Newsletter of the Michigan Entomological Society

Vol. 63, No. 1 **April 2019**

MES Website: http://michentsoc.org Facebook: https://www.facebook.com/michentsoc/

Upcoming MES Events

65th Annual Meeting – 21- 22 June 2019 at the Rockwell Lake Lodge.
(https://rockwelllakelodge.hillsdale.edu/).

The Rockwell lake Lodge has been a great place for several of our annual meetings, with posh accommodations and lots of habitat to explore! David Houghton has been putting together another grand meeting, and we hope that you will attend. The Annual Meeting has a rich history, and while locations have varied from year to year, The Rockwell lake Lodge has been a favorite spot for many of us. It's not far from Cadillac, MI, which itself is a nice place to visit, The trails meander through a variety of habitats, and there is excellent fishing in Rockwell Lake. Canoeing and kayaking the lake is another treat for those that wish to do so. There are good spots to set up your night lights, and of course, insect nets are allowed everywhere. The Lodge accommodations are top-notch, and the food, excellent. In short, it's a place where you have have a meeting and can also relax and mingle with the MES folk. Inside this newsletter, you'll find the meeting registration and reservation information, and you can also go online at our website to download the pdf. It's at http://michentsoc.org/MES2019Registration.pdf

A New Insect Collection Manager at the UMMZ

Hello Michigan Entomological Society! I know I haven't met most of you yet since I'm new to the area, but I wanted to introduce myself. My name Erika Tucker and I am the Insect Collection Manager at the UM Museum of Zoology. I'm really excited to be here in Michigan to take care of the collection!

Now that the insect collection has relocated slightly south of main campus to the Research Museum Center (HUGE undertaking - thank you Mark O'Brien!), we have started a couple big projects. We are currently working on digitizing and databasing all of the estimated 3.5 million specimens in the collection. This is mostly run on student power at the moment, but we will soon be incorporating citizen scientists into the project to help transcribe digitized datasets. Our other big project is a prairie restoration! The school gave us permission to use the plot of lawn next the RMC and restore it to native prairie land. Volunteers from UM and the local community have been a huge part of this project. We are currently in the process of removing the dead grass and weeds from the site and plan on planting a cover crop once it warms up, with the prairie seed to be planted this fall. Stay tuned for updates on both projects and please let me know if you'd like to become involved!

While the Insect Collection at the RMC is not currently open to the public, I am more than happy to provide tours to small groups of those interested in visiting. We also have the capability to host things like lectures or events here at the RMC and I'd love to have some of those activities be entomologically related (hint, hint).

We would also greatly welcome enthusiastic, experienced volunteers. As many of you are well aware, insect collections are living things (albeit composed of dead specimens) and require constant care and attention. If you have extra time or expertise, with collections or a particular group of insects, and are interested in volunteering please contact me! I can always use extra hands for identifying undetermined specimens, updating taxonomic groupings in the collections, digitizing

specimens or transcribing data, and just generally curating and keeping the collection properly organized.

And finally, just a brief blurb about my background in case you were dying of curiosity… My training is in hymenoptera systematics and biodiversity, as well as entomological collection care. Before moving here to work in the UMMZ Insect Collection, I was at University of New Hampshire working on bee biodiversity and ecology while caring for the Rehan Lab's bee collection. Before that I was at the University of Kentucky working on revising a cosmopolitan genus of parasitoid wasps for my dissertation research with Michael Sharkey and assisting in the Hymenoptera Institute Collection. Before that I was originally from Maryland where I completed my BS at the University of Maryland, College Park, and spent time working with Sam Droege on bees at the USGS.

While I won't be able to make it to the Breaking Diapause meeting (we have a prairie cleanup event scheduled), I look forward to meeting all of you at the next meeting after that. In the meantime, please feel free to contact with any questions you may have!

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Volunteering on the Monarch-Milkweed Initiative at St. Marks National Wildlife Refuge in Florida

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During the past few winters, my wife and I have spent about 3 months in the Florida Panhandle on the Gulf Coast in the region known as the *Big Bend*. The coastline here has few sandy beaches, but does have miles and miles of salt marsh. Within the Big Bend, about 35 miles south of Tallahassee, is the St. Marks National Wildlife Refuge. It was established in 1931 primarily for migratory birds and now covers over 70,000 acres and about 45 miles of coastline on the Gulf of Mexico.

There are many opportunities to volunteer at St. Marks, but for a retired entomologist what would be better than getting involved in their Monarch-Milkweed Initiative? The primary objectives of the project are simply to collect seed from local milkweed (*Asclepias*) species, grow the plants, and then outplant them on public and private lands in north Florida.

This program started in 2015 in response to the "National Strategy to Promote the Health of Honey Bees and Other Pollinators" that was released by the Obama White House in 2015. This National Strategy sets goals for several federal agencies and in cooperation with Canada and Mexico set a goal to increase the Eastern population of the monarch butterfly (*Danaus plexippus*) to 225 million overwintering adults in an area of about 15 acres (6 ha) in the overwintering grounds in Mexico by 2020. This goal approximated the average overwintering monarch population level in Mexico during 1994-2014. Note that the 2014-2015 overwintering population in Mexico was estimated at 56.5 million monarchs, occupying only 2.8 acres (~1.1 ha). But already the monarch situation appears to be improving given that the occupied area in Mexico during the 2018-2019 winter was estimated at 6.05 ha (monarchwatch.org).

Milkweed production in screen houses at St. Marks, image courtesy USFWS

Of the approximate 73 *Asclepias* species native to the United States (monarchwatch.org), 21 species are native to Florida, and 19 occur in the Florida Panhandle (florida.plantatlas.usf.edu). There is also one non-native milkweed species in Florida, often called Tropical Milkweed (or Scarlet Milkweed, Bloodflower) *A. curassavica*. By contrast, Michigan has 11 native milkweed species (michiganflora.net), and of these, four species are native to both Michigan and Florida (*A. amplexicaulis*, *A. incarnata*, *A. verticillata,* and *A. viridiflora*).

The Monarch-Milkweed Initiative at the St. Marks Refuge is led by Rangers Scott Davis and Gail Fishman with assistance from over a dozen active volunteers. Seed is being gathered from all 19 native milkweed species found in the Florida Panhandle, with emphasis on *A. humistrata, A. incarnata. A. perennis, A. tomentosa, A. tuberosa,* and *A. verticillata*. This effort began in 2015, with production of about 11,000 plants that year, but more recently annual production is over 20,000 plants per year. To accomplish all this, several screen-houses were constructed, and a couple had to be reconstructed due to recent hurricane damage!

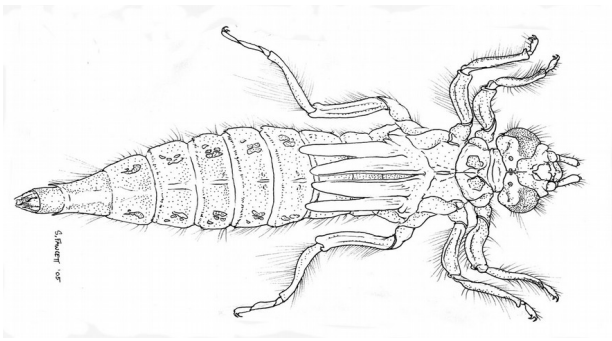
During the winter months, the volunteers are mostly involved in mixing soil, filling pots, planting milkweed seeds, watering, and weeding. In spring and summer the actual outplanting occurs. When plants are given to the public for various planting efforts, *A. incarnata* (swamp milkweed) and *A. tuberosa* (butterfly weed) are the primary species used. In addition to simply growing the milkweeds, several side studies have been initiated that address topics such as proper seed storage, seed stratification, optimum soil pH and soil mixes for each milkweed species, and monarch larval development and survival on the different milkweed species.

Monarchs move through the St. Marks area in large numbers both in fall on their way to Mexico and in spring when they return. To take advantage of this phenomenon the Refuge sponsors a Monarch Festival each October, which offers many educational activities for the public, including tagging monarch adults. Tens of thousands have been tagged at St. Marks over the years, and sometimes a few already tagged monarchs are encountered, like one recently found at the Refuge that had been tagged earlier that season near Toronto, Canada.

As a side note, not all monarchs make it to Mexico. For example, during our recent stay in Florida (1 December 2018 – 15 March 2019, about 30 miles west of St. Marks, near Bald Point State Park), we saw monarchs flying every week along the Gulf coastline. The fate of these monarchs is not well understood, but some appear to survive the winter in North Florida, and even breed without having first flown to Mexico and back. In fact, Ranger Scott Davis found monarch eggs and even some 1st-instar larvae in early February 2019 near the St. Marks Refuge, where adults had oviposited on *A. perennis* (white swamp milkweed or aquatic milkweed), a wetland milkweed that retains foliage year-round.

Asclepias perennis, a wetland milkweed that retains foliage in winter in North Florida. Image courtesy USFWS

Financial support for the Monarch-Milkweed Initiative at St. Marks is provided by the Refuge and through the Friends of St. Marks Wildlife Refuge. Progress on this program can be viewed on Facebook at https://www.facebook.com/StMarksMilkweeds/. Working on the Monarch-Milkweed Initiative with the motivated Refuge staff and volunteers at St. Marks was a very rewarding experience, and we plan to pitch in again next winter.



Underwintering

Filled with haemolymph,
the little dragonfly nymph,
lies defiant under snow and ice.

Without this natural antifreeze,
she would be brought to her knees
defiance simply would not suffice.

Ken Tennessen

Citizen Science and Entomology

Mark F. O'Brien
Ann Arbor, MI

Over the past decade, Citizen Science has become a prominent feature of many research initiatives. First, what do we mean by "Citizen Science?" To some, it's basically crowd-sourcing – "to obtain (information or input into a particular task or project) by enlisting the services of a large number of people, either paid or unpaid, typically via the Internet." The definition of citizen science is "the collection and analysis of data relating to the natural world by members of the general public, typically as part of a collaborative project with professional scientists."

As you can see, there is overlap between the two definitions. A museum may crowd-source the transcription of written field notes to typed pages, and it could also sponsor a research project that relies on citizen scientists to provide sight records of migratory birds. One of these projects does not require the special ability to discern different species. So, to be a citizen scientist, you have to have some degree of training, either formal or informal, and accrued experience to participate. That is what makes citizen science different from crowd-sourcing. That training may be very specific to a certain project, such as the Lost Ladybug project, or it could be more general, as in providing weather data to a central data center. No matter what you want to call it, many of the projects typically involve interaction via the Internet. Citizen Science can be very local – such as volunteers to monitor glue traps for invasive pests, estimate butterfly populations at parks, or do aquatic insect surveys in watersheds. Crowd-sourcing on the other hand, really does rely on the interactions of many people via the Internet to achieve a result that would be nearly impossible otherwise.

Entomology is well-suited for many citizen science projects. For one, if a project requires the collection of specimens, there is likely to be less outcry over the taking of specimens for research, and the equipment to do so is very simple. Training presents a problem if the insects in question are small and hard to identify. In those cases, collecting samples (such as bark beetles in alcohol traps) and sending them to the researcher may be the only way to gather data with the only training being in the trapping and collection of specimens. For larger insects such as dragonflies, butterflies and moths, many beetles and Orthoptera, there are plenty of online guides for identification and vetting organizations that examine the data sources. Citizen science has a great role to play in our current state of affairs regarding climate change, invasive species, declining habitat richness, and the recording of our fauna and flora. In addition, almost every natural history museum is understaffed, and collections managers are in need of volunteers to assist with projects.

I think it's incumbent on any citizen science initiative to make sure that the participants are well-trained for their roles, and to have professionals and para-professionals mentoring people as much as possible. The results for those projects will be far better and more solid in the long run, and in my experience, it takes at least one field season to get people trained to the point where they trust their own judgment and of course, the feedback from the project coordinators needs to be helpful to the participants. It's also important to publish the results online so that the public knows that the effort was not wasted. In researching this, I found projects that had dead web pages. I don't know if the project was completed, aborted, or what happened.

Citizen Science projects that are web-based need to have good data verification routines, a social media presence to generate enthusiasm and attract new participants, and of course, some reward for participation. Perhaps it's nothing more than an online acknowledgment of the participants, or it could be prizes supplied by sponsors. It's important to have a dialog with the participants so that they feel like they are valued for their roles and contributions to the project, whatever it is.

Perhaps you would like to be involved with a citizen science project. Citizen science has a positive benefit not only for the goals of a project, but the activity of participants also has a positive effect on the greater community in realizing that they can be part of something that may result in the advancement of our knowledge. Participants feel that they are doing something to help our natural world, and have a better connection with nature.

Check out the following links and take a look at what's being done around the United States and Canada.

- Effective ethanol traps for bark beetles - https://entomologytoday.org/2015/03/18/study-confirms-effectiveness-of-cheap-simple-traps-for-citizen-science-project/
- Backyard Beetles - http://www.backyardbarkbeetles.org/
- Firefly project - https://www.clemson.edu/cafls/research/baruch/firefly_project/
- Bumblebee megatransect in the Blue Ridge Mountains - https://www.handsontheland.org/environmental-monitoring/bumble-bee-megatransect.html
- The Pieris butterfly genome project - http://www.pierisproject.org/
- Importance of Citizen Scientists - https://www.americanforests.org/blog/the-importance-of-citizen-scientists/
- Pollinator Citizen Science Projects - https://pollinator.org/

- Bugs in Your backyard - https://scistarter.org/bugs-in-our-backyard
- Michigan Natural Features Citizen Science - https://mnfi.anr.msu.edu/programs/citizen-science
- Dragonfly swarms - https://thedragonflywoman.com/dsp/report/
- The Lost Ladybug project - http://www.lostladybug.org/participate.php

Spotted Lanternfly: An Asian Exotic is Moving Westward from the East Coast

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Fig 1: SLF adult with a 2 inch wingspan by Lawrence Barringer PDA

The spotted lanternfly (SLF), *Lycorma delicatula* (White) (Hemiptera: Fulgoridae), is native to China and Vietnam. An early report that SLF occurs in India was described by the author as "doubtful" (Distant 1906); nevertheless, some papers have reported India within this insect's native range. SLF has also spread to Japan and Korea in recent decades, with the DNA in those populations matching very closely to populations in China (Kim et al. 2013). SLF was first reported in the USA in 2014, in Berks County, Pennsylvania, northwest of Philadelphia (Barringer et al. 2015, Dara et al. 2015). As of early 2019, additional established populations of SLF have been found in small areas of Delaware, New Jersey, and Virginia. In addition, SLF individuals have been collected at various locations in Connecticut, Maryland, Massachusetts, and New York, but no established populations have yet been detected.

There are over 700 species of fulgorid planthoppers (or lanternflies) worldwide (Bourgoin 2019), but only 17 are native to the continental US, with most found in the Southwest (Bartlett et al. 2014). Most native fulgorids feed on woody plants, by sucking phloem juices through the bark, but a few are grass feeders (Bartlett et al. 2014). SLF is the first exotic fulgorid to become established in the US, and it feeds on a wide range of woody plants, including vines, shrubs, and trees.

Fig 2: SLF adult by Lawrence Barringer PDA

SLF completes one generation per year, overwintering in the egg stage (Zhou 1992, Dara et al. 2015). There are four nymphal instars. First instars appear in May and June, with fourth instars present during July to August. The first three instars are mostly black with white spots, whereas the fourth instar is largely red with white spots. Adults can be found from July into December, but mating (often taking place along the lower trunk) and oviposition usually do not begin until October. Adults are about 1 inch long with a 2-inch wingspan. Their forewings are gray with black spots, while the hindwings have bold red, black and white markings. Eggs are often laid on flat surfaces in groups of 30-50 eggs, and covered with a mud-like substance that is grayish brown in color.

More than 70 species of woody plants have been recorded as hosts for SLF (Dara et al. 2015), including several important commercial crop species (e.g., grapes, hops, apples, apricots, peaches, plums, and nectarines) as well as ornamental and timber tree species (e.g., cherry, maple, mulberry, oak, poplar, sycamore, walnut, and willow). In China, the favorite host is tree of heaven, *Ailanthus altissima*. Extensive feeding by SLF nymphs and adults, usually occurring on newer growth, can weaken plants and slow their growth. However, much of the economic impact to agricultural crops results from sooty mold development on the fruit after being coated with the insect's excreted "honeydew." SLF populations can be very high with 100s to 1000s of individuals occurring on a single infested plant.

Fig 3: SLF adults at base of tree to mate by Lawrence Barringer PDA

Adults can disperse on their own by active flight, but long distance spread will likely occur by humans moving objects contaminated with any SLF life stage, but especially eggs. The egg masses appear as dried mud, so are easily overlooked and can be easily moved on firewood, nursery stock, lawn and garden equipment, as well as autos, trucks, recreational vehicles, and trailers.

Fig 4: SLF egg masses on tree branches by Emelie Swackhamer PSU

Fig 5: SLF 4th instar nymphs and one adult by Stephen Ausmus-USDA ARS

Infested US states have imposed internal quarantines on their infested counties, and some states are starting to impose external quarantines on the infested states. There is no federal quarantine at this time.

Management options are still being developed, but many recommendations can be made based on current knowledge. For example, individuals can scrape egg masses off woody plants and other infested items during fall, winter, and spring. They can also apply sticky band traps around the lower trunks of trees to capture SLF nymphs and adults as they ascend. People should avoid parking vehicles under infested trees, given that SLF nymphs and adults often drop from trees when disturbed. They should also inspect their vehicles and outdoor items before moving them outside of infested zones. Similarly, businesses within infested areas should manage nearby woody vegetation and inspect their products, pallets, and vehicles regularly. In areas outside of quarantine zones, people should be made aware of SLF and encouraged to quickly report any sightings. In some communities, the preferred host tree of SLF (the exotic, tree of heaven) is being removed, while in other areas these trees are being used as trap trees. Several contact and systemic insecticides have proven effective against SLF, but there are concerns about non-target impacts and reinfestation can occur from untreated areas.

There are many active areas of SLF research in Asia and the US (Dara et al. 2015). A few of the recently published papers deal with attractants (Cooperband et al. 2019), natural enemies (Barringer and Smyers 2016, Liu 2019), morphology (Hao et al. 2016, Wang et al. 2018), flight behavior (Domingue and Baker 2019, Myrick and Baker 2019), defense sequestration (Song et al. 2018), low temperature threshold of eggs (Lee et al. 2011), and efficacy of chipping woody material to kill SLF eggs (Cooperband et al. 2018). Foreign exploration for natural enemies of SLF in China is also occurring.

We do not know when SLF will arrive in Michigan or in nearby states. It could take years or it may already be here. Therefore the public should be on the alert for this insect and report it quickly when seen given that early detection may allow for successful control of new introductions.

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Michigan Entomological Society
2019 Registration Form

65th Annual Meeting
G.H. Gordon Biological Station and Rockwell Lake Lodge, Luther, MI
Friday & Saturday, 21–22 June 2019
https://rockwelllakelodge.hillsdale.edu/

Name: _____

Address: _____

City: _____ State/Province: _____Zip: _____

Email: _____ Gender: _____ (cabins will be segregated by gender)

- Room reservation deadline is 06 June 2019
- Onsite meeting registration will be available Friday afternoon, or Saturday morning before 9:00

	Cost	#people		subtotal
Meeting registration……	$20.00	____	=	_____
Friday dinner..……	$25.00	____	=	_____
Saturday breakfast..……	$12.00	____	=	_____
Saturday lunch (included in registration fees)				
Saturday dinner ……...	$26.00	____	=	_____
Sunday breakfast ……	$12.00	____	=	_____
Lodging Friday night, Lodge*…….	$129.00	____	=	_____
Lodging Friday night, cabin…….	$20.00	____	=	_____
Lodging Saturday night, Lodge* …….	$129.00	____	=	_____
Lodging Saturday night, cabin…….	$20.00	____	=	_____
Bring your own tent (with access to kitchen, showers and restrooms) ……	$10.00	____	=	_____

*includes breakfast the following morning

TOTAL = _____

Note: cabins do not include bed linens or towels

Please describe any dietary restrictions here:

If you are sharing a Lodge room with a spouse or companion, please note the person's name here: (also request two full beds or one king sized bed):

Make checks payable to: Hillsdale College Department of Biology
Please send registration forms (**email preferred**) or any questions to:

David Houghton
C/O Rockwell Lake Lodge
3943 North Skookum Road
Luther, MI 49242 Email: dhoughton@hillsdale.edu

Michigan Entomological Society
Presentation Registration Form

65th Annual Meeting
G.H. Gordon Biological Station, Luther, MI
Friday & Saturday 21–22 June 2019

Submissions are due 14 June 2019

Type of Presentation: _____ ORAL TALK ____ POSTER ____DISPLAY

Title: _____

_____

Author(s): _____

Affiliation: _____

Contact person: _____

Address: _____

Phone: _____

E-mail: _____

Oral presentations must be brought on a usb drive or emailed beforehand. Mac users: please make sure that your presentations are MS Windows compatible. We are happy to review presentations for compatibility ahead of time.

If poster or display, please describe any specific needs below:

Check here _____ if the presenting author was a student when the research was conducted and should be considered for a student award.

Return by 14 June **(email preferred)** to: David Houghton
C/O Rockwell Lake Lodge
3943 North Skookum Road
Luther, MI 49242

Email: dhoughton@hillsdale.edu

Directions to the G.H. Gordon Biological Station

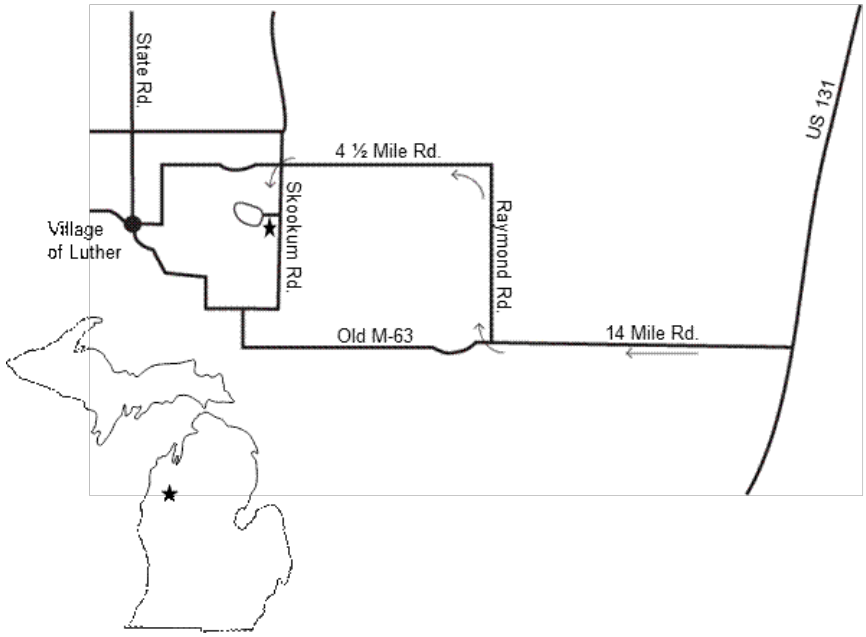
Take US 131 to Exit 162. Southbound traffic will go right (west) on 14 Mile Road off of the exit. Northbound traffic will turn left on 14 Mile Road and cross over the overpass above US 131.

There are several ways to reach the BioStation from the highway. The easiest approach is to go west on 14 Mile Road for 4 miles to Raymond's Corners (look for the smiling yellow lollipop). Turn right on Raymond Road. Proceed 2.5 miles to 4 ½ Mile Road and turn left (be careful, this is an easy turn to miss). Proceed 3 miles to Skookum Road and turn left. The entrance to the Lodge is 0.2 miles on the right. Look for the big Rockwell Lake Lodge and G.H. Gordon Biological Station signs.

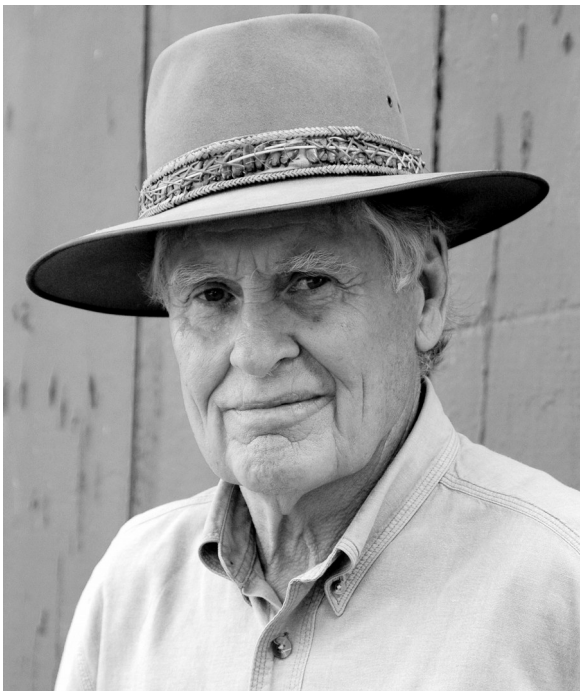
If the gate is closed, call the Lodge from the callbox to let you in. Proceed down the driveway and take a left into the large paved parking area. Check in at the Lodge, which is at the far left end of the parking area. The Plym Village and classroom are located to the right of the parking area. Park only in the paved parking lot.

G.H. Gordon Biological Station and Rockwell Lake Lodge https://rockwelllakelodge.hillsdale.edu/
3943 North Skookum Road
Luther, MI 49242

517-607-4300 or 517-607-4260



Obituary



Dick Alexander, 2007. Photo by M.F. O'Brien

A long-time member of the MES, Richard Dale Alexander (b.11/18/1929), passed away on Aug. 20, 2018 at the Saline Evangelical Home at the age of 88. Dick Alexander is survived by his loving wife of 68 years Lorraine Kearnes Alexander; his brother Noel (Donna); his daughters Susan (Sarita) and Nancy; his grandchildren Morgan Alexander Johnson, Lydia Lorraine Turner, Lincoln Alexander Turner, and Winona Johnson Alexander; and his great-grandson Ezekiel Alexander Johnson; and several nieces and nephews.

Dick was born in White Heath Illinois, and grew up in Piatt County, Illinois. He and his wife Lorraine were married in 1950, and they moved their family to Ann Arbor where Dick began his long and successful career teaching at the University of Michigan. Dick received his Associate Degree from Blackburn College in 1948, his Bachelors of Biological Science from Illinois State Normal University in 1950, and his Masters of Science and a Ph.D of Entomology from Ohio State in 1951 and 1956 respectively. He was in the U.S. Army stationed at Fort Knox, Kentucky from 1951 to 1953. During his career at the U of M Dick held many positions including Director of the Museum of Zoology, Professor of Biology, the Donald W. Tinkle Collegiate Professor, the Theodore H. Hubbell Distinguished University Professor of Evolutionary Biology and Curator of Insects.

He had over 40 graduate, masters, and post graduate students; and published over 140 scientific papers and books while with the U of M. He did extensive field work in numerous places around the world, including a John Simon Guggenheim Fellowship for 15 months of systematic work on crickets in Australia with Dan Otte in 1968. He received much recognition for his work in Entomology, Insect Behavior, Speciation, Animal Behavior, Human Behavior, Morality, Kinship Systems, Evolutionary Ecology, and Evolution. Some of his numerous honors, awards, and medals include a bronze medal from the American Association for the Advancement of Science (AAAS) for the outstanding paper presented at the annual meeting in 1961; the Daniel Giraud Elliott gold medal from the National Academy of Sciences in 1991; the inaugural Distinguished Scientific Career Contribution Award from the Human Behavior and Evolution Society in 2008; Distinguished Animal Behaviorist in 2002; along with membership in several Honor and Scientific Societies including the National Academy of Sciences; and distinguished and lectureships throughout the U.S. His teaching awards included the Amoco Good Teaching Award in1977; the Outstanding Educator Award in 1982; and Excellence in Education Award in 1995.

Dick had many varied talents and hobbies which he focused on full time after retirement. He was a talented artist in many media: pen and ink drawings; oil paintings; and wood carvings. He wrote and illustrated autobiographical stories, children's books, verse, cartoons, and horse training manuals. If you ever visited Dick and Lorrie at their farm on Bethel Church Road, you would know that you were a welcome visitor. Dick was a farm boy at heart, and delighted in riding his quarterhorses, raising a few cattle, doing farm chores; and the hard work kept him in good physical condition for most of his life.

Dick's keen intellect and curiosity put him on a path to honored scientific achievements, but his down-to-earth demeanor and background allowed him to be as conversant with the farmer down the road as he was with the many graduate students and faculty at the University of Michigan. He was an astute observer of people and of the natural world. To go from a one-room schoolhouse to a medal from the AAAS astonished even him. His varied interests and abilities truly made him a Renaissance man. His many students were greatly influenced by him, and often became collaborators after graduating from U of M. Those of us that knew Dick Alexander will never forget the impact he made on us. The world is poorer for his loss, and yet richer for his existence.

Mark O'Brien, (with most of the text from the Alexander family obituary that appeared online at http://obits.mlive.com/obituaries/annarbor/obituary.aspx?n=richard-d-alexander-dick&pid=190027685&fhid=5988

Spring, 2018 Meeting Minutes

March 23, 2019

Dow Gardens, Pines Historic Home, Midland, MI

Present: Board Members: Martin Andree, Matt Douglas, David Houghton , Elly Maxwell, Mark O'Brien, Adrienne O'Brien. Others present: this was a well-attended meeting with several new and returning individuals.
Description of Meeting – Breaking Diapause – the annual Spring gathering

Reports:
Secretary: Adrienne O'Brien – the membership is fairly stable
Treasurer: Angie Pytel - Angie was unable to attend but sent a brief report – account balances ($24,474) are up and more stable, due to low publishing expenses.
Newsletter: Mark O'Brien - Mark is gathering material for the Spring Newsletter, Vol. 63, No.1
Journal: Kristi Bugajski – no report
Webmaster: Mark O'Brien – Mark will continue as Webmaster for the near future, as it can be done from anywhere. The social media account (Facebook) could be more active, and if someone wants to step forward to take on that task, it would be good. Facebook is a good way for the MES to attract non-traditional members and to interface with the public.

Old Business:
The quest to digitize historic photos of people and events in MES history is underway. If you have any photos, please contact Martin Andree. Ted Herig, Duke Elsner and Kyle Johnson have many of the old albums and have offered to work with Martin. The plan is to set up a separate website, possibly a Flickr account, so that it is accessible to anyone and easy to add photos.
New Business:
1. Adrienne and Mark O'Brien will be moving out of state this summer. Adrienne would like to continue some of her Secretarial duties, including membership and database management. However, she will be unable to record meeting minutes. It was decided to appoint a delegate and Elly Maxwell volunteered to do this. Mark will publish one more edition of the MES Newsletter. Crystal Dailey and Duke Elsner have stepped forward to be co-editors for the Newsletter. In addition, Crystal Dailey will take on the social media tasks. She is very experienced and has her own site. Mark would like to continue as the Webmaster. Thank you to Elly, Crystal and Duke for making this a smooth transition.
2. Member Contact Database – It was suggested that MES Governing Board Members should have access to the member emails so they can contact directly contact the Membership without going through the Secretary. In addition, the possibility of all-Member access to the database for email addresses only be allowed was suggested. Because of privacy issues, it could be a password protected Google Doc for Members only.
3. Journal – Would it be possible to add page numbers to each paper? Currently it only says: Article 1, Article 2; There are many Associate Journal Editors listed as officers. Should all be voting officers? Constitution says yes, when we only had a few.
4. Election – We have several volunteers for Governing Board Officers. Duke Elsner will run unopposed for President-elect. For the two Member-at-Large positions, three members – Ralph Gorton, Bob Haack and Steve Bransky – have offered to run. Look for ballots and candidate bios in May. Thank you, candidates!

And finally, a HUGE Thank You to Elly Maxwell and the staff at Dow Gardens for hosting this year's Breaking Diapause and the tours of the butterfly house and the Pines Historic Home and access to the beautiful grounds at Dow Gardens.

From the Editor

It has been a short tenure as Newsletter editor, and I hope that I have helped move the MES towards a more digital presence. I have held several MES positions over the past 36 years – Member At large, President, Journal Editor , Webmaster, and Newsletter Editor. The MES has been a part of my professional life, and I have made many friends over the years through the Society. Now that I have been retired for over a year, I have come to the realization that I am too far removed from the entomological scene and current events to be as effective as I might be if I were still involved in entomology at some level. Perhaps in another few years, my interests may rekindle in doing something entomological, but I have moved into a new life where other interests are keeping me busy and active. On top of that, Adrienne and I will be moving to North Carolina later this year. It's time to hand the newsletter over to someone young, enthusiastic, and involved in entomology. Crystal Dailey is that person, and I hope that you will help her and Duke Elsner out by sending your articles and news items to them. Crystal's email is: smilingrainbow00@yahoo.com , and Duke's email is duke.elsner1@gmail.com.

I wish all of you the best!

Mark O'Brien