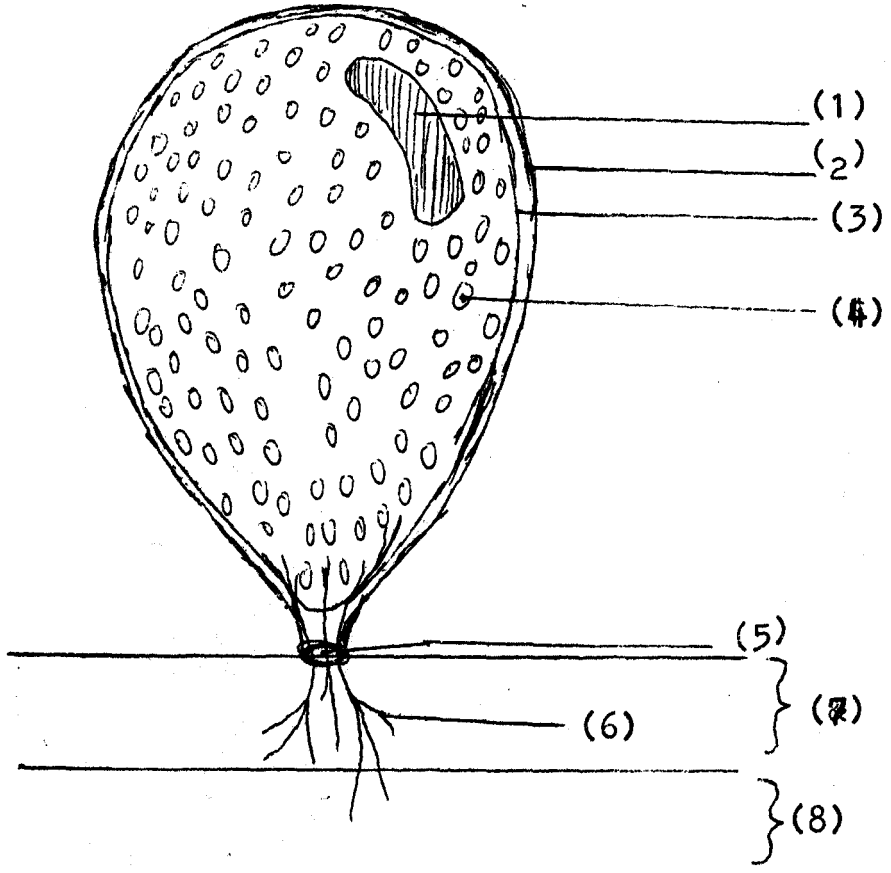
Oodinium pillularis

by JOHN. J. FRABONI

A curse to which many aquarists are exposed is a disease caused by one of the dinoflagellates. I was a victum of an epidemic shortly after I became interested in the hobby. This particular manifestation caused me to lose some very fine Swordtails as well as a whole tank of Green Sailfin Mollies. This is a disease common to all parts of the world. The culprit is Oodinium pillularis and it causes the disease commonly known as velvet or the gold dust disease. There is even a species common to salt water and is a pest to marine aquarists too.

*DIAGRAM #1 Oodinium pillularis



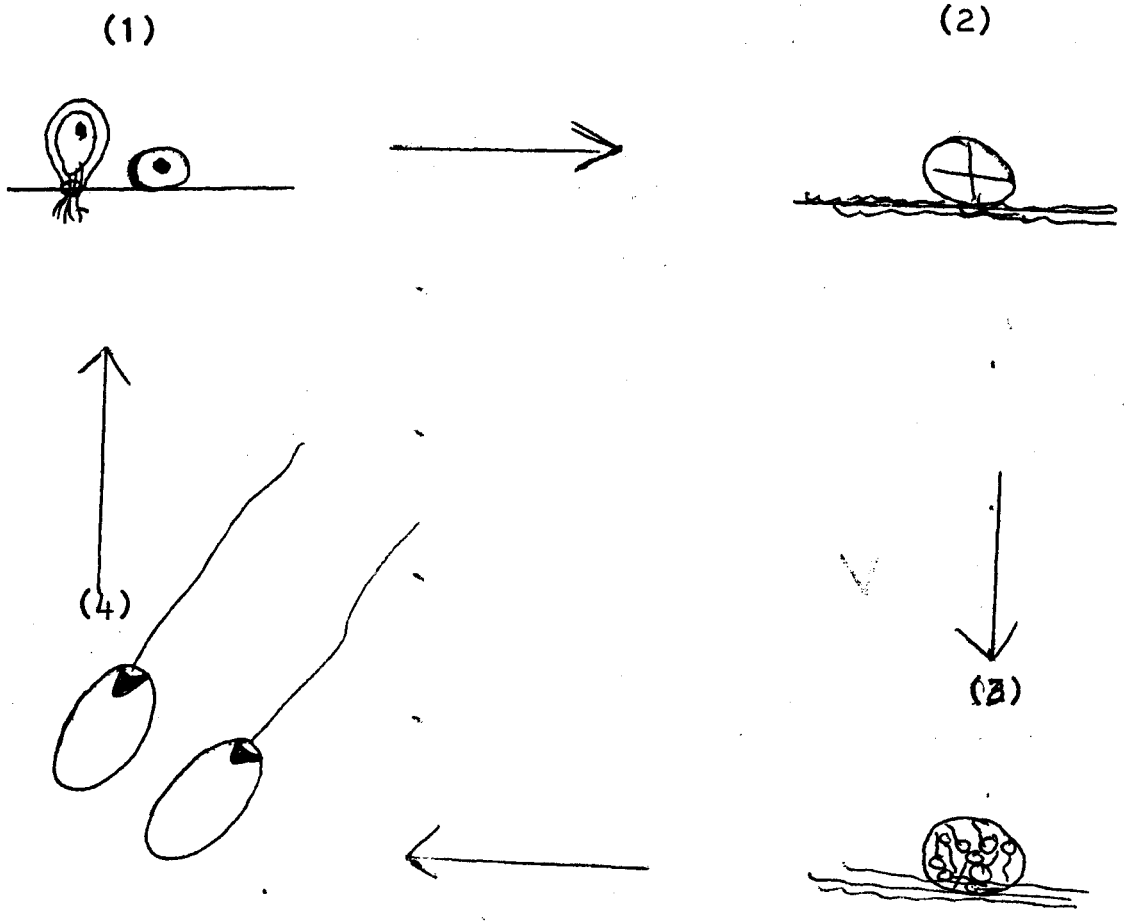
Almost every person interested in the hobby has at some time seen this disease in his tanks. The protozoa that causes this infection is from 30-150 microns long and from 15-70 microns wide. It infects the epithelial tissue of its host. In very acute cases it is found in the gills and is, but only rarely, found in the subcutaneous and connective tissues. The mode of attachment is a cytosome (funnel like orafice). From this opening plasmatic psuedopodia (similar to rhizoids in many types of molds) begin to develope down into the epithelium. It is from these filimentous growths that the parasite derives its nourishment. The filiments dissolve living cells and pass the contents into the mother cell by osmosis. When the adult reaches maturity it loses the

*(1) NUCLEUS
(2) CELL MEMBRAIN
(3) CYTOPLASM
(4) PROTOPLASMIC GRANULATION
(5) CYTOSTOME
(6) PLASMATIC PSUEDOPODIA
(7) EPITHELIUM
(8) SUBQUTICULAR LAYER

(Continued on page 33)

plasmatic psuedopodia and becomes spherical. At this time the cell drops to the substrate and remains dividing again and again until 32 to 64 daughter cells are formed. These cells are flagellated and are very motile. When they reach the free swimming stage they must find a host fish within twenty four hours or they will perish.

**DIAGRAM #2 Life cycle of Oodinium pillularis



Symptoms:

1) Loss of normal coloration; fish will be pale at first.
2) A gray to yellow-gray coloration will form on the specimens skin.
3) In very acute cases the skin will fall away in strips.
4) Specimens may become thin and refuse to eat.
5) Spawn will show a marked lack of embiologic developement.
6) Fish will rub their sides on stones and other stationary objects.
7) Gills become pale in very acute infestations.
8) The fish will begin to die sporadically.

**(1) ADULT
(2) VEGETATIVE
(3) MITOTIC
(4) PARASITIC FLAGELLATE

(Continued on page 34)

OODINIUM.....(Continued from page 33)

Treatment:
1) Prolonged baths in acriflavin and raise the water temperature to 30 C.
2) Quinine dichloride baths 1.5gms to 100 L of water.
++3) NaCl 3-5% bathe the fish for three minutes.
4) Copper Sulphate in a very small amount;
BASE SOLUTION: 1gm/l
add 2ml to each liter of water.

The prognosis for this disease is usually a bright one. If the aqyarist is on his toes he can catch the disease before it gets out of hand. The best ways to prevent the disease are those same old dos and donts that all aquarists are familiar with. Proper management of tank space, water temperature, and correct diet are the major factors in keeping any fish healthy. Frequent water changes as a rule are a very good health stimulaor. I hope you all have good luck and never lose a fish to a disease, but when a disease is discovered prompt and accurate treatment will very likely guarentee success.

JOHN J. FRABONI

++THIS TREATMENT SHOULD BE A LAST RESORT AS COPPER IS VERY TOXIC TO FISH EVEN IN SMALL AMOUNTS.

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LIFE CYCLE OF LIGULA

Illustration #1. (Figures A. thru E.)