

Institute for Fisheries Research University Museums UNIVERSITY OF MICHIGAN Ann Arbor, Michigan

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Report No. 105 GENERAL INFORMATION ON THE "WORMS" AND "GRUBS" OF INLAND LAKE FISH

- l. Most of our inland lake fish become infested with parasitic worms ("worms" and "grubs"). Generally these are small and inconspicuous, so that it takes an expert to find them. But occasionally they become so large or numerous as to render the fish disgusting to the general public.
- 2. The ordinary "grubbiness" is usually most conspicuous in the summer months. However, some of the parasitic worms are present in cold weather and not in the summer.
- 3. All kinds of fish are subject to a greater or less degree to these parasitic infestations. Some species, however, are more often or more heavily infested than others. Perch and rock bass are among these. However, the degree of infestation differs greatly in different waters, and in many lakes perch and rock bass are almost free of parasites.
- 4. The parasitic worm infestation is sometimes fatal to the fish, but usually not. The fish diseases which are of bacterial ("germ") origin are more likely to be fatal.
- 5. The ordinary "grub" of the perch sluffs off in the winter. Whether it dies first is not known.

The parasitologists believe that most of the species of worms have a definite season in fishes. After they have produced eggs which pass out into the water the "worms" and "grubs" disappear. It is thought that some may pass out alive while others probably die before being passed away or absorbed by the fish.

These parasites usually find only one of their "hosts" in fish. The fish usually become infested by eating or coming into close contact with some snail, crustacean or other water animal which is acting as a "host" to an early stage of the parasite. The parasite then develops a new stage in the fish. It may mature in the fish, or may pass on into some other host, usually a bird or fish which has eaten the first infected fish. In any case, the parasite exentually matures in some host, and produces eggs which enter the water and develop there into larvae which in some way find their way into the small primary host again. According to the species the parasite reaches the fish either by the eating of the primary host or by the direct action of the parasite in swimming to the fish. Eventually the parasite again matures and the cycle goes on over and over again.

Incidently the fish which are wormy or grubby are entirely safe to eat. In the first place almost none of the parasites are capable of infesting man, and all are killed by any of the ordinary cooking processes. The intestinal worms of course are cleaned out, and the flesh "grubs" will have no ill effect even on the taste of the fish, unless they are thick enough to soften the flesh or render it disgusting to the sight.

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