

# STUDY OF ORNAMENTAL FISH DISEASES AND PROPHYLATIC MEASURES



# Bacterial diseases

## Mouth fungus

### Symptoms

White cotton patches around the mouth.

Mouth Fungus is so called because it looks like a fungus attack of the mouth. It is actually caused by the bacterium *Chondrococcus columnaris*. It shows up first as a gray or white line around the lips and later as short tufts sprouting from the mouth like fungus.

Penicillin at 10,000 units per liter is a very effective treatment. Second dose with chloromycetin, 10 to 20 mg per liter may be given after two days.



# Bacterial diseases – Contd...

## Dropsy

### Symptoms

Bloating of the body, protruding scales.

Dropsy is caused from a bacterial infection of the kidneys, causing fluid accumulation or renal failure. The fluids in the body build up and cause the fish to bloat up and the scales to protrude. It appears to only cause trouble in weakened fish and possibly from unkept aquarium conditions.

An effective treatment is addition of antibiotic such as chloromycetin (chloramphenicol) and tetracycline at the rate of 10 mg per liter of water.

# Bacterial diseases – Contd...

## Tail Rot & Fin Rot

### Symptoms

Disintegrating fins that may be reduced to stumps, exposed fin rays, blood on edges of fins, reddened areas at base of fins, skin ulcers with gray or red margins, cloudy eyes.

Tail and fin rot appears to be a bacterial infection of the tail and/or fins and may be caused by generally poor conditions, bully, or fin nipping tankmates.

An effective treatment is addition of antibiotic such as chloromycetin (chloramphenicol) and tetracycline at the rate of 10 mg per liter of water.





# Fungal diseases

## Fungus (Saprolegnia)

### Symptoms

Tufts of dirty, cotton-like growth on the skin, can cover large areas of the fish, fish eggs turn white.

Fungal attacks may lead to other health problems like parasitic attack, injury, or bacterial infection. The symptoms are a gray or whitish growth in and on the skin and/or fins of the fish. Eventually, if left untreated, these growths will become cottony looking. The fungus, if left untreated, will eventually eat away on the fish until it finally dies.

# Fungal diseases

## Fungus (Saprolegnia)

### Treatment

Use a solution of phenoxethol at 1% in distilled water. 10 ml of this solution to be added per liter of aquarium water. The treatment should be repeated after a few days if needed. If the symptoms are severe the fish can be removed from the aquarium and swabbed with a cloth that has been treated with small amounts of povidone iodine or mercurochrome.

For attacks on fish eggs, most breeders will use a solution of methylene blue adding 3 to 5 mg/l as a preventative measure after the eggs are laid.





# Parasitic diseases

## Argulus (Fish louse)

### Symptoms

The fish scrapes itself against objects, clamped fins, visible parasites about 1/4 inch in diameter are visible on the body of the fish.

The fish louse is a flattened mite-like crustacean about 5 mm long that attaches itself to the body of fish. They irritate the host fish, which may have clamped fins, become restless, and may show inflamed areas.

With larger fish and light infestations, the lice can be picked off with a pair of forceps. Other cases can best be done with a 10 to 30 minute bath in 10 mg per liter of potassium permanganate. Or treat the whole tank with 2 mg per liter, but this method is messy and dyes the water.

# Parasitic diseases – Contd...

## Anchor worm (Lernaea)

### Symptoms

The fish scrapes itself against objects, whitish-green threads hang out of the fish skin with an inflamed area at the point of attachment.

Anchor worms are actually crustaceans. The young are free swimming and borrow into the skin, go into the muscles and develop for several months before showing. They release eggs and die. The holes left behind are ugly and may become infected.

The anchor worm is too deeply imbedded to safely remove. Treatment can best be done with a 10 to 30 minute bath in 10 mg per liter of potassium permanganate. Or treat the whole tank with 2 mg per liter, but this method is messy and dyes the water.

# Protozoan diseases

## Velvet or Rust

### Symptoms

Clamped fins, respiratory distress (breathing hard), yellow to light brown "dust" on body.

This disease has the appearance of a golden or brownish dust over the fins and body. The fish may show signs of irritation. The gills are usually the first thing affected. Danios seem to be the most susceptible, but often show no discomfort. This disease is highly contagious and fatal.



# Protozoan diseases

## Velvet or Rust

### Treatment

The best treatment is with copper at 0.2 mg per liter (0.2 ppm) to be repeated once in a few days if necessary. Acriflavine may be used instead at 0.2% solution (1 ml per liter). As acriflavine can possibly sterilize fish and copper can lead to poisoning, the water should be gradually changed after a cure has been effected.

# Protozoan diseases – Contd...

## Costia

### Symptoms

Milky cloudiness on skin.

Similar treatment followed for velvet diseases may be done.



# Protozoan diseases – Contd...

## Ich (Ichthyphthiriosis)

### Symptoms

Salt-like specks on the body/fins. Excessive slime. Problems breathing (ich invades the gills), clamped fins, loss of appetite.

The drug of choice is quinine hydrochloride at 30 mg per liter (1 in 30,000). Quinine sulphate can be used if the hydrochloride is not available. The water may cloud but this will disappear. By reducing the time (with raised temperature) of the phases, you should be able to attack the free swimming phase effectively. Most commercial remedies contain malachite green and/or copper, which are both effective.

