



Arisaema

Michigan Botanical Club State Newsletter

<http://michbotclub.org/>



Corresponding Secretary's Report

The primary focus of this issue is the annual Michigan Botanical Foray. This year, the Huron Valley Chapter, has been hard at work planning a weekend of field trips, speakers, presentations and workshops.

There are plenty of club matters in this issue as well. We welcome our new president Garrett Crow. There is important news about the club's non-profit status, and there will be a mini-foray in the fall. Our very hard working editor of the MBC journal, The Great Lakes Botanist, Michael Huft, is looking for an assistant editor. Thank you to the Southwestern Chapter for the 2016 Foray report.

The MBC State Board met at Albion College in January. The minutes are in this issue, along with a the 2017 state directory. The Michigan Botanical Foundation Report has provided a report with a summary of grants they have awarded .

I would like to thank Mary Danforth for helping me with the transition to Arisaema editor. I hope to live up to the high standard she established for this newsletter.

Sheila Bourgoin

Corresponding Secretary of the Michigan Botanical Club



Spring Foray and Fall Meeting Schedule

YEAR	SPRING	FALL
2017	Huron Valley Chapter	Southwestern Chapter
2018	White Pine Chapter	Huron Valley Chapter
2019	State Board	White Pine Chapter
2020	Southeast Chapter	State Board
2021	Southwestern Chapter	Southeast Chapter



Cirsium pitcheri, Photo: Sheila Bourgoin

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President's Report

Thankfully spring is around the corner and the MBC Spring Foray will soon be upon us. So much to look forward to with this new growing season. First of all, I would like to thank Judy Kelly, our past president, for her many years of service to the Club. And I am grateful for your confidence in allowing me now to serve as your President. This is a wonderful organization, and it's an honor for me to serve.

I wish to congratulate the Southwestern Chapter on a very successful Fall Foray last September. It allowed us to experience many wonderful habitats that are best visited in the late summer. Our hats off to all the organizers, the field trip leaders and speakers that made the Fall Foray a very memorable weekend. Thanks.

At the Fall Foray, the Membership voted in support of MBC State Club to file for 501(c)(3) tax exempt status. Michael Huft prepared all the paperwork and submitted our application in October, and we received approval from the IRS in December. We've filed with Michigan's Office of the Attorney General, so we are now Tax Exempt. We encourage anyone wishing to support various efforts of the Club to make donations, such as supporting Foray expenses, publications such as *The Great Lakes Botanist* or *Arisaema*, field research, various other projects or the general fund. If one wishes to support Chapter activities/projects, the donations would have to be given to the State organization, with directions in the cover letter for the funds to be directed to a particular Chapter.

Sheila Bourgoin (HVC) has taken on the task of Corresponding Secretary, hence is editor of the *Arisaema*—no small task. As if that wasn't enough, she has taken on the duties of Webmaster as well as Content Manager for the MBC Website. Thanks.

Even as we are eager to get out there on the Spring Foray field trips, we can also look forward to a wonderful summer of trips, culminating with a Fall Mini-Foray September 23rd, hosted by the Southwestern Chapter. We are grateful to Dave Wendling, SWC's new President and his team for organizing our Fall event.

Sincerely,

Garrett Crow

President, Michigan Botanical Club

Constitution and Bylaws Committee Report

501(c)(3) Status for the Michigan Botanical Club and What It Means

The Internal Revenue Service recognized the Michigan Botanical Club as a 501(c)(3) organization as of October 13, 2016. This means that contributions to the Club are now tax-deductible. Although the basic dues payable by members to their chapters are never tax-deductible, any amount donated to the Club at the state level will be a tax-deductible contribution.

It is important to understand that the 501(c)(3) designation does not apply to the chapters, which are separate organizations. Therefore, contributions are deductible only if they are made to the Michigan Botanical Club at the state level.

Any donor may, however, request that his or her contribution to the Club, or any part of it, be made for the benefit of a particular chapter, and the state treasurer will turn those funds over to the designated chapter. A member can do this by submitting a separate check payable to the "Michigan Botanical Club" at the same time he or she submits annual dues to the chapter (in which case the chapter treasurer will forward the check to the state treasurer) or by submitting a check directly to the state treasurer.

In either case, the person making the contribution should enclose a written note indicating that the extra amount is a contribution and whether it is meant for the use of the Club at the state level or whether it is meant to support the donor's chapter (in which case the state treasurer will send the funds to the chapter). A donor may also indicate any other uses for the donation, such as to support the *Great Lakes Botanist*, to support the Foray or a student attendance at the Foray, or for any other purpose. If no special purpose is indicated, the funds will be treated as a general donation to the Club.

Chapters have the option of seeking 501(c)(3) status themselves, which would make them eligible to receive tax deductible contributions. Alternatively, the Club may consider establishing a process whereby a chapter may choose to become an integral part of the Club (which is the standard situation in virtually every other state native plant society). A chapter that chooses to do so will then be able to make use of the 501(c)(3) status of the Club and receive tax deductible contributions.

Michael Huft

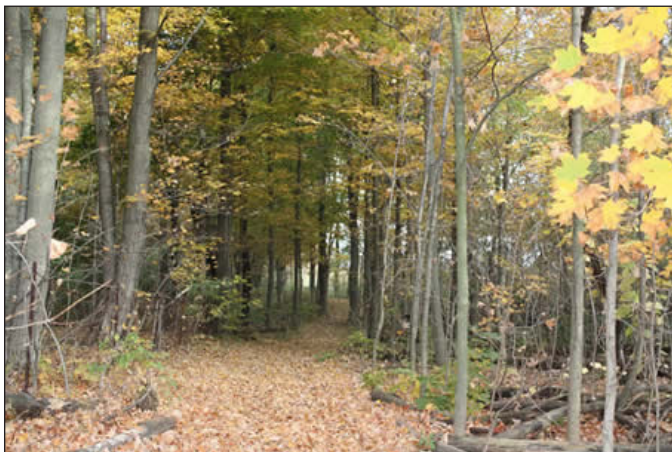
Chair of the Constitution and Bylaws Committee

Michigan Botanical Club Fall Mini-foray

Date: October 7, 2017

Where: Pierce Cedar Creek Institute, southwest Michigan, near Hastings (<http://www.cedarcreekinstitute.org/>)

The MBC SW Chapter will be hosting a State-wide Fall Mini-foray this year at Pierce Cedar Creek Institute (PCCI). We will be offering one morning field trip and several in the afternoon to explore diverse natural communities and the restoration efforts in the area. The MBC State Board will also be meeting in the morning. A MBC dinner and botanical talk will be held in the PCCI dining room about 5:00 PM. If you haven't experienced one of their meals you are in for a treat. An evening presentation will be given by Garrett Crow titled "In the Footsteps of 19th Century Naturalists: Plant Exploration on the Amazon." Details will follow including available lodging for those who want to stay overnight.



Photos: Cedar Creek Institute Trails, www.cedarcreekinstitute.org/

Searching for an Assistant Editor for The Great Lakes Botanist

The Great Lakes Botanist (formerly The Michigan Botanist), now in its 56th year, is the peer-reviewed professional journal of the Michigan Botanical Club. The majority of its financial support comes from dues paid by members of the Michigan Botanical Club, many of whom are not professional botanists and who may find some of the technical articles published by the Botanist to be of little interest. It is important, therefore, that we gear more of the content of the journal to the interests of the broader nonprofessional membership of the Club.

I am therefore seeking an Assistant Editor whose job would be to help establish content of interest to the broader membership and to locate contributors who can provide such content. The position would be voluntary and is subject to oversight of the Editor. Anyone who is interested in such a position, please contact me at [REDACTED]

Michael Huft

Editor of The Great Lakes Botanist

MICHIGAN BOTANICAL CLUB

The Michigan Botanical Club, the native plant society of Michigan, promotes through its aims, the understanding, enjoyment and preservation of our Great Lakes flora, and the conservation of our natural heritage. The Club is a 501(c)(3) non-profit organization founded in 1941.

AIMS

- Conservation of all native plants.
- Education of the public to appreciate and to preserve plant life.
- Sponsorship of research and publications on plant life.
- Sponsorship of legislation to promote the preservation of Michigan native flora.
- Establishment of suitable sanctuaries and natural areas.
- Cooperation in programs concerned with the use and conservation of all natural resources and scenic features.

Welcome to the MBC 2017 Spring Foray May 26-29, 2017

Located where Lake Huron meets Lake Michigan along the beautiful Straights of Mackinac, St. Ignace is known as “The Gateway to the Upper Peninsula”. Not only picturesque, it is ideally located to explore the botanically rich Eastern U.P. with enthusiastic experts.

The Niagaran Escarpment limestone bedrock influences much of the landscape that was crushed, scraped, deposited and eroded by the glaciers and ancient lakes thousands of years ago. The shallow bedrock remaining can have dramatic impact on drainage, even with small changes in topography, resulting in very diverse plant communities quite close to each other. Lakes Michigan, Huron and Superior not only are spectacular to witness but affect local climate, further influencing plant communities. Embrace the northern hardwood and coniferous forests, limestone cliffs, bogs, fens, cedar swamps, alvar expanses and dune shorelines. Bring good shoes and a great attitude!

While the far corners of Michigan -- Isle Royale or SW Michigan close to Indiana -- have many species whose ranges barely enter the State, mostly, these are plants that are common elsewhere. The Straits region can be viewed as the epicenter of Michigan and Great Lakes Botany in that it is here that we see the greatest number of species that are Great Lakes or, rarely, even Michigan endemics, occurring nowhere else in the world. Some of these are difficult to find, but a number are frequent within the local area in which they occur, the most famous of these that will be conspicuous in May being the dwarf lake Iris, *Iris lacustris*.

The reason for the concentration of such species in the straits region appears to be the extensive calcareous shores and wetlands that are so well developed here. Such sites have a rich flora and with vast stretches of sandy or rocky beaches

and other calcareous wetlands, not only are endemics frequent, but also widespread species of such shores occur in great abundance, like sweeps of our famous bird's eye primrose, which also should be in bloom then.

St. Ignace is the second-oldest city founded by Europeans in Michigan. Sault St. Marie, to the north, was first encountered in 1668 by the French explorer and

priest Jacques Marquette. Only a few years later, in 1671, he founded St. Ignace building a small wooden log cabin as a mission chapel. Later, honoring his wishes, his body was reinterred in a wooden box under the chapel in 1677, 2 years after his death. The location of the original mission, purposely burned down in 1705, was discovered in 1877 and later marked by a statue of Père Marquette and designated a city park, now Father Marquette Mission Park. Built about a mile away in 1837, the second mission chapel named St. Ignatius Loyola Church was used until 1905. This building, the oldest Catholic church in Michigan, was moved to the park site in 1954 and since the late 1980s has been home to the Museum of Ojibwa Culture. Native Americans comprised about one third of the city's population of 2452 in 2010.

Our Foray happens to take place on the weekend of the annual Native American Festival. This will be an excellent opportunity to witness the culture and explore the natural landscape embraced for thousands of years.

General Information

Hotel check-in and Foray check-in start 3:00 pm Friday, May 26, at Quality Inn - St. Ignace. Check-out time is 11 am. MBC Foray registration will be adjacent to the lobby and will be open from 3:00 until 7:30 pm. Your foray materials will be given to you when you check-in. It includes your name tag with field trip assignments on the backside. Check-out by 11:00 am on Monday.



Iris Lacustris
Illustration: Abe Cone



Mackinac Bridge from Point La Barbe, large boulders of Mackinac breccia in the foreground, Photo: Tony Reznicek

Lodging and Meals

The Foray will be located at the U.S. Rte 2 Quality Inn - St. Ignace (not Quality Inn Lakeside). It is 100% smoke free. Amenities are free Wi-Fi, M-F free newspaper, indoor pool, whirlpool hot tub, and an exercise room. You must make your own room reservations by calling Quality Inn directly at [REDACTED] and identify yourself as a participant of the Michigan Botanical Club's Spring Foray Event. There is a special group rate of \$75 per room (single or double) per night, plus tax for reservations made by May 5, 2017.



Reservations made after May 5 will be on a space available basis and the group rate is not guaranteed. If you wish to share a room to further reduce costs, registrar, Toni Spears < [REDACTED] > will maintain a waiting list of people seeking to share a room.

Two notes:

1. There is no elevator. If one needs to be on the first floor, then please request.
2. The hotel is "pet friendly", an alert for those with allergies to request an allergy free room. No pets are allowed at the foray.

You will be on your own for dinner on Friday. Breakfast, dinners and evening programs will be in the conference room. Buffet will be served in the lobby. The meal package at the hotel for the entire weekend will include 3 breakfasts, 2 box lunches and 2 dinners with an option to add a box lunch for Monday at \$9.00. Please take your box lunches with you for all field trips. Single day registration with meals (breakfast, box lunch and dinner) is available. The box lunches include an assortment of wraps and will be labeled. Coolers will be provided or you may bring your own. Half day field trips will be returning to the Quality Inn where lunch can eaten in the Breakfast room, at the QI picnic tables or at nearby Father Marquette National Memorial off of Boulevard Drive just past the hotel on the left.

Registration

The Foray Registration Form (enclosed), accompanied by a check, must be received by **April 24, 2017** in order to meet the venue deadline for meals arrangements.

Each individual attending must complete a separate form. No refunds will be made after **May 12**. Due to limited space, registration priority will be given to current MBC members.

What to Bring

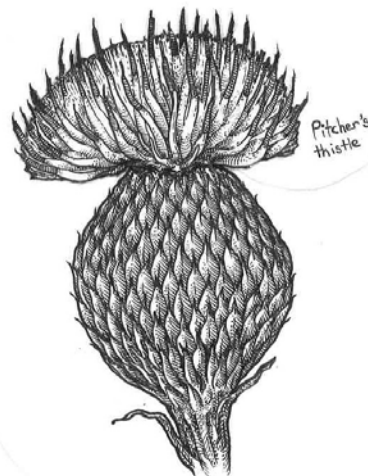
This year's foray will take us through a variety of habitats and walking conditions. Be prepared for sun, wind, and rain while walking on dry trails or wetland areas. The average high temperature is 57° and low is 42°. Check the weather forecast and pack accordingly.

It is recommended that you bring sturdy walking shoes, long pants, a windbreaker or rain jacket, swimsuit (for hotel pool), sweater, umbrella, hat, sunscreen, insect repellent, medications, water bottle, notebook, field guides, hand lens, and daypack. Cell phone reception may be unavailable in some areas.

There are many restaurants including McDonalds, Big Boy, and a nice variety of casual downtown restaurants and pubs. In addition, Ace Hardware, Family Fare Grocery, Bay Pharmacy, and Mackinac Straits Hospital are nearby.

Camping: Try Lakeshore RV Park Campground or Straits State Park.

Also visit the St. Ignace website for your free 60 page Visitor Guide that showcases things to do, places to stay, where to shop and eat. <http://www.stignace.com/>. These will be available at the foray registration desk.



Cirsium pitcheri, Illustration: Abe Cone

Directions

Hotel: Quality Inn St. Ignace

561 Boulevard Drive, Saint Ignace, MI 49781
<http://www.stignace.com/business/quality-inn-st-ignace>

Driving Directions to Quality Inn St. Ignace

For those driving from the south of the Mackinac Bridge, go north on I-75 over the Bridge (toll is \$4.00 per car). After crossing the Bridge, take Exit 344B (US-2 West, Escanaba/Manistique). After 0.37 miles, turn left onto Boulevard Drive and then immediate right into Quality Inn - St. Ignace.

For those traveling from the western Upper Peninsula, take US-2 East toward St. Ignace. Once in city limits, turn right onto Boulevard Drive and then right into the Quality Inn - St. Ignace.

Driving distance from Lansing is 236 miles, from Kalamazoo or Detroit 290 miles, from Houghton 260 miles, from Marquette 160 miles, and from Sault St. Marie 85 miles.

Note: There are two Quality Inn hotels in St. Ignace; we are NOT staying at the Lakefront hotel on State Street.

Things to do in the St. Ignace Area

Native American Festival – Saturday May 27 at the Museum of Ojibwa Culture “Immerse yourself in the culture, language, music, and history of Native Americans in the St. Ignace region at this annual event. The event is held on the grounds of the Museum of Ojibwa Culture and festival activities are free to all visitors.”

Museum of Ojibwa Culture & Father Marquette Mission Park (museumofojibwaculture.net) is two miles from hotel at 500 N State Street, St. Ignace, Michigan 49781. This is the site of the Native American Festival.

Fort de Buade Museum - fortdebuade.com 334 North State, 2 miles from hotel. Nearly 8,000 years of local history and more than 3,500 artifacts fill the museum.

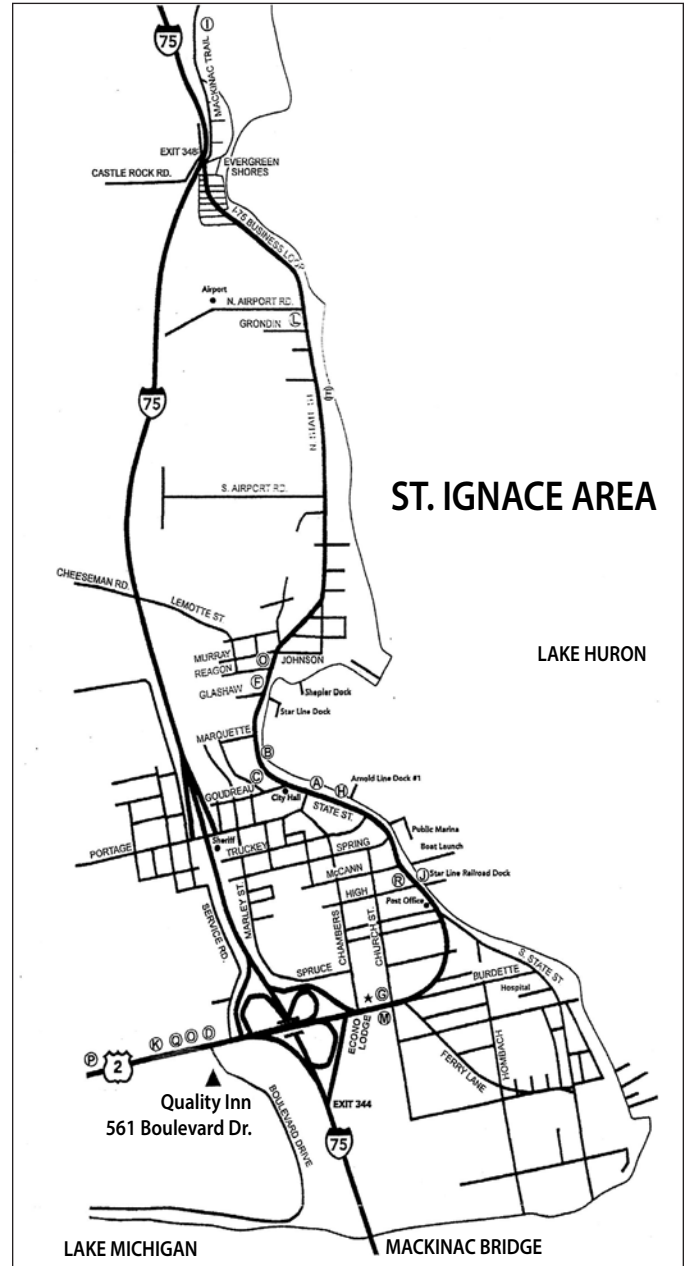
Huron Boardwalk Walking Tour – Booklet: saintignace.org/wp-content/uploads/walking-tour-booklet.pdf. Begin at the boardwalk near the intersection of N. State St. and Marquette St. along the waterfront. Interactive panels, displays and an audio cell phone tour will introduce you to the rich local history of St. Ignace.

Castle Rock – N2690 Castle Rock Rd., St. Ignace, MI 49781 - 5 miles from hotel. Enjoy beautiful views of Lake Huron, the Mackinac Bridge and Lake Michigan from this limestone stack created by erosion from the former glacial Lake Algonquin.

Woods & Water Ecotours - upecotours.com 20 S. Pickford Ave. Hessel, MI 49745 () – 30 miles from hotel.

Guided birding, hiking, biking and sea kayaking trips.

Kewadin Casino - kewadin.com/st-ignace/ 3015 Mackinac Trail – 6.3 miles from hotel; Exit 348 off I-75. More than 800 slot machines available and the closest you’ll get to botany here is the Northern Pines Lounge and Sports Bar.



Spring Foray 2017 Schedule

Friday, May 26

- 3:00 pm Check-in begins at the Quality Inn, St. Ignace.
- 3:00 – 7:30 pm . Foray Registration adjacent to the lobby, Dinner on your own
- 7:30 pm Welcome and orientation in Conference Room
- 8:00 pm Speaker: Josh Cohen, “An Ecological Overview of the Straits” (and book signing)

Saturday, May 27 – Note: All Field Trips assemble in parking lot 15 minutes prior to departure time.

- 6:30 – 8:00 am . Breakfast buffet served in lobby, eat in Conference Room
- 7:15 Pick up box lunches in lobby.
- 8:30 Departure for All-Day field trips and Morning Half-Day field trip
- 12:00 – 12:45 . . Box Lunch in field or at hotel (Breakfast Room or picnic tables)
- 1:00 Departure for Afternoon field trip
- 4:00 All field trips return to Quality Inn
- 4:00 – 6:00 . . . Free time to clean up, take a nap, key out plants, etc.
- *5:00 – 6:00 . . . Michigan Botanical Club State Board Meeting in Breakfast Room
- 6:00 – 7:00. . . . Buffet served in Lobby – Dinner in Conference room
- 7:15 MBC Group Photo
- 7:30 Announcements, recognition of Student Scholarship recipients, Awards, Board meeting report
- 8:00 Evening Program in conference room: Speaker: Susan Fawcett, “How One Tiny Fern May Have Changed Global Climate and Other Pteridophyte Tales”

Sunday, May 28– Note: All Field Trips assemble in parking lot 15 minutes prior to departure time.

- 6:30 – 8:00 am . Breakfast buffet served in lobby, eat in Conference Room
- 7:15 Pick up box lunches in lobby.
- 8:30 Departure for All-Day field trips and Morning Half-Day field trip
- 12:00 – 12:45 . . Box Lunch in field or at hotel (Breakfast Room or picnic tables)
- 4:00 All field trips return to Quality Inn – St. Ignace
- 4:00 – 6:00. . . . Free time to clean up, take a nap, key out plants, take a dip in the pool, etc.
- 5:00 – 6:00. . . . Great Lakes Chapter board meeting – Breakfast Room
- 6:00 – 7:00. . . . Buffet served in Lobby – Dinner in Conference Room
- 7:30 Announcements, Awards, President’s remarks
- 8:00 Evening Program in conference room: Speaker: Dr. Garrett Crow, “Across Michigan By Covered Wagon in 1888”

Monday, May 29

- 6:30 – 8:00 am . Buffet served in Lobby – Breakfast in Conference room
- 7:15 Pick up box lunches only if you ordered this option
- *8:00 TBD MBC State Board Meeting continued in Breakfast Room
- 9:00 Field Trips on your own. Suggested trips include: Grass Bay, Headlands and Wilderness State Parks
- 11:00 am. Check-out time for Quality Inn
- *MBC State Board Members please note second meeting’s time

Speakers — MBC Spring Foray 2017

Friday, May 26 Speaker: Josh Cohen**“An Ecological Overview of the Straits”**

This presentation will outline the plant communities and natural features of the Straits region in line with the recently published book. In the course of an ecological tour of the straits region (the eastern Upper Peninsula especially) Michigan, the author will discuss some of the unusual plant community types that are rich in endemics and disjunct species, and note some of the distinctive features of these communities, some of which are very rare in Michigan.

About *A Field Guide to the Natural Communities of Michigan*

The culmination of three decades of work, this field guide provides an accessible introduction to Michigan's natural community classification and is meant to serve as a tool for those seeking to understand, describe, document, conserve, and restore the diversity of ecosystems native to Michigan. Josh is the lead author.

NOTE: Josh will have copies of the book available for purchase and signing. Bring your copy if you would like it signed.

Speaker Biography: Josh Cohen

I have worked as an ecologist with Michigan Natural Features Inventory for the past 15 years. My primary duties involve refining and revising MNFI's natural community classification through ecological inventory and sampling, literature research, and data analysis; classifying conservation targets; prioritizing areas for conservation and restoration; and conducting vegetative sampling, ecological mapping, monitoring, and natural community surveys. I received a Master's of Environmental Management in 1999 from Duke's Nicholas School of the Environment with a degree in Resource Ecology and a major in Conservation Biology. Since 2006 I have served as a plant ecology editor for the *Natural Areas Journal*. I am the lead author for the MSU Press book *A Field Guide to the Natural Communities of Michigan*. I have a strong avocation for landscape photography and enjoy climbing trees to capture a unique perspective of Michigan's ecosystems (many of my tree-top photos are featured in this book).

Sunday, May 28 Speaker: Dr. Garrett Crow, “Across Michigan By Covered Wagon in 1888”

In June of 1888 an exploring expedition by Michigan Agriculture College, concerned with the botany, forestry, and agriculture of the North Country, crossed the northern Lower Peninsula from the shore of Lake Huron to the dunes of Lake Michigan. The Party, consisting of Dr. W. J. Beal, Liberty Hyde Bailey, and C. F. Wheeler, 2 botany students; the expedition was widely reported on by reporters from *The Detroit Free Press* and the *Tribune* who accompanied the group. Nearly

100 years later Ed Voss and Garrett Crow, based on all the specimens collected (>300 at MSU Herbarium, >100 at Bailey Hortorium, Cornell U.), all newspaper accounts, photographs in the MSU Archives, historical literature, maps, advice from local historians, attempted to reconstruct this pioneering scientific endeavor—and in 1975 retraced the route themselves. The expedition is described in detail in *The Michigan Botanist 15: 3–70*; reprints will be available after the talk.

Speaker Biography: Dr. Garrett Crow

After earning a BA from Taylor University in 1965, Garrett completed a M.S. and Ph.D. in botany at Michigan State University. He spent his entire career teaching botany – 33 years at the University of New Hampshire, Director of the Herbarium, and last 6 years as Department Chair. With a particular interest in aquatic and wetland plants his field research has allowed him to travel widely both in temperate and neotropical regions. Returning to Michigan he stays active botanically as Adjunct Research Botanist at MSU Herbarium (completed taxonomic treatment of *Utricularia* and *Pinguicula* for FNA). And as Visiting Scholar in Biology, Calvin College, he is partnering with Dave Warners and Brad Slaughter on a fascinating historical project: *A Field-based Retrospective Assessment of Emma J. Cole's Grand Rapids Flora After 100+ Years of “Progress*, rediscovering Emma Cole's collecting sites and comparing the flora of her day with that of the Greater Grand Rapids Area today. As of January 2017 he became President of The Michigan Botanical Club.

Saturday, May 27 Speaker: Susan Fawcett,**“How One Tiny Fern May Have Changed Global Climate and Other Pteridophyte Tales”**


How could one tiny fern trigger the global climate to transition from a 'greenhouse' to an 'icehouse' in the span of 1.2 million years? As they evolved into their modern forms, ferns and lycophytes have participated in, and born witness to, 400 million years of climate change. The sequestration of atmospheric carbon by pteridophyte coal swamps during the Paleozoic enabled the industrial revolution, which in turn threatens the continued survival of some of Michigan's most charismatic native fern species. What can these plants tell us about the future?

See Susan's Biography on page 10.

Field Trip Schedule

Saturday, May 27		
Duration	Title	Trip Leader
ALL DAY	Fens and Other Calcareous Peatlands in the Eastern Upper Peninsula	Tony Reznicek
ALL DAY	Ferns and Lycophytes	Susan Fawcett
ALL DAY	Lake Huron Shoreline	Elaine Chittenden and Bill Brodovich
ALL DAY	Michigan Nature Association Preserves	MNA Staff
MORNING	Introduction to Bryophytes and Lichens	Janet Traub and Jim Toppin
AFTERNOON	Woody Plants of the Straits Region	Robert Ayotte
Sunday, May 28		
Duration	Title	Trip Leader
ALL DAY	Peatlands of the Straits Region	Brad Slaughter
ALL DAY	Ferns and Lycophytes	Tony Reznicek
ALL DAY	Lake Huron Shoreline	Elaine Chittenden and Bill Brodovich
ALL DAY	Orchids and Lake Huron Shore Wildflowers	Robert Routledge and Steve Baker
ALL DAY	Bryophytes	Janet Traub and Jim Toppin
MORNING	Photography Field Trip/Workshop	Bob Smith
AFTERNOON	Free time for exploring St. Ignace area	On your own - See "Things to do in St. Ignace"

Field Trips


 Degree of difficulty and how to prepare for each field trip is included in the "NOTE" section of each field trip description.

Fens and Other Calcareous Peatlands in the Eastern Upper Peninsula

Saturday May 27, ALL DAY

Trip Leader: Tony Reznicek

With limestone and dolomite near the surface everywhere, calcareous wetlands are the norm in the eastern Upper Peninsula, ranging from forested wetlands like cedar swamps to sunny marl flats. We will visit several peatlands near St. Ignace covering the full spectrum from bogs through sedge meadows with high acid hummocks that support shrubs in the heath family to marl fens, with strictly lime loving plants. Besides rare and interesting plants, we will also look at some of the wetland processes, including mat formation and marl deposition.

 NOTE: Walking will be level, but of course, prepare for wet feet, and moderately awkward hummocky terrain. There may be passing insects.

Trip Leaders Biography: Tony Reznicek: Curator, University of Michigan Herbarium

As a university researcher, my research specialties center on the systematics and evolution of sedges, especially *Carex*, Michigan Flora, the flora and biogeography of the Great Lakes


region, and botanical history in the Great Lakes region. My primary interests in biogeography are plant migration and colonization, the origin and persistence of relict plant species and communities, and the determining factors of species richness in plant communities. *The Field Manual of Michigan Flora*, was published as a one volume condensation into Ed Voss's three Volume *Michigan Flora*, but is now a continuously updated website: <http://michiganflora.net>. I also have strong interests in conservation, especially of rare plants, and serve as the chair of the State Rare Plant Technical Advisory Committee. Besides teaching at the University of Michigan Field Station, I conduct numerous workshops throughout the US on plant identification, especially of sedges.



Rhodobryum ontariense, Photo: Tony Reznicek

Ferns and Lycophytes**Saturday May 27, ALL DAY****Trip Leader:** Susan Fawcett

Michigan is home to over 100 species of ferns and lycophytes. On this field trip we will visit a diversity of species, easily accessed in a variety of habitats. The eastern UP provides an excellent opportunity to experience these plants because of the diversity and abundance of habitats, including hardwood forests, conifer swamps, wetlands, and, notably, the exposure of the Niagara Escarpment which provides ideal habitat for a number of rare ferns that are restricted to calcareous rocks. We will focus on field characters useful at species, genus, and family levels, as well as in a larger evolutionary context.

 **NOTE:** The trip will involve some hiking in rocky terrain, but won't be terribly strenuous.

Trip Leaders Biography: Susan Fawcett is currently a PhD student in the Barrington Lab at the University of Vermont and is affiliated with the Pringle Herbarium. A native of Petoskey, Michigan, she received a bachelor of fine arts and a bachelor of general studies from the University of Michigan in 2005 and a masters in biology in 2012 from Northern Michigan University where she researched the flora and ecology of a neotropical savanna on Utila, Bay Islands, Honduras. Most recently, she worked at UC Berkeley as a freelance illustrator and employee of the UC / Jepson Herbaria.

Her first taste of field work came as an intern at the Fundacion Jardin Botanico del Orinoco, in Ciudad Bolivar, Venezuela, on a general collecting trip in the Sierra de Lema in the Venezuelan Guyana. She's since participated in research on fisheries and fungi in the Peruvian Amazon, warbler migration in Nicaragua, the flora of vernal pools in the Baja peninsula of Mexico, aquatic plants of Northern Wisconsin and on drought tolerance of vegetation on serpentine soils in California. As a member of the Barrington Lab, she is studying the evolution of ferns, with a focus on the systematics of the Thelypteridaceae and the ecology of *Asplenium* in northeastern North America.

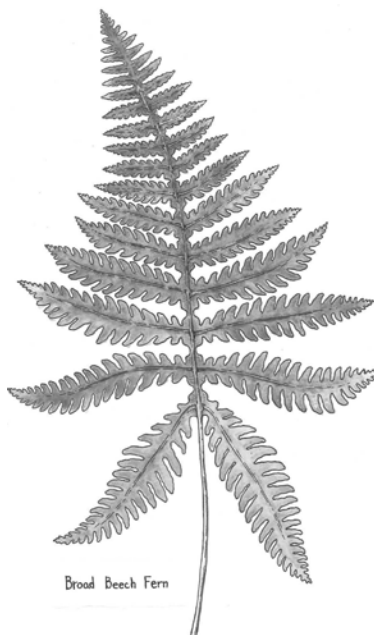

*Phegopteris hexagonoptera*

Illustration: Abe Cone

Lake Huron Shoreline**Saturday May 27, ALL DAY and Sunday May 28, ALL DAY****Trip Leaders:** Elaine Chittenden and Bill Brodovich

We'll explore the lakeshore east of Rabbitback Peak, about 3½ miles north of St. Ignace. Although the lake level is currently very high, there should still be plenty of interest to see, and Lake Huron is always scenic. Many of the plants that we'll see are restricted to Great Lakes shorelines, and many of them are calciphiles. You may want to wear rubber boots (unless you don't mind wet feet!), and do bring water, your lunch, and a sun hat or sun screen.

 **NOTE:** This trip should not be strenuous, but if you do get tired you can always find a nice log to sit on and we won't forget to pick you up on the way back.


Trip Leader Biographies: Elaine Chittenden is a botanist at Smith College in Massachusetts. She did her graduate work at Michigan State, spending a summer at the U-M Bio Station near Pellston (taking courses from Ed Voss and Howard Crum). Elaine was collections manager at the W.J. Beal Botanical Garden at Michigan State University and helped organize MBC Forays for the Red Cedar Chapter in the past.

Bill Brodovich is a botanist with the environmental consulting firm of King & MacGregor Environmental (Grand Rapids and Canton). Bill is a native of Michigan, attended U-M and, like Elaine, spent one summer at the Bio Station. In recent years, his work has taken him frequently into the UP.

Michigan Nature Association Preserves**Saturday May 27, ALL DAY****Trip Leader:** Michigan Nature Association

Lake Huron Sand Dunes Plant Preserve and the Walter and Elaine Carey Memorial Plant Preserve

Join an MNA hike leader as we visit two MNA properties along the Lake Huron shoreline. These sanctuaries include coastal fen, sand dunes, and dune and swale complex and contain plants unique to the Lake Huron shoreline as well as limestone loving plants of the coastal fen. Join us in visiting these exemplary sanctuaries that protect and showcase the plants and vegetation of the Eastern Upper Peninsula.

 **NOTE:** Hiking will be easy to moderate, with some modest slopes, loose sand, and wetlands. We may also see some biting insects, so bring repellent. Watch the weather reports and come prepared for their predictions. Bring a hand lens.


Introduction to Bryophytes and Lichens

Saturday May 27, HALF DAY (morning)

Trip Leaders: Janet Traub and Jim Toppin.

With a fossil record extending back more than 400 million years, bryophytes and lichens were early colonizers on land. Within any landscape, they occupy a wide variety of small habitats with different temperature, light, moisture and nutritive conditions, offering us wide diversity within a relatively small area.

Around 800 lichen species and 500 bryophyte species are known from Michigan. We'll see a number of different mosses and liverworts, as well as a variety of foliose, fruticose and crustose lichens. We'll bring whiteboards for drawing and an iPad with magnifier to highlight the beauty and features of these small plants.

 NOTE: We're scouting several areas to choose a diverse site in a one-mile circuit of easy walking with ordinary hiking shoes, avoiding deep mud or water.

Trip Leader Biographies: Janet Traub and Jim Toppin are charter members of the Ohio Moss and Lichen Association, which conducts two forays a year in Ohio, contributing new county and state records for Ohio. They have led walks and workshops on mosses and lichens in Ohio and Michigan. They are also stewardship volunteers for the Nature Conservancy in Ohio, particularly the Kitty Todd Preserve near Toledo. Their mentor was Dr. Charles Arzeni of Eastern Illinois University, who taught a wonderful summer course on bryophytes and lichens in the Sleeping Bear Dunes region.



Nature Conservancy - Maxton Plains Preserve Photo: Mark Charles

Woody Plants of The Straits Region

Saturday May 27, HALF DAY (afternoon)

Trip Leader: Robert Ayotte

This excursion will highlight the trees, shrubs, and vines of Boreal Forest, Rich Conifer Swamp, and Muskeg Communities. We will consider the site factors and processes that influence the establishment and distribution of their diverse woody species. There will be a particular focus on forest soils (we'll dig a pit and examine soil horizons).

 NOTE: This hike will be of moderate difficulty.


Trip Leaders Biography: Robert was a Graduate Student Instructor for Forest Ecology (NR 431) at the University of Michigan, served as a naturalist/interpreter for the US Forest Service, and more recently worked as a seasonal field ecologist for Michigan Natural Features Inventory. He has a particular interest in conservation history, and natural history literature.

Peatlands of the Straits Region

Sunday May 28, FULL DAY

Trip Leader: Brad Slaughter

Although a few people visit the Mackinac Straits each year for the gustatory delights of smoked whitefish and premium fudge, most of us are drawn instead to the area's fascinating bogs, fens, and northern white-cedar swamps that blanket the peat-covered lakeplain. Contingent on weather and phenology, we will visit several peatlands in Mackinac County, ranging from acidic bogs dominated by stunted conifers and ericaceous shrubs to calcareous marl fens supporting calciphiles and several rare boreal taxa. While we're enraptured in the botanical delights of the North Country, we'll also explore peatland soils and the natural processes that shape these bog and fen natural communities.

 NOTE: The trip will be moderately difficult, with periods of off-trail hiking over hummocky, unstable terrain. Attendees who desire to keep their feet dry may prefer knee boots; those who do not mind wet, mucky feet might benefit from lighter footwear. Biting insects may be prolific depending on the timing of spring warm-up, so dress accordingly and pack insect repellent if desired.

Trip Leaders Biography: Brad Slaughter is Lead Botanist with Michigan Natural Features Inventory (MNFI) Michigan State University Extension. Brad has served as a plant community ecologist and botanist with MNFI since 2005. One of his primary objectives is the documentation of high quality examples of natural communities and populations of rare plants throughout Michigan. He is a co-author of the 2014 *A Field Guide to the Natural Communities of Michigan* (Michigan State University Press) and has also authored several papers published in *The Michigan Botanist* and dozens of techni-

cal reports on Michigan's natural communities, rare plants, native flora, and other conservation-related topics. Brad also serves on the State of Michigan's Rare Plant Technical Advisory Committee. Prior to his tenure with MNFI, Brad earned a B.A. in Biology from Albion College in 2002 and a M.S. in Botany from Miami University in 2005.




Polystichum lonchitis, Photo: Tony Reznicek

Ferns and Lycophytes

Sunday, May 28, ALL DAY

Trip Leader: Tony Reznicek

One of the most distinctive element of the fern flora of Michigan are the species that grow on limestone outcrops and virtually nowhere else. Since the eastern UP is limestone, that is a prominent element here and will be the focus of this field trip. Rocky habitats will vary from cliffs to mossy boulders to open outcrops, to rocky woods, each with distinctive plants. We will focus on these habitats, and genera like *Asplenium*, *Cystopteris*, *Dryopteris*, and *Polystichum*, but will also examine other ferns and lycophytes as we see them.

 NOTE: This trip will have some hiking and scrambling over rocky terrain, but no serious climbing. We will cover some modest distances, and may see bugs. Michigan Ferns and Lycophytes.

Orchids and Lake Huron Shore Wildflowers

Sunday, May 28, ALL DAY

Trip Leaders: Steve Baker and Rob Routledge

Through a few stops and short hikes, we will have an opportunity to explore some of the diverse habitats of the eastern UP. We will visit northern fens, rich conifer swamps, limestone cobble shores, and boreal forest. We'll also explore some man-made distur-




Cypripedium reginae
Photo: Sheila Bourgoin

bances (e.g., Powerline right-of-ways, borrow pits) that have created and maintained small forest openings important to many species in the absence of natural disturbances such as fire. The focus will be the diversity of vascular plants in the area from the generalist to site specific wildflowers (notably early season orchids), ferns, and graminoids. Possible species that may be seen include *Carex concinna* (beauty sedge), *Coral-lorhiza striata* (striped coral-root), *Cypripedium spp.* (ladies-slipper orchids; e.g., *C. acaule* and *C. arietinum*), *Drosera spp.* (sundews; e.g., *D. linearis*), *Gymnocarpium robertianum* (Limestone Oak Fern), *Iris lacustris* (dwarf lake iris), *Neottia cordata* (heart-leaved twayblade), *Orobanche uniflora* (Cancer Root), *Pinguicula vulgaris* (butterwort), and *Primula mistassinica* (bird's-eye primrose). The guides for the trip will take advantage of their local knowledge and explore sites that are seldom visited and off the beaten path.



Primula mistassinica, Photo: Bev Walters

 NOTE: Bring your bag lunch, loupes, and a sense of adventure. Moderate degree of difficulty. Waterproof boots or old tennies recommended for some sites and sturdy boots for uneven terrain on other sites (walking sticks will be available). Mosquitos, black flies, and ticks may all be present and hungry, so be prepared.

Trip Leader Biographies: Steve Baker is a retired Veterinarian from Indian River and is a birder turning botanist. He frequently leads birding and plant-trips for the local Audubon groups and volunteers as a steward for various land conservancies. He has been active as a hawk watcher for many years at the Mackinac Straits. As a budding botanist, the thrill is in the hunt, as he enjoys exploring new areas of the UP, especially for orchids and ferns. Other interests include kayaking, hiking, photography, and trying to learn the dragonflies.

Rob Routledge is a Professor, Natural Environment and Outdoor Studies, at Sault College in Sault Ste. Marie, Ontario. As an amateur botanist, he has


extensively explored the Mackinac Straits area in the Eastern Upper Peninsula with a special interest in sedges, ferns and site specific rarities.

Bryophytes

Sunday, May 28, ALL DAY

Trip Leaders: Janet Traub and Jim Toppin

Inspired by Howard Crum's *Mosses of the Great Lakes Forest* and Janice Glime's *The Elfin World of Mosses and Liverworts of Michigan's Upper Peninsula and Isle Royale*, we'll explore the diverse habitats of the eastern Upper Peninsula – bogs, fens, broadleaf and conifer stands, dunes, beaches, calcareous bedrock and erratic boulders. We'll see mosses and liverworts ranging in size from "robust" to tiny, and also be on the lookout for hornworts. No bryophyte trip is complete without seeing a few colorful lichens, which often grow intermixed with bryophytes. We'll bring whiteboards for drawing and an iPad with magnifier to bring out the finer details.


 NOTE: Walking will be easy to moderate difficulty. Ordinary hiking shoes should be sufficient, we'll avoid deep mud or water.

Photography Field Trip/Workshop

Sunday, May 28, HALF DAY (morning)

Trip Leader: Bob Smith

Many of us take pictures of plants. This field trip/workshop will be camera oriented, and look at taking pictures of wildflowers in the field. We will visit the nearby area and use examples of some of the unique and distinctive flora of the straits region. Some considerations that we will look at are your goals in taking the pictures, some commentary on equipment, technical concerns such as lighting, depth of field and focus, background, exposure, plus aesthetic concerns.

 NOTE: This will be an easy trip with modest walking on fairly level ground and will allow appreciation of the surroundings.

Trip leader biography: Robert Smith is a botanist and photographer by avocation, especially now in his recent retirement. He has studied wild plants extensively in Michigan, especially in his home area of Lenawee County, where he has documented the flora through collections. He has also contributed a large number of pictures to the online Michigan Flora. And now you can see his photography work on his new wildflower site at: <http://www.wildflowerdaze.com/>



Viola lanceolata, Photo: Bob Smith

Reading and Web Resources

This list is available with active hyperlinks to web resources at www.michbotclub/2017foray-reading

Albert, DA. 1995. Regional landscape ecosystems of Michigan, Minnesota and Wisconsin: a working map and classification. In General Technical Report. St. Paul, MN: U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station. <https://www.nrs.fs.fed.us/pubs/gtr/other/gtr-nc178/s8-1-1.htm>

Barnes, Burton V., Christopher Dick, and Melanie Gunn. 2015. Michigan Shrubs and Vines- A Guide to Species of the Great Lakes Region. Ann Arbor, MI 48104-3209: University of Michigan Press.

Barnes, B. V., and W. H. Wagner. 2004. Michigan Trees: A Guide to the Trees of the Great Lakes Region. Ann Arbor, MI: University of Michigan Press.

Cohen, Joshua G., Bradford S. Slaughter, Michael A. Kost, and Dennis A. Albert. 2015. A field guide to the natural communities of Michigan. East Lansing, Michigan: Michigan State University Press. An e-book version also available.

The Michigan Natural Features website <<https://mnfi.anr.msu.edu/>> offers additional related information.

Dorr, J. A., and D. F. Eschman. 1970. Geology of Michigan. Ann Arbor, MI: University of Michigan Press.

Medlin, Julie Jones. 1996. Michigan lichens, Bulletin. Bloomfield Hills, Mich.: Cranbrook Institute of Science.

Nadelhoffer, Knute J., Alan J. Hogg, and Brian A. Hazlett. 2010. The changing environment of northern Michigan : a century of science and nature at the University of Michigan Biological Station. Ann Arbor, MI: University of Michigan Press. This highly informative collection of essays leads the reader on a virtual field trip through the “tip of the mitt” in the Douglas Lake area. The well-written chapters offer a summary of research conducted in the area and cover the history, geology, ecosystems and habitats in enlightening detail.

Schaetzl, Randall J., Joe T. Darden, and Danita S. Brandt. 2009. Michigan geography and geology. New York: Custom Publishing.

Voss, Edward G. Botanical Beachcombers and Explorers: Pioneers of the 19th Century In the Upper Great Lakes. Volume 13, Contributions From the University of Michigan Herbarium

Voss, Edward G., and Anton Reznicek. 2012. Field manual of Michigan flora. Ann Arbor: University of Michigan Press. Michigan Flora online < <http://michiganflora.net/>> provides additional information.

Weatherbee, Ellen Elliott. 2006. Guide to Great Lakes coastal plants. Ann Arbor: University of Michigan Press.

Natural Communities in the Michigan Straits Area¹

“This natural community classification is designed to serve as a tool for those seeking to understand, describe, and document the diversity of natural communities in Michigan. A natural community is defined as an assemblage of interacting plants, animals, and other organisms that repeatedly occurs under similar environmental conditions across the landscape and is predominantly structured by natural processes rather than modern anthropogenic disturbances.”²

PALUSTRINE

- Marsh
 - Submergent Marsh
 - Emergent Marsh
 - Great Lakes Marsh
 - Intermittent Wetland
 - Northern Wet Meadow
 - Southern Wet Meadow
 - Interdunal Wetland
- Fen
 - Poor Fen
 - Patterned Fen
 - Northern Fen
 - Prairie Fen
 - Coastal Fen

- Bog
 - Shrub Wetland
 - Northern Shrub Thicket
 - Forested Wetland
 - Hardwood-Conifer Swamp
 - Floodplain Forest
 - Northern Hardwood Swamp

TERRESTRIAL

- Prairie
 - Dry Sand Prairie
 - Mesic Sand Prairie
- Savanna
 - Oak-Pine Barrens
- Forest
 - Dry Northern Forest
 - Dry-mesic Northern Forest
 - Mesic Northern Forest
 - Boreal Forest

PALUSTRINE/TERRESTRIAL

- Wooded Dune and Swale
 - Wooded Dune and Swale
 - Complex

PRIMARY

- Dunes
 - Open Dunes
 - Great Lakes Barrens

- Sand/Cobble Shore
 - Sand and Gravel Beach
 - Limestone Cobble Shore
 - Sandstone Cobble Shore
- Bedrock Grassland
- Great Lakes Barrens
- Bedrock Glade
 - Limestone Bedrock Glade
- Lakeshore Cliff/Bluff
 - Clay Bluff
 - Limestone Lakeshore Cliff
 - Sandstone Lakeshore Cliff

SUBTERRANEAN/SINK

- Karst
 - Cave

Sources:

1. Natural Communities in the Michigan Straits Area from *A Field Guide to the Natural Communities of Michigan*.
2. https://mnfi.anr.msu.edu/reports/2007-21_Natural_Communities_of_Michigan_Classification_and_Description.pdf

Minutes of the Winter State Board Meeting of the Michigan Botanical Club

Albion College, Saturday, January 21, 2017

In Attendance: Alice Ward, Arlene Obetts, Craig Elston, Dan Slean, Emily Nietering, Garrett Crow, Irene Eiseman, Jim Hewitt, John Zimmerman, Larry Nooden, Leslie Kuhn, Michael Huft, Phyllis Higman, Renée Zimmerman, Sarah Nooden, Sheila Bourgoin, Tony Reznicek, Wayne Roussel. (18)

1. Call to Order: After determining that a quorum was present the meeting was called to order by President Garrett Crow at 12:05 PM.

2. Approvals

- The agenda was approved without change upon motion by Emily, second by Alice.
- Revised minutes of the Sept. 3 Board Meeting were approved on motion by Irene, second by Tony. Paper copies of these minutes were subsequently handed out by Jim Hewitt, Recording Secretary.

3. Robert's Rules of Order: The meeting will operate under the guidelines of Robert's Rules of Order.

4. Announcements

- Emma Cole Grand Rapids Flora Project: Garrett said he is giving a talk in Grand Rapids next Saturday on the work of early botanist Emma Cole and offered to present the program to Chapters as desired.
- DVD of Tony Reznicek Presentation from HVC Chapter Meeting: "Kissing Cousins and Family Skeletons - The Michigan Flora and Modern Evolutionary Biology". Sheila said she has with her copies of the talk (on plant nomenclature), of which the Powerpoint was taped and the audio recorded, available on a computer-ready disk. All chapters who had not seen the program were happy to receive the DVD.
- Tyler Bassett PhD dissertation: Defended yesterday, Garrett announced. Sarah moved, second by Irene, to send Tyler a congratulatory note. Approved. Garrett will send the note.
- New President of Southwest Chapter: Garrett announced that Dave Wendling is now the President of the Chapter replacing Tyler Bassett.
- MBC Brochure: Sarah passed around the brochure for updates by members. When up-to-date, Sarah will send the revised brochure to the Chapter Presidents.
- WAM Conference: The Wildflower Association of Michigan Annual Conference is March 5-6 at the Kellogg Center in East Lansing. MBC has a display board to deploy at the Conference and Sarah asked if any members who may be there could help member Andrea Mattheis attend it. John and Renée said they

would assist.

5. Committee Reports

- Corresponding Secretary – Sheila, the new Secretary, said her job description deals mainly with the publication of the Arisaema and that she has begun assembling the Spring Edition. Deadline for submissions by Chapter Presidents and others is February 20 which will give adequate lead time for an April publication, 6 weeks ahead of the Spring Foray.
- Treasurer – Bob Kelly sent his Year-end Report and Financial Statement to the Board via email. In reviewing these documents, Renée wondered about the absence of a line item for Foray-sponsored students and Emily replied that this expense (one student, each chapter) is covered by monies from the Michigan Botanical Foundation's Joan Robb Fund. Sarah moved to approve the Report and Statement. Second by Phyllis. Passed.
- Nominating Committee – Sarah said the Committee was unsuccessful in attracting a candidate for Treasurer. She appealed again to Chapter Presidents to help identify someone to replace Bob.
- Editor's Report; The Great Lakes Botanist – Michael said the last issue of The Michigan Botanist, a double issue covering July-December, 2016, was published at the end of 2016, thus bringing the journal up to date. This both pleased and surprised him given the short lead time he gave the printer. At this point Garrett thanked and congratulated Michael for his efforts to get the journal back on schedule, a huge accomplishment given the backlog he inherited upon becoming editor. The Board affirmed Garrett's accolade with a round of applause for Michael.

Michael said his promotion of MBC through Facebook has resulted in some new memberships, and he showed a piece about MBC he wrote for the newsletter of the Indiana native plant organization. Because of the journal name change, Michael made a motion: "To add The Great Lakes Botanist as a name on the checking account." This will allow checks with that payee to be accepted by the bank as well as checks made payable to The Michigan Botanist. Second by Tony and passed.

Next, Michael moved on to publication costs. Although he has been publishing only double issues the last one was just 40 pages and the total cost of it per copy (printing and mailing) was only \$.65 less than an 80-page double issue (13%). Which has led him to conclude that the bulk of printing costs are in setup and that the number of pages is a marginal cost factor. Printing 4 single issues could cost as much as \$4,000 more than printing 2 double issues and about \$4,000 more than present income. He identified a range of ideas for additional income, all either with drawbacks or insufficient on their own: 1) membership dues increase; 2) institutional subscriber fee increase; 3) page charges (to authors) (per Tony could be made optional

if author lacked institutional support); 4) grants; 5) contributions under new 501(c)(3) status (unknown); 6) Request of the Hanes Trust Board to apply the annual \$2,000 business manager stipend (which Michael, as business manager, is not accepting) to publication costs. In the interim and until additional funding sources can be confirmed and quantified or until the journal becomes an online publication Michael recommended continuing with double issues.

- 501(c)(3) approvals – In December the IRS approved **501(c)(3)** status for The Michigan Botanical Club, Inc., effective 14 Oct 2016. Michael made a few points now that the Club can accept tax-deductible contributions:
- The Chapters are separate organizations and do not fall under 501(c)(3) status. Therefore, members who wish to make tax-deductible contributions to their chapters must make checks payable to the state organization (MBC) and be marked as designated for the local chapter. The state treasurer would then forward the donation to the chapter which must use the money in a 501(c)(3) approved manner.
- Base-level membership dues are not tax-deductible.
- Any contributor of \$250 or more must receive a written acknowledgement from the State organization which includes the statement that no goods or services were received for this gift.
- In order to solicit contributions, the Club must register with the State Attorney General. Michael will complete the required form in the next few days.
- Constitution and Bylaws Committee – Michael will chair a re-constituted committee consisting of Garrett, Dan, and Sarah and will deliver a report at the next meeting.
- Dickinson Award Committee – Irene announced that the award for best student-authored paper in Volume 54 of The Michigan Botanist (TMB) went to Robert Roos for his study of variables affecting sand prairie restoration. He received a \$250 check from the Michigan Botanical Foundation. Irene said there were no student-authored papers in Vol. 55 of TMB and thus no Dickinson Award for 2016.
- Spring Foray Report – Tony said flora of limestone habitats will be a focus of field trips for this year's foray in St. Ignace on May 26-29. Josh Cohen and Garrett Crow will be among the evening speakers. Accommodations at the Quality Inn will limit participants to about 100 so prompt registration is recommended. Tony encouraged the Chapters to sponsor students.
- Special Recognition Award -- This new award, proposed by Larry Nooden, seeks to recognize an important botanical contribution in Michigan made by someone not necessarily a member of MBC. Vice-President Dan Skean will administer the award which will be made at the Spring Foray.
- Website Report -- Sarah moved, Wayne second, to appoint Sheila to the position of Webmaster. Motion approved. Irene

thought the Home Page has too many tabs, with the effect of obscuring pertinent information. Sheila said a new template offered by Squarespace will help her freshen up some areas of the site. Payments to Squarespace for the website and to Network Solutions for the domain name: Judy Kelly has personally been taking care of this. Garrett will ask Bob Kelly if he can set up an automated process either through bank account debit or PayPal.

- Michigan Botanical Foundation Report -- Emily reported that the Foundation made five grants in 2016 totaling \$7,266. The Foundation Board consists of Emily as President; Judy Kelly, Vice President; Bev Walters, Secretary; Bob Kelly, Treasurer; and Michael Huft and Dave Warners.
- Big Trees Report – Andy Sawyer submitted a written report which Garrett read aloud. Little progress has been made toward the goal of developing an online database for the current inventory of big trees which now resides in an Excel spreadsheet and is unavailable for inquiry. A recent effort with an online service called Caspio, if proven workable, may result in a recurring \$40 monthly fee. Several board members thought \$40 seemed quite high and Sheila volunteered to investigate other options including Squarespace.

6. Old Business

- Improving MBC State level participation – Garrett would like to see more opportunities for members to engage beyond the chapter level. Besides the annual Foray there is the fall meeting which includes a field trip, but the timing can place it late in the season and the fact that a meeting is included can be deterrents. Several ideas like reviving the mini-foray and collaborations with other groups like regional plant societies or Michigan Nature Association were mentioned. For now, Wayne set Sept. 30 for the MBC Fall Meeting and Garrett asked chapter representatives to promote one of their field trips this year to all MBC members to encourage their participation.

7. New Business

- Editor reappointment – Sheila moved to reappoint Michael as Editor of The Great Lakes Botanist (TGLB) for a 2nd 3-year term. Second by Leslie. Motion carried.
- Confirming TGLB Editorial Board – For a 3-year term concurrent with his, Michael proposed the Board consist of current members Tony Reznicek & Dan Skean and newcomers Mike Penskar & Michael Rotter. Irene moved for approval, second by Wayne, and the motion was passed.

8. Next State Board Meeting – May 27, 2017, 5 PM, St. Ignace Quality Inn

9. Adjournment – 3:34 PM

Submitted by Jim Hewitt, Recording Secretary



Minutes of the Fall State Board Meeting of the Michigan Botanical Club

Holiday Inn Kalamazoo-W September 3, 2016

In Attendance: Arlene Obetts, Bob Kelly, Craig Elston, Dorothy Sibley, Garrett Crow, Irene Eiseman, Jim Hewitt, Judy Kelly, Lynn Kirkpatrick, Mary Danforth, Michael Huft, Phyllis Higman, Richard Fowler, Ruth Hart, Sarah Nooden, Sheila Bourgoin, Tony Reznicek, Tyler Bassett, Wayne Roussel. (19)

1. Called to Order by President Judy Kelly at 5:03 PM
2. Review of agenda and previous meeting minutes
 - a. The agenda was approved without change upon motion by Irene, second by Phyllis.
 - b. The minutes from the 4/30/16 meeting, as published in the Arisaema, were approved on motion by Mary, second by Wayne.
3. Robert's Rules of Order – per Judy these rules will govern the meeting and members should raise their hand when wishing to speak.
4. Announcements
 - a. President's email contact list: Judy passed around her list of board members for any updates.
 - b. The Michigan Botanical Club brochure is, per Sarah, complete and up-to-date.
5. Committee Reports
 - a. Web Site – Sheila noted all the Foray information that she had added to the site which included links to references and articles pertinent to the event. Judy mentioned that the Club's Facebook Page has over 800 followers and is quite active with many postings and pictures. Judy said she would create an album for the pictures.
 - b. Corresponding Secretary – Mary said she is in the process of transitioning her duties, chiefly the editing of the Arisaema, over to Sheila, the incoming Corresponding Secretary. The Board thanked Mary for her service to the Club.
 - c. Treasurer – Bob said all chapters have submitted their dues payments and asked if there were any questions about the Treasurer's Report and Statement which had been sent to members prior to the meeting. He said the financial condition of the Club was "ok" but noted a trend in recent years of expenditures somewhat exceeding income on an annual basis. A motion was made by Wayne, second, Mary, to accept the Treasurer's Report. Motion approved.

Bob said that a report by an Audit Committee (the formation of which he had recommended) had just been completed and would become available to the Board by the next meeting. Wayne, who had served on the Committee, identified two areas which needed strengthening: 1) a written process by

which a successor could be guided to perform the duties of the treasurer and 2) records retention. These and other recommendations would be included in the report.

d. The Michigan Botanist – Michael said the next two issues, Volumes 1 and 2 for 2016, are about 6 weeks away from publication. He said he still hopes to complete Volumes 3 and 4 by the end of the year in order to begin 2017 with no backlog.

i. Michael's proposal to change the name of The Michigan Botanist to The Great Lakes Botanist at the beginning of 2017 (discussed at the last meeting and the subject of various email exchanges) was given the status of a motion and seconded by Bob. Further discussion noted the de facto geographic expansion due to increasing out-of-state content and authors. Motion passed.

ii. A motion to change the subtitle to "A Journal of North American Botany" was made by Garrett with a second by Bob. Some discussion over whether "North America" was too broad in scope or not broad enough. Motion was called and all voted in favor.

Michael reiterated that the focus of the Journal would continue to be the Great Lakes region. He also said he wanted the Journal to be more inclusive to the club members who do not find technical papers and treatises to be enjoyable reading and who would appreciate content of particular interest to them. He proposed the appointment of an associate editor whose job it would be to seek out such content and incorporate it into The Great Lakes Botanist. Richard welcomed this idea, it was received favorably by the board members present, and was made a motion, seconded by Sarah. Garrett said he would like to see more detail before moving ahead but the motion carried with the understanding that the chosen candidate for the position would help write the job description.

e. Constitution and Bylaws Committee – no activity pending determination of non-profit status. Big Trees – still no report from Andy Sawyer.

g. 2017 Foray announcement – Lynn said the Foray would be held in St. Ignace on Memorial Day weekend and would be limited to 115 participants.

6. New Business -- None

7. Old Business

a. Nonprofit status of MBC; 501(c)(4) vs. 501(c)(3) – Judy said the proposal to change the organizational status of Michigan Botanical Club from (c)(4) to (c)(3) would be presented to the members for a vote at the evening gathering for dinner and program.

8. Next State Board Meeting – Judy proposed Saturday, January 28, 12 Noon at the Michigan Environmental Council Office in Lansing. The date was acceptable; Judy said she would be out of state and absent from that meeting. As this was Judy's

last meeting as President, Irene asked for a round of applause to recognize her years of service to the Club as its President.

9. Adjournment – 5:58 PM

At that evening's gathering during the Fall Foray Judy announced that per the Club's Constitution a change to its Articles of Incorporation must be approved by a vote of the membership. Tim Eiseman made a motion to change from a 501(c)(4) organization to a 501(c)(3) organization. Second was made by Cal Lamoreaux. Judy explained that the reason for the change was to allow the Club to accept tax-deductible donations. The motion was approved by voice vote.

Emily Nietering, who was unable to be at the board meeting, gave an update of the Michigan Botanical Foundation on whose board she serves as president. She said they were currently reviewing student research papers that had been submitted for a grant from the Isobel Dickinson Fund, which the Foundation administers. She reminded the audience that the Foundation is the "original 501(c)(3) organization" and that tax-deductible contributions can be directed to the Board's treasurer, Bob Kelly.

Submitted by Jim Hewitt, Recording Secretary 09/06/2016





Report on the MBC 2016 Foray in Southwestern Michigan

The Southwestern Chapter was very pleased to host the MBC 2016 Foray in Kalamazoo over Labor Day weekend -- Friday, September 2 to Monday, September 5. Because this was the first time an annual Foray was held in September, we didn't know whether members would respond favorably to the timing. But we wanted to give it a try because late summer is the very best time to visit special plant communities found in southwest Michigan. And fortunately, MBC members responded enthusiastically. Our base of operations for meetings, lodging and meals was Holiday Inn Kalamazoo West, located at the US-131 & Stadium Drive interchange.

Southwestern Michigan's post-glacial landscape of moraines, lakeplains, outwash deposits and meltwater channels offers an array of natural wetland and upland communities populated with an astonishing diversity of plant life. With plenty of places to explore, we were able to offer field trips that featured coastal plain marshes in Van Buren and Allegan counties, as well as a variety of other wetlands -- bogs, prairie fens, and hardwood-conifer swamps. Several trips highlighted significant collecting sites used by the remarkable amateur botanists, Clarence and Florence Hanes, who published their classic, *Flora of Kalamazoo County, Michigan*, in 1947. These sites included West Lake, Lyons Lake and Pretty Lake. Other trips gave us the chance to explore upland communities, including savanna, prairies, oak-pine barrens and dry-mesic southern forest. Adding

to the variety were -- a tree identification walk on the lovely, gently rolling Western Michigan University campus; a leisurely walk through the beautiful Kellogg Forest in search of fungi; and a visit to a privately-owned woodland that is the only currently known location in the State for Climbing Fern. Participants, which numbered 120 (including 10 students), had 18 field trips to choose from.

The Foray opened Friday evening with a welcome and orientation, followed by our speaker, Tony Reznicek, who presented "Disjunct Coastal Plain Plants in the Great Lakes Region." Tony explained that one of the most remarkable occurrences in the Michigan and Great Lakes region flora is the occurrence of a number of species whose primary range is centered on the Atlantic and the Gulf Coastal Plains. Unexpectedly, here they are usually not long-lived plants of stable habitat, but rather often annuals and short-lived perennials of transient habitats. Tony described the remarkable dynamics of these habitats and

the strategies for long term survival, as well as the conservation challenges.

On Saturday evening, Garrett Crow's topic was "The Vegetation and Phytogeography of a Southern Michigan Bog." Garrett talked with us about Pennfield Bog, located in neighboring Calhoun County. Garrett described the various vegetation zones and examined the phytogeographical patterns of bog plants in light of the impact of Pleistocene glaciation and where these plants might have survived the Ice Age and



Tony Reznicek with group at Goose Lake Coastal Plain Marsh

ultimately migrated to our southern Michigan bogs.

On Sunday evening, Todd Barkman's subject was "Tropical and Temperate Orchid Species Diversity: More Similarities than Differences." Todd described the many traits that distinguish orchids from other plant families as well as each other. His discussion incorporated aspects of phylogeny as part of the attempt to understand the nature of diversity associated with orchid species that are found in our backyards as well as those that are incredibly rare and known only from some of the most remote places on earth.

The Foray also gave the Club the opportunity to celebrate its 75th Anniversary. The oldest wildflower organization in the State, the Club (originally named the Michigan Wildflower Association) was founded in May 1941 during a "Spring Foray" held at a Wildflower Festival at Trout Lake in Michigan's Upper Peninsula. We celebrated the anniversary with cake and with presentations by President Judy Kelly, who showed a wonderful and entertaining collection of photos from past Forays, and by Vice President Garrett Crow, who described the Club's history and achievements.



The Southwestern Chapter is very grateful to the many people who contributed to the success of this Foray in so many ways – leading field trips, presenting evening programs, organizing and facilitating field trips, handling registration, arranging accommodations and meals, and performing innumerable other essential tasks. We also very much appreciate generous funding received from the Hanes Trust, Forensic Fluid Laboratories of Kalamazoo, and the Michigan Botanical Foundation.

And one more thing, the weather was wonderfully sunny and pleasant, all weekend – a welcome contrast to the weather for other SWC-hosted Forays, for example, the 2001 Spring Foray at Yarrow Lodge in northeastern Kalamazoo County that is remembered as the "Rainy Foray" and the 2006 Spring Foray at Indiana Dunes that holds the record as the "Hot Foray."

Report submitted by Becky Csia



Photos by Sheila Bourgoïn from the 2016 Foray. Field Trip Leaders: Jesse Lincoln, Bev Walters, Tyler Bassett

Michigan Botanical Foundation Report

The Michigan Botanical Foundation (MBF) is a 501 (c) (3) organization whose purpose is to receive and administer funds for the support of Michigan botanical research, educational publications, and related activities that enhance the knowledge and preservation of Michigan's flora. Each year in the Spring issue of *Arisaema* the MBF reports on their activities of the previous year. The MBF funded five grants in 2016 for a total of \$6,800. The details of these grants can be found at the end of this report. We also continued to support the HVC in giving a monetary award for the best student botanical project at the Southeast Michigan Science Fair for the fourth year of a five year grant.

The Foundation is committed to protecting and using our funds in accordance with our stated purpose. The MBF continues to work with our financial planner to make sound investments. We saw good returns this past year and the current value of the MBF portfolio as of January 31, 2017 was \$237,641. This year the MBF was the beneficiary of a life insurance policy from long-time Southeast Chapter member, Jocelyn Baker. Jocelyn was a science teacher in the Detroit Public Schools and was the first woman naturalist in the Metroparks system. She remained active in the SEC until just a few years before her passing at age 95 in May 2016.

We ask that you consider making a financial contribution to the Michigan Botanical Foundation. We welcome contributions of cash or stock. Your donation can be sent to our treasurer at the following address.

Robert Kelly, Treasurer
Michigan Botanical Foundation
18863 Lakewood Circle
Lake Ann, MI 49650

We carefully consider all grant applications for compliance with our stated purpose. If you are interested in applying for a grant, you can obtain a copy of our grant guidelines on our website www.michbotclub.org/botanical-foundation.

MBF Trustees are elected to two year terms and then elected to officer positions on a yearly basis. The MBF Trustees, their current elected positions, and terms of service are as follows:

Emily Nietering, President, 2015-2017
Judy Kelly, Vice-President, 2016-2018
Bev Walters, Secretary 2015-2017
Robert Kelly, Treasurer, 2016-2018
Michael Huft, Trustee, 2015-2017
Dr. David Warners, Trustee, 2016-2018

MBF Grants Awarded in 2016

MBF 2016-01: \$1110.25 in 2016 to graduate student Susan Fawcett for her study of two rare species of *Asplenium* (Green Spleenwort and Walking Fern) for the purpose of describing and comparing environmental characteristics of their respective microhabitats. These funds are for 2016 field research expenses in northern Michigan. The Board has also approved additional funding in 2017 (\$956.25) if satisfactory progress is made in 2016. Susan Fawcett is a PhD candidate at the University of Vermont.

MBF 2016-02: \$2000 to Dr. E. Binney Girdler, Associate Professor of Biology at Kalamazoo College for analysis of the spread of spotted knapweed into the habitats of Pitcher's thistle and Lake Huron Tansy, two threatened dune species. This is a continuation of Dr. Girdler's research which received a grant (\$1110) from MBF in 2013 – both grants supported student involvement in the research.

MBF 2016-03: \$1718 to Tyler Bassett, Michigan State University PhD candidate, and Brad Slaughter, Botanist at Michigan Natural Features Inventory, for a conservation status assessment of three state-listed prairie species: leadplant, white false indigo and prairie coreopsis. These species are rarely encountered in Michigan and results from this survey will be important in evaluating if the state status should be elevated from threatened to endangered.

MBF 2016-04: The Board approved MBF Joan Robb Scholarship Awards and funding for additional sponsored students for the MBC 2016 Foray. This year awards in the total amount of \$1721 were funded. The Huron Valley, Great Lakes and White Pine Chapters each received funding for one sponsored student, while the Southeast Chapter received funding for three students.

MBF 2016-05: \$250 for the Dickinson Award to students who authored the best student paper published in Volume 54 of *The Michigan Botanist*. The student is Robert C. Roos who co-authored the paper with Todd A. Aschenbach, the chair of his Graduate Committee. Their paper is entitled "The Initial Effects of the Community Variables on Sand Prairie Restoration: Species Establishment and Community Responses." Their study was done in the Manistee-Huron National Forest, Manistee County, Michigan. This grant was approved by the Board in October 2015.

MBF 2012-09: \$275 granted in April 2016 to the MBC Huron Valley Chapter for the best student botanical projects at the Southeast Michigan Science Fair. This funding is part of a \$1500 grant payable over a five-year period beginning with 2013.

Report submitted by Emily Nietering



Field Trip Registration

Pre-selecting your field trip preferences is part of the Foray registration. For each day of participation, please indicate your 1st, 2nd, and 3rd choices. Field trip assignments are first come, first assigned, with priority given to current MBC members. Your field trip schedule will be provided when you check in.

NAME _____

	Choice #	SATURDAY MAY 27
ALL DAY		Fens and Other Calcareous Peatlands in the Eastern Upper Peninsula
ALL DAY		Ferns and Lycophytes
ALL DAY		Lake Huron Shoreline
ALL DAY		Michigan Nature Association Preserves
MORNING		Introduction to Bryophytes and Lichens
AFTERNOON		Woody Plants of the Straits Region

	Choice #	SUNDAY MAY 28
ALL DAY		Peatlands of the Straits Region
ALL DAY		Ferns and Lycophytes
ALL DAY		Lake Huron Shoreline
ALL DAY		Orchids, special Lake Huron shore Wildflowers
ALL DAY		Bryophytes
MORNING		Photography Field Trip/Workshop
AFTERNOON	-----	Free time for exploring St. Ignace area

_____ I'll volunteer to help the leader and facilitate one of my field trips, if needed. (Many thanks!)

_____ I am interested in sharing a room at the Quality Inn. (Registrar will forward contact info to others interested.)