



Invasive Zebra Mussels

Zebra mussels are native to Eastern Europe. They are a threat to the food supplies of native fish in the Great Lakes. One problem they cause for humans is clogging water pipes.

Invading Asian Carp

Asian carp invaded the Mississippi, Missouri, and Ohio rivers in the 1980s. They pose a danger to boaters and water skiers. They jump into the air and slam into boats and people.



4.5 The Great Lakes Today: Invasive Species

Scientists estimate that there are more than 185 **invasive species** in the Great Lakes today. Invasive species are nonnative plants and animals that invade a new ecosystem. The sea lamprey described earlier in this chapter is one such invader.

Most Invaders Arrive by Sea Most invasive species travel to the Great Lakes by water. Some even come in the ballast water of ships. Ballast water is water that is pumped into the bottom of a ship to keep it stable. After arriving at a port, the ship releases the ballast water—and any creatures that were in it.

Other invaders, like the zebra mussel, hitch rides on the underside of ships. Once zebra mussels reach a suitable location, they multiply rapidly. In fact, up to 70,000 mussels can thrive in a single square meter of water.

Invasive Species Upset the Ecosystem Invaders like the zebra mussel, sea lamprey, and alewife have all damaged the Great Lakes ecosystem. Zebra mussels, for example, steal food from native species, clog water pipes, and attach to docks. They also make swimming dangerous because of their sharp shells.

The Asian carp is another major threat to the Great Lakes. Catfish farmers in the American South brought this large, ever-hungry fish from Asia to clean algae and other things from their ponds. However, during floods, many of these ponds overflowed, and carp escaped into rivers. Now carp in the Mississippi River are migrating northward toward Lake Michigan. Many people fear that the Great Lakes will someday become giant carp ponds.

The United States and Canada are working to prevent more non-natives from entering the Great Lakes. Shippers are being asked to treat their ballast water more carefully. A barrier has been constructed to keep Asian carp and other nonnative fish in the Mississippi River from entering the Great Lakes. In addition, several states have banned the sale of live Asian carp for fear they will have disastrous consequences on the Great Lakes food web.

Another approach has been to stock the Great Lakes with species that will eat the invaders. Pacific salmon, for example, have been introduced into the lakes to control alewives. Alewife numbers have dropped greatly as a result, and native fish have begun to recover.

4.6 The Great Lakes Today: Habitat Loss

A century ago, loggers in the Great Lakes region told folktales of a giant lumberjack named Paul Bunyan. Bunyan was so gigantic that he could cut down a forest in minutes. One tale tells of how he scooped out ponds to provide drinking water for his big blue ox, Babe. Today those ponds are the Great Lakes.

In the time of the Paul Bunyan stories, dense forests covered the Great Lakes region, so nobody worried about **habitat** loss. A habitat is the natural environment in which a plant or an animal lives. But habitat loss is a big worry in the region today.