

New Zealand Mudsnail

(Potamopyrgus antipodarum)

A THREAT TO WISCONSIN'S WATERS

In 2005 the New Zealand mudsnail was found in Lake Superior in the Duluth-Superior Harbor. In 2007 ecologists at the Lake Michigan Biological Station discovered New Zealand mudsnails south of the Waukegan Harbor in Lake Michigan.

As of November 2008 they have not been documented in inland waters in Wisconsin. It is important that we be on the lookout and take the necessary precautions to prevent their spread to protect our fisheries and stream ecosystems.

These invasive snails from New Zealand have been spreading throughout the western United States since they were recorded for the first time in North America in 1987. In western streams mudsnails have been found to reach a density of a half million per square meter, frequently comprising over 95% of



*New Zealand mudsnails have been found in the Great Lakes Region. Scale is in millimeters.
(photo by Mike Gangloff)*

the invertebrate biomass in a river. This has devastating consequences to native mussels and other invertebrates populations, such as caddisflies and mayflies. Fish populations that depend on these natives as a food source are threatened as well.

Help prevent the spread....

- Inspect and remove visible aquatic plants, animals, and mud from waders, hip boots, and field gear before transporting
- Drain lake or river water from livewell and bilge
- Rinse waders, hip boots, and gear with hot water (113°F/45°C), or freeze gear
- Report new sightings by contacting Laura Herman, University of Wisconsin Extension, (715) 365-8998.

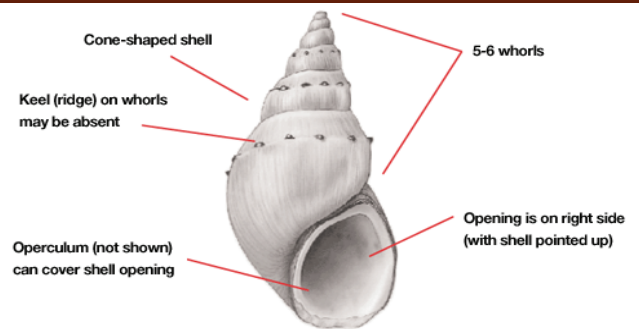


STOP AQUATIC HITCHHIKERS!

Prevent the transport of nuisance species.
Clean all recreational equipment.
Particularly waders/boots.
www.ProtectYourWaters.net

IDENTIFYING THE NEW ZEALAND MUDSNAIL

The mudsnail is very small typically ranging from 3 to 6 mm. They have brown or black cone-shaped shells with five to six whorls. Native snail are typically more elongated and have less whorls. The operculum is a hard "lid" that covers the opening.



Credit: U.S. Geological Survey

ECOLOGY



(photo by Dan Gustafson)

The New Zealand mudsnail inhabits both brackish and fresh waters. It can be found in estuaries, lakes, rivers and streams. It survives in waters with high and low calcium content, on hard and soft substrates, in turbid or clear water, and among vegetation. It is capable of tolerating a wide range of temperatures with upper thermal limits of 83°F and lower thermal limits near freezing allowing it to overwinter here in Wisconsin. It has a very high reproductive rate capable of producing 230 juveniles per year. It is asexual so one specimen has the potential of establishing a new population. It is classified as a scraper preferring diatoms, plant and animal detritus, and attached periphyton. It is a serious threat to native mollusks as it outcompetes them for resources and habitat.

STOP THE SPREAD

The mudsnail spreads through many mechanisms and it is not known if, how or when it may move from its known locations in the Great Lakes to nearby rivers and lakes. On its own it may move as much as 60 meters against current in 3 months. Salmon and other species of fish that migrate from the lakes up the tributaries may be the primary vector as the mudsnail is capable of passing through their digestive tract unharmed. Humans play a large role in its dispersal as it is transported to new basins on fishing waders and other recreational equipment. At cool temperatures, mudsnails can survive up to 25 days or longer (inside waders, in mud on wader boots, in the laces and tongue of wader boots, in live wells or in cooling systems). Simply drying gear is ineffective. To avoid spreading mudsnails **inspect and remove visible plants, animals, and mud from boats, waders, hip boots, and other gear** before transporting. **Drain lake or river water from boats. Rinse gear with hot water (113°F/45°C) or freeze gear before reuse.** Fishermen are encouraged not to use felt bottom wading boots as they are more likely to harbor mudsnails and other invasive species.



(photo by Dan Gustafson)

COLLECTING AND VERIFYING A SPECIMEN

Your help is needed to detect new infestations early to prevent spread throughout the state. Please become familiar with this species and be on the lookout while in the field, particularly in the Lake Superior and Lake Michigan watersheds. If you suspect that you have found a specimen, please...

- Confirm identification with this reference to be sure your snails are likely to be New Zealand mudsnails.
- Collect up to 10 of the suspect snails. Place them directly into a container of 70-95% ethanol (rubbing alcohol will also work) and place vials in the freezer. **DO NOT MAIL ALCOHOL, IT IS ILLEGAL.**
- Record exact location, collection date, approximate density and size of infestation. If possible, photograph the infestation.
- Contact Laura Herman, University of Wisconsin Extension, at (715) 365-8998 to arrange pick-up or delivery for verification.



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