Reducing “red worm” parasites in your Lake Erie yellow perch catch

Each year many yellow perch (Perca flavescens) from Lake Erie’s sport catch are wasted as anglers discard those fish which have large red worms burrowed into the flesh. This waste of good fish can be avoided if the catch is handled properly.

The worms which cause this problem are immature nematodes which have no accepted common name but are known to scientists as Eustrongylides tubifex. They are red in color, usually 2 to 3 1/2 inches long, and are normally found coiled inside tissue capsules in the body cavities of yellow perch. However, when seen by anglers as they dress their catch the worms have often burrowed either into the flesh or under the skin.

Minimizing contamination of the meat

The best method to prevent Eustrongylides worms from being found in your dressed perch or fillets is very simple:

Ice your catch immediately

This simple precaution is based upon a particular behavior characteristic of Eustrongylides worms. In live fish the worms occupy capsules in the body cavity. The worms remain in the body cavity as long as the temperature stays below 62° Farenheit (17° Celsius). When the temperature exceeds 62°, the worms begin burrowing out of the body cavity and into the muscles. Thus, having an ice chest on your boat or at the fishing pier for storing your catch is the easiest effective way to maintain high quality. A fish sack or stringer dangling in warm water can induce these worms to penetrate into the meat. Icing down the catch has the added benefit of inhibiting bacterial action and produces tasty, firm fillets. As an added safety factor, thorough cooking will kill any parasite.

Facts about Eustrongylides

As with many parasites, Eustrongylides have a lengthy and somewhat complicated life cycle. The adult worms are found in various types of fish-eating birds such as mergansers and certain ducks. Eggs produced by the adult worms pass into the water via the birds’ feces. The mechanism by which yellow perch become infected is unknown. It is hypothesized that as fish-eating birds prey upon the infected perch the cycle is completed; Eustrongylides reach adult form in the birds’ stomachs and are then ready to produce more eggs. At least seven species of fish found in Lake Erie, including channel catfish (Ictalurus punctatus) and walleye (Stizostedion vitreum), are known to host Eustrongylides but the greatest incidence by far is seen in yellow perch.

Research indicates that the worms begin their development in the intestines of the fish. As growth proceeds, the worms migrate into the body cavity; the largest worms are found encapsulated within the body cavity. There appears to be a corresponding increase in the percentage of fish which are infected as a fish gets older. Yet the relatively large perch, those over 8 1/2 inches long, seldom show a high intensity of infection. This may indicate that heavily infected fish seldom reach their potential mature size.

The rate of infection of perch by Eustrongylides generally increases throughout the summer. During this time nearly half of the perch in the Western Basin of Lake Erie may be infected. There is some indication that perch from the Central Basin may have slightly lower rates of infection.