THE GLQO WATERSHED JOURNAL



The Gull Lake Watershed includes Gull Lake, Little Long Lake, Grassy Lake, Little Gull Lake, Miller Lake, Bullhead Lake, Duck Lake, Backus Lake, Dake Lake, Elliston Lake, Mud Lake, Wintergreen Lake, and Prairieville Creek.

Starry Stonewort: An Overview of the Invasive "Connoisseur of Clean Waters"

A presentation by Scott Brown, Executive Director, Michigan Lake and Streams Association

The Gull Lake Quality Organization recently welcomed Scott Brown to a public meeting to learn about starry stonewort, the latest aquatic invasive species to be found in Gull Lake. Having studied starry stonewort for years in Michigan, he is regarded as one of the few experts on this harmful algae that has invaded many Michigan lakes.

A concerned audience learned that the species is native to Europe and Asia and was first detected as an invasive species in North America's St. Lawrence Seaway in 1978.



Finding its way to the Great Lakes in 1983, it was positively identified in the inland lakes of Michigan in 2006.
According to Scott, 75

percent of the 6,537 inland lakes in Michigan that are at least 10 acres in size may be susceptible to colonization of starry stonewort.

Now nearly extinct in southern Europe, starry stonewort likes fresh, cold (39-77 degrees), clear water that is at least 1 meter deep. In addition, it thrives in lakes with good vegetation, moderate phosphorus levels (somewhat higher levels than those found in Gull Lake), and lake bottoms composed of soft organic sediments, marl, peat and gravel. Scott shared, "Gull Lake has all the qualities, other than moderate phosphorus, to make it a perfect habitat for

SUMMER 2015

In This Issue:

Starry Stonewort Overview
GLQO Hosts Annual Meeting1
Area Lake Associations Collaborate 2
The Subtle Truth about Dying 3
Membership Committee Update 4
Boater Safety Committee Update 5

The Gull Lake Quality Organization is an All-Volunteer Organization. Our mission is to address concerns and provide education regarding the use of natural resources of the Gull Lake Watershed.

GLQO ANNUAL MEETING

Please plan to join members and friends of the Gull Lake Quality Organization for its annual meeting on Tuesday, August 18th in the Terrace Room at Kellogg Manor.

This year, we will hear from representatives from Kieser & Associates, the environmental science firm who are conducting the aquatic vegetation survey on Gull Lake.

A social time* begins as 6:30 pm with the meeting beginning promptly at 7:30 pm.

*Light hors d'oeuvres and cash bar

Continued on page 2

Starry Stonewort: An Overview (continued)

starry stonewort. The only predictable thing about starry stonewort is that it is unpredictable." Scott was expecting to see new growth of starry stonewort when he dove down to a thirty-foot depth in Gull Lake earlier in the day. But, the algae displayed its unpredictability by not being present at that time in the deep or shallow waters. Further hunting provided evidence of starry stonewort when we scooped up a bucket full of sediment from a shallow area where the stonewort was densely growing last summer. Within the sediment were the small white stars that are the definitive characteristic of starry stonewort. As of late June, those stars had grown into green plants that were about 12-18" tall.



Soon, Scott will be back to dive in Gull Lake and videotape starry stonewort in the shallows and also in the 25-30" depths. He recently said that all lakes he has visited so far this summer are showing slow growth of starry stonewort, probably caused by cooler temperatures and cloudy days. No miracle treatment has been found to eradicate the invader. Copper sulphate, suction harvesting, and mechanical harvesting remain the only somewhat effective ways to treat this aquatic invasive species, but not without costs.

How can you identify starry stonewort? In the water above the sediment, you will see bright green thin strands that pop when pinched. A slimy protoplasm is inside the strand. In the sediment, you will find clear thin strands that are attached to small white stars. If you suspect you see starry stonewort, please email GLQO at info@glqo.net or call Water Quality Committee chair Mike Gallagher at 269-209-1566.

Collaboration with Area Lake Associations

The challenges Gull Lake is facing from problem weeds are not unique. Most lakes with public access in our area are also grappling with invasive aquatic species, typically spending \$20,000 to \$70,000 annually to control them. Over the summer, GLQO began meeting with representatives of several lake associations, (Wall, Sherman, and Upper Crooked Lakes), the Four Townships Water Resources Council, and the Kalamazoo River Watershed Council to share information on infestations and treatment options and to collaborate on ways to prevent and control the spread of aquatic invasive species.

Unsuspecting recreational boaters, for example, often transfer unwanted weeds from one lake to another as seeds or plant fragments on their motors or other parts of their boat and trailer. GLQO and the Upper Crooked Lake Association will be administering a short survey to boaters using the public launches on our respective lakes. These surveys will help us document the movement of boats among lakes and people's awareness of the importance of taking simple steps (like washing their boats) to prevent the spread of problem weeds.

We also will be considering opportunities to collaborate on grant applications to the state to prevent and control aquatic invasive species in our lakes.

Mobile Boat Wash Comes to Gull Lake

Come see MSU interns operate the DEQ's mobile boat wash and learn how it protects our lakes from harmful aquatic invasive species.

Saturday, August 1 from 10:00 to 4:00 at the Prairieville Township Boat Launch

Do you have an hour or two to share? We are looking for volunteers. There will be a volunteer training session on July 30 from 7 to 8 p.m. Call Mike Gallagher at 209-1566 to sign up.

The Subtle Truth of Dying (Zebra Mussel Style)

By Gary Mittelbach

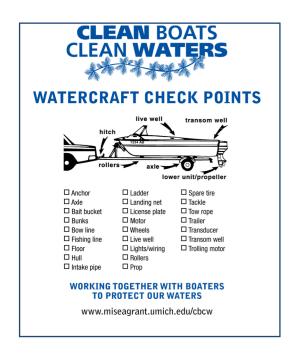
The unseasonably warm summer of 2010 resulted in a mass die-off of Zebra mussels in the shallow waters of Gull Lake, but it took nearly 4 years of research to understand why. As it turns out, temperature was indeed the culprit in the demise of the zebra mussels, but its effect was far more subtle that most scientists had previously believed. In a recently published article in the Canadian Journal of Fisheries and Aquatic Science, Michigan State graduate student Jeff White and his faculty colleagues Steve Hamilton (KBS) and Orlando Sarnelle (MSU Fisheries and Wildlife) demonstrate through experiments conducted in Gull Lake that prolonged exposure to temperatures greater than 25°C (77°F) can be fatal to zebra mussels, when previously scientists had believed





that it took temperatures over 30°C (86°F) to kill mussels. The subtle difference between death due to chronic, long-term exposure to warm temperatures and death due to acute exposure to very high temperatures is important, as lakes in our area rarely reach temperatures over 86°F, but prolonged periods of water temperatures over 77°F are much more common. Thus, an unanticipated consequence of the "dog-days of summer" may be the periodic set-back of zebra mussel numbers in Gull and other Midwestern lakes.

Jeff White's research in Gull Lake was supported in part by funds from the Gull Lake Quality Organization as part of its water quality monitoring program and the results of Jeff's research have been published in previous newsletters. The GLQO thanks Jeff for his dedicated work for our organization and congratulates him on receiving his Ph.D. from MSU in summer 2015.





GLQO Board Notes and Updates

There are five standing committees represented on the Gull Lake Quality Organization. They are the Communications Committee, Water Quality Committee, Membership Committee, Boating Safety Committee and the Fisheries Committee. Look for updates from one (or more) of our committees in each newsletter or at www.glqo.net.

GLQO and its Membership Committee Host "Welcome to Summer Party" and new members!



More of a "friendraiser," the "Welcome to Summer Party" was also a fundraiser to help raise much needed funds to support the 2015 Aquatic Vegetation Survey of Gull Lake. This extensive lake survey, to be conducted by Kieser & Associates, is slated to take place late July. We thank all who came out in support of the GLQO and the Gull Lake Country Club for hosting a great event. During the event, Susan Houseman, president of the GLQO, gave a brief program about the important work of this organization. She discussed the survey initiative to map all aquatic species, but more specifically to identify potential invasive species and their locations in Gull Lake. We will hear a report from Kieser & Associates at the GLQO Annual Meeting on August 18th.

Pictured from left to right are Tom Lechota (Gull Lake Yacht Club Commodore), John Kittredge, and Max Doolittle. Max, age 88, has been sailing on Gull Lake for 55 years and has been teaching sailing at GLCC for 50 years. (He still teaches and comes to the lake almost every day during sailing season.) The Pavilion on the CC grounds is dedicated to "The Doolittles." (Check out the two signs on the Pavilion next time you are out. Mary, Max's wife, passed away several years ago.) Max is an honorary member of GLCC.





Inform, Educate, Protect, Preserve

Education regarding lake quality is a priority for the Gull Lake Quality Organization. Mike Gallagher, Water Quality Committee chairperson, provided a wide variety of "good" weeds found in Gull Lake. He also included a sample of some sediment containing starry stonewort, which is considered a non-native aquatic invasive species.

We gratefully acknowledge all the members who have teamed up with the Gull Lake Quality Organization! We welcome your interest, questions and input. We invite you to volunteer: attend our board meetings, join one of our committees, or stop by for the mobile boat wash event on August 1. For more information, e-mail us at info@glqo.net.

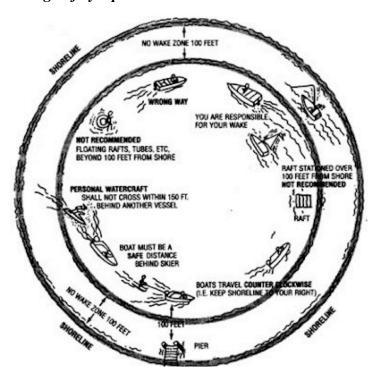
GLQO Board Notes and Updates

Water Quality Committee:

Thanks to the families who are enjoying wakeboarding and surfing while respecting the ecology of the lakes. By participating in this recreational activity *in the middle of the lake* you are helping to minimize the environmental and ecological impacts. In an article published by Michigan Lake and Stream Associations, it is noted that "Ballast laden wake enhancing boats operating near inland lake shorelines are capable of producing wave heights and frequencies that dramatically exceed those produced during even the most intense summer thunderstorms and/or high winds."



Boating Safety Update:



Are You Observing the 100-Foot Rule?

It is every boater's responsibility to know the laws regulating boating and watercraft. Two regulations, the 100-foot rule and counterclockwise operations, became law in 1994 and are defined in the Natural Resources and Environmental Protection Act, Section 324.80149.

As a visual reminder about the 100-foot rule and counterclockwise operations, we have included a graphic (from Michigan Lake and Stream Associations) for your review. (This guideline is not a substitute for the Marine Safety Act and amendments. Boaters are ultimately responsible to know the rules governing boating.)

New Law Applies to Blood Alcohol Limits

Michigan House Bill 4441, effective on March 31, 2015, lowers blood alcohol limits for people driving boats on any waters in the State of Michigan. The new law applies to snowmobiles and off-road vehicles too.

According to its website (http://www.legislature.mi.gov), the law states:

- (1) A person shall not operate a motorboat on the waters of this state if any of the following apply:
 - (a) The person is under the influence of alcoholic liquor or a controlled substance, or both.
 - (b) The person has a blood alcohol content of 0.08 grams or more
- (6) A person who is less than 21 years of age, whether licensed or not, shall not operate a motorboat on the waters of this state if the person has any bodily alcohol content.



We gratefully acknowledge and appreciate the business sponsors for the 2015
GLQO Annual Meeting



Support the continued vigilance of the Gull Lake Quality Organization. Join today.

Name:(Please indicate how you wish your name to appear in the GLQO Membership List.)			
Address:			
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Phone:	Phone: E-Mail:		
	Individual/Family Membership	Corporate Membership	
	Regular (\$35) \$	Silver (\$100) \$	
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	 □ I wish to receive the GLQO newsletter via email (to the email noted above) □ I wish to have my membership level kept confidential □ I do not wish to have my name published on the GLQO website or in GLQO publications □ Please direct my dues to: (please specify) 		

Mail to: GLQO, PO Box 34, Hickory Corners, MI 49060

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Quality Organization for 2015!
Your support helps to preserve the beauty of the
Gull Lake Watershed!

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Every effort is being made to report members' names as you have requested. Some members have requested to remain anonymous. If you see an error, please e-mail info@glqo.net.

The Gull Lake Quality Organization

P.O. Box 34 / Hickory Corners, Michigan / 49060 Website: glqo.net Contact: info@glqo.net







Upcoming Events

Saturday, August 1st... Mobile Boat Wash In Action...10:00 a.m. to 4:00 p.m. at Prairieville Township Park

Tuesday, August 18th at 6:30 p.m. GLQO Annual Meeting Terrace Room at Kellogg Manor

Sunday, August 23rd from 3:00 p.m. to 5:00 p.m. Lakeside Concert with the Cereal City

Band on the grounds of Kellogg Manor

Tuesday, Sentember 22nd at 7:00 n m

Tuesday, September 22nd at 7:00 p.m. GLQO Board Meeting Richland Area Community Center

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GLQO by-laws allow volunteers to serve as directors for two consecutive three-year terms. After each Director's name are two numbers: the year their current term expires, and the number of the current term.

We welcome you to volunteer for committee work (of your choice) and to participate in our board meetings.