11. Undulating worms attached to body, fins, gills, and mouth.

12. Red, thread-like worms extending from the anus.

13. White to pink thread-like swelling on head or fins.

**Found in the Flesh**

14. White or yellow cysts imbedded in the muscle.

15. Sandy flesh in walleye.

**Found Internally**

16. Large white flat worm in the body cavity.

17. Coiled (like a watch spring) worm encrusted on the internal organs.

18. Round transparent cysts on the internal organs.

19. Irregular white cysts in or on the internal organs.

20. White, thread-like worms lying on or moving through the internal organs.

21. Tiny gold-brown cysts on the internal organs.

22. White or orange worm in body cavity, attached to the intestine.

23. White, undulating worms emerging from ruptured intestine.

**VISUAL SIGN**

**CAUSE/RECOMMENDATION**

*Leeches.* Conspicuous, blood-feeding, external parasites, leeches produce a small circular wound that remains even though the leech moves or drops off. Edible. Clean and prepare as usual.

*Round Worms* (*Carnallanus* sp.). Various roundworms are found throughout the intestine. The species that lives in the lower large intestine will occasionally extend from the anus. Edible. Clean and prepare as usual.

*Round Worms* (*Philometra* sp.). Normally found on carp, buffalo, and suckers, this adult roundworm lives just under the skin. Edible. Clean and prepare as usual.

*Yellow Grub* (*Clinostomum* sp.). Cream-colored cysts found in many parts of the body contain larval flukes that become adults in birds. Numerous at times, the Yellow Grub will emerge if cyst is broken in water. If practical, remove cysts from flesh; clean and prepare as usual. Otherwise, discard entire fish.

*White Grub* (*Hysteromorpha* sp.). Smaller and lighter colored than the Yellow Grub. These larval flukes are most often found in catfish. Use same as above.

*Unknown.* An unusual problem apparently found only in walleye. Fish show no external symptoms or abnormal behavior. The rough, sandy flesh is found in varying intensity when fish is filleted but the flesh is always somewhat discolored. DO NOT EAT. Wrap fish in plastic or foil (do not freeze) and notify nearest Game and Fish Commission office.

*Tapeworm* (*Tigula* sp.). This larval tapeworm is found free in the body cavity of minnows, carp, suckers, and some other fish. It is uncommonly large and may create an abdominal bulge. Edible. Clean and prepare as usual.

*(Contracaecum* sp.). Found on the internal organs or the wall of the body cavity, these larval roundworms are immobile. They become adult in fish-eating birds. Edible. Clean and prepare as usual.

*White Grub* (*Neascus* sp.). These larval flukes occasionally occur in quite large numbers. Edible. Clean and prepare.

*Larval Spiny-Headed Worm* or *Larval Tapeworm.* These cysts are larger, whiter, and not as round as those described in No. 18. Edible. Clean and prepare as usual.

*Larval Tapeworm.* Some tapeworms are not found in cysts. Numerous worms may infect the ovaries of bass. Edible. Clean and prepare as usual. Roe can be cleaned by removing worms with tweezers before preparing.

*Larval Roundworm.* Often found in great numbers, these cysts will give a sandy appearance to a fish's innards. Edible. Clean and prepare as usual.

*Spiny-Headed Worm* (*Pomphorhynchus* sp.). Since most adult acantophorans live inside the intestine, they are not seen by fishermen. However, this species can be found lying in the body cavity with its head buried in the intestine. Edible. Clean and prepare as usual.

*Intestinal Worms* (Adult Helmintis). Adult flukes, tapeworms, roundworms, and spiny-headed worms will not normally be seen by fishermen unless the intestine is accidentally cut in cleaning. Edible. Clean and prepare.