

Aquatic Invasive Species

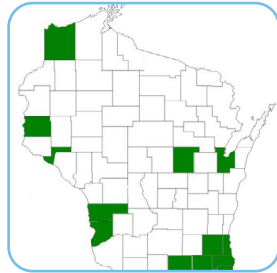


UW-MADISON EXTENSION



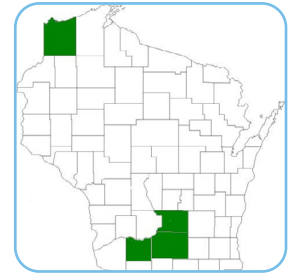
Freshwater Golden Clams

- While native fingernail clams are no larger than a dime (18mm), the invasive Asian clams can reach the size of a quarter (24mm).
- The concentric ridges of an Asian clam's shell feel like a washboard, compared to the smooth shells of native fingernail clams. You can distinctly feel them with your finger.
- Asian clams have been found at densities of 20,000 clams per square meter. They can self-fertilize, so it only takes one to start a new population.
- Asian clams compete with native species for food and space, and can alter nutrient cycling within the stream.



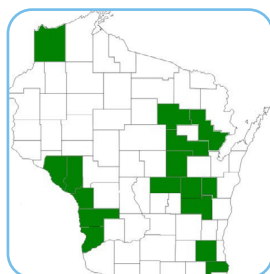
New Zealand Mudsails

- New Zealand mudsnails are very small, no more than 4–6mm (1/4").
- Their shells, ranging in color from gray to light or dark brown, have 5–6 whorls and a right-side opening.
- New Zealand mudsnails can reproduce asexually by cloning and can become superabundant (500,000 snails per square meter) in productive streams.
- They compete with native stream species and alter food chains.
- Their small size allows them to be easily and unknowingly transported; their ability to seal their shells allows them to survive out of water for nearly a month.



Faucet Snails

- Faucet snails are small, generally growing to sizes up to 15mm (just over 1/2").
- Faucet snails range in color from pale brown to black, have a right-side opening shaped like a teardrop, and tend to have 5–6 whorls. Adults have concentric circles on the operculum (the structure that covers the shell opening).
- Faucet snails are filter feeders and have high growth rates, thus competing with native populations for habitat and food.
- Faucet snails act as hosts to a variety of parasites that pose a threat to native waterfowl that consume the snails.
- Faucet snails can live for up to a month in dry mud.



Rusty Crayfish

- Adults are up to 15cm (6") in length – larger than most native crayfish and with larger claws.
- They are easily identified by rust-colored spots on each side of the carapace (shield projecting backwards from its head).
- Females carry fertilized eggs under their tails for many months and can spread the population as they move or are transported.
- Rusty crayfish, with a higher metabolism than native crayfish, feed voraciously day and night, thus outcompeting the native crayfish that typically feed only at night. The aggressive rusty crayfish can eat vegetation, native crayfish, fish eggs, young fish, tadpoles, and macroinvertebrates, thus altering the stream ecosystem.



Photographing AIS Specimens

If target AIS are found, volunteers should always photograph the specimens and the monitoring location.

Materials:

- Camera or phone with camera

Additional photo guidance:



<http://dnr.wi.gov/topic/Invasives/report.html>

Process:

1. Photograph the landscape illustrating the location and extent of the occurrence so that the site is easy to recognize for follow-up visits. Include landmarks such as signs, beaches, public structures, memorable environmental features, or anything that is unique and would be easy to locate again. Take multiple landscape photos to ensure at least one is in focus.
2. If possible, take a GPS point. The GPS coordinates will help to relocate the population if needed.
3. Take several close-up photos of the specimen to show the various identifying characteristics. Include the data collection sheet in each picture to show the location (station name, number, date, etc.) Take multiple photos to ensure at least one is in focus.
4. Photographs should be submitted to local AIS contacts and emailed to: DNRIvasivePhotos@wisconsin.gov.

Collecting AIS Specimens

If target AIS are found, and volunteers are able, specimens should be collected and labeled.

Materials:

- Zip-top storage bags or sample vials/jars
- Labels for preserved specimens
- Pencil

Process:

1. Collect up to five specimens of the species, if possible.
2. Preserve specimens in bag or plastic/glass container with enough water to keep moist.
3. Label the specimens. Using a pencil, write the stream name, site description (e.g., Rocky Creek at CTH H), county, date, and your name on a slip of paper small enough to fit in the preservation vessel or to be applied to the outside of the specimen vessel.
4. Insert the paper into the container, or apply it to the outside. Close securely. Freeze specimens such as snails or crayfish as they will smell bad.
5. Specimens should be submitted to local AIS contacts.

Cleaning Your Gear

After monitoring each site, volunteers should clean, dry, and disinfect equipment and footwear.

Materials:

- Stiff bristle brush
- Spray bottle with tap water
- Rubber tote (18–50 gallons)
- Bleach solution (1 Tbsp bleach per 1 gallon water)
- Rubber gloves

Process:

1. Before leaving the stream:
 - **INSPECT** equipment.
 - **REMOVE** sediment, plants and animals by scrubbing equipment with a stiff brush.
 - **RINSE** equipment with tap water.
 - **DRAIN** all water from equipment.
2. Before entering another stream, it is recommended that volunteers switch to a completely new set of gear or take one of the following disinfection steps:
 - Far away from surface water, **SOAK** waders and other equipment in bleach solution for 20 minutes in rubber tote, then rinse. Wear gloves when handling bleach; or
 - **STEAM CLEAN** equipment; or
 - **SOAK** equipment in 140°F water for several minutes; or
 - **FREEZE** equipment for 8 hours.

*New Zealand mudsnails do not react to bleach solution. Gear must be steamed, frozen, soaked, or treated with Virkon solution

Find your local AIS Contact at <http://dnr.wi.gov/topic/Invasives/report.html>