

# Faucet Snails (*Bithynia tentaculata*)

“What they are and why we should care”



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# “Dead Scaup”, “What could be causing this”, “Massive diver die-off”

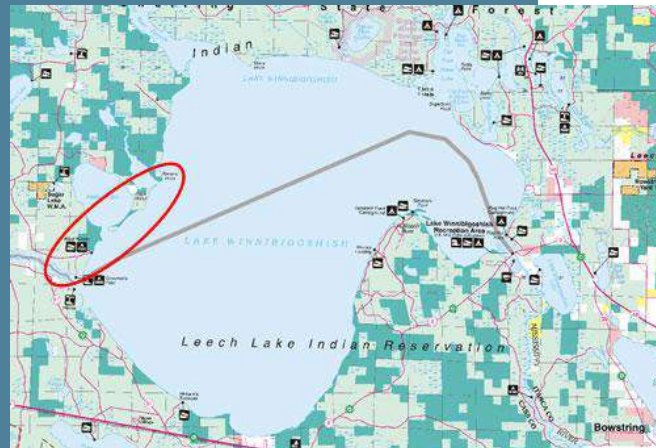


## Waterfowl Hunters

### Do Not Eat Sick or Scavenged Ducks or Coots

There was a duck and coot die-off on Lake Winnibigoshish in the fall of 2007, where an estimated 7,000 lesser scaup and an unknown number of coots died from eating snails that were infected with parasitic trematodes. Summer surveys of Lake Winnibigoshish revealed the presence of the faucet snail, *Bithynia tentaculata*, the invasive species that carries the parasite that can infect and kill the ducks. **Please be sure you clean your decoy lines, boat, etc. to remove aquatic vegetation or snails that could be transported to other lakes.**

Minnesota DNR will be monitoring 'Winnie', Bowstring and Round Lakes this fall for additional duck and coot die offs. If a die-off occurs, picking up the dead birds will not reduce the number of birds that die, thus we will be conducting a limited cleanup.



A similar situation has occurred in southern Minnesota along the Mississippi River for several years and there has been no reports of these trematodes infecting humans. However, we are asking hunters not to eat birds that appear sick. Hunters are advised to wear gloves when cleaning or handling birds and to clean them until well done.

If you find sick or dead ducks or coots on Winnie or other area lakes, or would like further information, please contact Perry Loegeing, Minnesota Dept. of Natural Resources Wildlife Manager, Grand Rapids, Minnesota, 218-999-XXXX (perry.loegeing@dnr.state.mn.us)



# What could have caused this??



Introduced Infected snails



Waterfowl feeds on snails



Waterfowl dies hemorrhaging



Figure 3. Gross lesions of *Cyathocotyle bushiensis* in ceca of lesser scaup (*Aythya affinis*).

Trematodes bore through intestine

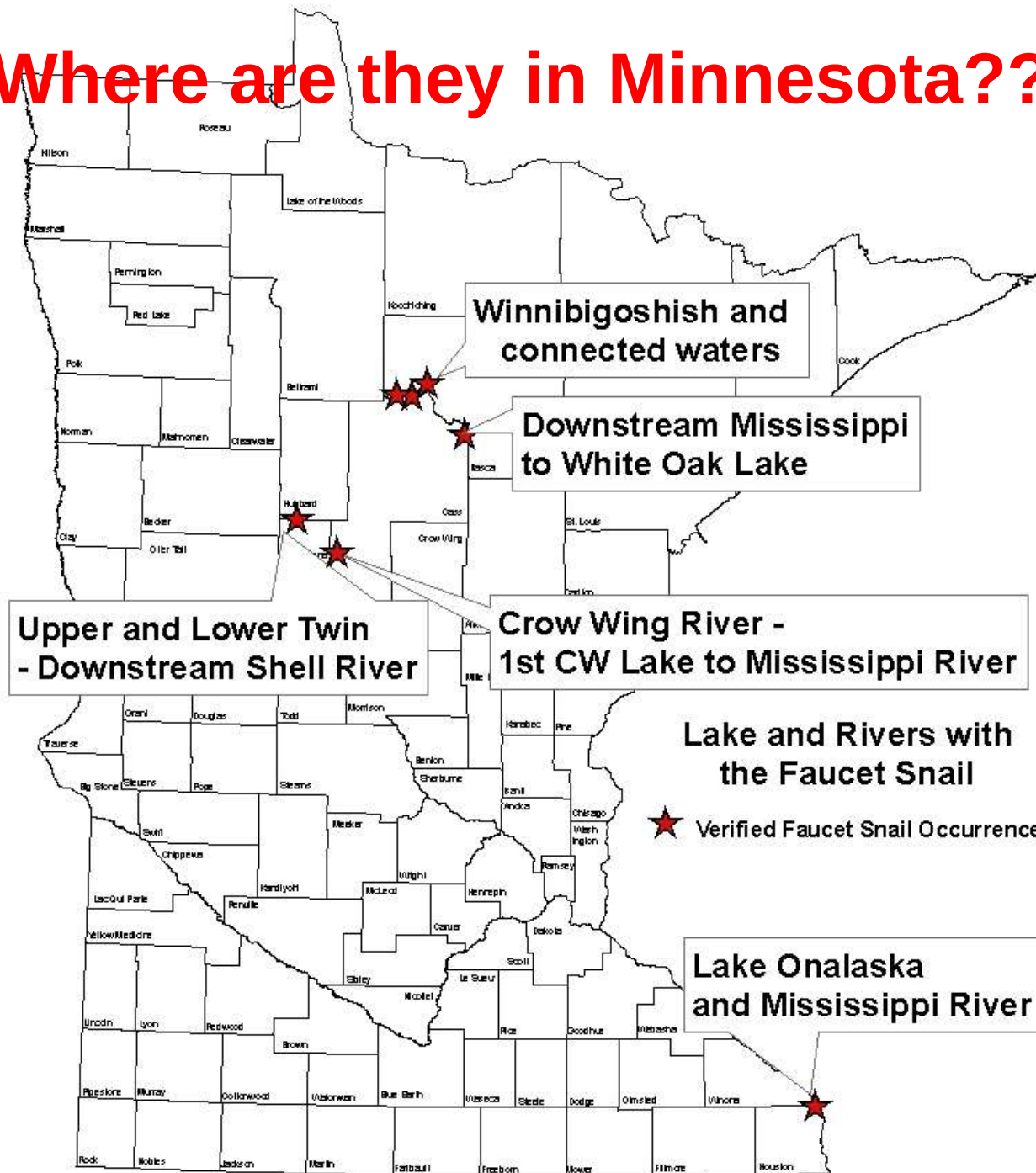
# What is it and how to identify –

## The faucet snail and three parasitic tremetodes



- Up to ½ inch in length
- Light brown to black
- 4 to 5 whorls that bulge
- Operculum on opening
- Operculum is concentric
  - like a bulls-eye

# Where are they in Minnesota??



# How the snails may spread.....

Others...



# Life Cycle of the tremetodes

Faucet snail and 3 intestinal parasitic tremetodes

- waterfowl – primary host
- faucet snail – intermediate host
- 3 parasitic tremetodes

*Spaeridiotrema globulus*

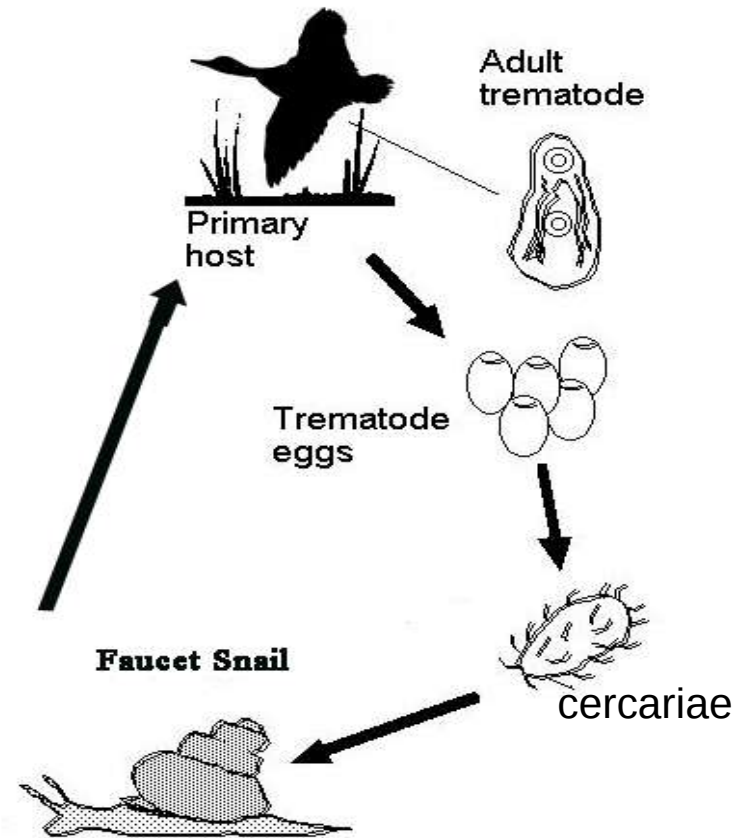
*Cyathocotyle bushiensis*

*Leyogonimus polyoon*



**Figure 3.** Gross lesions of *Cyathocotyle bushiensis* in ceca of lesser scaup (*Aythya affinis*).

## *Sphaerididiotrema* spp. life cycle



# DNR Goals that apply to the Faucet Snail

- 1) To Prevent the spread of Faucet Snail within Minnesota.
- 2) To Reduce the Impacts caused by Faucet Snail to Minnesota's ecology, society, and economy.



# Strategies to attain these goals...

- 1) Prohibit the sale, importation, transport or introduction of Faucet Snails
- 2) Monitor current distribution and assess changes
- 3) Support Research to better understand the faucet snail, it's parasitic partners, and their impacts to waterfowl and other wildlife.
- 4) Designate waters as infested were present



# Regulatory Classification

The DNR is Proposing to Designate as  
“Prohibited Invasive Species”

- Making it illegal to import, possess, transport, and/or introduce



# Back to why are they so bad and why do we care. “THE NUMBERS”

- Mississippi River Pools 7 and 8 since 2002
  - **> 100,000** scaup, coot, and other waterfowl deaths
- More Recently found in Lake Winnie - 2007
  - **> 6,000** scaup die-off in 2007, **< 1,000** scaup die-off in 2008
  - No large die-off in 2009 or 2010 – little scaup usage
  - Recent downstream designation of Mississippi River
- Crow Wing River and Upper and Lower Twin Lakes
  - **3 Canada Geese** confirmed dead in 2009



# Back to “why should we care”

- 1) Impacts to waterfowl
  - long term decline of scaup
  - Effects on all waterfowl
- 2) Waterfowling is a large economic impact
  - 43 million dollars MN annually (2008, USFW)
  - 2.4 billion nationally (2008, USFW)
- 3) Impacts to native snails community and ecosystem imbalance
- 4) If transporting faucet snails you may also be transporting other AIS such as EWM and Zebra Mussels



# Control and Disposal

- Currently no good management tools to eliminate or control
- If they are found washed up onshore and are a nuisance they may be transported to and disposed of away from that body of water



# Questions

