Spring 2023 Newsletter

Michigan Chapter North American Lake Management Society

The purpose of McNALMS is to promote understanding and comprehensive management of Michigan's inland lake ecosystems

P. O. Box 4812
East Lansing, MI 48826

Visit our website at www.mcnalms.org

Presidential Ponderings

by Melissa DeSimone, McNALMS President

Hello everyone, I would like to introduce myself. I'm Melissa DeSimone, the new President of the Michigan Chapter of the North American Lake Management Society. I am very pleased to be working with the wonderful board of McNALMS, who care so dearly for our inland lakes. I want to take a moment to extend my gratitude to all of you as well. We may not know each other personally but we share a camaraderie in the care and keeping of the lakes of Michigan, for this I thank you. There is so much we can do together to ensure the future of our freshwater lakes is a positive and sustainable one.

We look forward to reviewing and awarding another competitive slate of grant proposals for our Student Lake Research Grants Program. I strongly believe that investing in student work is paramount to ensuring healthy lake practices for the future. This opportunity is provided in partnership with the other organization I hold dear, the Michigan Lakes and Streams Association (MLSA). When I take off my McNALMS presidential cap, I happily don my Executive Director badge for MLSA that I have worn since 2019.

As the representative for MLSA, I would be remiss if I did not invite you to join us for our 62nd Annual Conference at Crystal Mountain Resort in Thompsonville, MI. We look forward to a wonderful two day event packed with educational sessions, networking opportunities, and fellowship with riparians, agency staff, and lake management professionals on Friday, May 5 and Saturday, May 6, 2023. You can find details at mymlsa.org. Please plan to attend, it will be an excellent event!

(Continued on the next page)

Michigan Natural Shoreline Partnership

Promoting Natural Shoreline Landscaping to Protect Michigan's Inland Lakes

The goals of the **M**ichigan **N**atural **S**horeline **P**artnership include:

- Train contractors and landscape professionals about shoreline technologies and bioengineered erosion control.
- Educate property owners about natural shorelines and technologies that benefit lake ecosystems.
- Research, demonstrate, and develop natural shoreline technologies that benefit lake ecosystems.
- Encourage local and state policies that promote natural shoreline management.

www.shorelinepartnership.org

Michigan Chapter, North American Lake Management Society is a proud affiliate of the **North American Lake Management Society,** an organization that is dedicated to forging partnerships among citizens, scientists, and professionals in order to foster the management and protection of lakes and reservoirs…for today and tomorrow. To learn more about each organization, visit these informational websites located at :

www.nalms.org/ www.mcnalms.org/

facebook twitter

Follow McNALMS on Facebook & Twitter

Presidential Ponderings...

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During the conference we are also holding in person training sessions for the MiCorps Cooperative Lakes Monitoring Program. Training sessions are free to attend and are also required for participation in the program parameters. We offer discounts for trainees to join us at the main conference for meals and we encourage you to catch some free breakout sessions and networking time when you are not training for parameters too.

I hope the lake season of 2023 is the most beautiful yet. And I'm proud to work with a group of people like yourselves that work so hard to keep it that way. Wishing you many happy summer days ahead. Enjoy the lake.

Click here for more information or to register for the MLSA 62nd Annual Conference

MICHIGAN STATE UNIVERSITY | Extension

December 2022 For additional information, visit extension.msu.edu

Identifying and managing invasive Eurasian and hybrid watermilfoils in Michigan lakes: A response to differential sensitivity to herbicides

Jo Latimore[1], Erick Elgin[2], James McNair[3], Syndell Parks[3], and Ryan Thum[4]

[1]Michigan State University, [2]Michigan State University Extension, [3]Grand Valley State University, [4]Montana State University

Summary

We genetically analyzed hybrid watermilfoil collected from lakes across Michigan and tested the hybrid plants' susceptibility to a common herbicide, fluridone. We made two important determinations. First, there are many different genetic strains of hybrid watermilfoil in Michigan lakes. Second, these strains respond differently to fluridone, and some are highly resistant to it. Therefore, knowledge of what strain(s) of watermilfoil are present in a lake is very important when developing a management plan that includes control with herbicides.

Background

Eurasian watermilfoil (J. Latimore)

Eurasian watermilfoil (*Myriophyllum spicatum*) has been a problematic invasive weed in Michigan lakes for decades. Once introduced, it can rapidly grow and create dense stands that impede recreation and negatively impact lake life. Management approaches for Eurasian watermilfoil include herbicide application, biological control, and physical removal. Recently, lake managers and scientists observed that traditionally effective herbicides were failing to control invasive watermilfoil in some lakes (Berger et al. 2012, Chorak et al. 2020, Thum et al. 2012). Genetic analysis of plants from these lakes revealed that Eurasian watermilfoil had begun crossing with native northern watermilfoil (*Myriophyllum sibiricum*), leading to concern that hybrid plants may be herbicide resistant (Moody and Les 2002).

Today, aquatic plant managers increasingly recognize that Eurasian watermilfoil (including hybrids with native northern watermilfoil) is genetically diverse, and that strains can differ in their growth, spread, impacts, and herbicide response. A practical challenge for Eurasian watermilfoil management is developing efficient and effective methods to predict how a specific

Click here to read the rest of this article...

NALMS Enhanced 314 Clean Lakes Program Position Statement

Click here to download a pdf of the **Enhanced 314 Clean Lakes Program Statement**

Lakes are Important Resources and are at Risk

Lakes are highly valued natural resources that provide critical ecosystem services, including:

- *provisioning* (fisheries and aquaculture, water for drinking and non-drinking, raw materials, energy);
- *regulation and maintenance* (water and air quality regulation, erosion and flood prevention, maintaining ecological populations and habitat, pest and disease control, soil formation and composition, carbon sequestration, and local climate regulation); *and*
- *cultural* (recreation; intellectual, spiritual, and aesthetic appreciation) (Reynaud and Lazanova 2017).
- Lakes can serve as a healthy source of food and drinking water, and offer recreation opportunities that can be accessible to traditionally underserved communities.

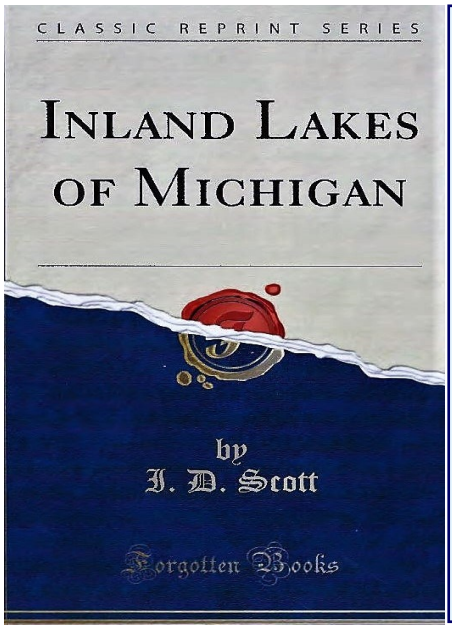
Lakes contribute to local, regional, and national economies.

- Lakes with high quality water add economic value (estimated average annual value of $442.50- USD per property in the U.S. (Reynaud and Lazanova 2017)) to nearby homes, especially homes with a lake-view (estimated average of $79,000 USD in 2021) (Doss and Taff 1996).
- Lakes bring significant tourism and recreation spending to the surrounding communities (Voigt et al. 2016).
- Losing one meter depth of water clarity was estimated to cost Vermont lakeside communities $16.8 million in economic activity and 200 full-time jobs during the summer season, and a three percent depreciation for single-family homes and 37% depreciation for seasonal homes (Voigt et al. 2016).

Lakes are currently threatened by many factors, which can be challenging to mitigate without a clear, unified funding mechanism and coordinated effort among agencies.

- Deicing salts are contributing to the increase in salinity of many lakes in the Midwest and Northeast North America (Dugan et al. 2017).
- Summer surface water temperatures in lakes are increasing globally in connection with climate change and land use changes in the lake watershed (O'Reilly et al. 2015).
- Long-term increases in nutrients (i.e., eutrophication) in lakes have resulted in over half of lakes in the U.S. classified as eutrophic or hypereutrophic according to the 2012 NLA (USEPA 2016).

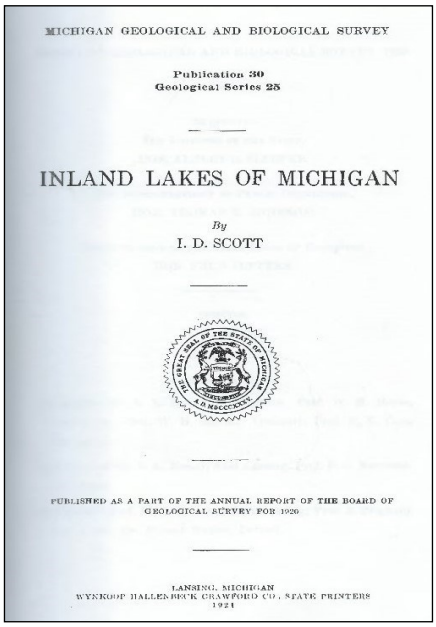
Click here to continue reading the NALMS Enhanced 314 Clean Lakes Program Position Statement



Michigan Geological and Biological Survey
Publication 30
Geological Series 25
1921

Inland Lakes of Michigan

by I. D. Scott


MICHIGAN GEOLOGICAL AND BIOLOGICAL SURVEY

Publication 30
Geological Series 25

INLAND LAKES OF MICHIGAN

By
I. D. SCOTT

PUBLISHED AS A PART OF THE ANNUAL REPORT OF THE BOARD OF GEOLOGICAL SURVEY FOR 1920

LANSING, MICHIGAN
WYNKOOP HALLENBECK CRAWFORD CO., STATE PRINTERS
1921

Dr. Irving Day Scott's Now Century Old *Inland Lakes of Michigan* A Must Read for Lake Professionals and Enthusiasts Alike

by W. Scott Brown, McNALMS Secretary & Newsletter Editor

Representing one of the state of Michigan's first official publications dedicated entirely to exploring the origins, classification, distribution, and "physiographic" properties of some of our state's large inland lakes based upon their "importance, accessibility, distribution, and promise of scientific results", state geologist Dr. Irving Day Scott's well written one hundred and two year old book is a must read for those blessed with a passion for learning more about inland lakes.

Based on observations gleaned during field studies conducted during the summer months of 1913 and 1914, and completed in the summer of 1920 following a six year disruption of the study forced by the outbreak of World War I, Dr. Scott wisely dedicates Chapter 1, The Origins and Classification of Lake Basin, to providing the reader with a detailed overview of what he considered the "agents of most importance (in regards to the origin of inland lakes) - the atmosphere, running water, wind, ground water, and glaciers." Written from the perspective of a well educated geologist possessing a comprehensive knowledge "of the form and distribution of the material deposited by the ice during its last retreat have determined the present land surface," the author also provides the reader with a comprehensive and well written description of how the advance and retreat of the glaciers interacted with the unique geological features of the Lower and Upper Peninsula of Michigan to create at times beautiful inland lake inundated landscape of today. Dr. Scott dedicates Chapter 2, The Development of Lake Shores and the Extinction of Lakes, to a detailed explanation of how waves, currents, and ice act to define the shape and shoreline characteristics of inland lakes, and how the gradual processes of filling, draining, and evaporation each contribute to their inevitable extinction. The work's remaining ten chapters are each dedicated to a thorough study of the sub-watershed areas and "physiographic" characteristics of many of the large lakes situated in various regions of Michigan as defined by their geologic origins, and/or upon the boundaries of their parent watersheds.

Published by **Forgotten Books** as part of their **Classic Reprint Series**. Dr. I. D. Scott's unique 371 page treatise entitled **Inland Lakes of Michigan** is available for purchase on Amazon at a current price of $16.57.

McNALMS Corporate Member Spotlight

Since 1975 **Aqua-Weed Control Inc**. has been providing products and services for managing nuisance aquatic plant problems in Michigan's lakes and ponds. As one of the largest aquatic plant control companies in Michigan, we take customer service very seriously!

Aqua-Weed Control Inc. is a second generation family owned business. As a "hands on" owner, I personally supervise, on a daily basis, many of the aquatic weed control projects we are contracted to perform. Few companies can make this claim!

To learn more about **Aqua-Weed Control Inc.,** point your browser toward https://aquaweed.com/

The **Michigan Clean Water Corps (MiCorps)** is a network of volunteer water quality monitoring programs in Michigan. It was created through Michigan Executive Order #2003-15 to assist the Department of Environment, Great Lakes, and Energy (EGLE) in collecting and sharing water quality data for use in water resources management and protection programs.

To learn more about **MiCorps**, click here

McNALMS Corporate Members 2023

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Aquaweed.com

clarke
clarke.com/aquatic-services

LakePro Inc.
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michigan lakefront solutions
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PhycoTech, Inc.
Phycotech.com

PLM Lake & Land Management Corp
Plmcorp.net

progressive ae
Progressiveae.com/water-resources

Restorative Lake Sciences
Restorativelakesciences.com

McNALMS Board Members 2023

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Michigan Inland Lake Partnership's Virtual Lake Learning Event Listing

Many organizations offer on-line learning opportunities throughout the year. For your convenience in helping to identify and track on-line events that may interest you, the **Michigan Inland Lake Partnership** has created a continually updated virtual event list that serves to highlight many current inland lake and water resources related on-line events. These organizations welcome participation by lake and water resource professionals, and the general public.

Check it out today!

The carnivorous, free floating common bladderwort (*Utricularia vulgaris*) on display while suspended in the water column just below an overhead canopy comprised of the large floating leaves of American white water lily (*Nymphaea odorata*) in 1.5 meters of water in Lenawee County's moderately productive Allen Lake. Just as the leaves of many deciduous trees begin to turn wonderful shades of spectacular color in response to the cooler temperatures and shorter periods of daylight of fall, many floating leaf and submerged aquatic plants also begin to display photo enhancing shades of orange, pink, yellow, and red in response to the cooler waters of fall. Photo by Scott Brown