

To: Natural Resource/Conservation Managers
From: Leslie Dierauf, Director, USGS National Wildlife Health Center
Title: Exotic Parasite of American Coot Discovered in Exotic Snail in Lake Onalaska
Date: July 11, 2007

In June 2007, scientists at the USGS National Wildlife Health Center (NWHC) discovered *Leyogonimus polyoon*, an exotic parasitic trematode affecting American coot, in exotic faucet snails collected from the Upper Mississippi National Wildlife and Fish Refuge, near La Crosse, Wisconsin. The snails came from Lake Onalaska, a major backwater lake of the Upper Mississippi River. USGS documented the first record of *L. polyoon* in North America in 1998 when it infected and killed thousands of American coots in north-central Wisconsin. The discovery of snails infected with *L. polyoon* in Lake Onalaska confirms that the parasite has become established in the Upper Mississippi River System (UMRS) and can potentially spread into its many tributaries.

Based on data from 2004–2006 surveys, *L. polyoon* was **not** present in the Upper Mississippi River until now. The life cycle of *L. polyoon* involves the exotic faucet snail (*Bithynia tentaculata*) and various species of aquatic insect larvae, such as dragonflies and damselflies. The American coot is the only natural definitive host thus far reported to be susceptible to infection in North America. Coot fall victim to the parasite by feeding on infected insect larvae. (See USGS Fact Sheet : *Exotic Parasite Causes Large Scale Mortality in American Coots* http://www.nwhc.usgs.gov/publications/fact_sheets/pdfs/fact_lpolyoon.pdf). In Eastern Europe, where the faucet snail and parasite are native, the spread of the parasite is limited by the geographic distribution of the faucet snail. In the United States, coot and aquatic insects are widely distributed, so control of the parasite will focus on controlling the snail.

The faucet snail was first reported in the UMRS in 2002, when it was associated with large, recurring die-offs of American coot and lesser scaup attributed to two other parasitic trematodes (*Cyathocotyle bushiensis* and *Sphaeridiotrema globulus*). The common link among the three trematodes is the exotic faucet snail, documented in USGS Open-File Report 2007-1065, *Finding the Exotic Faucet Snail* (<http://pubs.usgs.gov/of/2007/1065/>).

NWHC is working closely with Refuge staff and the USGS Upper Midwest Environmental Sciences Center to develop adaptive management strategies and techniques to limit the expansion of the faucet snail into new areas of the UMRS. Preliminary results from small scale controlled experiments will be available in the fall of 2007.

Natural Resource managers and biologists are asked to report wildlife mortality events to USGS Wildlife Disease Specialists Mark Jankowski (608-270-2443) or Krysten Schuler (608-270-2447). In light of this discovery, disease outbreaks involving American coot and lesser scaup are of special interest.

L. polyoon and the other two parasitic trematodes mentioned above have not been reported to infect humans. No human health threats are known, but hunters are reminded to wear gloves when cleaning or handling birds and to cook them until well done. There appears to be no threat to raptors or mammals scavenging on infected carcasses.

For additional information related to this Bulletin please contact Rebecca Cole at 608-270-2468 (rcole@usgs.gov) or Mark Jankowski at 608-270-2443 (mjankowski@usgs.gov).

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