

## Zebra Mussel Update

Zebra mussels (*Dreissena polymorpha*) get their name from the alternating black and white striped pattern on their shells. They have spread extensively in the Great Lakes region in the past decade. They attach themselves to any solid underwater object such as boat hulls, piers, intake pipes, plants, other bivalves (mussels) and even other zebra mussels.



They were first discovered in North America in Lake St. Clair in June 1988. The mussels then spread to the rest of the Great Lakes. The first sighting in Lake Michigan was in June 1989. By 1990, zebra mussels had been found in all of the Great Lakes, and by 1991 they had made their way into the adjacent waters of the Great Lakes such as the Illinois River, which eventually led to their spread into the Mississippi River and all the way down to the Gulf of Mexico.

### **Year Lakes with discovered zebra mussels**

1999	Independence Grove Lake
2001	Sterling Lake at Van Patten Woods, Fox Chain-O-Lakes, Gages Lake, Lake Zurich, <b>West Loon Lake</b> , Lake Minear and Tower Lake
2003	Bangs Lake, Cedar Lake, Third Lake
2004	Druce Lake, <b>East Loon Lake</b>
2007	Slocum Lake
2008	Diamond Lake
2010	Acorn Pond
2012	Long Lake, Round Lake

**These are the only officially documented occurrences of zebra mussels in inland lakes in Lake County. However, the mussels have undoubtedly infested other County lakes but have probably gone unnoticed thus far.**

The zebra mussel's reproductive cycle allows for rapid expansion of the population. A mature female can produce up to 40,000 eggs in a cycle and up to one million in a season. Zebra mussels can live as long as five years and have an average life span of about 3.5 years. The adults are typically about the size of a thumbnail but can grow as large as 2 inches in diameter. Colonies can reach densities of 30,000 - 70,000 mussels per square meter.

Due to their quick life cycle and explosive growth rate, zebra mussels can quickly edge out native mussel species. Negative impacts on native bivalve populations include interference with feeding, habitat, growth, movement and reproduction.

The impact that mussels have on fish populations is not fully understood. However, zebra mussels feed on phytoplankton (algae), which is also a major food source for planktivorous fish, such as bluegill. These fish, in turn, are a food source for piscivorous fish (fish eating fish), such as largemouth bass and northern pike.

In addition to the ecological impacts, there are also many economic concerns. Zebra mussels have caused major problems for industrial complexes located on the Great Lakes and associated bodies of water. Mussels can clog water intakes of power plants, public water supplies and other industrial facilities. This can reduce water flow (by as much as two-thirds) to heat exchangers, condensers, firefighting equipment and air conditioning systems.

A Michigan-based paper company recently reported that it had spent 1.4 million dollars in removing only 400 cubic yards of zebra mussels. There is currently no widespread/whole lake control practice that would be effective without harming other wildlife, and there does not currently appear to be an effective predator of the mussel. Below are some tips from the Great Lakes Sea Grant Network that can help prevent the spread of zebra mussels:

- Always inspect your boat and boat trailer carefully before transporting. Studies have shown that transport via aquatic plant fragments is one of the major contributors to the spread of zebra mussels.
- Drain all bilge waters, live wells, bait buckets and engine compartments before entering another lake. Make sure water is not trapped in your trailer. Never transport water from one lake to another.
- Flush clean water (tap) through the cooling system of your motor to rinse out any larvae.
- Full grown zebra mussels can be easily seen but cling stubbornly to surfaces. Boats that have been in the water for long periods of time should be carefully inspected. Carefully scrape the hull (or trailer), or use a high pressure spray (250 psi) to dislodge them. Or leave your boat out of the water for at least 5 days, preferably up to two weeks. The mussels will die and drop off.
- In their earlier stages, attached zebra mussels may not be easily seen. Pass your hand across the boat's bottom - if it feels grainy, it's probably covered with mussels. Don't take a chance; clean them off by scraping or blasting.
- Dispose of the mussels in a trash barrel or other garbage container. Don't leave them on the shore where they could be swept back into the lake or foul the area.