A Note from the President

When we're asked to respond to surveys, we rarely see the results implemented. The GLC survey that many of you participated in last year provided valuable information about why our members joined GLC. I see it as a base point for growing our chapter. Briefly, the number one reason for joining GLC is to receive *The Great Lakes Botanist*, which I think you can all agree is an outstanding journal of botany. Secondly, members expressed a general interest in receiving a variety of botanical news. Interests ranged from notification on upcoming events, conservation efforts, historical reviews, educational topics, acknowledgements, and more. But, to put any of these suggestions into tangible results we need you to provide the textual information to us. In the upcoming year we will be seeking your assistance in helping to make GLC a stronger chapter by sharing your botanical observations, experiences, research, and ideas. We look forward to your contributions and hearing from you.

In this issue of the newsletter you will find a summary of key activities that occurred throughout the year: 1) In March, Derek Shiels launched our first GLC online plant database using the iNaturalist platform, 2) GLC sponsored two undergraduate students to attend the MBC Spring Foray in St. Ignace, MI, 3) our annual GLC Board Meeting that is open to all members was held during the May Foray, 4) a September field trip to Lake Lansing North Park in Haslett, MI was a wonderful success thanks to the coordinated efforts of Jim Hewitt and Phyllis Higman. 5) In addition, the combined efforts of our five-member Board once again produced a splendid End-of-Year Newsletter. A reminder about 2018 MBC dues notice from Treasurer, Leslie Kuhn, is included on the back page. We hope you find the newsletter informative.

Wishing all a Happy Holiday Season,

Irene Eiseman, President

Mark your Calendar! 2018 MBC State Spring Foray - Bellaire, Michigan

Mark your calendars! It's the White Pine Chapter's turn to host the Foray, and we are planning it for Memorial Day Weekend (May 25-28, 2018) in the beautiful Chain of Lakes region of Northwest Lower Michigan, centered in Antrim County. Shanty Creek Resorts will be serving as primary lodging and base of operations. Folks from the botany and conservation communities in that corner of northern Michigan appear excited about an MBC visit, and Shanty Creek will graciously offer our group rate for an extra couple of days to any members wishing to extend their stay and/or make a family vacation out of it.

The Chain of Lakes Watershed includes a 75-mile-long waterway of 14 lakes and interconnected rivers across four counties, eventually emptying into East Grand Traverse Bay. Among the botanically rich settings is Grass River Natural Area, where 7 miles of trails and boardwalk include cedar swamp, sedge meadow, and upland forest. Other preserves and properties in the area—several owned, managed and/or co-owned/co-managed by Grand Traverse Regional Land Conservancy—encompass Lake Michigan and inland lake shoreline, river and stream bank, coastal dune, meadow, shrub thicket, conifer swamp, and more. We look forward to sharing and exploring this splendid area with MBC members.

We anticipate a great adventure. A robust slate of field trips is being planned. Three full day trips will be available on Saturday and a different three on Sunday, or for those who prefer half day trips, there will be 3-4 choices each half day. Although there will be no scheduled trips for Monday, those interested in extending their experiences in

the area will have many available sites to explore. With 3 presenters and 20 field trip leaders, including 4 from the Great Lakes Chapter, there will something for everyone to learn!

Lastly, we know that there are members of the MBC who have, over the years, enjoyed the many field trips they have attended, but are finding it difficult to do the walking involved. Therefore, we are working to provide one session each half day that will provide an interesting option with limited walking involved. These sessions will be held either at the hotel or at the Grass Lake Visitors Center. Hopefully this will enable those members to continue to enjoy a Foray with their botanical friends.

Join us on Memorial Day weekend, 2018, in Bellaire!

2018 WPC Foray Planning Committee

2017 Student Foray Awards

Congratulations to Kailey Miller and Thomas Charney, who were recipients of the 2017 Joan Robb Student Foray Award. Both students attend the MBC Spring Foray in St. Ignace, MI as sponsored students of the Great Lakes Chapter. Kailey was a sophomore attending Michigan State University studying Plant Biology, and Tom, also a sophomore at MSU, was enrolled in the Environmental Sciences and Plant Biology program. We thank the Michigan Botanical Foundation for providing funding for meals and hotel accommodations and David Rothstein for assistance with transportation expenses.

Kailey Miller & Tom Charney, GLC sponsored students attending the MBC Spring Foray in St. Ignace, MI.

Woody Plants of Interest: Witch hazel (*Hamamelis virginiana*)

Did you know that the witch hazel shrub has nothing to do with witches or with hazelnuts? It was named *Hamamelis* by Linnaeus in 1753, derived from the Greek word "hama" meaning "at the same time", and "melon" for "fruit"[1]. It represents a very unique feature of the tree's ability to flower while still retaining last year's seeds on the same branches, thus yielding flowers and aged seeds together (Figure 1).

Figure 1. *H. virginiana* flower and seed capsules

The "witch" part of the common name may have evolved from an adaptation of Old English *wicce*, meaning bendable, and it's possible that it may refer to its use as a divining rod or water-witch. There are also reports that the American Indians used the pliable branches in making bows. As for "hazel", there are some perceived morphological similarities between the American hazelnut, *Corylus americana,* and our native witch hazel in their clumping growth pattern and general leaf shape when viewed casually (Figure 2).

In the Great Lakes region, *H. virginiana* is one of the last flowering trees of the season. It is not uncommon to find the small yellow strap-like flowers clinging to twigs late October through November. The adjacent rounded seed capsules are dark brown, quite hard, and can explosively eject seeds several feet with a loud popping sound.

Figure 2. Left: *C. americana*, Right: *H. virginiana*

There are many cultivars of witch hazel that are prized for there early spring blooming. These red to yellow blossomed shrubs can be quite fragrant and are likely hybrids of the Asian *H. mollis, H. Japonica,* or our southern U.S. native *H. vernalis*.

Early American settlers soon learned about the valuable medicinal properties of the bark and leaves. Most notably is the high tannin content (3-12%)[2]. Therapeutically, the astringent activity of distillates and relative safety of the extracts has yielded many useful products in daily use today for the treatment of itching, burns, insect bites, hemorrhoid preparations, and skin care[3].

The National Champion *H. virginiana* is located in Smith County, Virginia: girth 31 inches, height 32 feet, crown 38 feet[4].

[1] Missouri Botanical Garden – *Hamamelis virginiana* http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a749

[2] European Medicines Agency (2009) Assessment report on *Hamamelis virginiana* L., cortex, *Hamamelis virginiana* L. folium, *Hamamelis virginiana* L., folium et cortex aut ramunculus destillatum. EMA/HMPC/1.

[3] Witch Hazel (USP) Specification, American Distilling Monograph http://www.americandistilling.com/Witch_Hazel_Products

[4] American Forests Champion Tree Register http://www.americanforests.org/explore-forests/americas-biggest-trees/

GLC Recognizes Derek Anderson – 533 Reports on iNaturalist!

The Great Lakes Chapter wanted to recognize chapter member, Derek Anderson, who has a commanding lead in the Great Lakes Chapter's Cyber Foray, having observed a total of 533 species (at the time of writing this article). In total, seven people contributed 2,123 observations, cataloguing 699 species! Great work Derek and thanks for participating! In addition to awarding Derek a complementary 1-year GLC membership, we wanted to give Derek an opportunity to share a little bit about himself and he graciously answered the following questions:

GLC = Great Lakes Chapter; D.A. = Derek Anderson

GLC: Can you tell us a little about who you are, where is home, and how do you like to spend your time?

D.A.: I am a botanist with the Minnesota Department of Natural Resources. I primarily monitor and survey the species that are federally listed in the state, as well as the state's rare plants in the prairie region of Minnesota (western and southern Minnesota). I live in St. Croix Falls, a small town in northwestern Wisconsin on the Minnesota/Wisconsin border. I enjoy spending time on the St. Croix River as well as spending time volunteering on floristic projects that work to fill in gaps in known plant distributions in the state.

GLC: What does being a part of the Michigan Botanical Club mean to you?

D.A.: Being part of the Michigan Botanical Club is important to me because it keeps me connected to people and plant related activities in the upper Midwest and Great Lakes Region. The Great Lakes Botanist publication is also an important part of being connected to the club as it provides an avenue for sharing research related to the flora of the region.

GLC: Why do you use iNaturalist and in what capacity do you use it?

D.A.: I just started using iNaturalist earlier this year in response to a friendly challenge between the Botanical Club of Wisconsin and the Illinois Native Plant Society to see which group could make the most observations and capture the most plant species within their respective states.

GLC: Would you encourage others to use iNaturalist? If so, why?

D.A.: I definitely would encourage others to use iNaturalist. I am constantly learning new ways to use the website such as searching for different taxa groups and for species in specific locations. I think this is an easy way to engage citizen scientists. For example, I am a botanist with the Minnesota Department of Natural Resources. Part of the work I do includes monitoring and surveying listed species across the state. This year while using the website, I came across observations of listed species that filled in distribution gaps in our rare features database. I've shared this information with coworkers that are now exploring possibilities with other taxa groups (such as reptiles and amphibians).

GLC: What is one of your favorite groups of plants and where do you like to go to see them?

D.A.: There are many species that I enjoy working with, and picking one group is kind of hard. I work with rare species in Minnesota—so many favorites certainly come to mind. If I had to choose one, I would probably lean toward the western prairie fringed orchid. I work with this species extensively, and I as a result, I am constantly being surprised and learning new things about its life history. To see this species I travel to the prairies of western Minnesota. A close second would be visiting the cedar forests in northern Wisconsin. I do not visit these areas as much as I once did, but it is always fun to go back to and explore.

More on iNaturalist from Board Member Derek Shiels

This summer I was compiling a list of the flora on a property and looking for new plants I hadn't yet found. When I found one not on my list I would impulsively drop to my knees for a closer look and audibly mutter some exclamation, such as "oooh hello!" Can you relate? This encapsulates my fascination with botany: the spirit of discovery and the joy of rich diversity. I like to learn, many of us do, it's one reason we foray. To be shown a

new plant or to key out a new one ourselves—both make for a great day!

Another reason for my botanical passion is my desire to be part of making this world a better place, which is how I like to define nature conservation. Learning, observing, and documenting plants can be meaningful work that serves a greater mission. All of this: discovery, learning, and conserving nature, are happening in a community of nature lovers, called iNaturalist.

The organization, iNaturalist.org (iNat, for short) is many things. It is a website and therefore internet-based and users interact virtually. The website is social media for nature nerds (affectionately) and thus iNat is a network of naturalists. But not just a network, it is equally a database of biodiversity. It is about enjoying nature and knowing nature. Members document their nature observations with photographic evidence and share it with the global community where it can be vetted and turned into—through identification confirmations—real scientific data. The iNat community is building a foundation of biological observational data that will inform future conservation and help keep common species common and rare species valued.

In just six years, the iNat community has documented 128,824 different species. But what I think attests to the site's success is the distribution of the iNat observations across the taxonomic tree. The global repository of biological occurrence data (referred to as GBIF) only had 5% of its occurrence records as plants, and 2% as insects, whereas 85% were bird occurrences, iNat's U.S. occurrence distributions are roughly 30% plants and 20% insects with observations of birds at about 25%, to highlight those groups. A new poison dart frog species was discovered through iNaturalist and a snail, drawn in the late18th century but not observed since then was posted to iNaturalist and then seen by a snail expert. With the ever-growing body of observational data, the exciting discoveries and advances in understanding species distributions will continue.

Regarding iNat's place in education, any investigator seeking to devour some new information and learn all they can, will lose hours, but gain wisdom perusing the network. Users can search any area to see what has been documented, they can search for a species to see what it looks like from the different photographic collections that have been made, they can be challenged to try identifying others' observations and in doing so, dig into learning. A user can post their own photos of unknown critters to be enlightened by the shared knowledge of fellow iNat participants. Member interaction is encouraged, users ask each other questions, share what they've learned about identifying something, and challenge each other to document more (and take more detailed photographs!).

The how-to nitty gritty is rather simple if you have access to a computer. Users create an account (free!) and then can start making observations. You must provide evidence for your observation, which comes in the form of a photo (or it could be an audio clip) and then the observation must include a date/time and location. The last piece of the puzzle—what it is that was observed—can be crowdsourced, meaning you don't have to know what it is; if you know it's a plant, enter "plant," if you know it's a sedge, then enter "sedge" (or "Cyperaceae"). Expertise is not required to participate! There are tutorials on how to upload photos and add a location to your observation, but feel free to contact the Chapter for assistance. If you have a smart phone (it is not required to participate), you can use the iNat app to add observations, which does simplify the process even more. After making observations, the next action to master is helping identify others' observations.

There are numerous ways to experience the iNat network and utilize the database. One that I want

to highlight is the Project feature, found by clicking the 'Project' tab on top of the website. Projects provide opportunities for focusing in on a specific place, event, group of critters, or other more narrowly defined objective. I started Projects for this year's spring and fall MBC Forays as a place for us all to share our photos and observations from the various field trips during a Foray. Of course, these projects become more interesting as more people utilize them. Another project that the Chapter launched this year was a Cyber Foray. This project provided a way to gather and display all of the participants' botanical observations throughout the year from their various individual explorations. An iNat cyber foray offers a challenge for who can document the most species in the year—a fun way to celebrate botanizing and biodiversity. I encourage you to take a look at iNat and give it a try next year.

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Check out our iNaturalist Cyber Foray Website!

https://www.inaturalist.org/projects/great-lakes-chapter-mbc-cyber-foray-2017

Lake Lansing Park North Field Trip 2017

Phyllis showing some of the group the difference between huckleberry (*Gaylussacia baccata*) and low sweet blueberry (*Vaccinium angustifolium*) at Lake Lansing Park, North. *(Photo by Irene Eiseman)*

The Great Lakes Chapter held a field trip on Sunday, September 24 at Lake Lansing Park North in Ingham County. We had a pretty good turnout on an unseasonably warm afternoon. This walk was also advertised to other groups such as Wild Ones and Stewardship Network. This 400-acre park has an extensive trail system but we didn't get too far relative to all there was to see, even for the time of year – from black oaks to wild yam - and we were moving at a botanizing pace. We all learned a lot from our leader, Phyllis Higman, a Chapter board member and botanist with Michigan Natural Features Inventory. Everyone had something interesting to share.

Entrance to the Park on Lake Drive, Haslett, MI *(Photo by Jim Hewitt*)

Winterberry, Michigan holly (*Ilex verticillata*) (*Photo by Jim Hewitt)*

Great Lakes Chapter- Michigan Botanical Club Board Meeting Recap

May 28, 2017

The Great Lakes Chapter held its annual meeting during the 2017 Spring Foray in St. Ignace on May 28. Members of the Executive Committee present were Irene Eiseman, Derek Shiels, Jim Hewitt, and Phyllis Higman. Also present were members Bob Kahl and Elaine Chittenden.

Election of Officers: Derek Shiels was elected to a second 2-year term as Vice President and Leslie Kuhn was elected to a second term as Treasurer. These terms begin January 1, 2018.

iNaturalist: Derek explained this program which allows the submission of plant sightings into an online database and how it could help with plant ID, increase knowledge of plant distribution and abundance, engage and connect chapter members, and perhaps attract new members.

Newsletter: Phyllis agreed to again edit a year-end chapter newsletter.

Chapter Progress: Irene reported that we have 70 members. An annual attrition rate of about 14% means we need to continually attract new members to maintain the status quo and to grow. A younger demographic is needed and students from such institutions as Michigan State University and Northern Michigan University would be good candidates.

Field Trips: Even though attendance at the two 2016 field trips was modest the Board thought it would still be useful to organize one or two events in 2017, targeting the northern Lower Peninsula or the Greater Lansing area.

Submitted by Jim Hewitt, GLC board secretary, September 9, 2017; revised 9/10/17

MBC-Great Lakes Chapter Treasurer's Report, November 13, 2017

Income:
Balance carried forward from 2016: $1112.72
Membership dues and donations: $2000.00 (exactly this number)
Total income: $3112.72

Expenses:
Central MBC dues at $7/member * 67 GLC members: $469.00
The Great Lakes Botanist vol. 55(3-4) at $6 * 68 members: $408.00
The Great Lakes Botanist vol. 56(1-2) at $6 * 70 members: $420.00
Postage and photocopying: $16.66
Canadian check deposit fees: $10.00
Miscellaneous student foray expenses: $62.00
Total expenses: $1385.66

Peatland Treasure
(Photo by Phyllis Higman)

Net current balance of income – expenses: $3112.72 - $1385.66 = $1727.06

Submitted by Leslie Kuhn, GLC Board Treasurer, November 13, 2017

MBC – Great Lakes Chapter Board Members

President:	Irene Eiseman	eisemani@gmail.com
Vice President:	Derek Shiels	d.r.shiels@gmail.com
Secretary:	Jim Hewitt	Tz4ggm@aol.com
Treasurer, Director-at-Large:	Leslie Kuhn	KuhnL@msu.edu
Director-at-Large:	Phyllis Higman	higmanp@michigan.gov

Great Lakes Chapter Membership

The Great Lakes Chapter of the Michigan Botanical Club gratefully acknowledges the support of the following members who have provided additional funding through their membership.

Sustaining Membership

John Case
Timothy & Irene Eiseman
Steven Grund
Phyllis Higman
Sonnia Hill
Robert & Judy Kelly
Leslie Kuhn
David Rothstein
Ruth Schmitter
Anita Scussel

Family Membership

Steven Garske
Lynden Gerdes
Neil Harriman
Jim Hewitt & Louise Wescott
Robert Kahl
Carolyn Miller
Noel Pavlovic
Barbara Rafaill
Dana Richter
Brad Slaughter & Erin Victory
Kay & George Yatskievych

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2018 MBC – Great Lakes Chapter Dues

A New Year is here and it is time to pay your Chapter dues. Please see the instructions on the membership form (next page) and join us for another memorable year!

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Michigan Botanical Club – Great Lakes Chapter
2018 Membership Dues

Name: _____

Address: _____

City: _____ State/Province _____

Zip code + 4 digit code _____+_____

Telephone: _____ Email: _____

Do you prefer to receive the *Arisaema* newsletter in paper format? _____

Sustaining membership ____ $50.00 (or more)

Individual membership ____ $30.00

Family membership ____ $40.00

Student membership ____ $15.00 University _____

US members, make checks payable to: **Michigan Botanical Club - Great Lakes Chapter**
Canadian members please send a check or money order in U.S. funds payable to **Irene Eiseman.**

Mail to:

Irene Eiseman
MBC-Great Lakes Chapter
1873 Pierce Road
Chelsea, MI 48118

Thank you for your continued support!

A little slice of peatland! 2017 Spring Foray trip to Horseshoe Bay fen led by Tony Reznicek.
(Photo by Phyllis Higman)