ODNR – Division of Wildlife

Freshwater Mussel Conservation

Freshwater Mussels:

- are native bivalve mollusks that live buried in the bottom of rivers and lakes.
- are powerful filter-feeders that help clean our water.
- can have exceptionally long lives—lifespans range from 4 years to over 180 years!
- have a unique life cycle: their larvae must live on a host fish to complete metamorphosis and become juveniles.



Freshwater mussel lure to attract host



Current Conservation Efforts in Ohio

- **Columbus Zoo's Watters Aquatic Conservation Center:** A collaborative effort of the Columbus Zoo and Aquarium, ODNR Division of Wildlife, and The Ohio State University, the WACC is an animal care facility that conducts research on the propagation and health of native mussels using both traditional (host fish infection) and in vitro (laboratory) methods. It also trains student scientists in aquaculture, aquatic conservation, and molecular biology.
- **The Ohio State University Museum of Biological Diversity**: OSU MBD is home to the world's largest research collection of freshwater bivalves. It stores historical and contemporary specimens from mussel surveys, tracks long-term changes in mussel distributions, and trains field biologists in mussel identification.
- **The Mussel Survey Protocol:** This ODNR-managed statewide program standardizes data reporting and specimen collection for mussels across Ohio, informing management decisions and providing valuable data to scientists at the museum and the WACC, and guiding future survey, propagation, and reintroduction efforts.

Status

- Freshwater mussels and other non-marine mollusks are the most endangered animals on Earth.
- North America is home to over 300 mussel species, 60 of which are currently found in Ohio.
- Mussels face threats from pollution, sedimentation, habitat loss, disease, and competition with invasive bivalves like Corbicula clams and zebra mussels.
- In Ohio, all 60 native mussels are protected by law. 36 species are state listed, and 12 of those species are also federally listed under the Endangered Species Act.



Freshwater mussel host identification



Freshwater mussel survey Big Darby Cr.