FACT SHEET

L-1409

ANCHOR PARASITES OF FISHES

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Anchor parasites parasitize a wide variety of freshwater fishes in Texas. Sometimes called anchor "worms," they actually are not worms but members of the crustacean group (such as crawfish, crabs, etc.) known as copepods. Most freshwater copepods range in size from 1/100- to 1/5-inch long.

The most common species of anchor parasite in Texas *(Lernaea cyprinacea)* prefers minnows as hosts, but also will infest catfish, bass and bream.

Life Cycle

In its early stage of development the parasite swims freely about in the water. After transformation into the intermediate stage the anchor parasite seeks a fish host and attaches to the surfaces of the gills or the outer skin. After developing into an adult the parasite ventures about the surface of the fish and even into the water as a free agent. By this time the males have begun to die and the females have been fertilized.

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The fertilized female will rasp away the skin of the fish and burrow into the flesh. While embedded in the fish's flesh, a transformation takes place in the body of the parasite. The parasite becomes much larger; the head develops extensions resembling horns; and the tail protrudes through the skin to the outside. The animal resembles an anchor in appearance, thus the name anchor parasite. After a short time two egg sacs develop as attachments to the tail. At maturity the egg sacs open and young parasites resembling ticks swim free in the water.

Effects of Parasite Infestation

Fish infested with anchor parasites are prone to get bacterial infections in the openings caused by the parasites. Very small fish are more adversely affected than larger fish. Fish infested with anchor parasites may be unsightly, and this loss of visual appeal is probably the most serious consequence of infestations.

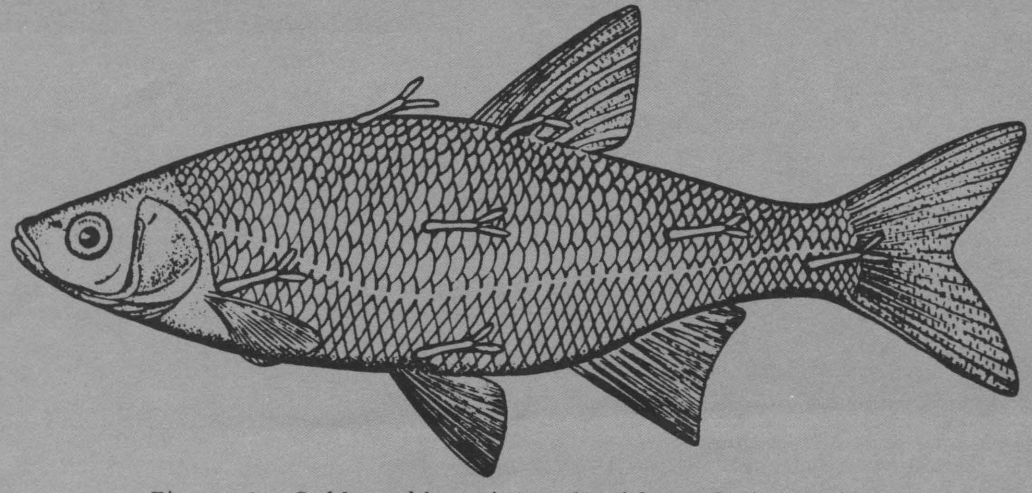

Figure 1. Golden shiner infested with anchor parasites.

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The parasites are removed during the skinning or scaling process, and are not harmful to humans.

Anchor Parasite Control

Anchor parasites can be controlled with a commercially available pesticide called Masoten®, which kills the immature stage. By treating a pond at weekly intervals for 4 weeks during the summer, the immature stages are eliminated as the adults produce them and before they have a chance to transform into untreatable adult females. Studies indicate that the productive period of the female is completed within a 3-week time span in the summer. Since the adult produces eggs only in water temperatures above about 68 degrees F, winter treatments are not effective.

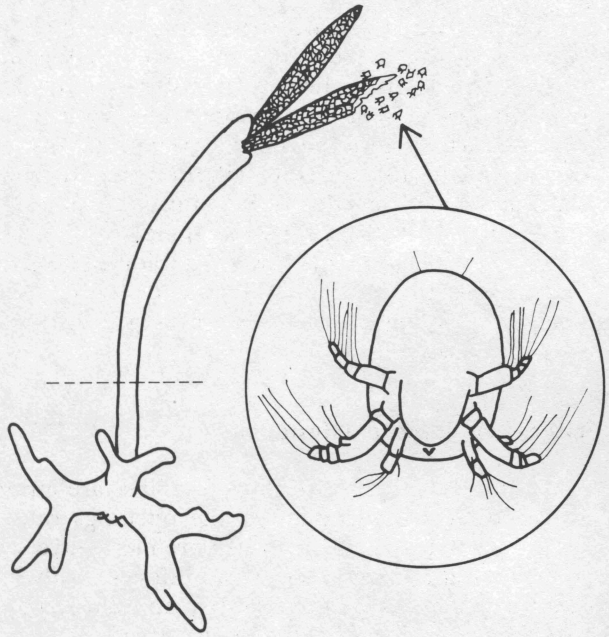

Figure 2. An anchor parasite and newly-hatched larvae. The transformed female parasite is shown with larvae being released from the egg sacs. The broken line indicates the point from which the parasite protrudes to the outside of the fish.

The rate of application is based on the weight of the active chemical ingredient per million parts of water. Masoten is cleared for use on bait fish only, and not for food fish. The user should carefully follow instructions on the pesticide label.

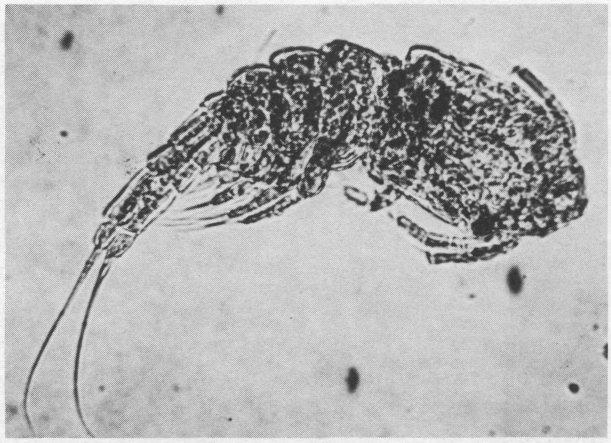

Figure 3. Microscopic view of an intermediate stage, the stage which infests fish. This intermediate stage of the anchor parasite is similar in appearance to the intermediate and adult stages of non-parasitic copepods.

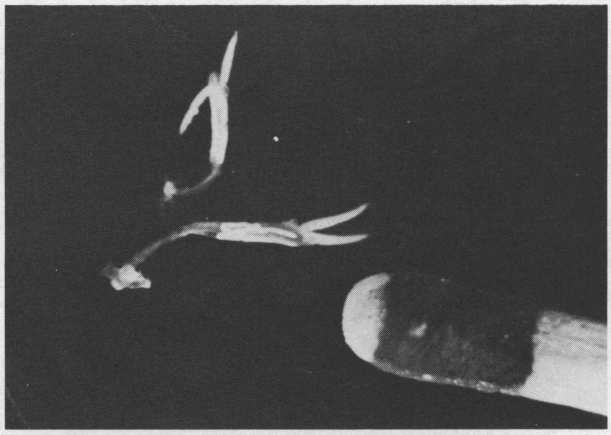

Figure 4. Transformed females removed from a fish. This mature stage is about twenty-five times the length of the intermediate stage.

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