

## Worms in Your Fish...? Not to Worry



Granted the thought of worms in a fish you just caught and plan to eat is not an appealing one, but occasionally anglers do come across them while cleaning their catch. Fortunately, while unsightly, they pose little risk to fish consumers. It is important to remember two key points. First, worms and other parasites naturally occur in most fish species, and second, while certain parasites can infect people, properly handling and preparing your catch will render these parasites harmless.

A variety of parasitic worms are found in local species including tapeworms, flukes, roundworms (also known as nematodes) and thorny-headed worms. While these species can potentially occur in or on all fish, some groups are more susceptible due to their life history and diet.

Members of the drum family including sea trout, red drum, and black drum, for example often have worms present, but sharks, amberjacks, cobia, and groupers also commonly have them. Most parasites found in fish have complicated life cycles that require them to utilize a number of hosts before they can reproduce. They tend to work their way up the marine food web while growing and multiplying, and this is one reason the adult forms tend to be found in top predators. Parasitic worms rarely harm their host species, and in fact, researchers have found the presence of a variety of worms can be an indication of a healthy marine environment. Fish found in polluted areas tend to have fewer species in greater abundance where fish in more pristine waters typically will have a greater diversity of parasites in lower numbers.

### Common Parasitic Worms Found in Fish

**Tapeworms:** These parasites are commonly observed by fishermen when cleaning their catch. Larval tapeworms form cysts on or in the internal organs or in the body cavity. Adults are white, have worm-like segmented bodies, and are found in the intestines. Because the worm's bodies are long and twisted they can give the illusion that a fish is more infected than it really is; typically a fish will not have more than three or four worms.

**Roundworms (nematodes):** Roundworms are very common parasites in fish. The larvae may be found in cysts or coiled in or on various internal organs. Adults are usually found in the intestines, and can even be seen extending from the anus. Some are found coiled under the skin. Like tapeworms, roundworms require multiple intermediate hosts to complete their life cycle.

**Flukes:** There are two groups of flukes. Monogenetic flukes live on the external body surface and multiply on the same host. Digenetic flukes are internal fish parasites and require two or more hosts to complete their life cycle. Other hosts may include snails, clams, birds or other fish - but not man.

**Spiny-Headed Worms:** Spiny-headed worms are rarely seen by anglers. They live in the intestines of their fish host. Their name refers to their retractable mouth-like appendage that is equipped with multiple hooks. Most use crustaceans as an intermediate host, and are typically found in fish that eat crustaceans.

**Anglers typically have little to worry about when it comes to being infected by these parasites as most are very host-specific and therefore, cannot be passed to humans.** The risk from parasitic worms is far less than the risk associated with elevated levels of bacteria that can build up from poor handling and preparing practices. It is also important to note that most adult parasitic worms are commonly observed in the digestive track of fish, which anglers remove while cleaning and filleting their catch. Any worms that do remain can be eliminated by freezing or thoroughly cooking the fish before it is used. According to most authorities, cooking fish to an *internal* temperature of 140°F (60°C) will kill any parasites present. Since most home freezers do not reach the extreme temperatures recommended for commercial operators to kill these parasites within hours, it is recommended to freeze any infected fish at least five to seven days to kill the parasites.



### **References:**

Seafood Network Information Center:

<http://seafood.ucdavis.edu/pubs/parasite.htm>

Florida Fish and Wildlife Conservation Commission Sea Stats Publication-Worms in Fish, Unsightly but Safe:

[http://research.myfwc.com/products/product\\_info.asp?id=1952](http://research.myfwc.com/products/product_info.asp?id=1952)

University of Georgia Extension Service; Angler's Guide to Fish Diseases and Parasites:

<http://warnell.forestry.uga.edu/service/library/index.php3?docID=52&docHistory%5B%5D=1>

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