins often become clamped or folded

**Body.** Excessive mucous production is typical, & parts of the body will exhibit a cloudiness as large numbers of the parasite begin feeding of the epithelial layers.

**Gills.** Gill examination will show large numbers of the leaf shaped organisms.

**Skin** (smear). Should show ciliates once an infection has become established.

## **Life cycle & method of transmission.**

This protozoan parasite occurs frequently in fresh water Aquaria, & has a counterpart in marine aquaria called *Brooklynella*. The parasite is vaguely leaf shaped with a length of 40-70 microns, & a width of some 30-50 microns. The ventral side of the parasite is covered with cilia. Inside the cell for those of you, who have a microscope, & wish to examine same, are a nucleus and two contractile vacuoles. These are made more evident, by staining the slide with a smear taken from an infected fish, using a stain such as methylene blue, or methyl violet.

Reproduction of the parasite takes place typically by mitotic division, but from time to time a pairing of two individuals takes place called conjugation, and an exchange of some genetic material probably takes place.

As with many parasitic infestations, *Chilodonella* can lie dormant for long periods of time, but if and when the fish becomes stressed or weakened for any reason, or if the quality of the water conditions in the Aquarium deteriorate, then rapid reproduction of the parasites can ensue, and once the gills are attacked mortality is to be expected.

## Prognosis

When a heavy infestation of *Chilodonella* has taken hold, then some casualties are to be expected. Usually certain species such as Discus, will become infected most severely first, but if untreated other varieties will succumb as well. However if correct treatment is applied in good time, then it can not only be checked but it is also possible to eliminate the parasite.

Young fish have less capacity to resist the parasite, & will more easily succumb.

## Treatment

Fortunately if successfully diagnosed, there are several treatments that can be used.

These include the use of formaldehyde used as a bath as well as Acriflavine type drugs along with methylene blue. One should follow the manufacturer's instructions for treatment, as different producers, use different concentrations, & it is therefore impossible to give a standard treatment for all the medications out there. At Fish-Vet we produce two very effective treatments for this condition called **Aqua Pro-Cure** and **Revive**, which are safe for invertebrates and plants

In treating the fish, one should always make allowances for the degree of infection, as weakened fish may not always withstand the full dosage, either in strength, or period of time. This call is one which either one builds up experience over time or with the help of a dealer whose expertise you can trust.

As *Chilodonella* is not affected by change of water temperature, no change should be made to your heater.

### Bibliography.

Langdon et al. 1985. Death in Australian freshwater fishes associated with *Chilodonella hexasticha* infection. In Australian Veterinary Journal 62, 409-413

Untergasser D. 1989. In Handbook of Fish Diseases. Publ. TFH page 95.

Van Duijn C. 1973. In Diseases of Fishes . pages 70-72.