

Asian Carp

A more immediate and serious threat!



Courtesy of Great Lakes Fishery Commission

Asian Carp was introduced in the U.S. in the Mississippi River in the 90's and it has been moving north and out competing many native species. Lake Erie is a great habitat for it because of the cold water temperatures. The carp can grow to be up to 4 feet and weigh up to 100 lbs. If these fish are introduced to Lake Erie they will become the dominant species and out compete valuable sport fish such as the walleye. They are a major threat because they have been sighted as close as 40 miles from Lake Michigan!

Snakehead - a Serious Threat



Courtesy of USGS

The Northern Snakehead is an invasive species native to China and was first imported to the U.S. as an aquarium fish. If it were to migrate to the Great Lakes, it would be extremely

devastating to the sport fish population. Ninety percent of its diet consists of fish. It does not have any natural predators in the Great Lakes, so the population would continue to grow. It is a threat to the Great Lakes because of its ability to walk on land for up to four days. It can survive in temperatures of 32 to 86°F. The snakehead has already been found as close as Wisconsin and Maryland.

Don't Say Good-bye to our Walleye - Please help us keep these invasives out of our lake!

Eutrophication

Increased levels of algae growth and decreased levels of oxygen have been observed in Lake Erie. Zebra mussels and non point source pollution contribute to these problems. If this trend continues then eutrophication of Lake Erie will increase and life in the lake will decrease.



Courtesy of NOAA, Great Lakes Environmental Research Laboratory

Things you can do to help

When you leave a body of water:

- Remove any visible mud, plants, fish or animals before transporting equipment
- Eliminate water from equipment before transporting
- Clean and dry anything that comes into contact with water (boats, trailers, equipments, clothing, dogs, etc.)
- Never release plants, fish or animals into a body of water unless they came out of that body of water
- Leave your boat and trailer out of water for 5 days if they have been used on a zebra-mussel infested water body OR thoroughly clean the boat, trailer, bilge, or any other water remaining in the boat motor with a chlorinated water solution (5-10%)
- Educate your children about ecosystems, plants, animals, and invasive species
- Participate in community activities that restore the habitat and report signs of invasive species
- Eliminating already intruded invasive species is impossible. Preventing other invasive species from being introduced is possible if we all take part
- Use Native Plants when you landscape your property.



STOP AQUATIC HITCHHIKERS!

Prevent the transport of nuisance species. Clean all recreational equipment. www.ProtectYourWaters.net



This publication was funded by the Lake Erie Protection Fund (LEPF) and the Ohio Lake Erie Commission. The commission oversees the fund which is supported by Ohioans each time they purchase a Lake Erie license plate displaying either the Marblehead Lighthouse or the Toledo Harbor Lighthouse designed by Ohio artist Ben Richmond.

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STOP

INVASIVE

SPECIES

IN OUR LAKE



FOR MORE INFORMATION:

www.ProtectYourWaters.net

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Do you know about the Invasive Species in our Lake Erie?

For many of us living in northern Ohio, Lake Erie is a wonderful place to fish, enjoy boating and share good times with friends and family. However, today Lake Erie and the rivers and streams that empty into it are under attack by aquatic invaders that threaten the habitats of our native fish and the entire Lake Erie ecosystem.

Round gobies, zebra mussels, quagga mussels, Eurasian watermilfoil, are "aquatic exotics," or invasive species, because they don't belong in Lake Erie. Many came from Europe and Asia in the ballast waters of ships. In the past 15 years these "aquatic hitchhikers" have invaded hundreds of waters in the Midwest and harming these waters and native habitats. They are doing great harm in Lake Erie and are a great threat to other Ohio inland lakes and streams!

Lake Erie and our fish are being threatened!

The Lake Kleenerz mission is to help people understand two key issues that are causing damage to the water and life in Lake Erie; 1) invasive species and 2) non point source pollution. We want to spread awareness about these issues to improve the situation and preserve our vibrant Lake Erie waters, ecosystem and aquatic life.

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Top Five Most Wanted

The invaders currently doing the most harm to our lake and threaten to invade inland lakes and streams are:



Courtesy of US Fish & Wildlife Service

Sea lampreys are parasites that attach to fish with their suction mouth and feed on the fish's blood and body fluids.



Photo by Dave Brenner, Michigan Sea Grant archives
Courtesy of Dave Brenner, Michigan Sea Grant archives

Zebra and Quagga Mussels multiply very quickly and feed on plankton again leaving less for native fish and reducing the diversity of life in the lake.



Courtesy of NYSDEC

Eurasian Watermilfoil is a submerged plant that quickly forms thick mats on the water and interferes with swimming, boating, fishing and other water related activities. This plant can also prevent the sun from reaching native fish and other life in the lake.



Courtesy of Great Lakes Fishery Commission

Round gobies are aggressive bottom dwellers that compete with native fish for food. Consequently, they are reducing the population of native fish in Lake Erie.



Courtesy of EPA, Great Lakes National Program Office

White perch aggressively compete for food with native fish and feed on their eggs. This also causes a reduction in the population of native fish.



Alison Fox, University of Florida, www.invasive.org

What are they doing to Lake Erie?

Sea Lampreys

Sea Lampreys can do serious harm to fish by sucking their blood and body fluids. The sea lampreys are being adequately controlled by lampricide methods in Ohio. In a 12-20 month period, this parasitic fish can kill 40 pounds of fish or more!

Round Gobies

Round gobies are displacing our native fish because they are eating their eggs and young. They also spawn many times in a season and are reproducing much quicker than native fish and they can survive in poor water quality. There is less food for smallmouth bass and walleye as the gobies eat the sculpins and darters and other food in the food chain.

Zebra/Quagga Mussels

The impact invasive species have on Lake Erie effects all of us. The zebra mussel attaches itself to any hard surface and colonizes. This is a nuisance for boaters as they must constantly clean their hulls and motors. It significantly impacts water intakes for industrial powerplants and municipal water plants. The colonization results in significant reduction of pumping capabilities. In addition:

- Over \$1,185,000 per year is spent by municipalities and power plants to control mussels
- Zebra mussels concentrate the amount of PCB's ten fold contaminating the fish that feed upon them
- Zebra/Quagga mussels filter the water removing large amounts of phytoplankton thus decreasing the food supply for the native mussels.

White Perch

White perch are invasives where they consume quantities of larval or juvenile walleye and white bass endangering these populations greatly.

Eurasian Watermilfoil

Its submerged dense strands grow quickly and they disrupt predator-prey relationships by fencing out larger fish, and reducing the number of nutrient-rich native plants available for waterfowl. The decaying mat cover also reduces the oxygen level in the water. Unfortunately, this plant is well-distributed throughout Ohio!