

# TRICHODONIOSIS

There are three genera, Trichodina, Trichodinella, and Tripartiella that have similar appearances and are commonly found parasitizing fishes.

Trichodinids are ciliated, circular parasites that are flattened and have denticular rings. They are usually 40 to 60 $\mu$ m in diameter and are found on the skin and gills of fishes. They move in a distinct manner, often rotating their denticular ring continuously. In the wet mount, the organisms are dome shaped when viewed from the side.

Heavy infection causes respiratory distress and skin ulcers, and in some fish species these parasites have been reported to infect the urinary bladder and oviducts. Affected fish may show hypermucus production in the form of a white cast to the skin.

These parasites are commonly found on the skin and gills of fish, Especially if the water has a high organic load. The parasites multiply by binary fission and do not produce resting spores. They do survive well off a host and can be introduced to aquaria with plants or substrates.

Removal of fish to fresh water will often effect a cure.

# HEXAMITOSIS

Hexamita ( Octomitus ) spp. are flagellated protozoans found in the gastrointestinal tract of fishes. They frequently infect discus. These parasite are very motile, and are pear shaped and about 5 to 12µm long. The eighth flagella are usually not easily seen. In an, unthriftiness, angelfish, discus, and gouramis, inappetence, weight loss, and death. Fish may show excessive nervousness and sometime hypreanemia of the intestinal tract. Sometimes, organisms are found in the liver, gallbladder, and kidney.

This disease is caused characterized by erosions of the epithelium and underlying muscles, which can extend to the bones of the skull. The lesions are progressive and can cover a large percentage of the head. The lateral line is also a preferred site for these lesions.

Direct contact spread in crowded tanks is certainly an important route of transmission. The relationship between Hexamita organisms and the 'hole in the head' syndrome is not well established.

Maintenance of good water with regular cleaning of the aquarium gravel and water. Changes seems to be important preventing hexamitosis. Improved nutrition, with Supplementation of vitamin C, has been reported to improve the condition. A single metronidazole bath (5 ppm) is effective in treating classic hexamitosis.

**Nematodes**, also called roundworms, occur worldwide in all animals. They can infect all organs of the host, causing loss of function of the damaged area. Signs of nematodiasis include anemia, emaciation, thriftiness and reduced vitality. Three common nematodes affecting fish are described.

Camillanus;

Camillanus is easily recognized as a small thread-like worm protruding from the anus of the fish. Control of this nematode in non-food fish is with fenbendazole, a common antihelminthic. Fenbendazole can be mixed with fish food (using gelatin as a binder) at a rate of 0.25% for treatment. It should be fed for three days, and repeated in three weeks.

## Capillaria;

Capillaria is a large roundworm commonly found in the gut of angelfish, often recognized by its double operculated eggs in the female worm. Heavy infestations are associated with debilitated fish, but a few worms per fish may be benign. Fenbendazole is recommended for treatment.

## Eustrongylides;

Eustrongylides is a nematode that uses fish as its intermediate host. The definitive host is a wading bird, a common visitor to ponds. The worm encysts in the peritoneum or muscle of the fish and appears to cause little damage. Because of the large size of the worm, infected fish may appear unsuitable for retail sales. Protecting fish from wading birds and eliminating the intermediate host, the oligochaete or Tubifex (soft-bodied worms), are the best means to prevent infection.