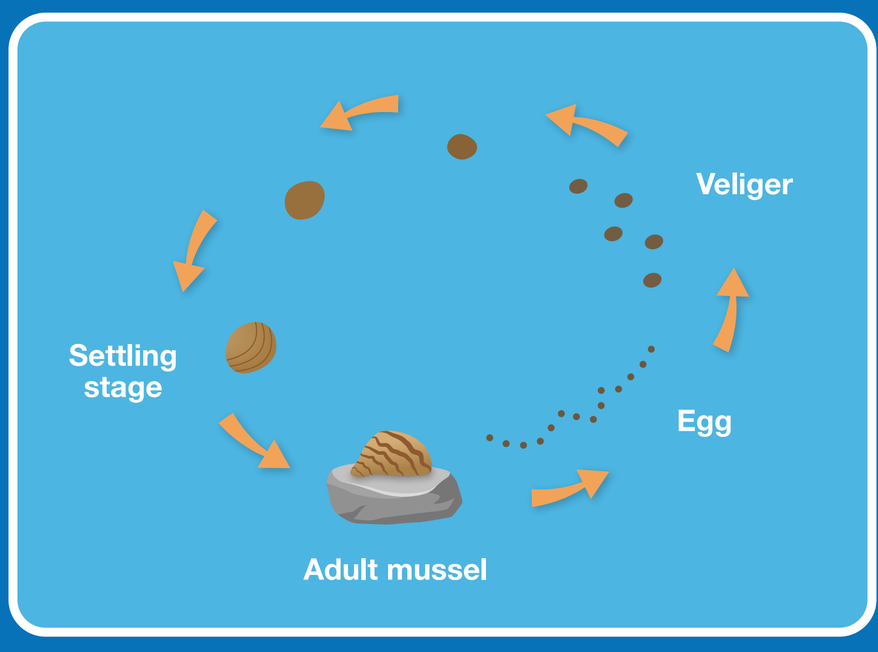
Zebra Mussel Ecology

What are Zebra Mussels?

Zebra mussels are small (1-3 cm long), clam-like aquatic animals. They have triangular or “D” shaped shells, and most have light and dark brown bands on their shells. They are invasive to North America.

Life Cycle of a Zebra Mussel



Why are they a Problem?

Prolific reproduction abilities.
Females may release up to 1 million eggs in a single spawning season.

Cling to things.
They can attach to vegetation, hard surfaces, and other immersed items.

Negatively impact infrastructure.
Zebra mussels clog intakes for power stations, water treatment plants, and other industrial or commercial operations.

Costly nuisance.
They can reduce recreational opportunities for boaters, commercial fishers, anglers, and beach goers. Removing mussels and cleaning up their shells costs money.

Outcompete native species.
Zebra mussels filter up to a litre of water per day, removing algae and microscopic aquatic animals which are important to the food web. Because very few things eat them, these nutrients are then not available for other life in the system.

Methods of Transfer

Zebra mussel larvae (veligers) float until they attach to an object. Mussels cannot swim. They move with the water current or are transported by humans. Veligers can survive in residual water left in bait buckets, live wells, bilge areas, ballast tanks, motors, and other equipment. If **Clean, Drain, and Dry** practices are not followed they can enter subsequent water bodies.

Example of zebra mussels being transferred between waterbodies by boat:

1. Boat is used in water with zebra mussels. Veligers enter boat.
2. Boat is not **Cleaned, Drained, and Dried** after use. Veligers survive in water left in boat.
3. Boat enters new waterbody that does not have zebra mussels.
4. Veligers are released into waterbody where they may develop into adult mussels.

Risk Level of Watercraft and Equipment

Every watercraft or piece of equipment poses a risk of transferring zebra mussels:

Lowest Risk
All or most surfaces visible and thus easy to decontaminate.

Canoes and kayaks may pose a higher risk because they are often used in multiple waterbodies in a short period of time. However, if they are properly, **cleaned, drained, and dried,** this risk is significantly reduced.

Highest Risk
Difficult to drain. Hidden areas can store water and harbour aquatic invasive species.

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