

“ICK” AND “VELVET”

By Chase Klinesteker SWAM, July-Aug 2009

The two most common diseases of our tropical aquarium fishes are “ick” and “velvet”. They are both contagious and deadly to our fish, so we must be familiar with how to prevent and cure both. Almost everyone who has kept tropical fish for a few years has experienced one or both of these diseases in their fish. Prevention of both is based on reducing stress on the fish, whether it be temperature changes, environmental changes, pollution, poor diet, or physical stress. Because early signs are not always obvious, we always recommend quarantining fish purchased at a store for 2 weeks or more to see if anything develops. Fish have been through much stress in the shipping and holding process before they get to the dealers tanks. The causing organisms are present in our aquariums all the time but don’t become a problem unless we introduce a weakened fish or allow conditions to deteriorate in our tanks so the parasites can gain a foothold. This is why nutritious foods, regular water changes, removing fish waste, and filter cleaning is so important. Overfeeding and the resulting pollution is a common cause of fish getting sick.

ICK

Ick, or white spot disease, is a single celled protozoan, *Ichthyophthirius multifiliis* (easy for you to say?!). It is a free swimming ciliated parasite which attaches to a fish and burrows under the epithelium for nourishment. It can affect almost all fish species around the world. As it grows, it gets quite large and is seen as a white spot on the skin. Then it drops to the bottom and divides into cysts. In 2-4 days, depending on the temperature, the cysts break into many small free-swimming parasites that can infect other fish. The parasites are only susceptible to medication in the free-swimming stage and a higher temperature speeds up the cycle to make them more affected by the medication. If left untreated, the parasites eventually overwhelm the fish and they die. Some medications recommended are malachite green, formalin, or acriflavin, but they sometimes are not readily available and have some drawbacks.

VELVET

“Velvet” or “rust” disease, *Oodinium limneticum*, is a dinoflagellate related to green water algae. This parasite attacks many species of fish, especially killiefish, tetras, danios, barbs, and rasboras. *Northobranchius* are particularly susceptible. The free swimming parasite attaches to the fishes skin and gills and the body becomes covered with a brownish or rust colored fuzz or velvety coating. A light infection can go unnoticed. It is best seen by shining a flashlight on the affected fish. When it matures it drops from the fish and produces around 250 tiny free-swimming parasites that spread the disease. It eventually overwhelms the fish and causes death, probably from affecting the gills. Velvet is a disease of poor tank maintenance, so if possible do a water change and filter clean before treating with chemicals. Just make sure the disease is not spread to other tanks. Copper can be a cure for velvet, but some fish and plants are dose sensitive. Because the organism is related to algae, a reduction in light can be helpful.

SALT AND METHYLENE BLUE

The commercial medication products can work well when directions are followed, but I wanted to use a treatment that is easily available, a reasonable cost, and not harmful to most fish if doses are not exact. I settled on a combination of 2 teaspoons of sea or rock salt and 2 drops of 5% methylene blue per gallon of tank water. If after 5 or 6 days the infestation does not improve, I can increase that to 3-4 teaspoons of salt without harming most fish. The sooner treatment is begun, the better chance of success. Most all medications will cause damage to live plants, so I will usually remove the plants if they are floating or in pots and place them in an empty tank or container with no fish. After 2 or 3 weeks and no fish hosts present, they can be rinsed and used elsewhere. If an infestation occurs in an established planted tank, I remove all fish and treat them in another aquarium. The planted tank is cleaned (water change, debris removal, and filter cleaned) and left to set for several weeks before adding fish. Observe the fish in the treated tank closely. Usually the infestation will begin decreasing in 5-7

days. Feed the fish sparingly to keep pollution levels down. Once the infection has disappeared, I wait another week, then make a 50% water change. The medication likely has reduced the biological filter considerably, so continue to feed quality food but sparingly. In another week make another 50% water change and things should be close to normal and the blue color almost gone. Plants can then be added back. This treatment method has worked well for me many times.