

**Toni Spears, Treasurer  
Huron Valley Chapter  
Michigan Botanical Club  
7412 Black Forest Drive  
Dexter, Michigan 48130**



**MICHIGAN BOTANICAL CLUB**

The Michigan Botanical Club was founded in 1941. It is a non-profit organization that promotes the understanding, enjoyment and preservation of Michigan native plant life and the conservation of our natural resources.

**AIMS**

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

**Huron Valley Chapter  
Michigan Botanical Club Board**

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HURON VALLEY CHAPTER



MICHIGAN BOTANICAL CLUB



# THE ECOLOGICAL ROLES OF FUNGI

**Paul Olexia**

Professor of Biology, Emeritus, Kalamazoo College

**7:30 p.m., Monday, April 15, 2013**

**Matthaei Botanical Gardens auditorium, 1800 N. Dixboro Rd. Ann Arbor, MI 48105**

# HURON VALLEY CHAPTER NEWSLETTER

## MICHIGAN BOTANICAL CLUB

April 2013

MBC *founded 1941*

[www.michbotclub.org](http://www.michbotclub.org)

Meetings are held on the 3<sup>rd</sup> Monday, 7:30 p.m. September through April, excepting December, at the Matthaei Botanical Gardens auditorium, 1800 N. Dixboro Rd. Ann Arbor, MI 48105.

### 2012 – 2013 MEETINGS

**MONDAY, April 15 - THE ECOLOGICAL ROLES OF FUNGI, Paul Olexia**, presented by Professor of Biology, Emeritus, Kalamazoo College. Fungi are distinctive organisms, clearly separate from both plants and animals. But they are more closely related to animals than they are to plants and they have many of the same needs as animals, e.g. moisture (water), oxygen, and some form of food (organic molecules such as bread, leather, wood, etc.). So Fungi constitute a separate Kingdom of organisms and they are divided into Phyla or "Divisions" mostly on the basis of microscopic characteristics. A few of these groups will be introduced to provide some idea of their unique characteristics and the diversity of the group. Perhaps one of their most distinctive traits is that they structurally consist primarily of very fine filaments called "hyphae". These filaments secrete enzymes by which the fungus can break down complex organic molecules (the food source) into smaller molecules that then can be absorbed to provide nutrition for the fungus, comparable to the way animals secrete digestive enzymes in their stomachs and intestines for the same purpose.

An important feature of fungi and their ecological roles in nature has to do with the sources of their food. Some live off of living organisms (and are called "pathogens"), of both plants and animals, e.g. black spot of roses or athlete's foot. Some live primarily off of dead organisms or their parts (decomposers or "detritivores") and, in the process, can function in recycling nutrients within an ecosystem. In this, and some other ways, fungi can affect soil quality. Finally, some fungi can act as "mutualists", a type of relationship in which both the fungus and its "partner" or "host" reap benefits from the relationship, the most obvious example being a lichen, a combination of a fungus and an alga. The talk will be mostly about these basic kinds of relationship and some of their consequences.

At Kalamazoo College Paul mostly taught courses in Evolution, Plant Biology and Environmental Science. As part of the Kalamazoo Wild Ones Community Projects Committee, they have made and maintained some native plantings in town. In warmer months, he is a weekly

Southwest Michigan Land Conservancy volunteer steward e.g. eradicating invasive species, posting boundary signs, building trails, and so forth. He is Professor of Biology, Emeritus with a BA Wabash College; MA State University of New York at Buffalo; and PhD University of Tennessee.

### HVC Newsletter Distribution

This April is the introduction of the MBC-HVC e-newsletter in .pdf format. It is being sent to the HVC email distribution list. Members who requested the "snail mail" version will be receiving that as well. The newsletter is published January-April and September-November. Please notify the treasurer of any change in email address or request for snail mail copy. (Toni Spears, [t\\_spears2000@yahoo.com](mailto:t_spears2000@yahoo.com), 734-424-2530)

### FIELD TRIPS AND EVENTS

**Saturday 13 April 2013, 10 am to 1pm, The Hunt for Harbinger-of-Spring (Continued) (Rescheduled from March 30)**

MBC-HVC Ramble: Last year we missed the harbinger-of-spring (*Eriginia bulbosa*) in bloom. SO, by popular request, we'll try this trip a week sooner this year. The lovely small woodlot near the Huron River has a wealth of wildflowers, and we'll look for other early starters, such as bloodroot and the large patches of false rue-anemone and trout lilies. The wild ginger and cut-leaved toothwort typically appear later, but who knows what this weather pattern might bring. Large Chinquapin oaks also live here. Meet in the east parking lot (furthest from the entry). The park is located on Huron River Dr. about a mile down river (east) of Dexter.

**Saturday 20 April 2013, 1:00 pm - 4:00 pm, Eco-Restoration Volunteer Workday & Wildflower Walk at Horner Woods, Sylvia Taylor.**

Join volunteers from the Michigan Botanical Club to scout for the invasive garlic mustard and help with light trail maintenance at Horner Woods, a wildflower sanctuary NE of Matthaei Botanical Gardens. Volunteers will also enjoy seeing large patches of a lovely native wildflower, Twinleaf, which will be in peak bloom in late April. Please dress for physical, outdoor work. Sturdy closed-toe shoes are required. We provide tools and orientation. Minors are welcome with permission forms; those under 16 must be accompanied by a parent/guardian. Meet in the west lobby at Matthaei Botanical Gardens 1800 N. Dixboro Rd. to caravan to Horner Woods.

**Saturday 11 May 2013, 10:00 am - 1:00 pm, Spring  
Ephemerals of Nan Weston Nature Preserve:  
Manchester, MI, Neal Billetdeaux and Robert Ayotte**

The variety of plant communities at Nan Weston Nature Preserve at Sharon Hollow reflects the amazing underlying geological diversity of the area. We will provide an introduction to the ecology with a focus on spring ephemerals of the rich mesic and lowland woods. Wear sturdy walking shoes, dress for the weather. From Chelsea, Michigan: • At the junction of I-94 and M-52 (Exit 159), take M-52 south for 7.4 miles to Pleasant Lake Road. There is a flashing yellow light at the intersection. • Turn right (west) on Pleasant Lake Road, follow it for 3.2 miles to Sharon Hollow Road. • Where Sharon Hollow Road curves sharply to the south, go straight (toward sign for Sharon Mills parking) and turn right (north) on Sharon Hollow Road (dirt), and follow to Easudes Road. • Turn left (west) and travel 0.9 miles on Easudes Road. You will see the preserve sign on the left (south) side of the road. • Park on the south side of Easudes Road, between the preserve sign and Jacob Road. The trail into the preserve begins at the sign. Please be sure not to block any of the preserve neighbors' driveways. Questions? Contact: Neal.Billetdeaux@smithgroupjjr.com (734) 604-6682.

**Saturday 18 May 2013, 1:00 pm - 4:00 pm. Eco-  
restoration Volunteer Workday at Horner Woods led by  
Sylvia Taylor**

Join volunteers from the Michigan Botanical Club as they continue to remove invasive garlic mustard at Horner Woods, a wildflower sanctuary NE of Matthaei Botanical Gardens. In late May, Garlic Mustard will be in bloom and more easily identifiable for removal. Please dress for physical, outdoor work. Sturdy closed-toe shoes are required. We provide tools and orientation. Minors are welcome with permission forms; those under 16 must be accompanied by a parent/guardian. Meet at Matthaei Botanical Gardens, 1800 N. Dixboro Rd., near the back horticulture entrance (due to the second spring plant sale that will be held partly in the west lobby), to caravan to Horner Woods.

**May 24 – 27 - MBC Spring Foray** - White Pine Chapter hosting at Calvin College, Grand Rapids. Details in Spring Arisaema.

**Saturday 22 June, 10 am to 1 pm, "Kitty Todd Preserve"  
in Swanton, Ohio. Trip Leaders: Jim Toppin/Janet Traub**

We'll enjoy the great diversity of plants and animals here by touring a variety of lakeplain habitats, including sand barrens, oak savanna, wet-mesic flatwoods, and tallgrass prairie. The hike will be a maximum of 2 miles with fairly easy walking, mainly on trails, in very flat terrain with a few low sand dunes. We'll be hiking largely in dry to mesic areas, but rainy weather could make for some wetter ground in places, so consider appropriate footwear. With a recent land acquisition, the preserve now protects 1000 acres, and we'll see some results of the active stewardship work done

by staff and volunteers. Meet at the Kitty Todd office, 10420 Old State Line Road. From Ann Arbor, take US 23 south into Ohio to exit 8 West - Airport Highway/Route 2. Take Airport Highway west about 5 miles to Eber Road, turn north on Eber and go about 1 mile until it dead-ends at Old State Line Road, then go west about a half mile to the preserve office on the north side of the road.

**In planning for the 2013 season, Field Trip Coordinator, Robert Ayotte would greatly appreciate hearing from members. Please forward your suggestions and ideas for field trips, leaders and locations to [Rayotte14@Comcast.net](mailto:Rayotte14@Comcast.net) or call 734-718-6114. Please check the MBC website: [www.michbotclub.org](http://www.michbotclub.org) for updated listings and/or watch for email notices for MBC-HVC field trips.**

**Save the Date!  
MBC Fall All Chapter Meeting 2013**

**Saturday October 12, 2013** will be the Michigan Botanical Club State Fall Meeting, hosted by our Huron Valley Chapter and held at the Gerald E. Eddy Discovery Center in the >20,000 acre Waterloo State Recreation Area near Chelsea, Michigan. A wonderful program on Alaska presented by Tony Reznicek, and a field trip centered on the evergreen lycopods led by Connie Crancer awaits us. Volunteers for refreshments will be recruited in September. -- Sarah Nooden

**The Michigan Botanical Foundation**, an independent non-profit tax exempt, 501(c)(3), organization was established in 1992 for the purpose of providing financial support for Michigan botanical research, education, publications, field trips, panels, lectures, and other related activities. Correspondence, contributions, and inquiries should be directed to: **Michigan Botanical Foundation  
c/o Robert Sabine, Treasurer,  
703 Lake Avenue,  
Grand Haven, MI 49417-1715**

**E-mail or Telephone Alerts:** If you do not receive email alerts or reminders from HVC and you wish to, please notify Tony Reznicek, [reznicek@umich.edu](mailto:reznicek@umich.edu). If you don't have e-mail and would like to know of late breaking events? Please call Hal Juran at (734) 769-4497 to be on his "call" list.

**Damaged Newsletters:** If your newsletter arrives damaged or not at all and you would like a replacement, please contact Sarah Nooden, [snooden@umich.edu](mailto:snooden@umich.edu), or (734) 663-5667.

## Conifers in Nichols Arboretum, 16 March 2013

Reported by: Ron Gamble



*L-R: Mary, Dennis, Jennifer, Irene, Robert, Ron, Amanda  
Photo by Tim Eiseman*

Robert Ayotte led a fantastic trip for seven attendees on a lightly snowy day through Nichols Arboretum. (Just think, last year during mid-March we had already been at 80° F. several days; quite the difference as compared to our well below-average March temperatures this year!) Our topic, “Conifers”, can be defined as a woody plant that bears cones, has naked seeds, and evergreen needle-like or scale-like leaves.

We gathered at the Washington Heights road entrance near the Reader Center (aka Burnham House), and quickly discussed the names of Michigan’s 13 native conifers. Our trip focus now changed: During this field trip, we reviewed at least 25 species of conifers present in the Arb, which Rob identified and described. The majority of these conifers were native to the Appalachians, Western U.S., Europe or Asia (but not Michigan).

We got started looking at a group of pitch pine (*Pinus rigida*). Rob explained these trees were tolerant of less fertile and dry soil. It is common in the Appalachians and Eastern U.S., and even dominant in the New Jersey pine barrens. The wood has been commonly used in ship building and rough construction. This is a 3-needle pine. He explained pines can have: 1 needle, 2-3 needles, 3 needles or 5 needles. Apparently 4 needle pines are quite uncommon.

We looked briefly at red pine (*Pinus resinosa*). Within the *Pinus* genus, the ability to self-fertilize is a distinct character attributed to red pine.

We spent considerable time throughout the trip being tested (by Rob), “Is this a fir or a spruce?” Initially, the separating character was described as, “For firs, if you break off a

needle at the stem, the leaves (i.e. needles) leave a depressed sucker-like disc on the stem which can be seen easily with a hand lens; while the broken off needle of a spruce does not leave a depressed disc, but rather a post-like structure called a sterigma.” However, later it turned into a trick question, because although a sterigma-like structure may be seen, the tree could be something other than spruce.

We looked at eastern hemlock (*Tsuga caroliniana*) which had soft needles and was quite attractive. At first look, the leaves appeared to be in a flat plane, but on close inspection were actually in a spiral. Also, unique to trees seen on this field trip today, this tree also had additional very short (maybe 3-4 mm in length) leaves, oriented parallel to and against the stem branches. These appressed leaves were a character easy to miss, yet quite interesting.

Another interesting tree, and one known (at least by name) to most of us was the Douglas fir (*Pseudotsuga menziesii*). One of the most interesting things about this tree is the cone. When you look at the cone, there are bracts extending between the scales which some folks describe as looking like “the hind legs and tail of a mouse trying to hide between the cone scales.” Even though some folks name it “fir”, it’s not a fir (*Abies*) but rather more closely related to larch (*Larix*), although both in the pine family (Pinaceae). This is an example where a sterigma-like structure remains if you break off a leaf, but remember it’s not a spruce (*Picea*).

We heard there are many fungal and other diseases which bother our wide range of conifers. I guess that’s not a real surprise, since it’s fair to say most of our affected conifers are non-native.

Toward the end of the trip we looked at cedar-of-lebanon (*Cedrus libani*), and then immediately learned there are no true cedars (*Cedrus*) in North America. Wait, what about eastern red cedar (*Juniperus virginiana*), or northern white cedar (*Thuja occidentalis*)?! They’re not true cedars (in the Pinaceae family), but rather belong in the cypress family, the Cupressaceae. *Cedrus libani* had short shoots, similar to our larch, where the needles grow from the tree branches. Wood from *Cedrus* is rumored to have been used to construct Solomon’s Temple, and also sea-worthy boats of the sailing Phoenicians.

Finishing up, we discussed the larches (*Larix*), and the suggestion that *Larix* is the most widely distributed conifer genus in the world. Typically, this genus is moisture tolerant and shade intolerant. Pests of *Larix*, including larch sawfly and the larch casebearer moth, have had significant negative impact on *Larix* populations.

Even though our walk distance was maybe a mile, we spent a very educational and enjoyable three hours in the

Arb and successfully dealt with challenging footing on the sometimes steep and slippery slopes/trails. Not to mention the “slippery slopes” of conifer identification...

Thanks to Irene Eiseman for help getting the names together for this report. Thanks again to Rob for many hours of preparation getting ready to lead this outing! (p.s. I'm thankful to \*not\* be taking a woody plants exam in this Arb)

### MEMBER NEWS



#### **FAYE STONER PRESENTS SLIDE SHOW TO “OUTSIDERS”**

Faye Stoner, long time member of HVC, presented her Isle Royale slide show to Southeast Michigan Group, Sierra Club, on March 7 at Birmingham Unitarian Church in Bloomfield Hills. This was the same program that Faye gave to HVC in 2012 and it seemed perfect for a program that the SEMG Outings Committee would be hosting soon. Billed as a “Virtual Visit to Isle Royale,” Faye and the Committee were rewarded with the largest audience in the 20-year memory of the Committee co-chairs. Way to go, Faye!

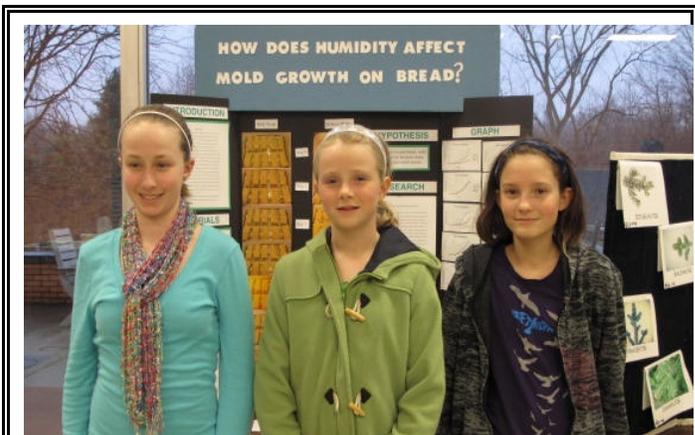
---Joanne Cantoni, HVC Member,  
SEMG Outings Committee Co-Chair

#### **CONGRATULATIONS TO TODD CRAIL\* !**

News from Todd: “I was offered a Lecturer position in the Department of Environmental Sciences at the University of Toledo two days before I defended my dissertation (The Ecological Niche of Darters (Pisces:Percidae) Across Multiple Scales in the Ohio River Basin). My focus is developing undergraduate engagement and research, and I am focusing that effort around collecting data that managers in the Oak Openings Region can use. Some of the current more developed projects are, the habitat characteristics of orange fringed orchids and other Atlantic Coastal Plain disjuncts, leaf removal as a means of restoration (when prescribed fire is not available), the landscape to local drivers of buckthorn thicket, and using frogs as a response variable to buckthorn management. Of course, I am still insanely interested in fish and mussels, and the River Raisin and Huron River feature prominently in my radar. ---

\* Many remember Todd from the talk he gave to HVC a few years ago, and/or the field trips he led at Oak Openings Region at the 2010 Spring and Mini – Forays. --sn

### **2013 Botanical Science Fair Awards**



Student Award winners from Middle School Division who attend the HVC award ceremony held March 18<sup>th</sup> at Matthaei Botanical Gardens. First Place, Clair Weadock (middle); Second Place Awards, Christina Galia (left), and Indigo Corvidae, (right).  
Photo by S. Nooden

The 55th Southeast Michigan Science Fair was held March 9<sup>th</sup> at Washtenaw Community College. HVC representatives of the Botanical Science Division were Ruth Hart, Amanda Klain, and Irene Eiseman. The team is pleased to report that five exhibits were judged to be outstanding in their scientific presentation and botanical content. At the high school division, 1<sup>st</sup> Place was awarded to Garrett Fisher from Onstead High School. His exhibit was "How Sweet is This Stuff" which examined starch and sugar content in various fruits using osmosis techniques. Second Place went to Jessie Kim from Skyline High School, who studied "The Effect of Artificial Lighting in Plant Growth". In the Middle School division, 1<sup>st</sup> place was awarded to Claire Weadock from St Francis Middle School, who carefully examined "How Do Different Colors of Light Effect Plant Growth". Two 2<sup>nd</sup> Place Awards were presented; one to Indigo Corvidae, Forsythe Middle School, who presented an investigation of "Phyllotaxis - Do All Plants in the Pinaceae Family Grow Needles Following the Same Mathematical Sequence?", and 2<sup>nd</sup> Place to Christina Galia from Clague Middle School, for her analysis of the growth patterns of fungi, "Does Water Affect the Rate of Mold Growth on Bread". As an acknowledgement of their exceptional work and interest in the botanical sciences each students received a gift card to Barnes and Noble bookstore, and hearty congratulations on their outstanding accomplishments. We gratefully acknowledge the Michigan Botanical Foundation whose continued financial support provided funding for the Science Fair Awards program and for the volunteer efforts of the expert judges.

**by Irene Eiseman**

## PRESIDENT'S CORNER

### Futuristic Botany

Every time I look at the statement on the Michigan Flora website, where we note that “Few things in science are more certain than the fact that floristic works become outdated almost as soon as they are printed,” I reflect on the changing reality of our modern environment. In researching updates for the website, Bev Walters and I visited the Herbarium at Andrews University in Berrien Springs, Thursday, March 28. This collection has excellent modern holdings of the rich flora of the extreme SW corner of Michigan, an area that has a milder climate than most of the state, and thus many southern plants are more frequent here than in any other area of the state. Some, like the crane fly orchid, *Tipularia discolor*, occur nowhere else in the state. While there, we also took advantage of the nice weather to do the first botanizing of the season. Now that was an eye opener.

The recently retired Curator of the Herbarium, Dennis Woodland took us to see some of the new records that he had discovered. We soon saw that there was another side to this area being the warmest part of Michigan One plant recently reported as new to our flora was American holly – *Ilex opaca*. This is a small broad-leaved evergreen tree. It is hard to imagine a broad-leaved evergreen growing wild in Michigan, but hollies were clearly invading the understory of an old pine plantation. Even more astonishing was seeing a vacant lot in St. Joseph that was being overrun with a tall (to 12 ft. or more), fully evergreen, Asian bamboo! How the bamboo got there is a mystery – perhaps with construction equipment, or maybe even spread from a planting in the area. But at least it will not likely be a serious threat to natural areas, as spread is only vegetative and it may well never flower and fruit in Michigan. But we know exactly how the holly got to where it grows – dispersal of the bright red edible fruits by birds. And the area where the holly occurs was also filled with other invasives with bird dispersed fruits; buckthorns, honeysuckles, privets, Asian bittersweet, and even Eurasian yews (*Taxus*)! It brought home to me how many of our aliens are dispersed by birds (some of which are also aliens, like Starlings).

And there is another lesson here. The warmer climate in this small area of Michigan may give us a window into the future of larger areas of Michigan decades from now. Imagine American holly – and perhaps other evergreen woody plants – becoming frequent in forest understories in southern Michigan. We think buckthorn and honeysuckle are bad with their ability to leaf out early and hold leaves late – imagine what an evergreen might do to the forest ground layer! But I think this is a clear sign that the future may well bring an influx of more southern weeds and invasives, and possibly more life forms foreign to Michigan (like large broad-leaved evergreens and evergreen vines.)

Is there anything we can do? Of course, yes. Work to reduce

our carbon footprint wherever possible. It really will have an effect on our flora (and will help with more than just this particular impact). Be careful of what you grow in your garden. Even though we all want to feed birds, I think we also need to think carefully about this and avoid using bird dispersed aliens, even those that are not yet invading Michigan – or else use cultivars whose fruits are not viable. Such a high proportion of woody plants that invade natural areas are bird dispersed that we should be very cautious here. And more generally, many people think they want low maintenance plants that aggressively thrive in a wide range of conditions, smother weeds, bloom and fruit all summer long, etc. But that is almost the definition of an invasive! We really should want plants that require cultivation to survive, or for lower maintenance, use natives!

**Tony Reznicek,**  
**President, Huron Valley Chapter**

### OF RELATED INTEREST

#### Waterloo Natural History Association Programs.

Advance Registration Required and for more information, call 734-475-3170, or go to [www.wnha.org](http://www.wnha.org)

**SKETCHING NATURE** Saturday Apr 20 & 27, 10 am to Noon  
- under the direction of **Artemis Eyster.**

**INCREDIBLE EDIBLES** Saturday May 11, 1:30 to 3:00p.m.  
**Led by** wild edibles expert **Tom Jameson.**

**FAERIE FESTIVAL** - MAY 4TH 10:00 – 4:00. Explore the Magic of Nature at the Eddy Discovery Center, 17030 Bush Rd. Chelsea

#### WASHTENAW COUNTY PARKS EVENTS

**For more information contact: Faye Stoner,** Parks Naturalist, Washtenaw County Parks, 734-971-6337 X334 or [stonerf@ewashtenaw.org](mailto:stonerf@ewashtenaw.org)

#### **APRIL:**

**Garlic Mustard Pulls**, 10:30 a.m. to 12:30 p.m.  
Sat, Apr 20 Th Scio Woods, Scio Twp.  
Sat., April 27 Miller Smith Preserve, Lima Twp.  
Sun, Apr 28 Park Lyndon South, Lyndon Twp.

#### **Landscapes of the Raisin River Saturday, April 6**

10 a.m. to Noon, come at 9:30 for networking/refreshments Leonard Preserve, Manchester Twp. Visit [www.stewardshipnetwork/rc](http://www.stewardshipnetwork/rc) for more info

**Invite Garlic Mustard to Tea - The Heritage of a Wild Edible**  
Sunday, April 7, 2 to 4 p.m. County Farm Park  
**Bronwen Gates**, local botanist/herbalist.

**Boots Required! - A “Wet Woods” Walk - Sunday, April 14,**  
2 to 4 p.m. Northfield Woods Preserve, Northfield Twp.

**Wildflowers along the River Raisin - Sunday, April 28,**  
2 to 4 p.m., Leonard Preserve, Manchester Twp.