



The Truth About Zebra Mussels

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Zebra mussels were first discovered in Pickerel Lake in July 2020. Since that initial discovery, the northeast South Dakota lake has experienced a number of changes. Pickerel Lake Conservancy, the local lake association, has learned from its own experience that there are a lot of myths out there that just aren't true. Here's what was discovered during the past four years dealing with zebra mussels.

Myth: Zebra Mussels Are Good For The Lake

Truth: Zebra mussels change the lake ecology with some positive benefit, but many adverse impacts. The invasive mollusks attach in huge numbers to virtually every hard surface, such as rocks, logs, docks, boat lifts, lawn irrigation intakes and even aquatic plants. One immediate impact is that the sharp edges of the shells easily cut hands and feet. As a result, it's now imperative to always wear water shoes while wading and gloves when handling shoreline equipment. Zebra mussels are also killing the native clam population.

Myth: Zebra Mussels Make The Lake Cleaner

Truth: It is true that a zebra mussel infested lake often experiences clearer water. Pickerel Lake was clear to a depth of 19' last June, which is double the average historical clarity depth. Zebra mussels consume huge quantities of zooplankton (algae), which improves clarity, but that doesn't mean the lake is any cleaner. Zebra mussels don't decrease nutrients and toxins that are already in the lake, such as phosphorus, nitrogen and chemicals. If a lake was polluted before zebra mussels were introduced, it will remain polluted after they arrive.

Myth: Better Water Clarity Is A Good Thing!

Truth: That's what some Pickerel Lake residents and seasonal cabin owners thought until the past couple years. Clearer water allows more sunlight to penetrate to the lake bottom. In a nutrient rich lake, it triggers heavier aquatic vegetation growth, especially near the shoreline but also in deeper water. The heavier "weed" density begins to interfere with boating and swimming, so the lake association is working with SDGFP to identify responsible ways to manage nuisance vegetation. One unpleasant nuisance plant that emerged in large numbers last summer was filamentous algae, sometimes referred to as "green slime". It commonly shows up in zebra mussel infested lakes and floats in masses on or just below the lake surface. This adversely affects swimming, boating and fishing during heavy blooms of these slimy algae blobs.

Myth: Birds Spread Zebra Mussels

Truth: Tests conducted by the Minnesota AIS Research Center determined that it technically is possible for wildlife to spread the microscopic zebra mussel larvae (called veligers), but that it is highly unlikely. In South Dakota, 22 water bodies have become infested with zebra mussels. Every single one

is either a popular boating recreation lake or river, or directly connected to a previously infested recreation water body. We are kidding ourselves if we don't believe careless boaters are the culprit!

Myth: Zebra Mussels Don't Affect Fishing

Truth: Zebra mussels compete for the same zooplankton food supply as young fish. Studies show that walleyes grow 14% slower their first year in a zebra mussel infested lake. The slower growth makes them susceptible to predators longer, increasing the mortality rate. Stocking more hatchlings can counter this, but only if the state fish hatchery has the capacity to rear a sufficient stocking supply. Also, the rapid expansion of aquatic vegetation discussed earlier causes changes in fish locations and feeding patterns. At Pickerel Lake, some of the usual fishing hot spots are now harder to fish and not as productive.

Myth: There's Nothing We Can Do To Stop Zebra Mussels

Truth: Unfortunately, this is partly true. There currently is no cost-effective way to eradicate zebra mussels and prevention measures aren't fool proof. But there is promising research underway such as genome mapping that may eventually identify ways to control zebra mussels through an understanding of their DNA. Aggressive prevention measures buy time to allow research to progress. Lake associations and SD Game Fish and Parks should collaborate in implementing more robust prevention measures before zebra mussels find their way into the lake. And prevention is not just about zebra mussels. There are several particularly harmful invasive aquatic plants in nearby states that we want to keep out of our SD lakes, such as starry stonewort and Eurasian water milfoil. Preventing the spread of any aquatic invasive species is vitally important to the long-term health of our lakes and streams.

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