



Hello members, families and friends,

It is with a very heavy heart that I have to inform you that we found Zebra Mussels on Big Fish Lake on Monday, October 8, 2018. The Board hired Steve McComas from the Blue Water Science Company out of the Twin Cities to do an extensive plant and animal survey. He came highly recommended by the DNR and several other contacts that I have met while serving on the Stearns County Aquatic Invasive Species (AIS) Committee.

On Monday morning, Matt Peters from BFLA Board rode around with Steve and one of his team members. They did meandering searches all around the lake until early afternoon. At that point nothing was found, including Starry Stonewort or Eurasian Milfoil. At around 1 in the afternoon, Matt had to leave so I took his place and helped the team do an extensive search around the DNR boat access by throwing out rakes and bringing in about 70 samples. Nothing was found.

Soon after that Steve suggested that we start our search for Zebra Mussels. None were found at the landing so we started walking along the shore just north of the access. We found our first zebra mussel clinging to a tire and then kept looking for more. We found about a dozen mussels. We hoped that it was an isolated case. Steve suggested that we go towards the other side of the north bay to see if the wind had carried them over there. Unfortunately, we found more zebra mussels there.



Above, you will see most of the samples that we were able to collect. As you can see they vary in size from 1/4" (young mussels) to 3/4" (adult mussels). Because of the sizes of the adult mussels, Steve said that we have had these in our lake for about two years.

He is very knowledgeable about zebra mussels since he has studied them for over 10 years.

Below is a map where the zebra mussels were found during our search on Monday. The spots are indicated in the red dots.

Big Fish Lake Zebra Mussels October 8, 2018



Zebra Mussels found in shallow water, less than two feet or on recently removed docks
Field Work Conducted Oct. 8, 2018

UTM NAD 1983
Blue Water Science

It is important to note that these were the only places that were looked at. No further searching was done along any other shores since the infestation was found on two shores already. This means that since they were on the north end and had drifted over to the SE side of the bay, the zebra mussels are between both shores. They are sitting at the bottom of the lake attached to rocks, sticks and plants. Steve, who is an expert

on this type of infestation, said that there is nothing that we can do at this point. I suggested that we just isolate part of the zebra mussels and try and eliminate them but it said that it wouldn't work. This infestation is too far along. Again, this is so disheartening. Steve told us that we did everything that we could do by having an extensive boat inspection program, doing volunteer surveying twice a year and keeping up with the AIS protocols and research available. He was very impressed with our lake and how clean it was and said that we are getting the less of three evils by having zebra mussels versus Starry Stonewort or Eurasian Milfoil. He encouraged us to continue with the large number of boat inspections because he has been to Lake Koronis where they have Starry Stonewort and there are places on the lake that boaters can not even start their motors until they paddle out past the weeds to get to cleaner areas!

Below, I have listed several sites that may be of interest to you:

[Click here for Zebra Mussel Information](#)

[Click here for Pilot Projects to Control Zebra Mussels](#)

[Click here for the DNR Volunteer Zebra Mussel Monitoring Program](#)



What are zebra mussels?

Zebra mussels are small freshwater mussels that are not native to Minnesota. Adults range from ¼ to 1 ½ inches long and have yellow and brown striped shells. Unlike native mussels, they can attach themselves to hard surfaces in the water.



Zebra mussel
(*Dreissena polymorpha*)

Where did zebra mussels come from?

Zebra mussels are native to Eastern Europe and Western Russia. They have spread throughout much of Europe and Asia over the past 200 years. They were likely brought to North America in the ballast water of ships and were discovered in Lake Erie in 1988.

What problems can they cause?

Zebra mussels can:

- clog irrigation intakes and other pipes,
- attach to boat motors and boat hulls, reducing performance and efficiency,
- attach to rocks, swim rafts and ladders where swimmers can cut their feet on the mussel shells,
- attach to and smother native mussels, and
- eat tiny food particles that they filter out of the water, which can reduce available food for larval fish and other animals, and cause more aquatic vegetation to grow as a result of increased water clarity.

Zebra mussels in Minnesota

Zebra mussels were discovered in the Duluth harbor in 1989. As of 2014, the DNR had documented zebra mussels in fewer than 100 water bodies in Minnesota. The DNR has listed a total of 213 water bodies as "infested" with zebra mussels, a regulatory classification which includes some water bodies that are connected to water bodies where zebra mussels have been found.

How do they spread?

Zebra mussels can attach to boats or aquatic vegetation and be carried to a different lake or upstream in a river. The microscopic larvae (called "veligers") may be carried in bait buckets, live wells, or other water.



Zebra mussels
attached to a
native mussel

What should you do to prevent their spread?

Before you leave any water access, clean weeds and debris from your boat, remove drain plugs and keep them out while traveling, and dispose of unused bait in the trash. For additional recommendations see mndnr.gov/AIS.

Regulatory classification

Zebra mussels and quagga mussels (a related species) are both classified as *prohibited invasive species* in Minnesota. It is illegal to import, possess, buy, sell, transport, or introduce them into state waters.

The DNR was notified right away on Monday afternoon and I had to take pictures of the zebra mussels next to the ruler and the dime so that they could indeed verify our find. The picture was sent down to the St. Paul AIS office and upon their confirmation, two hot orange signs were hung up at the Big Fish Lake lake access to warn boaters coming in or out of the lake. A news release from the DNR will go out on Monday to inform the public.

Please look at your docks and lifts or other water related equipment as they come out of the lake to see if you have any zebra mussels on your shore. It is important to know so that we can monitor these invasives. If you see something and you cannot identify the mussel, please call John Ronning at (719) 426-1472 or Matt Peters at (320) 685-4507. Remember, the outside of a zebra mussel is striped and "D" shaped and can sit flat on its bottom side. Other noninvasive shells are round or spherical or even cone-shaped.

Again, we have to continue our fight against other invasives such as Starry Stonewort ,dubbed the lake killer, or Eurasian Milfoil. We have to be proud of what a beautiful lake that we have and try to keep as clean as possible.

Thank you for your time and concern for our lake and have a beautiful rest of the fall season!

Kit Ferber
President
320-249-4800

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