

New tapeworm found in Great Lakes fish

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Asian tapeworms are showing up in Lake Huron walleye, prompting a call to avoid sushi from Great Lakes fish. Officials said it is safe to eat fish that have tapeworms, provided the fish are thoroughly cooked, smoked or pickled using normal food preparation techniques.

An outbreak of tapeworms in Lake Huron walleye has Michigan officials urging people to avoid eating sushi made with freshwater fish caught in the Great Lakes region. The warning came as a Canadian researcher reported the first documented case of Asian fish tapeworms in Great Lakes fish. David Marcogliese, a research scientist at Environment Canada's research station in Montreal, reported the discovery of Asian tapeworms in Lake Huron walleye in the most recent issue of the *Journal of Great Lakes Research*.

The foreign tapeworm, the 186th invasive species documented in the Great Lakes, likely was imported to the region with infected bait fish, Marcogliese said in the article. "This parasite is known to cause weight loss, anemia and mortality in young fishes," Marcogliese said.

Numerous anglers began reporting finding tapeworms in walleye caught in Lake Huron and Saginaw Bay, according to a Michigan Department of Natural Resources memo. Fish from some inland Michigan lakes also were infected with tapeworms, according to the DNR memo. Some species of tapeworms are native to the Great Lakes fish. The discovery and proliferation of Asian fish tapeworms is a recent phenomenon that could harm walleye and other fish species, according to DNR officials and Marcogliese's research.

Researchers indicated the Asian fish tapeworm, one of the world's most pernicious invaders, will likely spread across the Great Lakes region. The tapeworm can grow to one-foot-long in large fish, such as carp, Marcogliese said.

DNR officials said it is safe to eat fish that have tapeworms, provided the fish are thoroughly cooked, smoked or pickled using normal food preparation techniques.

"We do not recommend making sushi from any species of freshwater fish as the risk to humans is not known," according to the DNR memo. "It is a very bad idea to eat any freshwater fish raw or poorly cooked as fish parasites use fish-eating mammals and birds as hosts and it is not known if humans can also be hosts." Tapeworms are ubiquitous in waters where fish live, but the incidence of the parasites infecting fish has surged in the past two years, according to DNR officials. State officials said the problem may be due to changes at the base of the Great Lakes food chain caused by zebra and quagga mussels, two other invasive species.

Asian fish tapeworms were carried into the U.S. in the 1960s by federal officials who imported Asian carp to control algae in Arkansas fish ponds. The invader has since spread to lakes and rivers across much of North America, according to federal records.

The invasive tapeworms enter the fish food chain when zooplankton ingest the creatures and become hosts for the parasite. The tapeworms move up the food chain as zooplankton are eaten by small fish; the pests mature and produce eggs once in the intestinal tracts of walleye and other fish species.

Fish excrete tapeworm eggs in their feces. The eggs settle on lake bottoms, where zooplankton eat them and give rise to a new generation of the pests. The mere sight of tapeworms can tarnish a fishing trip – the creatures are known to slither out of the mouths and gills of dead fish.

To avoid finding a tapeworm in your fish cooler, DNR officials recommend gutting fish immediately after catching them and disposing of the entrails after returning to land. It is illegal to discard fish guts in Michigan waters.

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