



Arisaema

Michigan Botanical Club State Newsletter

<http://michbotclub.org/>

Corresponding Secretary's Report

In this issue, we have the information you will need to register for the 2018 Foray. The White Pine Chapter has put together a wide range schedule of field trips, workshops and speakers.

Awards, remembrances of members who have passed this year and the Michigan Botanical Foundation, as well as the President's report round out the issue.

As MBC President, Garrett Crow mentions in his report, the Big Tree Program has been revived. It is time to start looking for the big trees out there and reporting them.

Enjoy and see you at the Foray!

Respectfully Submitted,

Sheila Bourgoin

Ariseaema Editor and Corresponding Secretary

Spring Foray and Fall Meeting Schedule

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

Appreciation:

Thank you to HVC members Andrea Matthies and Jim Odell for transporting and setting up the display panels at the Wildflower Association Conference. We appreciate your efforts and enthusiasm.

Contents

Corresponding Secretary's Report	1
Announcements	1
President's Report	2
2018 Spring Foray - May 25-27	3
Spring Foray 2018 Schedule	5
Spring Foray 2018 Directions and Map	6
Field Trip Schedule	7
Awards from the 2017 Spring Foray	18
2017 Fall Mini-Foray:	20
In Memoriam	21
Board of Directors Meeting, October 7, 2017	22
Board of Directors Meeting, January 27, 2018	23
Michigan Botanical Foundation Report for 2017	24

Announcements

Fall Meeting: The MBC Fall meeting, hosted by the Huron Valley Chapter will take place on Saturday, September 29, 2018 at the Discovery Center, DNR Waterloo State Recreation Area.

The MBC Treasurer Position Is Still Open

If you are inclined to working with figures and interested in participating at the statewide level of leadership in the MBC, please respond directly to the Nominating Committee Chair: Tyler Bassett

You would be expected to report at the State Board meetings which meet 3 times per year; in January, at the Foray, and at the Fall Meeting. The Treasurer has been wishing to retire for several years now and can coach you in all the details which are not terribly difficult.

President's Report

This winter seems to have been an especially hard one, so I, for one, am eager for spring and for our MBC Spring Foray Memorial Day weekend in the Chain-of-Lakes region east of Grand Traverse Bay. The White Pine Chapter has been working hard to provide a wonderful array of field trips and special lectures. This issue of *Arisaema* highlights all the wonderful opportunities ahead. So scour the newsletter for your preferred field trips and register early.

I wish to congratulate the Southwestern Chapter on a very successful Mini-Foray last Fall. Meeting at the wonderfully situated field station at Pierce Cedar Creek Institute allowed us to experience a late summer perspective on some unique habitats. Our hats off to Dave Wendling and all the organizers, as well as the field trip leaders—Dave Warners, Brad Slaughter, Tyler Bassett, and Corey Lucas for a very memorable weekend. The staff of the PCC Institute provided a wonderful dinner and in the evening I got to speak on a favorite topic of mine: “In the Footsteps of 19th Century Naturalists: Exploration for Aquatic Plants on the Amazon and Rio Negro.”

I would like to take this opportunity to encourage members to check out the Michigan Big Tree Database on the MBC website. For a number of years Andy Sawyer had been the keeper of the database, but more recently found that he has had to give up that responsibility. We are so very grateful for his years of service. Our new Chair of the Big Tree Committee is Ted Reuschel. Ted is especially familiar with

the program, having assisted Andy, but his years as a forester for the Michigan DNR and a deep love of trees—especially Big Trees—make him an ideal person to head up the program. And Sheila Bourgoin is ably updating the database online. So if you know of any big trees that might vie as a state champion, check out the How to Measure a Big Tree and Reporting the Big Tree information.

Are you aware that the Michigan Botanical Club now has 501(c)3 tax exempt status? We encourage anyone wishing to support various efforts of the Club to make donations, such as supporting Foray expenses, student scholarships to attend Forays, publications such as *The Great Lakes Botanist* or *Arisaema*, field research, various other projects or the general fund. If one wishes to support specific Chapter activities/projects, the donations must be given to the State organization, with directions in the cover letter for the funds to be directed to a particular Chapter.

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 organized by individual chapters, culminating with a State-wide Fall Mini-Foray, hosted by the Huron Valley Chapter. We are grateful to HVC's new President, Neal Billetdeaux, and his team for organizing our Fall event.

Sincerely,

Garrett Crow

President, Michigan Botanical Club

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.

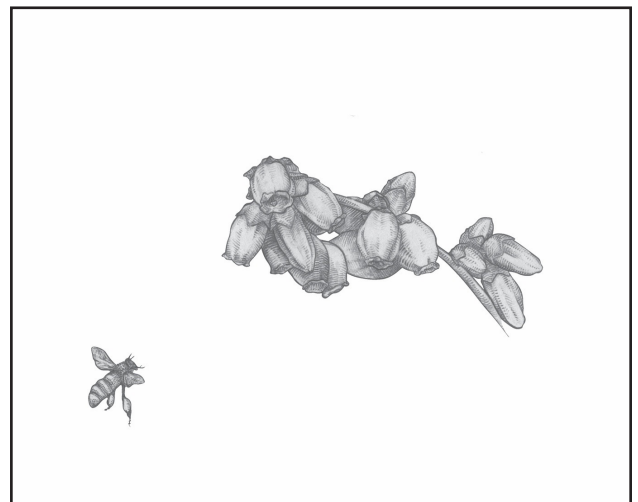


Illustration: Abe Cone

Welcome to the Michigan Botanical Club

2018 Spring Foray - May 25-27

The MBC Spring Foray, hosted by the White Pine Chapter, welcomes you to Antrim County and adjacent Kalkaska and Charlevoix Counties. The Foray home base at Shanty Creek's Lakeview Hotel overlooks Lake Bellaire, located in the middle of the Elk River Chain of Lakes watershed, covering over 500 square miles of land and 200 miles of shoreline.

Communities of northern mesic hardwood and conifer forests, rich conifer swamps, bogs, fens, coastal dunes, meadows, and more rest on bedrock of primarily Ellsworth shale. This corner of Michigan boasts three unique state symbols: the Petoskey stone, state wildflower, *Iris lacustris*, and state soil, Kalkaska sand.

Kalkaska sand, unique to Michigan, is ideal soil for the state tree, *Pinus strobus* (white pine) and also for red pine, jack pine, and oaks. Emmet till, a loamy sand of the area's glacial moraines supports hardwood forests of maple, beech and basswood. Spring ephemerals such as *Arisaema triphyllum* (jack-in-the-pulpit), *Cypripedium acaule* (pink ladyslipper), and massive carpets of *Trillium grandiflorum* (common trillium) proliferate in these forests.



Trillium grandiflorum
photo by Marilyn Keigley

Lake Bellaire connects to fourteen lakes and five rivers. From it flows the Grass River which continues its journey to Clam Lake, Torch Lake, Torch River, Lake Skegemog, Elk Lake and finally, Lake Michigan. The Elk River Chain of Lakes filters the largest watershed emptying into Grand Traverse Bay. Wetlands in the 1492 acres of Grass River Natural Area include rich conifer swamp, sprucebog pockets, northern fen, marshes, and three trout streams—Finch Creek, Cold Creek, and Shanty Creek that feed into the Grass River. Michigan Natural Features Inventory (MNFI) rated the rich conifer swamp and the northern fen extremely high, a rating considered rare and significant. Grass River Natural Area has interesting habitat transitions featuring calcium-loving plants like bulblet fern and grass-of-Parnassus growing



adjacent to acid-loving sphagnum moss plants like the pitcher plant and tall white bog orchid.

The Saturday evening presentation will address some of the issues of native orchid species of Michigan. MNFI lists *Calypso bulbosa* (calypso ladyslipper) and *Cypripedium arietinum* (ram's head ladyslipper) in the rare species inventory for five counties in this region.



Trillium, Calypso and Ram's Head photos by Marilyn Keigley

Speakers and Hikes

Evening Speakers: Friday "The Medicinal Facts and Fallacies of Michigan Native Plants," Dr. Robert Krueger; Saturday "Native Orchids—Challenges and Opportunities," Angie Lucas; Sunday, "Making Ecologically Sound Decisions—Exotics, Invasives, and Native Plants," Sarah Pregitzer and Randy Butters.

Hikes led by expert botanists to Antrim Creek, Grass River, Jordan River Pathway, Skegemog, Glacial Hills, and others will cover a range of topics such as forbs, orchids, grasses, ferns, sedges, ecology, geology, bogs, invasives, lichens, trees, medicinal uses and more.

Indoor Class Options: photography, lichens lecture, planting natives and pollinators, textile dyeing with plants, lichens and fungi, dried flower art and watercolor.

Check-in and Important Information

Hotel Check-in time is 5:00 p.m. Checkout time is noon.

Make hotel reservations online:

<http://reserve.shantycreek.com/?g=504413>

Room rates Friday through Sunday are also available 2 days before and 2 days after the Foray, subject to availability.

Please bring your own water bottles.

On Your Own Friday or Monday (Dinner is on your on Friday)

Sleeping Bear Dunes National Lakeshore begins in Empire 60 miles west— Hartwick Pines State Park is 41 miles

east— Wilderness State Park is 79 miles north, home to *Iris lacustris* (dwarf lake iris).

Area Conservancies: Leelanau, Grand Traverse Regional, and Little Traverse offer over 100 natural areas. The Nature Conservancy's Zetterberg Preserve at Point Betsie features boreal forest and interdunal wetlands.

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 64° and lows could be near freezing. 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 resort pool), sweater, umbrella, hat, sunscreen, insect repellent, medications, water bottle (to help reduce cost and waste), notebook, field guides, camera, hand lens, and daypack.

Local Information

There are a few restaurants in the area including Short's Brewery in downtown Bellaire. In addition, there is a True Value Hardware and Family Fare Grocery in town. There are many small and unique shops and galleries to enjoy. You can visit the Bellaire Chamber website at www.bellairechamber.com for more local information.

Otsego Memorial Hospital is approximately 25 miles away in Gaylord.

Camping: Try Chain O'Lakes Campground or Craven Park.

Lodging and Meals at Lakeview Hotel, Summit Village-A Shanty Creek Resort

The 2018 MBC Spring Foray will be held at the Lakeview Hotel at Summit Village (a Shanty Creek Resort) at Bellaire. This is a 100% smoke-free and pet-free lodging. Amenities include: free Wi-Fi, heated indoor pool and outdoor pool (weather permitting), whirlpool hot tub, fitness center, full service spa (contact the spa for pricing and reservations), dry sauna and steam room, and elevators (3). The hotel also offers complementary shuttle service to downtown Bellaire from 5-11 p.m.

Subject to availability, the conference rates are also available to attendees two days prior and two days after the Foray in case there is more you would like to see or do in the area.

You must make your own hotel reservation by one of two methods-either by mailing or faxing the reservation form included in *Arisaema* directly to the hotel, or via the internet using the URL below:

<http://reserve.shantycreek.com/?g=504413>

This link will take you directly to the MBC room reservation page where you can place your reservation. The group rate of \$89 per room plus taxes and fees (single/double) or \$109 for a Studio Parlor room is guaranteed until May 11, 2018. Reservations made after that date will continue to receive the group rate if rooms remain available. If you wish to share a room to further reduce costs, please send an email to the Foray registrar, Roger Tharp, [REDACTED]

You will be on your own for dinner on Friday. It should be noted that hotel check-in starts at 5:00 p.m. and the evening program starts at 7:30 p.m. You are welcome to contact the hotel earlier in the day to see if an earlier check-in is possible.

All meals and evening programs will be in the Ballroom, Parlor A. The meal package for the weekend will include 3 breakfasts, 2 box lunches, and 2 dinners. A single day meal package is also available and includes breakfast, box lunch, and dinner for the day selected. (See the Foray Registration Form.)

NOTE: Those with dietary restrictions which were listed ahead of time on the Foray Registration Form will find their box lunches will be clearly labeled. Coolers will be available for field trips.

Please be aware that to be environmentally responsible, bottled water will NOT be provided with box lunches. Please remember to bring your own refillable water bottles.

Suggested Books and Websites

A Great Lakes Wetland Flora. 3rd ed., by Steve Chadde (author and publisher), 2011.

Michigan Forest Communities: A Field Guide and Reference, by Donald Dickmann. MSU Extension, 2004.

Grass River Natural Area's Field Guide to Northwest Michigan: Its Flora, Fauna, Geology, and History, by James Dake, Educational Director of Grass River, 2016. Available at Grass River Visitor Center, northern Michigan bookstores, or by mail order. <http://www.grassriver.org/publications.html>

Downloadable field guide to the native orchids of Michigan by Al Menk: <https://sites.google.com/site/michigannativeorchids/home/pictorial-field-guide>

(Some names are outdated (e.g., *Galearis rotundifolia* is listed by its synonym, *Amerorchis rotundifolia*.)

Go Orchids (North American Orchid Center) <http://goorchids.northamericanorchidcenter.org>

Cutlip, Kimbra. "Why the Conservation of Orchids Is No Simple Matter," *Smithsonian* 28 Feb. 2018,

<https://www.smithsonianmag.com/smithsonian-institution/why-conservation-orchids-no-simple-matter-180968270/>

Spring Foray 2018 Schedule

Friday, May 25

- 3:00-7:00 p.m.. Foray Registration open at Lakeside Hotel, on the lower level in front of the Ballroom, Parlor A
 - 5:00 Hotel Registration begins at the Lakeside Hotel/Summit Village at Shanty Creek, Bellaire, MI
 - 7:15 Scholarship Student Meet and Greet and group photo-Ballroom Parlor A
 - 7:30 Welcome and Orientation-Ballroom, Parlor A-Lower Level
 - 8:00 Speaker: Dr. Robert Krueger
- “Native Plants, Facts and Fallacies of Their Medicinal Properties”**



Saturday, May 26 – Note: All field trips leave from designated Overflow Parking Area

- 6:30-7:30 a.m.. Breakfast Buffet available in Parlor A—Parlor A open until 8:00 a.m.
- 7:00- 7:30 Pick up Boxed Lunches in Parlor A
- 8:15 Assemble at parking area designated for All Day and a.m. field trip departures
- 8:30 Departure for All-Day field trips and Morning Half-Day field trips; Easy-Access Programs begin
- 12:00-12:45 p.m. Box Lunches in the field or on your own
- 12:45. Assemble at parking area designated for p.m. field trip departures
- 1:00 Departure for Afternoon Half-Day field trips; Easy-Access Programs begin
- 4:00 All field trips returned to Lakeside Hotel/Summit Village
- 4:00-6:00 Free time to clean up, nap, swim, key out plants, explore hotel/Summit Village, explore Bellaire, etc.
- *5:00-6:00 Michigan Botanical Club State Board Meeting in The Fireside Parlor
- 6:00 MBC Group Photo (location will be posted)
- 6:30 Plated Dinner begins in Parlor A
- 7:30 Announcements, awards, and recognition of Student Scholarship recipients
- 8:00 Speaker: Angie Lucas

“Orchids of Northwestern Lower Michigan: Conservation Challenges and Opportunities”

Sunday, May 27

- 6:30-7:30 a.m.. Breakfast Buffet available in Parlor A—Parlor A open until 8:00 a.m.
- 7:00-7:30 Pick up Boxed Lunches in Parlor A
- 8:15 Assemble at parking area designated for All Day and a.m. field trip departures
- 8:30 Departure for All-Day field trips and Morning Half-Day field trips; Easy-Access Programs begin
- 12:00-12:45 p.m. Box Lunches in the field or on your own
- 12:45. Assemble at parking area designated for p.m. field trip departures
- 1:00 Departure for Afternoon Half-Day field trips; Easy-Access Programs begin
- 4:00 All field trips returned to Lakeside Hotel/Summit Village
- 4:00-6:00 Free time to clean up, nap, swim, key out plants, explore hotel/Summit Village, explore Bellaire, etc.
- *5:00-6:00 Great Lakes Chapter only—meeting in The Fireplace Parlor
- 6:00-7:00 Chuckwagon Dinner Buffet available in Parlor A
- 7:15 Announcements, awards, and MBC President’s remarks
- 7:30 Speakers: Sarah Pregitzer and Randy Butters

“Givers and Takers-An Environmental Look at Plants and Landscape Gardening”

Monday, May 28

- 7:00-8:00 a.m.. Breakfast Buffet available in Parlor A. Parlor A is open until 8:30
 - *8:00 TBD. MBC State Board Meeting continues in The Fireplace Parlor if needed
 - 12:00 p.m. Check out time for Lakeside Hotel guests
- *Denotes specialized meetings-only affects MBC State Board and/or GLC members.



photos by Marilyn Keigley

Spring Foray 2018 Directions and Map

Directions to Shanty Creek Resorts

The Foray is taking place at Lakeview Hotel at Summit Village, a Shanty Creek Resort. 5780 Shanty Creek Rd, Bellaire, MI 49615. Lat/Lon 44.949299, -85.184362

From Grand Rapids

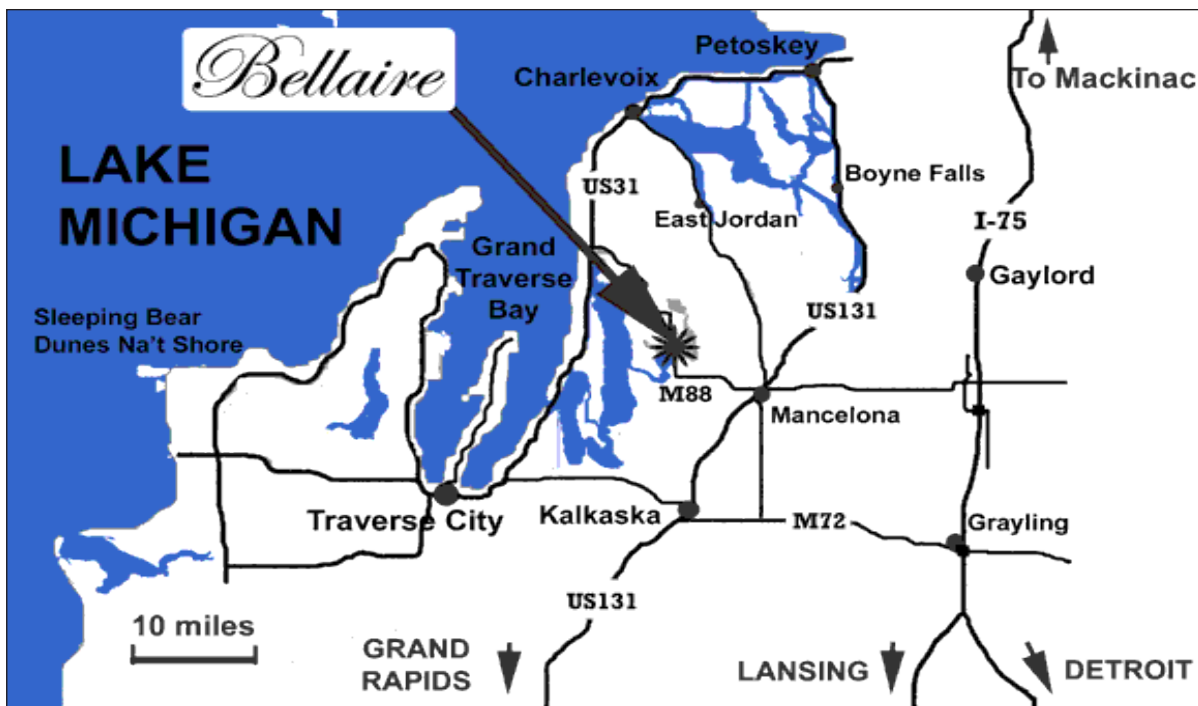
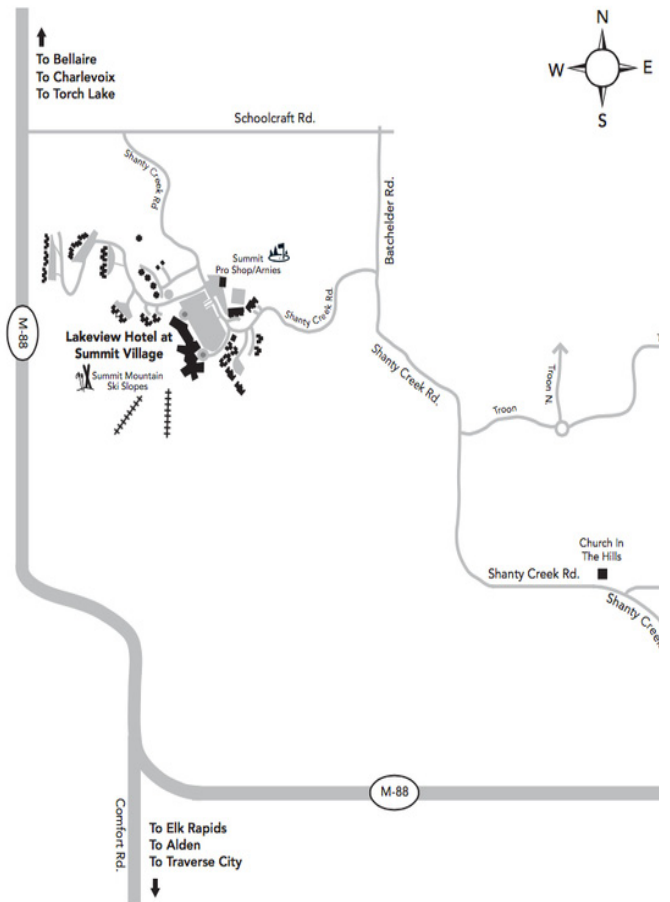
Take US-131 N. Follow US-131 N to N County Line Rd NE in Rapid River Township (143 mi) Take Bailey Rd and M-88 W to Shanty Creek Rd in Kearney Township (9.7 mi).

From Lansing Michigan

Follow US-127 N to I-75BL in Grayling. Take exit 254 from I-75 N (144 mi). Take M-72 W and Darragh Rd NE to Shanty Creek Rd in Kearney Township.

From Mackinaw City

Follow I-75 S to Old Highway 27 S in Bagley Township. Take exit 279 from I-75 S (58.6 mi). Continue on Old Highway 27 S. Take Mancelona Rd and M-88 W to Shanty Creek Rd in Kearney Township (note #1: This is where Amerigas Propane is located. Turn RIGHT). If you miss this turn just stay on M-88 until you reach the other end of Shanty Creek Rd. 41 min (32.5 mi).



Field Trip Schedule

Saturday, May 26		
Duration	Trip Leader	Title
ALL DAY	Glenn Vande Water	Ecosystems of the Jordan River Valley and Deadman's Hill
ALL DAY	James Dake	Exploring the Grass River Wetland Ecosystem
ALL DAY	Tony Reznicek	Conifer Swamps-Seven Bridges NA and Skegemog Swamp
ALL DAY	Brad Slaughter	Coastal Dune, Lakeshore and Forests of Antrim Creek Natural Area
MORNING	Robert Krueger and Arlene Westhoven	Hike to Locate Native Plants for Tea and Coffee Beverage Substitutes
MORNING	Katie Grzesiak	Spring Ephemerals and Woody Plants of Glacial Hills Natural Area
MORNING	Jean Lamoreaux and Dorthy Sibley	Creating with Nature and Watercolors (An Easy-Access Program)
AFTERNOON	Andy Bacon	Cedar River Nature Sanctuary
AFTERNOON	Ranger Steve Mueller	Interactions and Adaptations of Plants w/ Animals in Their Environments
AFTERNOON	Elizabeth Pitzer	Plant On the Wild Side (An Easy-Access Program)
Sunday, May 27		
Duration	Trip Leader	Title
ALL DAY	Garrett Crow	Bog Trotting in Kalkaska County
ALL DAY	Derek Shiels	Discovery at a Charlevoix County Nature Preserve
ALL DAY	Liana May	Fisherman's Island Shoreline and Forests
MORNING	David Dister	Grass River Wetlands
MORNING	Sarah Pregitzer	Exploring the Southern Trails of Glacial Hills
MORNING	Jean Lamoreaux and Dorothy Sibley	Creating With Nature and Watercolors (An Easy-Access Program) (Repeat or continuation of Sat. am)
MORNING	Julie Hurd	Habitat Gardens at Grass River Natural Area and Nature's Palette: Native Plants as Sources of Fiber Dyes (2-part program)
AFTERNOON	Ranger Steve Mueller	Interactions and Adaptations of Plants with Animals in Their Environments (Repeat of Saturday afternoon trip)
AFTERNOON	Mike Meriwether	Northern Hardwood Forest Management
AFTERNOON	Julie Medlin and Elizabeth Pitzer	Liking Michigan Lichens and More "Plant On the Wild Side" (Easy-Access) (2 parts, providing different information than the Sat. p.m. session)
AFTERNOON	Craig Elston	Flower Photography (An Easy Access Program)



What's New This Year

This year, as a little “extra”, participants to the 2018 MBC State Spring Foray will be able to purchase a reminder of their adventures in and around the Bellaire, MI area. On Friday afternoon and evening, we will have a mobile t-shirt printing press set up near the Foray Registration Area at the Lakeview Hotel (lower level, Promenade outside Ballroom Parlor A.)

The company, Rogue Inks, will have multiple designs available for you to choose from based on native plants. All shirt/tote bag printing is done in white ink, but the shirts come in multiple colors. You pick your shirt style, size, color, and design, and they will print it for you on-the-spot! In addition, they will have preprinted mugs (8 different designs) with full-color photos from one of our MBC photographers for \$10.

This service will be available to you only on Friday, May 25, from 2:00-end of the evening program. Rogue Inks accepts cash or credit cards, but no checks.

EVERYONE who registers for the Foray by May 11 will automatically be entered into a Free T-Shirt Drawing. Simply check the winner's list displayed at the registration desk on Friday, and if you are a winner, take two steps over to the printing press and get your free MBC 2018 Foray t-shirt (you can upgrade to a sweatshirt and pay the additional charge). There will be EIGHT t-shirt winners!

NOTE: If you do not pick up your t-shirt Friday, an MBC photo coffee mug will be held for you, as t-shirt printing will only be available on Friday.

*MBC 2018 Spring Foray—SATURDAY, MAY 26 FIELD TRIPS***Varied Ecosystems of The Jordan River Valley and Deadman's Hill****Saturday, May 26 — ALL DAY**

Trip Leader: Glenn Vande Water, assisted by Jim Toppin and Janet Traub

This trip will explore numerous natural communities occurring along the Jordan River, the first river in Michigan to be dedicated as a National Scenic River, and Jordan River Pathway. The 18-mile Jordan River Pathway is joined with the North Country National Scenic Trail System, both paralleling and crossing the Jordan River.

Mesic Northern Forest is the principal community type bisected by the Jordan River, with Poor and Rich Conifer Swamp, Northern Shrub Thicket, and Northern Wet Meadow community types occurring to a lesser extent along the river corridor. Our foray into the varying community types will key in on vascular and nonvascular plants that comprise them. The community types should still have a good number of migrant and resident bird species during our late spring Foray, and these can be pointed out to those interested.

Lunch will be at the summit of Deadman's Hill. We will use this site to access some nice Mesic Northern Forest along the slope leading down to the Jordan River. We will look at the numerous spring wildflowers and investigate tree bark for numerous leafy liverworts and lichens that particularly inhabit the bark of hardwood trees. We will scour wet-foot sites to review some type indicator species, hopefully some specialties, and the often overlooked, but typically diverse, bryophyte flora.



Trip Notes: A hand lens is recommended and you may wish to bring binoculars. Restrooms are only available at Deadman's Hill where we will lunch. This trip requires footwear appropriate to both dry and saturated soil sites. Consider taking along a pair of rubber boots or old sneakers in case the river flow rate allows us to access the channel itself. The site accessed at Deadman's Hill is relatively steep terrain and requires some stamina to descend and ascend.

*Biographies:*

Glenn Vande Water has over 30 years of experience as a biological/ecological consultant, conducting threatened and endangered species surveys throughout the Great Lakes and Midwest Regions, as well as in the Southwest, Southeast, and Northeast Regions. Though much of his career was spent addressing botanical issues, Glenn has also conducted songbird and raptor surveys in the Midwest and Southwest Regions. Glenn's undergraduate studies were completed at Grand Valley State University, supplemented with studies at the University of Minnesota Itasca Biological Station and the University of Michigan Biological Station, where he served as TA for Dr. Ed Voss's Boreal Flora class in the late '80s. Glenn has previously organized and led trips for the Michigan Botanical Club including the 1998 and 2015 Forays.

Janet Traub and Jim Toppin

Janet Traub and Jim Toppin of the Ohio Moss and Lichen Association will accompany our field trip to assist with assessing the bryophyte flora and lichens found in the community types accessed. Janet and Jim are familiar to those attending

earlier Forays, having led numerous trips to investigate bryophytes and lichens.

Exploring the Grass River Wetland Ecosystem

Saturday May 26 — ALL DAY

Trip Leader: James Dake

The Grass River Natural Area is an ideal place to explore the diversity of wetland flora. Through on-trail and off-trail expeditions we will observe a variety of wetland plants and learn the natural history of the Natural Area. For the morning we will utilize boardwalks that pass through cedar swamp, sedge meadow, and alder thicket as we examine wetland flora on GRNA's trail system and learn about GRNA's grassroots beginnings. During the afternoon portion, we will get a chance to access more remote parts of the Natural Area for the opportunity to find more rare wetland species.



Trip Notes: The morning segment is relatively easy going over level boardwalk trails. The afternoon will get into some off-trail wet areas where muck boots will be needed.

Biography: James Dake

James Dake has been Education Director at GRNA since 2014. He studied science education at Central Michigan University and Western Michigan University. James is a certified teacher and holds a Master of Arts in Science Education. He is also a Certified Interpretive Guide. James has taught in the classroom, as well as with nature centers and museums in Michigan and New York. He spent over two years in New York State and authored a field guide of the flora and fauna of the Finger Lakes region using his own photography, and he is the author of *Grass River's Field Guide to Northwest Michigan*. Along with teaching outdoors, his passions are backpacking, biking, photography, art, writing, and music.

Conifer Swamps of Northern Michigan: Seven Bridges Natural Area and Skegemog Swamp

Saturday, May 26 — ALL DAY

Trip Leader: Tony Reznicek

Where there is water in the northern Lower Peninsula of Michigan, coniferous trees, cedar, tamarack, spruce, hemlock, and pine dominate, giving a more northern look to the landscape, followed through by many northern species in the understory. We will look at two examples of such forests on this trip, as well as associated wetlands and stream banks.

Seven Bridges is a 314-acre nature preserve a few miles

from Rapid City in Kalkaska County. Here, the Rapid River separates into multiple arms as it spills through a mixed forest of tamaracks, cedars and hemlock, creating unique scenic views in miniature, but also homes for many coniferous forest understory herbs, ferns and sedges. There will be trails and bridges.

Few botanical experiences can rival northern Michigan cedar swamps for wetness, and the cover of tiny jewels – the mosses, fine sedges, tiny ericaceous shrubs like *Gaultheria hispidula* (creeping snowberry), and other small, often evergreen plants such as *Linnaea borealis* (twinflower), *Mitella nuda* (naked Bishop's cap), *Orthilia secunda* (sidebell's wintergreen), many sedges, etc., as well as some of the more specialized orchids. Skegemog Swamp offers a very nice opportunity to go through much of a relatively intact northern cedar swamp on dry trails and a boardwalk. It also has some marsh and sedge meadow areas, also accessible with the boardwalk, and a few unusual features, notably that even this far north, there are a few southern elements, such as spicebush, *Lindera benzoin* (spicebush), that seem quite startling in a northern conifer swamp.



Trip Notes: This will be mostly easy walking along level trails and boardwalks, with no feet wetting necessary, though distances will be moderate.

There will be restrooms in Rapid City if not in Freedom Park.

Biography: Tony Reznicek

Tony Reznicek is a Curator at the University of Michigan Herbarium, with research interests in sedges, especially systematics and evolution of the large and complex genus *Carex* in the New World, with a special focus on Mexico as well as on the Great Lakes region. Also, he works on Michigan and Great Lakes region floras, and is co-author, with the late Ed Voss, of the recent *Field Manual of Michigan Flora* and, with Ed Voss and Bev Walters, is responsible for the Michigan Flora Online: <www.michiganflora.net/>. He is also interested in the phytogeography of the northeastern North American flora, especially the Great Lakes region, with interests in plant migration and colonization, the origin and persistence of relict plant species and communities, and rare species. He conducts numerous workshops on plant identification, especially of sedges, and leads numerous field trips.

Coastal Dune, Lakeshore, and Forest Communities of Antrim Creek Natural Area

Saturday, May 26 — ALL DAY

Trip Leader: Brad Slaughter

Brad will lead us in an exploration of this 156-acre preserve which includes 1 mile of undeveloped Lake Michigan shoreline with beach access. The natural communities of the 2.1 miles of trails include hardwood forest, forested wetland, conifer swamp, shrub thicket, meadow, wet meadow, coastal dune and a portion of Antrim Creek that empties into Lake Michigan. A wide range of flora includes *Cirsium pitcheri* (Pitcher's thistle), *Tanacetum huronense* (Lake Huron tansy), *Erythronium americanum* (yellow trout lily), *Lilium philadelphicum* (wood lily), *Linnaea borealis* (twinflower), (*Arisaema* sp.) Jack-in-the-pulpit, and interesting stands of cedars.



Trip Notes: There are porta-potties available. We will be using easy trails.

Biography: Brad Slaughter

Brad Slaughter joined Orbis Environmental Consulting in April 2017. He is co-author of the 2014 *Field Guide to the Natural Communities of Michigan*. He has also authored several papers and published in *The Michigan Botanist* and dozens of technical reports on Michigan's natural communities, rare plants, native flora, and other conservation topics. Brad also serves on the State of Michigan's Rare Plant Technical Advisory Committee. He earned a B.A. in Biology from Albion College in 2002 and an M.S. in Botany from Miami University in 2005. He has also partnered with Garrett Crow and Dave Warners on a project called 100-Year Retrospective of Emma Cole's Flora of the Grand Rapids Region.

Hike to Locate Native Plants as Tea and Coffee Beverage Substitutes

Saturday, May 26, — MORNING

Trip Leaders: Robert Krueger and Arlene Westhoven

This hike involves hands-on discovery and sampling of Michigan native plants that can be used as beverages. We'll begin in the Grass River Education center with a brief lecture and then venture to the trails to locate many species of flora. Beverages can be made using leaves, bark, roots, or flowers (not all will be in season and not all will be found in Antrim County). For teas and coffees, Michigan offers species from many plant genres such as *Pinus*, *Picea*, *Juniperus*, *Gaultheria*, *Vaccinium*, *Mentha*, *Arctostaphylos*, *Rosa*, *Rubus*, *Ledum*, and more. Beverage use by common name include: wild rose, dewberry, wild mint, raspberry, Labrador tea, New Jersey tea, stinging nettle, wild strawberry, teaberry, juniper, Jerusalem artichoke, and many others. For those avoiding caffeine these are all caffeine-free. The Grass River Staff will provide some samples of treats for the group.



Trip Notes: Restrooms are available in the Education Center. This trip will be an easy walk. In case of heavy rain, an indoor presentation will be given.

Biography: Robert Krueger (See Friday night speaker information)

Biography: Arlene Westhoven

Arlene Westhoven is retired from the Biology Department at Ferris State University where she emphasized environmental solutions through teaching environmental biology, birds of Michigan, nature study, genetics, and human anatomy. She received a B.S. in Art Design from University of Michigan and B.I.S. and Master's in Biology from Central Michigan University. Arlene has been a staff naturalist at Grass River Natural Area for 15 years, leading hikes, kids' educational programs (like dipping for invertebrates), and teaching art classes. She believes sketching is a really good way to 'see' plants in their habitats. Arlene has been very involved with the Michigan Loon Preservation Association since it was founded in 1986.

Spring Ephemerals and Woody Plants of Glacial Hills Natural Area

Saturday, May 26 — MORNING

Trip Leader: Katie Grzesiak

Smack in the middle of the picturesque rolling hills of Antrim County lies the ecologically diverse, 765-acre Glacial Hills Pathway and Natural Area. Its beautiful northern forests cascading over undulating ground are home to 20 species of trees, 100 species of flowers, and plenty of up north beauty. Join Katie Grzesiak, invasive plant expert and native plant enthusiast, to explore spring ephemerals, woody plants, and invaders to keep an eye out for. Glacial Hills also has over 100 species of birds, including great-horned owls, eagles and the threatened red-shouldered hawk.



Trip Notes: This 2-mile hike will be easy to moderate, but expect hilly terrain. Restrooms are porta-potties.

Biography: Katie Grzesiak

Katie is Coordinator of NW Michigan Invasive Species Network (ISN), has a B.A. in Ecology from NMU and a Master's from University of Michigan, School of Environment and Sustainability. Her Master's thesis was a long-term study of the effects of herbicides on native and invasive plant communities while leading the Exotic Plant Management Team at Pictured Rocks National Lakeshore. Katie joined ISN in 2013 and has been Coordinator since 2014, applying her enthusiasm and teaching experience to outreach and education efforts. She serves on the Michigan Invasive Species Coalition Core Team and the Tri-national Steering Committee for the Play Clean Go™ campaign.

Creating with Nature and Watercolors

Saturday, May 26 — MORNING

Session Leaders: Jean Lamoreaux and Dorothy Sibley

This indoor workshop will be a hands-on experience of taking dried natural material (leaves, flowers, cones, twigs etc.) and placing on canvas or paper and applying watercolors with a brush to create an artistic painting or greeting card. You are welcome to attend both Saturday and Sunday sessions to have enough time to complete your project to take home, or you can attend either Saturday a.m. or Sunday a.m.

Session Notes: This workshop will be held in the Lakeview Hotel, site for the Foray, so it is an Easy-Access Program.

Biography: Jean Lamoreaux

Jean Havenaar Lamoreaux has a Bachelor's Degree in Business from Davenport University and is retired from the Postal Service where she had been Postmaster of Battle Creek, Big Rapids and Comstock Park. She also was Director of Marketing and helped with address and 911 systems. Since her retirement she has been Director of Senior Programs for Senior Neighbors in Grand Rapids, Clerk and Coordinator of the Downtown Development Authority for the Village of Middleville and is presently on the Village Council. In the past she was on the boards of Grand River Folk Arts Society, Thornapple Arts Council, Barry County Tourism, and Thornapple Trail Association and is currently on the



Cypripedium reginae
Photo by Marilyn Keigley

boards of Thornapple Kellogg Community Library, Barry

County Historical Society and the Barry County Commission on Aging. She is currently assisting with the planning of the Michigan Botanical Foray. Her hobbies are watercolors and Michigan history. She has received multiple awards for her paintings and photographs.

Biography: Dorothy Sibley was born and raised in Detroit, Michigan. She received a BFA Degree and M.Ed Degree from Wayne State University, plus post-graduate credits from other universities. She taught in the Detroit Public School System for 38 years as an art teacher, kindergarten teacher, and middle school teacher. She was a critic teacher for students from Wayne State University and University of Michigan. At her school, she taught after-school talented art classes to exceptional Detroit students sent to her from 10 Detroit schools. Dorothy joined the Southeastern Chapter of the MBC in 1965, and later became SEC President for many years. In 1985 Dorothy became Corresponding Secretary of the MBC, and initiated the mailing of the MBC State Newsletter (now called *The Arisaema*) to every MBC member. She worked on editing, publishing and mailing these publications until 2006. In 1989, Dorothy helped to found the White Pine Chapter which is based at Grand Valley State University in West Michigan. Dorothy has traveled to many countries and written reports on how universities or institutes in these foreign countries train teachers. She traveled to the USSR three times plus many other countries around the world for this study. She has driven to more than 44 US states and enjoys visiting US National Parks. Dorothy has always loved the study and beauty of native wildflowers.

Cedar River Nature Sanctuary

Saturday, May 26 — AFTERNOON

Trip Leader: Andy Bacon, Conservation Director, Michigan Nature Association

Explore the Michigan Nature Association's Cedar River Nature Sanctuary with Andy as we hike along the riverbank trail through the conifer swamp and then loop off into the northern mesic forest. This diverse habitat includes spring beauty, several orchids—*Platanthera flava* and lady's slippers, diverse spring ephemerals, ferns, and other flora. The Cedar River is part of a high-quality cold water stream with brook trout, one of Michigan's remaining classic trout streams. The river is accessible along the entire marked trail.



Trip Notes: It would be highly advisable to carpool. There are no bathrooms (nearest in Mancelona). Level of difficulty is easy.

Biography: Andy Bacon

Andrew Bacon has overseen the conservation programming for the Michigan Nature Association for the past 7 years.

MNA is a statewide land conservancy, which targets conservation programming toward rare species, imperiled natural communities, and unique geological features. Prior to working with MNA, he worked in northern Illinois overseeing the stewardship program of a regional land conservancy, the Natural Land Institute, completing restoration of a 721-acre preserve from farm fields to a wetland and prairie complex. Andy has also worked with other conservation groups including the Hamilton County Park District in Cincinnati, the Milwaukee Zoo, and Whitefish Point Bird Observatory.

Plant on the Wild Side

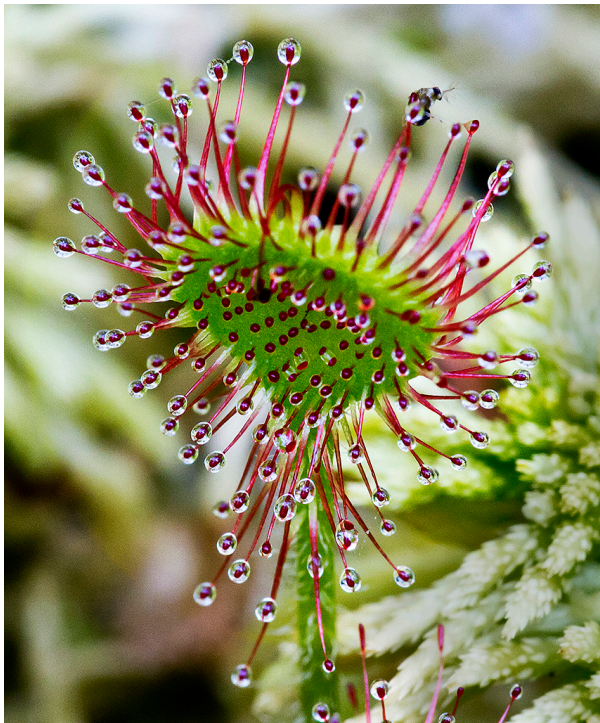
Saturday, May 26 — AFTERNOON

Trip Leader: Elizabeth Pitzer

This indoor workshop will cover the basics of gardening with native plants and their relationships with pollinators. Information will include why and how to plant natives, as well as which natives to select and how and where to obtain them. Propagation of Michigan natives will also be discussed, including a seed-germinating process called winter sowing. Participants will have the opportunity to take home some native seedlings that they can pot up from the winter-sown examples.

Session Notes: This workshop will be held in the Lakeview Hotel, headquarters for the Foray, so it is an Easy-Access Program.

Biography: Elizabeth Pitzer



Drosera sp. (Sundew)

Photo by Marilyn Keigley

Elizabeth Pitzer is a retired high school biology teacher and an avid gardener. In recent years she has focused much of her flower gardening efforts in the area of Michigan Prairie natives. She and her husband live and garden on the fragile and beautiful Newaygo Prairie remnant. Elizabeth earned her BS in education and MA in Biology from Central Michigan University. She completed her field work at the CMU Biological Station on Beaver Island.

Interactions and Adaptations of Plants with Animals in their Ecological Environments

Saturday, May 26 — AFTERNOON

Trip Leader: Ranger Steve Mueller

Visit the Jordan River Pathway to discover the beauty of vegetative and flora adaptations that allow plants to effectively function and survive in various ecological conditions. We will explore spring ephemerals and emerging summer growth for species just beginning their season in sun and shade. Our exploratory focus will reveal how specific physical adaptations serve plant needs though association with insects, birds, wind, and soils. Ranger Steve Mueller will lead this 'all-inclusive' hike as we experience the relational connections and intricate adaptations within natural environments.



Trip Notes: Difficulty level will be easy to moderate.

Biography: Ranger Steve Mueller

Naturalist Ranger Steve Mueller is a broad-spectrum ecologist. He has directed various nature centers and has worked/volunteered for over 35 years in Bryce Canyon Utah, where he discovered a new moth species while conducting biodiversity research. He discovered breeding colonies of the Northern Blue Butterfly in the Upper Peninsula, now listed as State Threatened, and received a grant to conduct life history research related to its host plant, *Vaccinium cespitosum* (dwarf bilberry), also State Threatened. While working with Dr. Tony Reznicek, both species were documented for Michigan at the same location at the same date. The connection between the two species was discovered later.

Seeking to excite the public, he publishes Ranger Steve's Nature Niche in newspapers, newsletters, and online. He has turned his own property into Ody Brook Nature Sanctuary. The sanctuary is open to the public, is visited by botanical groups, and is an eBird hotspot. It has one of the largest remaining American Chestnuts. Ody Brook's mission is to enhance biodiversity.

SUNDAY, MAY 27 FIELD TRIPS**Bog Trotting in Kalkaska County****Sunday, May 27 — ALL DAY****Trip Leader:** Garrett E. Crow

Bear Lake Road Bog – is a small, kettlehole bog. This is a good place to be introduced to the bog habitat. The carnivorous pitcher plants and sundews are often a highlight.

The Papoose Lake Nature Preserve consists of two parcels: a 40-acre forest to the northeast of Papoose Lake and a 6-acre section on the east side of Papoose Lake with a forest fragmented by power lines, a sedge meadow, and a bog.

The Papoose Lake Bog, located on the northeast side of Papoose lake, is a unique wetland community comprised of about 58 different species within an 18,000-meter square floating mat. Unique carnivorous plants inhabit the bog including numerous individuals of *Sarracenia purpurea* (pitcher plant), *Drosera* spp. (sundew), and *Utricularia* spp (bladderwort). Orchids including *Calopogon tuberosus* (grass pink), *Pogonia ophioglossoides* (rose pogonia), and *Platanthera dilatata* (tall white bog orchid) are also abundant. A number of unique sedges also inhabit the floating mat community and the surrounding areas. The floating mat is unique in that all of the species present on the mat are native.

The intermittent wetland sedge meadow occurs in the east most side of the 6-acre segment. Species common in the sedge meadow include *Muhlenbergia glomerata* (marsh wild-Timothy), *Scutellaria galericulata* (common skullcap), *Scirpus cyperinus* (wool-grass), and *Cladium mariscoides* (twig rush). Non-native reed canary grass *Phalaris arundinacea* and reedtop *Agrostis gigantea* is scattered within the sedge meadow.

The average Floristic Quality Index for parcels in Michigan is 20, the Papoose Preserve scored an FQI of 59.34 indicating statewide natural significance. The combination of the rich mesic forest and the unique bog and wetland communities are the cause for such a high FQI.



Trip Notes: The trip is not difficult. Bogs are wet places. To get into the bog, we must wade through a moat that is likely to be thigh deep. Once on the floating mat, walking on the mat is a little like walking across a king-sized mattress. Waders may be desirable. Or you could just plan to get wet, wearing sneakers that will dry out eventually. If you've never visited a bog, you'll be well rewarded. There will be primitive toilets at the lunch stop at Pickeral Lake Campground.

Biography: Garrett Crow

Garrett Crow is a life-long Bog Trotter. He is a retired botanist, presently a Visiting Scholar at Calvin College, serving as curator of the herbarium and working with Dr. David

Warners on a project updating the *Emma Cole Grand Rapids Flora* (1901) and aiming to relocate Emma's sites (and other natural areas) and re-evaluate their quality as natural areas today. Garrett received his MS and PhD at Michigan State University (plant taxonomy), then taught 33 years at the



Cirsium Pitcher (Pitcher's Thistle)
Photo by Marilyn Keigley

University of New Hampshire as Professor of Botany and Director of the UNH Herbarium. He has had a long interest in aquatic and wetland plants, with his master's thesis a floristic, ecological and phytogeographical analysis of Pennfield Bog, Calhoun Co., Michigan. He is co-author (with C. Barre Hellquist) of *Aquatic and Wetland Plants of Northeastern North America* (2 vols., well-illustrated, with user-friendly keys, corrected paperback edition 2006), and *Plantas acuáticas del Parque Nacional Palo Verde y Valle Tempisque, Costa Rica* (a bilingual field guide 2002), as well as various other botanical publications. Garrett is currently serving as President of the Michigan Botanical Club.

**Discovery at a Charlevoix County Nature Preserve
Sunday, May 27 — ALL****Trip Leader:** Derek Shiels

Little Traverse Conservancy owns and manages over 21,000 acres, on properties from Charlevoix County to Lake Superior. The Conservancy relies on volunteers to help document the biological diversity of these properties—critical information to inform stewardship. We will visit the Joseph and Ingeborg Marchio Nature Preserve, which is one of these properties

in need of a thorough vascular plant survey. The 40-acre preserve contains a conifer swamp, some peatland, a small creek, northern upland forest, and old agricultural fields. Three orchids have been found there: *Cypripedium parviflorum* (yellow), *C. reginae* (showy), and *Liparis loeselii* (tway-blade). What else is there to discover? We will enjoy making discoveries, practicing documenting our observations using iNaturalist, practicing making a collection for an herbarium, and gathering a snapshot floristic quality assessment (for what is identifiable at this time of the season).



Trip Notes: There are no trails on the property. Travel will be off-trail, meandering through the property. It is relatively flat, but there will be wet or mucky areas.

Waterproof boots and/or no cotton socks recommended. There are no restrooms on the property but can be accessed a 4-minute drive west to Ellsworth or a 6-minute drive east to East Jordan.

Participating with iNaturalist is optional and smart phones are encouraged but not necessary. If you want to sign up and explore iNaturalist before you arrive, visit here: <www.iNaturalist.org>. Derek will be available to help you at the Foray.

Biography: Derek Shiels

Derek started with Little Traverse Conservancy (LTC), based in Harbor Springs, in 2014 and transitioned to Director of Stewardship in 2017. In addition to documenting diversity at LTC nature preserves, Derek has conducted research on the systematics of the bulrushes in the Monfils lab at Central Michigan University, has worked on invasive species survey crews in southern and northern Michigan and last summer he conducted a floristic quality assessment of a 300-acre Cheboygan County property as a biological consultant. Derek serves as the vice president of the Great Lakes Chapter of MBC.

Fisherman's Island Shoreline and Forests

Sunday, May 27 — ALL DAY

Trip Leader: Liana May

The dynamic processes along Lake Michigan's shoreline, along with historic cultural uses, has formed a diversity of natural communities in Fisherman's Island State Park. The park is located south of Charlevoix and includes shale and limestone outcrops, retired quarries, beach strand, open and forested dunes, shoreline marshes, and hardwood-conifer swamps. We will explore these communities through two or three hikes off of the Park's access road. We will look for Lake Huron tansy, Pitcher's thistle, Pumpelly's brome, and Houghton's goldenrod while enjoying the diversity of plants that occupy these communities. Depending on lake levels and our sense of adventure, we may be able to walk out to Fisherman's Island.



Trip Notes: Walking will be moderately strenuous with occasional windthrow, steep slopes, and loose sand, but we will take it slow. Knee boots will keep feet dry in the wetlands.

A Michigan Recreation Passport will be required for Fisherman's Island State Park. You can purchase one for your vehicle at the park for \$16, or plan to carpool with someone who has the passport.

Biography: Liana May, Borealis Botanicals

Liana May is the owner and operator of Borealis Consulting LLC, where she specializes in botanical surveys, community mapping, and conservation-oriented natural resource management plans. Growing up in the dunes and forests of Leelanau County, she has had a passion for plant diversity, biogeography, and conservation from a young age. This has led to a diverse path of studying reforestation in Madagascar, human-forest interactions in Tanzania, and over a decade of mapping vascular plant occurrences in Michigan. Current projects include monitoring changes in floristic diversity inside of deer exclosures at the Leelanau Conservancy's Palmer Woods and encouraging public engagement in natural sciences through citizen science workshops, presentations, classes, and bio-blitzes. She teaches several botany mini-courses at Northwestern Michigan College in Traverse City each summer. Liana has a B.S. in Environmental Science (2006) and an M.S. in Conservation Ecology, Informatics, and GIS (2013) from the University of Michigan's School of Natural Resources and Environment. Graduate research in the Global Change Ecology Lab focuses on seedling recruitment dynamics in the dry forests of coastal Tanzania.

Grass River Wetlands

Sunday, May 27 — MORNING

Trip Leader: Dave Dister

The hike will occur mostly along boardwalks through wetland areas at Grass River Natural Area, including the Fern Loop Trail and Sedge Meadow Trail. This botany walk will provide identification of wetland flora (forbs, shrubs, and trees), as well as historic cultural uses and medicinal uses of selected plants. Ecological associations of the flora with local fauna, especially avifauna, will be emphasized.



Trip Notes: Waterproof boots are not expected to be needed due to extensive boardwalks through wetlands.

Biography: Dave Dister

Dave Dister attended Miami University (Oxford, OH) where he received a BA in Botany. Subsequently, he earned a secondary education teaching certificate in biology and earth science at the University of Cincinnati. Dave's career has included positions in outdoor education, as an environmental

scientist, and lastly, as a seasonal botanist for the Manistee National Forest. His areas of expertise include vascular plants, wetland flora, and field ornithology. In June 2017 Dave's 6-year study of *The Vascular Flora of Ludington State Park*, Mason County, MI was published in *The Great Lakes Botanist* (Vol. 56, Nos. 1-2).

Exploring the Southern Trails of Glacial Hills

Sunday, May 27 — MORNING

Trip Leader: Sarah Pregitzer

Glacial Hills Pathway and Natural Area is 765 acres of managed natural area in Atrium County. Sarah will lead this field trip through the extreme ecological diversity found there. Using the Vandermark Road Trailhead, (parking area is nearby) Sarah will lead participants in an exploration of spring flowers, native species, and invasive species. The interaction of these organisms with the overall ecosystem will be discussed. Sarah and her husband, Randy, will be Sunday night's keynote speakers, so this is an opportunity for a hands-on preview of that presentation.



Trip Notes: This hike will be easy to moderate, but expect hilly terrain. Restrooms are porta-potties.

Biography: Sarah Pregitzer (see Sunday night speaker information)

Creating with Nature and Watercolors

Sunday, May 27 — MORNING

Session Leaders: Jean Lamoreaux and Dorothy Sibley

Read about this Easy-Access program under Saturday a.m. listings. Participants may use this as a continuation of the Saturday session, providing more time to create individual and unique projects. However, you do not need to attend the Saturday a.m. session to attend today.

Part 1: Habitat Gardens at Grass River Natural Area

Part 2: Nature's Palette: Native Plants as Sources of Fiber Dyes

Sunday, May 27 — MORNING

Trip Leader: Julie Hurd

Part 1:

The Grass River Natural Area completed a new education center five years ago, which when completed, sat on an unappealing bare construction site much in need of landscaping. This presentation will describe how a team of volunteers led a multi-year effort to design and install gardens around the center representing habitats typically found in northwestern lower Michigan. Now, five years after beginning, we invite you to view our project that, like any garden, is a work-in-progress. This session will be a lecture/slide presentation with audience participation encouraged. If weather permits, we

will walk around the building to view each garden.

Part 2:

Before 1856, when the first synthetic dye was produced, color in clothing, as well as in household and ceremonial textiles, came from natural sources: primarily plants, but also fungi, lichens, and just a few animal sources. Nature's palette is rich and diverse, as paintings and surviving artifacts attest. Whether in the medieval unicorn tapestries, centuries old Scottish tartans, or paintings depicting royalty, those glowing colors were all extracted from natural sources. Every culture that existed has found ways to bring color into life. Attend this session for an overview of natural dyes, a story that touches on ethnobotany as well as history, chemistry, physics, and more. This will be a lecture/slide presentation complemented with many examples of natural-dyed yarns and garments. Come to experience the glowing hues that can be found in native and exotic species.



Trip Notes: This presentation will be held at the Grass River Center, a 12-minute drive from the Lakeview Hotel at Summit Village. Bathrooms are available. Very limited walking required.

Biography:

Julie Hurd, Professor Emerita, retired from a university career in teaching, research, and administration. She holds a Ph.D. in theoretical chemistry (U Chicago). Her computer expertise led to teaching and research in scientific information, with a focus on information technology and how it has changed/is changing how scientists communicate. She also has enjoyed creating fiber art, and weaves, spins, dyes, knits, and designs art to wear. She first took a workshop in natural dyeing in 1972 at the Chicago Botanic Garden and has been fascinated ever since with nature's dye chemistry. She teaches fiber art workshops and exhibits her award-winning work at conferences and in galleries. She now enjoys supporting arts and environmental organizations through volunteer activities. Julie has led weekly wildflower walks at Grass River for ten years and teaches classes in landscaping with native plants. She is a Master Gardener and a member of the Wildflower Association of Michigan.

Interactions and Adaptations of Plants with Animals in their Ecological Environments

Sunday, May 27 — AFTERNOON

Trip Leader: Ranger Steve Mueller (Biography, see Saturday afternoon information)

This is a repeat of Ranger Steve's session on Saturday afternoon May 27.



Trip Notes: Difficulty level will be easy to moderate

Northern Hardwood Forest Management**Sunday, May 27 — AFTERNOON****Trip Leader:** Mike Meriwether

Participants will be reviewing forest management history and its impact on forest ecology within a 100 acre forest area owned by Antrim County. Forester Mike Meriwether will be discussing forest management goals relative to forest product production, wildlife habitat, riparian forest identification, tree diameter distributions, and other forest management-related issues. Other discussions may include flora and fauna identification, recreational impacts, and aesthetics.



Trip Notes: There are no bathrooms on site. The nearest facilities are at the Bellaire Conservation District, 4820 Tover Road, Bellaire, Michigan. This site is relatively easy to navigate but will require some walking on two-track roads and trails with uneven terrain.

Biography: Mike Meriwether

Mike Meriwether is the Forester with the Antrim Conservation District. Mike has a Bachelor 's Degree in Forestry and Wildlife from the University of Wisconsin at Stevens Point. Mike has 30 years of field experience working with public and private forest lands in Northern Lower Michigan.

Part 1: Liking Michigan Lichens**Part 2: More Plants on the Wild Side****Sunday, May 27 — AFTERNOON****Trip Leaders:** Dr. Julie Medlin and Elizabeth Pitzer

Part 1:

This indoor workshop will have two segments. Join Dr. Julie Medlin for Liking Michigan Lichens where she will have her lichen petting zoo on display for observation. Be sure to bring a hand lens. After experiencing and studying the lichens, Dr. Medlin will present a short slide presentation about lichens.

Part 2:

Elizabeth Pitzer will then present More "Plant On the Wild Side". This presentation will be useful to those who attended her earlier session on Saturday but can also stand on its own for those who were not at the first "Plant on the Wild Side" workshop.

Session Notes: This workshop will be held in the Lakeview Hotel, headquarters for the Foray, so it is an Easy-Access Program.

Biography: Dr. Julie Medlin

Julie Medlin is an amateur botanist who likes lichens because they are out on display during all seasons. She holds a BS from the University of Michigan and an MA and PhD from Western Michigan University. She is retired from teaching

biology at Northwestern Michigan College in Traverse City

Biography: Elizabeth Pitzer

Elizabeth Pitzer holds a BS and an MA from Central Michigan University. She completed her field work at the CMU Biological Station on Beaver Island. She is currently retired from teaching high school at Newaygo Public Schools.

Flower Photography**Sunday, May 27 — AFTERNOON****Trip Leader:** Craig Elston

This workshop will help you take better photos of flowers and other botanical specimens. We will look at equipment and work on using your camera on manual settings to control the outcome of your images. We will cover many tips and techniques for better and sharper images. Learn to see and photograph the entire plant as well as extreme closeups of the parts. Bring your camera for practice and learning in the classroom as well as shooting out of doors at the end of our time.

Session Notes: This workshop will be held in the Lakeview Hotel, headquarters for the Foray, so it is an Easy-Access Program. A camera with manual settings and a tripod are recommended but not necessary. It is also suggested that you read the manual ahead of time and bring it with you to the class.

Biography: Craig Elston

As a Michigan native, Craig has always been interested in nature from his youth on his grandparents' farm through the present. He has also always been interested in growing plants and has had a great interest in native plants for most of his adult life. He has been leading interpretive hikes at the Hudsonville Nature Center since the mid 1990s. He has also led walks and presented lectures or slide programs at other nature centers, including Hoffmaster State Park's Gillette Visitor Center, Frederik Meijer Gardens, the Michigan Botanical Club, various events for MSU County Extensions in West Michigan, and other garden clubs or nature organizations. A member of the Hudsonville Parks and Grounds committee from 1988, he has been the Naturalist for the City since 2001, and he was involved in planting a Tall Grass Prairie in the Nature Center. He has earned the Advanced Master Gardener from Ottawa County. In 2003 he was privileged to be a part of the Kent County MSU Extension's Master Naturalist program from its inception, developing and writing the Prairie Environments segment, which is now a four-and-a-half-hour class with time both indoors and in the field for firsthand experience.

Craig is currently serving on the Gillette Nature Association Board, as Second Vice President of the Wildflower Association of Michigan, and is a Director at Large on the Michigan Botanical Clubs State Board of Directors.

Speakers—MBC Spring Foray 2018

FRIDAY EVENING SPEAKER: Dr. Robert Krueger**“Native Plants, Facts and Fallacies of Their Medicinal Properties”**

This presentation centers around the folkloric medicinal uses of Michigan native plants as well as some contemporary uses. Potential toxic effects from consuming some plants will be covered as well as potential interferences of Michigan natives with diseases and/or prescription and non-prescription drugs. Several species will be discussed including witch hazel, some lichens, *Equisetum* (horsetail), white cedar, harebells, Labrador tea, prairie sage, and buttonbush. Each plant's effectiveness will be commented on according to its phytochemical make-up in general terms. Those with tie-ins to modern drugs will be noted. A comprehensive handout will be made available to each attendee.

Biography: Dr. Robert Krueger

Robert Krueger is a member of the American Society of Pharmacognosy (ASP)—medicine derived from plants and natural sources. He taught Pharmacy at Ferris State University for 38 years and received a B.S. in Pharmacy from the University of Connecticut and a Ph.D. from the University of Iowa. He has published in the *Journal of Economic Botany* and *Journal of Natural Products*. Bob has presented locally, nationally, and internationally regarding toxic and medicinal native plants. He led the Michigan Wildflower Association and is currently co-chair of the international ASP Annual Conference for 2021.

SATURDAY EVENING SPEAKER: Angie Lucas**“Orchids of Northwest Lower Michigan: Conservation Challenges and Opportunities”**

Orchids are one of the most diverse plant families on Earth. In Michigan there are 56 native species, best described in the classic book *Orchids of the Western Great Lakes Region* by Fred Case. Although well-known and admired for their beauty, these enigmatic plants are at risk statewide as their habitats are degraded or lost. Angie will give an overview of native orchids known to occur in the northwest Lower Peninsula region of Michigan, as well as provide an update on partnership and restoration efforts by local land conservancies and volunteers, including a new collaboration with the North American Orchid Conservation Center (NAOCC). NAOCC was established as a collaborative effort by the Smithsonian Institute and the US Botanic Garden, and is based at the Smithsonian Environmental Research Center.

Biography: Angie Lucas

Angie Lucas is a Senior Land Steward at Grand Traverse Regional Land Conservancy (GTRLC), where she works on botanical inventories, rare plant monitoring, and preserve

management on protected lands including large-scale habitat restoration projects at Arcadia Marsh and Arcadia Dunes nature preserves. She graduated from Northern Michigan University and began monitoring for orchids during her days as a vegetation science technician at Pictured Rocks National Lakeshore in 2006. She began getting back into the orchid world last year when GTRLC collaborated with the North American Orchid Conservation Center/Smithsonian project and hopes to help continue spreading the word about this incredible plant family and the challenges and opportunities it faces in northern Michigan.

SUNDAY EVENING SPEAKERS: Sarah Pregitzer and Randy Butters**“Givers and Takers—An Environmental Look at Plants and Landscape Gardening”**

Plant lovers enjoy the new and exotic. But how do those new plants contribute or deter from the ecosystems they inhabit? With natural ecosystems increasingly stressed by habitat fragmentation, loss, and climate changes, how can gardeners and plant lovers help heal the land by their choices and actions? In this photographic presentation we will discuss exotics, invasives, and native plants in turn, and supply resources to help caring gardeners make ecologically sound decisions.

Biographies: Sarah Pregitzer and Randy Butters

Sarah Pregitzer has been an educator since the mid-'70s. She earned her Bachelor's degree from The University of Michigan and did her graduate work at Michigan Technological University and several other universities. Her love of wild places, native botany, and life-long learning has led her to work with the West Michigan Conservation Network, Michigan Nature Association, Muskegon River Watershed Assembly and the West Michigan Great Lakes Stewardship Initiative. She and her husband, Randy Butters, reside in Newaygo County where they co-founded the Newaygo Invasive Plant Project. She has designed and installed numerous pollinator and rain gardens with school groups and local interested folks, and dabbled in shoreline restorations.

Randy Butters worked in human services for over thirty-three years and retired from the Michigan Department of Human Services in 2010. He has a Bachelor's of Arts from Bemidji State University in Sociology and an MSW from Grand Valley State University. Randy has a longstanding interest and commitment to environmental causes. Since 2009, he has worked on various conservation issues and co-founded the Newaygo Invasive Plants Project (NIPP). Presently, he works with the Muskegon River Watershed Assembly and volunteers time with the West Michigan Cooperative Invasive Species Management Area.

Awards from the 2017 Spring Foray

Two different awards were given at this year's Foray, the Special Recognition Award and the Distinguished Service Award.

The Special Recognition Award, which is brand new and was presented for the first time, recognizes persons who have made important contributions to our understanding of the botany of Michigan and the Great Lakes Region. It was awarded Friday night to Joshua G. Cohen, Michael A. Kost, Bradford S. Slaughter, and Dennis A. Albert for their book, *A Field Guide to the Natural Communities of Michigan*. This book, published by Michigan State University Press in December, 2014, is based on over 30 years of field work by staff of the Michigan Natural Features Inventory, much of it conducted by the authors. It is a concise and well-illustrated compendium of the natural communities of the state and has quickly become a "must have" text for ecologists and botanists, both professional and amateur.

Josh and Brad were present to receive their individual awards, 4 x 4 inch trillium flower art tiles from Weaver Tile in Horton, Michigan, which were mounted in quarter-sawn white oak frames with engraved brass plates. Mike and Dennis received their awards after the Foray, and each of the recipients' employers was notified about the award.

Report submitted by Dan Skean



Photo: Mike Kost and Dennis Albert were not at the Foray to accept their awards. The photo above is the award for Mike Kost.

Photo by Judy Kelly

Editor's Note: The awards articles were not published in the paper version of the Spring *Arisaema*.



Dan Skean, (left) Brad Slaughter (center) and Josh Cohen (right) with their MBC Special Recognition Awards.

Photo by Judy Kelly.

The 2017 Distinguished Service Award was presented Saturday evening of the 2017 Spring Foray to Craig D. Elston of the White Pine Chapter. The formal nomination letter, written by White Pine Chapter President, Dorothy Sibley, is given below:

“Craig Elston has been a member of the White Pine Chapter since its formation on March, 1989. Our first WPC field trip was on May 6, 1989 when Dr. John Shontz led 15 of us through ravines along the Grand River that flows through the campus of Grand Valley State University. We enjoyed the many wildflowers in bloom on that day when suddenly it began to snow! I was following Craig, who began to laugh. He said that this always happens every spring at his Hudsonville Nature Center. After hearing about this nature center, guess what we did?

That’s right! In June, our brand new WPC members attended a wonderful field trip led by Craig Elston, the naturalist in charge of the Hudsonville Nature Center. Craig is also an excellent nature photographer, wildflower consultant, and master gardener. Over the years, Craig has led us on field trips at the nature center during different months of the year to see the ways the ecosystem changes with the seasons. This large center features bogs, streams, woodlands, and prairie areas. Craig has created and continues to work on a prairie area featuring a fantastic development of all types of Michigan prairie wildflowers.

Thus began our odyssey in following Craig throughout Michigan in search of wildflowers. He was with us in Northern Michigan and helped us identify the Michigan Monkey Flower, one of only 3 endemics that appear in Michigan, the Snow Trilliums in Lower Michigan, the Painted Trillium in Saginaw County, and the Blue-Eyed Mary in South Michigan. Craig has led us to prairie areas where he helped us locate Wild Lupine blossoms with Karner Blue Butterflies.

Craig is well known for presenting botanical programs. One of his outstanding programs illustrated the large burned area, caused by a forest wildfire, just south of Lake Superior five years ago. Craig created a photo documentary following the natural restoration of plant life for 2 years and how it affected the area. This program is remarkable, and should you wish to see it, contact Craig at [REDACTED]

In accordance with the MBC’s stated goals, Craig works hard to conserve native plants and educate the public. He donates many hours weekly at the Hudsonville Nature Center as naturalist. He works to maintain and upgrade the center, and spends some weekdays and most Sundays giving free tours to

the public to increase their appreciation and understanding of natural areas.

Craig has been an inspiration to our White Pine Chapter members. He has been an MBC Director-At-Large for four terms. He is currently our WPC Vice President. Craig has helped our WPC members host MBC State Forays with his ideas, special planning, and enthusiasm. He has attended many MBC State Forays and brings his special display to tell everyone about the illustrated wildflowers.

We owe much of the White Pine Chapter’s success to the many years of dedicated service performed by Craig Elston. His continuing contributions of time and effort in helping the White Pine Chapter grow in membership and to serve his community are worthy of the 2017 MBC Distinguished Service Award.”

Craig was presented with a 4 x 8 inch Jack-In-The-Pulpit tile in a similar oak frame from Weaver Tile with an engraved brass plate. It was clear that a surprise presentation was accomplished!



Nominations for the 2018 Distinguished Service Award are due to Vice President Dan Skean (dskean@albion.edu) by March 1, 2018.

Report submitted by Dan Skean

Craig Elston (right) with the 2017 Distinguished Service Award and Vice President Dan Skean, Awards Chair.

Photo by Judy Kelly.

2017 Fall Mini-Foray:

The MBC Southwest Chapter hosted the MBC Fall Mini-Foray on October 7-8, 2017 at Pierce Cedar Creek Institute (PCCI) in Barry County. It was a great success and was well attended. PCCI supplied us with a meeting room, dining room (and great food), and great hospitality. We enjoyed their Visitor's Center and their spacious grounds with several natural habitats to explore. The weather also cooperated by raining only at night!

Our field trip leaders took us on a number of interesting and informative field trips. We had a field trips to many of the various habitats at PCCI including a Cedar Swamp, Tamarack Swamp, Mesic Southern Forest, Sand prairie and the famous Little Grand Canyon. We also visited locations in Barry County including caves, the Great Fen, and a Oak Opening.

After Saturday's delicious dinner we had a wonderful evening program by Dr. Garrett Crow titled "In the Footsteps of 19th Century Naturalists: Exploration for Aquatic Plants on the Amazon and Rio Negro." This presentation chronicled Garrett's trip to the Amazon and focused on his interests in aquatic plants.

Report submitted by David Wendling



Great Fen Field Trip led by Tyler Bassett



Little Grand Canyon field trip, led by Dave Warners



Dioscorea villosa (wild yam)

In Memoriam

Kathleen Kepner Thomson

1929-2017

Editor's Note - the following is the obituary that was in the Nov. 5 issue of the Detroit Free Press. Kathleen was a former President of the Southeastern Chapter and her husband, George, was a founding member of the Michigan Botanical Club. Her memorial service was held in La Crosse on Nov. 19.

Kathleen Kepner Thomson was born March 30, 1929, in Raton, New Mexico, and died on October 27, 2017 in La Crosse, Wisconsin at Mayo Healthcare System at the age (as she's been saying since 1959) of twenty-nine. Kathleen grew up in the Rocky Mountains of New Mexico. She had red hair and was six feet tall, which she always said was "taller than all the boys." Her imposing stature was surpassed only by her fierce intellect and dogged determination.

Early on, she resolved to make her own way in the world through careful study, informed statement of facts, and insistence on ethical conduct on the part of those in authority. Her deep knowledge of public affairs, social issues, and the environment provided for endless interesting conversations. Her infectious laugh made every conversation joyful.

Kathleen graduated from the University of New Mexico with a Bachelor's degree in Social Studies in 1951. She received her Master of Science in Political Science in 1955 from the University of Wisconsin in Madison. Beginning in 1954, she served at the Wisconsin Legislative Reference Bureau, a non-partisan resource for Wisconsin legislators.

She moved to Detroit in 1966 to serve as a Senior Research Associate for the Citizen's Research Council, providing factual, unbiased information on state and local governments for policymakers. She met George W. Thomson, a tall Scotsman, chemical engineer, avid botanist, and frequent singer of Scottish ballads in Detroit, where they were married in 1979. Kathleen and George participated in leadership roles in the Michigan Botanical Club, and the Cactus and Succulent Society.

They enjoyed exploring nature and photographing the natural world around them. George died in 1996. Kathleen was a generous and active advocate for her various causes.

One of her many notable accomplishments was getting the endangered Dwarf Lake Iris named as Michigan's



Iris lacustris (dwarf lake iris)

Photo by Sheila Bourgoin

State Wildflower in 1999, for which she received the Distinguished Service Award from the Michigan Botanical Club. Kathleen moved to La Crosse in 2012 to be closer to family. She was a member of the Unitarian-Universalist Fellowship and one of their Covenant groups.

She continued to avidly follow and support her favorite causes. She is survived by her sister, Madeline Kepner, four nieces, Ruthe (Lee) Batulis, Deborah Stanage, Kelley (Charles Avila) Stanage, and Lisa (Don) Brosious, and nephew, Whitford (La Donna) Dwyer. Kathleen devoted her life to advocating for political integrity, social justice, and environmental stewardship.

All who knew her will miss her, but her life provides inspiration to strive for a more ethical, just, and beautiful world.

Roger Sutherland

January 8, 1930 – February 11, 2018

Roger was president of the Michigan Botanical Club Huron Valley Chapter from 1996 –2001. He carried the HVC through a critical period.

Born in Toledo, Ohio, he grew up in Trilby, Ohio. Education and service were a theme throughout Roger's life. He studied at Bowling Green State University (1948-1952), at Frank E. Bunts Educational Institute, Cleveland Clinic Foundation, served during the Korean War as a physical therapist. He earned two master's degrees (Education and Biology) from the University of Michigan. He began a 34-year career as a biology educator, at Allen Park High School in 1957 and in 1964, he became the first biology and botany teacher and chairperson of the biology department at Schoolcraft College.

He gave freely of his gifts and time as leader for Boy Scout Troop 30 Dixboro, 4-H, SE Michigan Beekeepers Association, Michigan Beekeepers Association, Michigan and Washtenaw Audubon Society, Michigan Botanical Club Huron Valley Chapter President, Naturalist Camera Club of Toledo. Roger presented many nature programs to classrooms, clubs, and church groups. He and Mary conducted countless classes on wildflowers,

Thank you to Sarah Noodén and Emily Nietering for providing this information.

Summary of the

Board of Directors Meeting, October 7, 2017

The meeting was held at Pierce Cedar Creek Institute in Barry County and was attended by 16 board members and two guests, one of whom was Neil Billetdeaux who will be taking over as President of the Huron Valley Chapter. President Garrett Crow presided.

Financial (Bob Kelly): \$2,000 will be transferred from the checking account to *The Great Lakes Botanist* account since it was Hanes Fund money and earmarked for hosting *The Great Lakes Botanist* on a U. of M. website. Seven dollars of the membership dues collected by the chapters are retained by the state organization and Bob Kelly was asked to determine how much, if any, of the \$7 could pay the cost of liability insurance.

Arisaema (Sheila Bourgoïn): The print version of the last *Arisaema* was missing some pages because of a miscommunication. The electronic version was complete. 75% of members receive both formats. Members were encouraged to submit articles on activities, recognitions, etc.

The Great Lakes Botanist (Michael Huft): The traditional four quarterly issues will be combined into two semi-annual issues in order to keep publishing costs in line with current income. An offer to digitize the entire run of the 'Botanist' was received from the Biodiversity Heritage Library who will make it available in a free searchable database on their website. Michael will pursue and review the license agreement.

Nominating Committee (Sarah Noodén): Sarah steps down at the end of the year and was thanked by the Board for her years of service as committee chair. Tyler Bassett volunteered to chair the committee whose immediate task is to find a replacement for Treasurer Bob Kelly.

Dickinson Award Committee (Irene Eiseman): Irene's suggestion to pre-approve \$500 annually for the award in order to streamline the process was approved by the Board. The actual amount of any award would be at the discretion of the committee. Going forward, the vice-president will serve as chair of the Committee in keeping with that officer's role in the administration of other awards.

Website (Sheila Bourgoïn): The number of trees in the Big Trees database on the website has been expanded to over 800. 53% of website inquiries come from desktop computers, 39% from phones, and 8% from tablets.

The Big Tree project has the most hits on the website.

MBC Brochure: Emily Nietering will take over the task (from Sarah Noodén) of keeping the club informational brochure updated.

Big Trees Project (Garrett Crow): Andy Sawyer has resigned as coordinator of the Big Trees Project and Garrett is in the process of finding a replacement.

Mini Foray (Dave Wendling): Costs for the ongoing event were expected to approach \$900. Suggestions for covering the costs included a grant request to Michigan Botanical Foundation and asking for donations at the evening program. There was no registration fee to attend the mini-foray.

Board Meeting Minutes: Garrett Crow suggested that a summary of board meeting minutes be published in the *Arisaema* and the full approved minutes be posted in an online folder.

Jim Hewitt, Recording Secretary



Mimulus sp. (monkey flower)
Photo by Marilyn Keigley

Summary of the Board of Directors Meeting, January 27, 2018

The meeting was held at Albion College and was attended by 17 board members and two guests. President Garrett Crow presided.

It was announced that the new President of the Huron Valley Chapter is Neil Billetdeaux. New Directors-at-large for 2018-2020 are Larry Noodén for Huron Valley Chapter and David Hazelswart for White Pine Chapter.

Financial (Bob Kelly): 70% of annual expenditures are for publication costs of *Arisaema* and *The Great Lakes Botanist*. Over the last two years these costs exceeded income from membership dues, the primary source of revenue.

Over half of the Club's finances are reserved in the Helen V. Smith Fund and are earmarked for botanical publications, such as *Winter Wildflowers*, the booklet she wrote in 1973. Updating this booklet or writing a southern Michigan field guide are projects that could be undertaken to use some of these funds.

The Club will update the new insurance policy to cover all participants at the Spring Foray. After the Foray the renewal of the policy will be discussed along with allocating its cost among the Chapters.

Arisaema (Sheila Bourgoïn): Cost control measures to produce and mail the Club's newsletter were discussed, beyond the \$100 Sheila saved by doing the graphic design herself. Bulk mailing, promotion of digital delivery, and content reduction were suggested.

The Great Lakes Botanist (Michael Huft): An agreement was signed with the Biodiversity Heritage Library to scan all issues of *The Great Lakes Botanist* and its predecessor, *The Michigan Botanist* and make them available on their website.

Manuscripts will be sought from a wide geographic area to keep the pipeline full.

TGLB has a separate bank account and the end-of-year balance was \$2,625 higher than the starting balance.

The cover and table of contents for each issue will be placed on the Chapter Facebook page.

2018 Forays: Dorothy Sibley and Jelanie Bush from White Pine Chapter reported on the venue (Shanty Creek Resort in Antrim County) and the field trips they are planning for May 25 – 28. Lynn Kirkpatrick of Huron Valley Chapter said the mini-foray concept is being considered in mid-autumn in SE Michigan.

Website (Sheila Bourgoïn): A "Donate button" will be added to the website to accept donations to the Club with processing through a third party (Stipe).

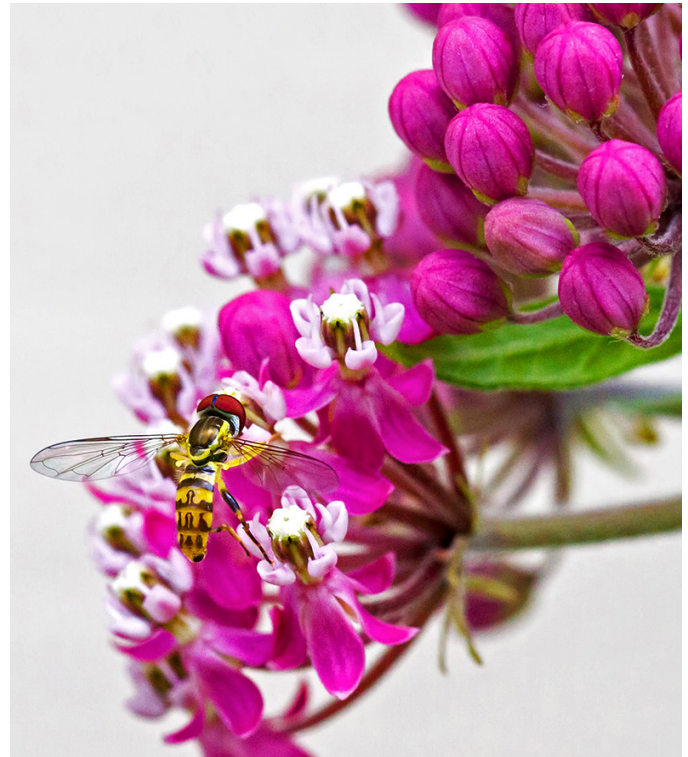
The Big Tree project has the most hits on the website.

Big Trees Project (Garrett Crow): On motion, Ted Reuschel was approved as chair of the Michigan Big Tree Committee. Ted is retired from a career as a forester with the DNR. His immediate goals are to work with Sheila to improve interaction with big tree data on the website, recruit a state-wide group of measuring volunteers, and increase the number of big trees in the database.

Board Meeting Minutes: A motion was approved to post the approved minutes of the meetings on the MBC website and to direct the recording secretary to additionally prepare a summary of the minutes for publication in *Arisaema*.

Sale of State Game Areas (Dave Wendling): Dave said MDNR is considering sale of some SGA's to private interests. Actions the Michigan Botanical Club and its members could take to prevent this were discussed.

Jim Hewitt, Recording Secretary



Asclepias incarnata (swamp milkweed)
Photo by Marilyn Keigley

Michigan Botanical Foundation Report for 2017

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 four grants in 2017 for a total of \$4,466.75. The details of these grants can be found at the end of this report.

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 December 29, 2017 was \$247,602.

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:

Judy Kelly, President, 2016-2018

Bev Walters, Secretary 2017-2019

Robert Kelly, Treasurer, 2016-2018

Michael Huft, Trustee, 2017-2019

Emily Nietering, Trustee, 2017-2019

Dr. David Warners, Trustee, 2016-2018

MBF Grants Awarded in 2017

MBF 2017-01: \$956.25 to graduate student Susan Fawcett for the second half of her study of two rare species of *Asplenium* (Green Spleenwort and Walking Fern) for describing and comparing environmental characteristics of their respective microhabitats. These funds are for 2017 field research expenses in northern Michigan. Susan Fawcett is a PhD candidate at the University of Vermont.

MBF 2017-02: The Board approved MBF Joan Robb Scholarship Awards and funding for additional sponsored students for the MBC 2017 Foray. This year awards in the total amount of \$1,710.50 were funded. The Huron Valley had one sponsored student, and the Great Lakes Chapter, the White Pine Chapters and Southeast Chapter each received funding for two sponsored students.

MBF 2017-03: \$1,500 to Sarah Lamar for her study "Biological Invasions on a Large Scale: Tracking Baby's Breath (*Gypsophila paniculata*) across North America." Sarah is associated with the Annis Water Resource Institute, Lake Michigan Center, Muskegon, MI. This project aims to examine the spread pattern of invasive baby's breath (*Gypsophila paniculata*) throughout North America. Baby's breath is particularly troublesome in ecosystems with sandy, well-draining soil, where it can form monotypic stands and threaten native plants, such as the federally-protected Pitcher's thistle (*Cirsium pitcherii*) in northwest Michigan. By understanding the invasion pattern of baby's breath, we can predict where it will spread next, helping to prevent invasions before they happen and target management in a more impactful way. Understanding baby's breath's invasion history will be accomplished through genetic analysis of both contemporary populations across North America and preserved herbarium specimens dating back to periods of early invasion.

MBF 2017-04: \$300 towards the 2017 Mini-Foray costs.

Donations in 2017:

There was one \$400 donation to support the Robb Scholarships underwriting student attendance to Michigan Botanical Club Forays.

Report submitted by Judy Kelly, President, Michigan Botanical Foundation, Board of Directors



Viola lanceolata (lance-leaved violet or bog white violet)
Photo: Bob Smith

