

Battling Invasives in the Great Lakes

What are invasive species?

Invasive species are non-native.

- They harm ecosystems, economies and human health.
- 180+ invasive species are in the Great Lakes.
- Most come from Eurasia and arrived in ship ballast water.
- Invasives are **plants** (purple loosestrife), **animals** (sea lamprey) and **pathogens**.

The damage they do

Invasives cause \$5 billion of economic losses in the Great Lakes annually.

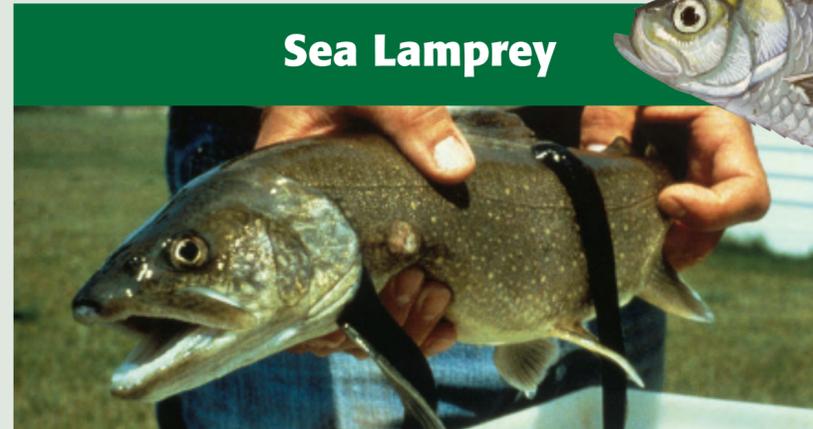
- They damage native populations and habitats by altering conditions needed to thrive.

- In the U.S., 42% of threatened and endangered species are at risk because of invasives.

What are we doing about it?

To battle invasives, we:

- Regulate importation and transportation of species.
- Reach out through public awareness campaigns.
- Detect and monitor invasive species through aquatic surveys.
- Aggressively control, manage and prevent invasives' spread.
- Provide cost-sharing grants to states to control aquatic invasives.



Sea Lamprey

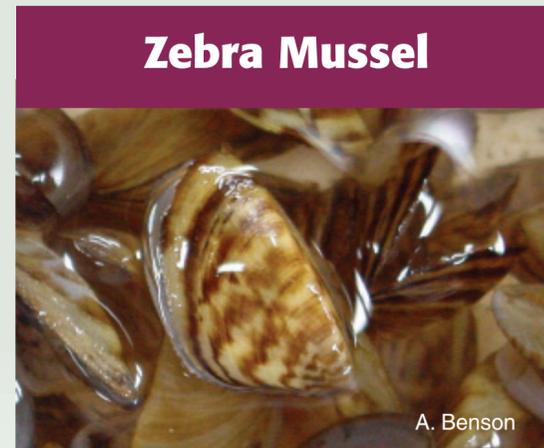


The sea lamprey is an aggressive parasite equipped with a tooth-filled mouth at the end of its eel-like body. The lamprey fastens onto its prey and rasps out a hole with its rough tongue. An anticoagulant in its saliva keeps the wound open until the lamprey is satiated or the host fish dies. In 1921, lampreys appeared in Lake Erie. They rapidly colonized all of the upper Great Lakes. At one point, sea lampreys eliminated most of Lake Michigan's large predator fish.



Alewife

Swimming in dense schools, alewives exert overwhelming pressures on native lake herring, whitefish, chub and perch. These species compete with alewives for plankton and other small aquatic organisms that make up their diets. Alewives were found in Lake Huron in 1933.



Zebra Mussel

Since their discovery in 1988, zebra mussels have spread to all the Great Lakes. They clog water systems of power plants, water treatment facilities and irrigation systems. Zebra mussels have severely reduced and eliminated native mussel species.



Round Goby

Round gobies eat foods important to native fishes; they also prey on their eggs. Gobies vigorously defend spawning sites, restricting access to less aggressive fish. Gobies also can feed in complete darkness, another advantage over other fish. Round gobies were detected in Lake Huron in the 1980s.