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Wisconsin Department of Natural Resources
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Protect Our Waters



Sea Grant

A Precious Way of Life...

For many of us, fishing in the cool clear lakes, rivers and streams of the Midwest is one of life's pleasures—one we want to share with our children and their children. Today, these waters are under attack by aquatic invaders that threaten the habitats of our native fish.

Round goby, ruffe, zebra mussels, purple loosestrife, Eurasian water-milfoil... These nonindigenous species are also called "aquatic exotics," or invasive species, because they do not belong in these waters. Many came from Europe and Asia in the ballast waters of ships. In just 15 years, these "aquatic hitchhikers" have invaded hundreds of waters in the Midwest, doing irreparable harm to many lakes and streams, and their native inhabitants.

Aquatic Hitchhikers

These exotic aquatic animals and plants are spreading at alarming rates, and they're spreading by hitching rides with anglers and boaters. Whenever you leave a body of water without cleaning your recreational equipment, you may be transporting one of these harmful creatures from one lake or stream to another.

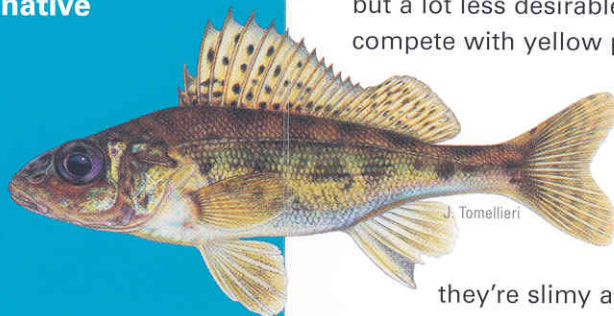
If you've ever been fishing for perch, got a hit on your line and then reeled in a round goby, you know how annoying these non-native invaders can be. But their impact on fishing goes way beyond annoying—they actually put our waters and their inhabitants in serious jeopardy.

Round gobies are bottom-dwelling fish that compete with native bottom-dwellers, like sculpins and log perch. They're also aggressive egg predators—feeding on the eggs of other fish, such as smallmouth bass, and thus contributing to the potential decline of many valuable sport fish populations.



J. Tomellieri

Eurasian ruffe are a member of the perch family but a lot less desirable! These harmful fish compete with yellow perch and other native species for zooplankton, the tiny aquatic animals near the base of the food web. Ruffe reproduce quickly and at very high rates and, because they're slimy and spiny, do not make good food for native fish.



J. Tomellieri

Be a part of the solution!

Zebra mussels

feed extensively on algae, thereby disrupting the delicate balance of the entire aquatic ecosystem. Just because they make the water clearer by eating algae doesn't mean they're good for the water! By eating algae, zebra mussels cause all sorts of problems all along the food chain.

Clearer water may force light-sensitive fish, like salmon and walleye, into deeper waters to find shelter from the sun. Because the sun penetrates deeper into the water, aquatic plants can

take root in larger areas. This increased vegetation helps small fish survive by giving them more places to hide, but at the same

time makes it more difficult for large predators to find food. Thicker weed growth also causes problems for boaters.

If that weren't enough, zebra mussels also cause harm out of the water. When they die, zebra mussels leave behind sharp-edged shells, which can foul beaches and make going barefoot risky.

Perhaps the most important thing to know about zebra mussels is that they can spread most easily when they're in their larval stage. That's when they're practically invisible to the naked eye and can go unnoticed on your boat or bait bucket.



Michigan Sea Grant



J.E. Marsden



Mr. Walter

Exotic aquatic plants, like purple loosestrife and Eurasian watermilfoil, also endanger our waters. These plants literally smother native plants and can take over waterways in a matter of months. Milfoil often piles up on beaches and frequently gets

wrapped around propellers, making it almost impossible to navigate through certain channels. It's important to clean weeds like Eurasian watermilfoil off your boat, because they can produce a whole new colony from a single strand barely two inches long. Zebra mussels also attach to aquatic plants and can

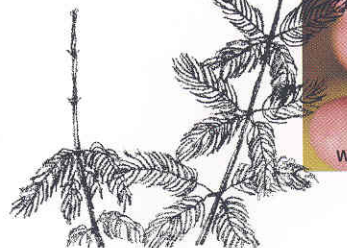
spread from lake to lake on trailers and boats entangled by weeds.



Michigan Sea Grant



Wendy Crowell



Minnesota DNR



Minnesota DNR



It's what you might not see that counts.

The larvae of zebra mussels and other species are often microscopic and therefore easy to overlook. These tiny organisms can live for days in a moist environment and will grow into adults that can reproduce and spread, threatening our favorite fishing spots.

You can help stop the invasion.

You can help by taking the following steps every time you take your boat out of the water, and every time you pack up your tackle box and head for home.

- **INSPECT** your boat and equipment and remove all aquatic plants from your trailer, propeller, anchor—anywhere they might be.
- **DRAIN** all the water from the boat, motor, bilge, live wells and bait wells.
- **DISPOSE** of leftover bait in a trash receptacle, not in the water.
- **RINSE** your boat and all of your fishing equipment with hot (104 degrees or higher) tap water, OR thoroughly dry your boat and your fishing equipment—leave them outside in the sun for five days—before going to new waters.

Finally, display this sticker on your boat, vehicle or tackle box to remind yourself and others of what we can do to help stem the tide of invasive species in the Midwest and throughout the country.

Help protect our waters for our children and grandchildren. Take these simple steps to ensure that our scenic and bountiful waters continue to be healthy for generations to come.

To find out more, visit the Sea Grant Nonindigenous Species Web site at www.sgnis.org, the Sea Grant National Aquatic Nuisance Species Clearinghouse at www.cce.cornell.edu/aquaticinvaders, and the U.S. Geological Survey's Nonindigenous Aquatic Species Web site at nas.er.usgs.gov.



STOP AQUATIC HITCHHIKERS!™

Prevent the transport of nuisance species.
Clean all recreational equipment.

www.ProtectYourWaters.net

When you leave a body of water:

- Remove any visible mud, plants, fish or animals before transporting equipment.
- Drain water from equipment (boat, motor, trailer, live wells) before transporting.
- Clean and dry anything that comes into contact with water.
- Never release plants, fish or animals into a body of water unless they came out of that body of water.



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