Zebra Mussel (*Dreisenna polymorpha*)

Taxa Group: Mollusk - Bivalve

Size: < 50mm.

Distinctive Physical Characteristics: Small fresh-water mollusk named for their dark, zigzagged stripes on each shell.

Habitat: Freshwater rivers, lakes, and reservoirs.

Native Range: Zebra Mussels are native to the Black, Caspian, and Azov Seas of Eastern Europe.

Current NC Distribution: Recently identified in one quarry in North Carolina.

History and Pathway of Introduction: Introduction into the US appears to be the result of ballast water discharge from transoceanic ships that were carrying veligers (the free-floating or "pelagic" larval stage), juveniles, or adult mussels. The first report of Zebra Mussels in the United States was in 1988 when adult mussels were found in Lake St. Clair. Since their introduction, Zebra Mussels have expanded their range to a number of water bodies within the Great Lakes and Mississippi River basins. Veligers and adults are easily transferred in small amounts of water and by attaching to boats, fishing gear, and other equipment, which has led to the rapid expansion of the species.

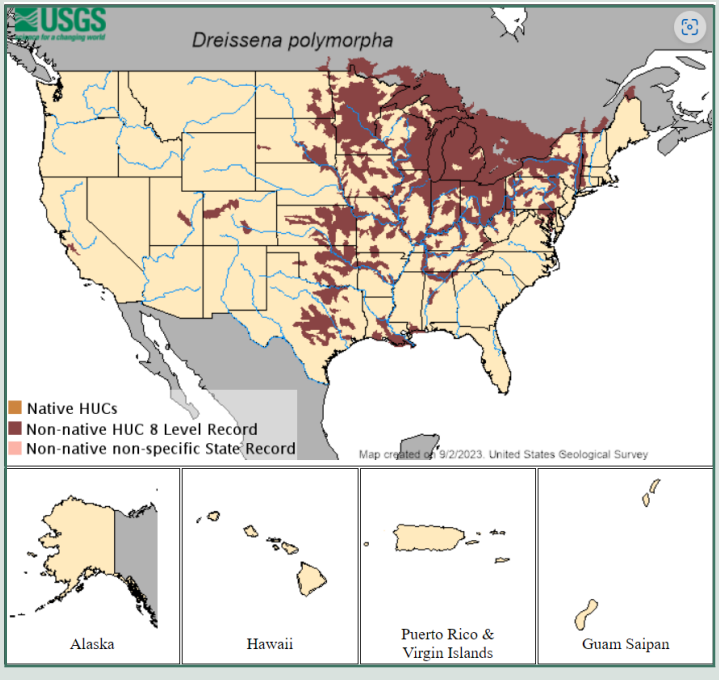
Management and Control: Control efforts focus primarily on protection of human infrastructure (such as water intakes) and efforts to educate the public on methods to prevent vectors of spread (such as cleaning boats, trailers, gear, etc).

[Interactive Version of Zebra Mussel Distribution Map]


USFWS


Jay Ondreika

Zebra mussels can be identifed by their dark, zigzagged stripes on each shell.



Current distribution of Zebra Mussel, USGS

Ecological Impacts: Zebra Mussels can have profound effects on the ecosystems they invade by removing substantial amounts of phytoplankton, zooplankton and suspended particulates from the water, which alters the food web. The waste products produced by Zebra Mussels create a toxic environment by depleting oxygen and lowering the pH. The mussels accumulate pollutants within their tissues, increasing wildlife exposure to these pollutants through the food chain. The presence of Zebra Mussels can decrease the biomass of fish species and alter aquatic communities.

Economic Impacts: The ability of Zebra Mussels to rapidly colonize hard surfaces causes serious economic problems. These organisms can clog water intake structures such as pipes and screens, thereby reducing pumping capabilities for power and water treatment plants, costing industries, companies, and communities. It is estimated that the U.S. spends more than $1 billion annually for damages linked to Zebra Mussels.

Sources: U.S. Geological Survey. 2014. Nonindigenous Aquatic Species Database. Gainesville, Florida, http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5; http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=95.

NC Aquatic Nuisance Species Plan
March-2016-Aquatic-Nuisance-Species-Management-Plan---reduced.pdf