

## Invasive Species in Michigan



Emerald Ash Borers are a severe threat to Michigan forests

The State of Michigan is under attack by non-indigenous, invasive species. These are organisms that have been intentionally or accidentally transported beyond their natural range, and that negatively impact the economy, environment, or human health in their new homes. Unwanted invaders arrive via many means, from the ballast water of ocean going ships, to packing and shipping material associated with cargo, to intentional introductions, to accidental escape or release from aquaria and nursery facilities. Currently, little stands in the way of future invasions.

As a Great Lakes state, Michigan has a long history with invasive species, and is home to many unwanted invaders. Round Gobies occupy spawning habitat and consume the eggs of native fish in Lake Huron and Lake Michigan. Eurasian ruffe, another species damaging to native fisheries, are established in the lakes and throughout the state. This species is expected to reduce the value of Great Lakes fisheries by \$119 million. Aquatic nuisance plants like purple loosestrife, hydrilla, and Eurasian water milfoil are present throughout the state, clogging waterways, reducing habitat for native fish and waterfowl, and interfering with hunting, fishing, and other recreational activities.

Asian Carp are another looming threat from an aquatic invader. Having escaped into the Mississippi from aquaculture ponds in the south, these fish have traveled north to the doorstep of the Great Lakes. Asian carp can grow to great size, and are capable of consuming large amounts of algae and zooplankton. If Asian carp reach the Great Lakes, they could severely impact native fish by consuming much of the available food.

Other invaders create a severe nuisance for industry and public utilities, in addition to harmful impacts on native habitats and food webs. Species like the zebra mussel foul and clog water intakes and pipes for factories and power plants. Zebra mussels were first introduced to Lake St. Clair in 1988. Millions have been spent since then to control the species in factories, power plants, and water treatment facilities.

Invasive species in Michigan don't stop at the waters edge. In 2002, a damaging forest pest, The Emerald Ash Borer (EAB) arrived in southeastern Michigan. The infestation has since spread to 5,600 square miles, mostly in Michigan but also in Ohio, Maryland, and Virginia. Many of the ash species this insect afflicts are commercially important, while other species are integral parts of the urban landscape. EAB has been responsible for the death or decline of over 6 million trees in and around Detroit, MI. Overall, the national urban impact from EAB could exceed \$20 billion.

The door to invasions remains wide open, as current prevention measures are proving inadequate. The impact of future invaders is impossible to predict. In the absence of effective measures to prevent and control invasions, Michigan's environment, economy, and its citizens' public health will remain at risk.