Cooperative Extension Service

Fact Sheet 9006

Yellow Grub in Fish

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During the summer, Extension Service personnel receive many inquiries about worms in fish. This publication describes the life cycle of the yellow grub and gives some measures you can take to reduce its occurrence. Three other grubs (white, black, and eye), which have similar life cycles, also affect fish.

The yellow grub is a large grub that infects catfish, bass, bluegill, redear, and other sunfish. It invades the muscle, the edible part of the fish. Its size and color make it easily visible. The grub is evident if the fish is skinned instead of scaled during the cleaning process. This parasite is not harmful to humans eating the fish, but the flesh of a parasitized fish is not appealing to eat.

To control plants or animals is to break a link (usually the weakest) in their life cycle. The life cycle of the yellow grub has many links in its life cycle, but none are very weak. It not only involves the fish but also a snail and a bird.

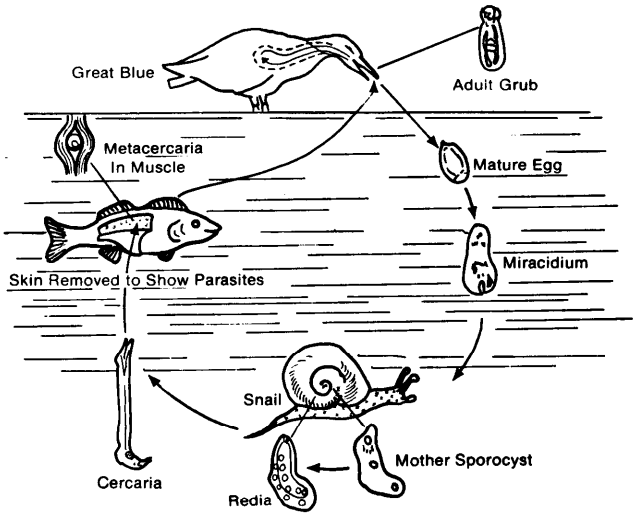
Life Cycle

The cycle evolves in the following manner:

1. The mature microscopic-size egg hatches in the water in a state known as a miracidium.

2. The miracidium is a free-swimming individual and will die within a few hours unless it comes in contact with a snail.

3. The miracidium enters the snail's body and forms a sporocyst. The sporocyst produces several stages known as rediae. The rediae produce many daughter cells known as cercariae in the snail.



Life cycle of the yellow grub

4. The cercariae leave the snail and enter the fish and form cysts.

5. The cysts in the fish are known as metacercariae (yellow grubs in the fish flesh).

6. When the infected fish is eaten by a fish-eating bird, the fish passes down into the stomach of the bird where the cyst walls are digested by enzymes. The freed grubs migrate up the esophagus to the trachea, the mouth cavity, or the upper esophagus.

7. In these areas, the grubs attach themselves and become sexually mature adults.

8. When the bird thrusts its beak into the water to feed, eggs laid by the adults are released into the water. When the eggs hatch, the cycle is completed.

Prevention and Control

All prevention and control amounts to only a token effort because of the complexity of the life cycle of the grub. The following will help reduce the occurrence:

1. Be careful and avoid introducing snails or infected fish when stocking a pond.

2. Snails feed on aquatic vegetation so the reduction of aquatic vegetation reduces the food supply.

3. Deep water (at least 18 inches) at the pond edge discourages birds that feed in shallow water.

4. Copper sulphate when used to control algae reduces the snail population.

5. Bird control is not a possibility because they are migratory and are protected.

6. Redear sunfish eat snails, so the stocking of this species of sunfish helps reduce the snail population.

7. Draining and drying are probably the only effective control. This presents the problems of lost production time and the impracticality of draining large bodies of water.

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