Newsletter

of the

Michigan Entomological Society

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Inside this Issue:

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Michigan Entomological Society Annual Meeting October 8-10, 2009

Duke Elsner, President-Elect
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The 2009 MES annual meeting will be held on Friday, October 9th, at the Ralph A. MacMullan Conference Center on the northern shores of Higgins Lake in Roscommon County. The RAM Center provides a quiet, relaxing atmosphere, with full lodging and dining facilities. Originally built by the Civilian Conservation Corps, the RAM Center is a tranquil setting that will allow us to get away from it all and hold a wonderful meeting. MES has met there before, and it has always been a great experience.

A separate mailing will come out later this summer with a call for papers (oral and posters), as well as information on lodging and pricing options. We will post the information on the MES website as well. We will begin Thursday afternoon and end Saturday morning. You can stay for 1 or 2 nights, or if you wish, you can come just for the meeting on Friday. Various meal options will be available (1-5 meals).

Our featured speaker will be Dr. Doug Tallamy, author of *Bringing Nature Home*, a highly acclaimed book that challenges people to plant and preserve native plants as food and habitat for native insects and their predators. Dr. Tallamy is currently Professor and Chair of the Department of Entomology and Wildlife Ecology at the University of Delaware in Newark, Delaware.

The RAM Center offers modern facilities with an up-north atmosphere, and has six lodges for overnight guests. The RAM Center's meals are legendary and the atmosphere is casual.

Plan to arrive on Thursday the 8th so you can attend an evening "social" where you can connect with new people and reminisce with old friends. Go to http://www.michigan.gov/dnr/0,1607,7-153-10365-71716--,00.html for more information on the meeting facility.

John Keeler is the New MES Secretary; New Treasurer Still Needed

John Keeler has taken over from Bob Kriegel as MES Secretary. Many thanks to John for his willingness to serve, and of course especially to Bob for his many many years as Secretary.

John has set up a new email address for society business. Please use:

sec-michentsoc@charter.net

John also established a new PO Box in his home town for MES secretary mail:

Michigan Entomological Society
John Keeler, Secretary
PO Box 931
Davison, MI 48423-0931

MES is still seeking a member to take on the position of MES Treasurer. Martin Andree has a new job that limits the time he can offer to MES.

Because John was a Member-at-Large, we will fill two Member-at-Large positions this year.

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An Additional Record of Hypercombe scribonia *(Stoll) (Lepidoptera: Arctiidae) from East Central Minnesota*

David B. MacLean[1] and Gary L. Hinds[2]
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On 2 July 2008, GLH captured an adult female leopard moth at his residence 4 km west of Hinckley, Pine County, Minnesota. On 4 July 2008, DBM identified the moth as *Hypercombe scribonia* (Stoll) (Lepidoptera: Arctiidae) and later placed it in his personnel collection. *Hypercombe scribonia* is a large (5.7-9.1 cm) showy arctiid moth that ranges from Massachusetts and southern Ontario south to Florida and west to Missouri and Texas (Covell 2005). Wagner (2005) lists many forbs and woody plants as larval host plants for *H. scribonia*. The distribution of *H. scribonia* in Minnesota is very poorly known. The only other records are from two east central counties (Aitkin and Crow Wing) directly west of Pine County (Butterflies and Moths of North America). There are no Minnesota records of *H. scribonia* in the University of Minnesota insect collection (William Miller, Department of Entomology UMD, pers. comm) and the Minnesota Science Museum (Ronald Huber, Bloomington, MN, pers. comm).

Ferge and Balough (2000) recorded *H. scribonia* from 10 Wisconsin counties including 2 records (mid-late June) from the Kohler-Peet Barrens State Natural Area in Burnett County (Leslie Ferge, Madison Wisconsin, pers. comm.) which borders Pine County, Minnesota (separated by the St. Croix River). Without additional records of *H. scribonia* it is difficult to speculate on how widespread the moth is in Minnesota. However, as Pine County, Minnesota is adjacent to Burnett County, it seems likely that *H. scribonia* has colonized east central Minnesota from extreme western Wisconsin.

References

Butterflies and Moths of North America. www.butterfliesandmoths.org.
Covell, C.V. 2005. A Field Guide Guide to the Moths of Eastern North America. Peterson Field Guide Series. Houghton Miflin Co. 496 p.
Ferge, L. A. and G. J. Balogh. 2000. Checklist of Wisconsin moths (Superfamilies Drepanoidea, Geometroidea, Mimallonoidea, Bombycoidea, Sphingoidea and Noctuoidea) Milwaukee Pub. Mus. Contr. in Bio. and Geo. No. 93, 55 p.
Wagner, D. L. 2005. Caterpillars of Eastern North America. Princeton University Press. 512 pp.

Entomological Foundation Awards

The Entomological Foundation would like students to be aware of the opportunity to apply for a scholarship and fellowship through the Entomological Foundation. The deadline has already passed in 2009 (July 1), but keep this date in mind for future years. The awards categories include:

BioQuip Undergraduate Scholarship. Students must attend college in the U.S., Canada, or Mexico and be pursuing a degree in entomology or pursuing a career as an entomologist. See: http://www.entsoc.org/awards/student/bioquip.htm

Larry Larson Graduate Student Award for Leadership in Applied Entomology. This leadership award acknowledges final year Master's students or first year Ph.D. students who exhibit exceptional interest in the study and application of entomology through outstanding research and leadership skills. The student must be an ESA member. See: http://www.entsoc.org/awards/student/larson.htm

For more information on all Foundation awards including mini-grants for teachers and research awards and grants see: http://www.entfdn.org/awards_scholar_fellow.php

Martinoptera

I Just Can't Seem to Relax

Martin J. Andree
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In one of Hemingway's Nick Adam's Stories, The Big Two-Hearted River, Nick is lustily slurping down a can of apricots. Nick notes happily "They were better than fresh apricots."

Good Old Nick, he had discovered a deep and fundamental truth about tinned fruit. It is obvious however that Nick had never tried his hand at relaxing dried insect specimens for spreading and pinning. If he had, I'm certain Nick would have quipped, "Fresh bugs are always better."

Let's face it, relaxing dried specimens is never relaxing. The process is loaded with horridly uncontrollable variables and fraught with plenty of opportunities to make poor choices.

Once the specimens are in the relaxing chamber, the anxiety begins. How long should they relax? One second they are as dry and crispy as Pringles, the next second they seem to have melted into something resembling the color and consistency of Crest.

I'm always baffled by this transformation, one minute the chamber is full of perfect specimens the next it's full of moldy white, fuzzy raspberries. It reminds me of the George Carlin routine about his refrigerator. He talks about old food getting so moldy that he can no longer identify it, "Is it meat or is it cake?" he exclaims. Finally in a fit of exasperation, he claims that it must be "meat cake." I lift the lid of my relaxer, peer inside, shake my head and proclaim to no one, "Bug cake."

My wife is always carefully tuned into important environmental cues that I'm about to relax. It can't be hidden, that witches brew of fragrances that wafts out of my office and down the hall. The combined smells of slightly rotting bugs, wet paper towel and moth crystals. She calls this "Odeur de Bugs."

Once in a while, I get it more right than wrong. My bugs are more relaxed than not, but not totally. The trouble is you can never really make that determination until after you've started down the path of specimen carnage.

One part of the bug, like maybe just the left antenna is soft and supple but the legs are stiff as a corpse. I find I can gradually free them up by moving them with tweezers. I find myself thinking of the Tin Man and wishing I could give their little arthropod joints a good shot of WD-40.

Disaster usually strikes after I've finally worked five legs free. Flush with success I bumble around until number six tragically falls off and disappears into the carpet below. "Argh" I blather, "There goes another leg of an irreplaceable Siberian *Bombus*." After a significant time groveling around on the floor, triumphant, I find the lost limb. I have the five-legged amputee specimen spread on the boards, but now what? I stare hard at leg number six and try to position it, flat against the board to be a mirror image of its partner leg. This is, of course, hopeless, the angles are all wrong, but I give it my best shot and pin this little appendage next to the specimen.

Sadly, I know the hardest part is yet to come, after it's dried, there is the re-attachment to deal with. I always start with the most delicate intentions, like using super glue, but usually end up savagely resorting to number 8 dry wall screws and an air nailer. By the time I'm done with all of these monkey shines, I'm pretty sure I could get much better looking specimens from the grill of my truck.

The trouble with all of this is that some bugs in a batch relax faster than others. Some come home, mix up a stiff highball, put on their slippers and read the paper. Others just take longer and can't seem to wind down. These are the ones that give me trouble, the kind that result in me tearing a rip in their forewing the size of the Grand Canyon. They should take a hint from their neighbors and just learn to relax. They should just look at this as a trip to the day spa or bug sauna. It's good for their pores.

Success here is all about timing and realistic expectations. Personally, I always convince myself that I'll have heaps of time to commit to spreading once my specimens are ready. I go so far as to plan on having a bona fide snow day two weeks hence. I usually load up my relaxers with six or seven hundred specimens and then end up staying up for 72 hours straight to try and save them all from rot. I call my office and tell Melanie Anderson in HR that I won't be coming it today. I tell her I have some kind of bug. I need all the time I can get.

I never learn, especially with lepidopterans. It seems that there is a critical time for coming out of the relaxer, when their wing scales are just a bit too wet to apply a wing strip to. I should let them dry. But, as I said, I've been up a long time and maybe not thinking too clearly and have ants in my pants, so I pin them all up right away. Once these specimens have dried, I will remove the strips, which will promptly pull off all of the wing scales that have stuck fast to the underside. I would have had just as good of results using Scotch tape, sticky side down.

I better get back to the task at hand, my bugs are turning into a sodden mess, my wife just announced "Something smells in there," I'm out of canned apricots and I can see from my caller ID that Melanie Anderson has called for the third day in a row. I wish everyone would stop bugging me and just let me relax.

Is the Cherry Gall Azure Double Brooded?

Ted Herig
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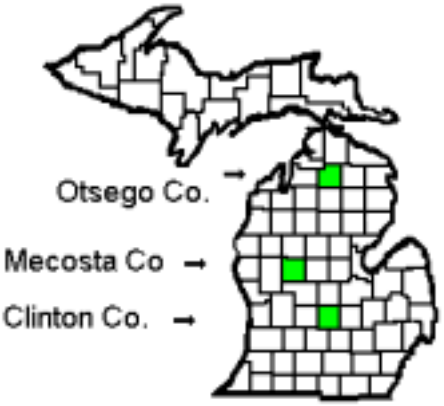
While rearing the Late Spring Azure or Cherry Gall Azure (*Celastrina serotina*) for several years now, I've always pondered why a few adults emerge 2-3 weeks after pupating, while the majority emerge the following year. In Pavulaan and Wright (2000), the authors say that *Celastrina* ova laid under lab conditions produce adults of the same form the same year in very small numbers, saying that the artificial conditions help force out some adults. I have reared and studied this species now extensively for over 5 years in Michigan (Herig 2006) and every year I have had a fairly large number of adults emerge in summer. I store pupae outside in screened containers so they should experience normal temperatures and humidity.

My first encounter with wild second-brood *C. serotina* adults was on 12 June 2006 at a study area in Clinton County where I had collected adults, ova, and larvae earlier in May. My grandson noticed a pair of *Celastrina* chasing about above our heads. I had no equipment, net, or camera with me, so I could only watch as the pair finally landed well above us. But they were close enough to identify the male form "violacea" and the female form "marginata" in copulation. In 2007, I was back in the same area in late June after having collected adults, ova, and larvae earlier in May, and once again I noticed second-brood adults. I saw three adults flying, capturing one female flying around galls on a choke cherry tree. I found no ova on the leaf galls, which by this time of the year the galls were starting to dry up and deform.

In 2008, I repeated the process, collecting two males and two females in the middle of June. So apparently in this area of Michigan (Clinton Co.) there's a partial second brood of azures, but why? A problem I see facing these azures in June is that the cherry galls have started to dry up and there is no flowering host available. In 2008, the weather was cold with frosts up to 1 June. Galls were at least 2 weeks behind normal, given that the eriophyid mite (*Phytoptus cerasicrumena*) that initiates the galls was undoubtedly held back by the cooler weather of late April and May. The *C. serotina* adults were emerging at about their normal time, but the host galls were almost nonexistent by 10 May. Cherry blossoms, which were also late, were at that time the prevalent host for oviposition. I captured several females ovipositing on the cherry blossoms. The more favored cherry galls were not used until 18-20 May when they were large enough to hide ova.

In Clinton County, MI, I observed *C. serotina* ovipositing for the first time on cherry blossoms (Herig 2006). Pavulaan and Wright (2005) say adult females oviposit on floral buds of several species of plants, but this was my first experience at seeing this butterfly do this. Under lab conditions it was never observed. In Otsego County, MI, from 29 May to 1 June 2008, after an extensive search for ova was undertaken, only 12 ova were found on or near cherry galls. The adult butterflies were fairly abundant but the host galls on both black cherry and choke cherry were slightly more than small protrusions on the leaves. Female *C. serotina* were ovipositing mainly on the new blossoms of both cherry tree species. Of the 12 ova found, I reared all to pupae: 1 died from parasitism, but the other 11 produced adults, emerging 3 weeks after pupation in early July. All of these larvae and pupae were reared outdoors under ambient conditions. If I had reared them indoors, I could understand why so many emerged early, but these were maintained outdoors. It's been brought to my attention that in my Herig (2006) article it states that adults emerged between 10-20 May in Mecosta Co, and on the wing thru 10 June or so. The reference to *C. serotina* adults being on the wing until 26 June pertains to first brood Otsego County butterflies, which by this time are badly worn. First brood Clinton County butterflies are well worn by 5 June.



Overall, I find these observations to be very interesting for an insect that's supposed to be single brooded! Something is happening in Michigan, maybe its weather related. More intensive studies are certainly needed, and hopefully others will investigate this phenomenon!

Finding second-brood emaculate adults in the lab is one thing, finding and capturing them in the wild is something else, especially when the first brood adults are worn badly or just gone!!

References

Herig, T. 2006. The cherry gall azure (*Celastrina serotina*): a new species for Michigan. Newsletter of the Michigan Entomological Society 51 (1-2): 10-11.

Pavulaan, H. and D. M. Wright. 2000. The biology, lifehistory, and taxonomy of *Celastrina neglectamajor* (Lycaenidae: Polyommatinae). The Taxonomic Report 2(5): 1-18.

Pavulaan, H. and D. M. Wright. 2005. *Celastrina serotina* (Lycaenidae: Polyommatinae): A new butterfly species from the northeastern United States and eastern Canada. The Taxonomic Report 6(6): 1-18.

Enviro-Weather: A Useful Tool for Entomologists in Michigan

Beth Bishop, Enviro-weather coordinator
B18 Food Safety and Toxicology, Michigan State University, E. Lansing, MI 48824. Email: bishopb@msu.edu

Do you need current weather-based information from locations throughout Michigan? Find it on Michigan State University's(MSU) Enviro-weather website (www.Enviroweather.msu.edu). Enviro-weather collects data from a network of local weather stations throughout Michigan (currently 62 stations and increasing). Processed data is used to produce summaries, tools and predictions for agricultural producers, natural resource managers, and other Michiganders whose lives are influenced by weather.

The Website: All summaries, tools and predictions on the Enviro-weather website are produced using weather data collected by local weather stations. When you first load the website, you will see a Michigan map with station locations shown as dots. By clicking on a dot, you can view the weather data/ summaries, tools and predictions based on data for that station. Once at this "station page" it is easy to switch to another location by using the pull-downs mentioned at the top of the screen.

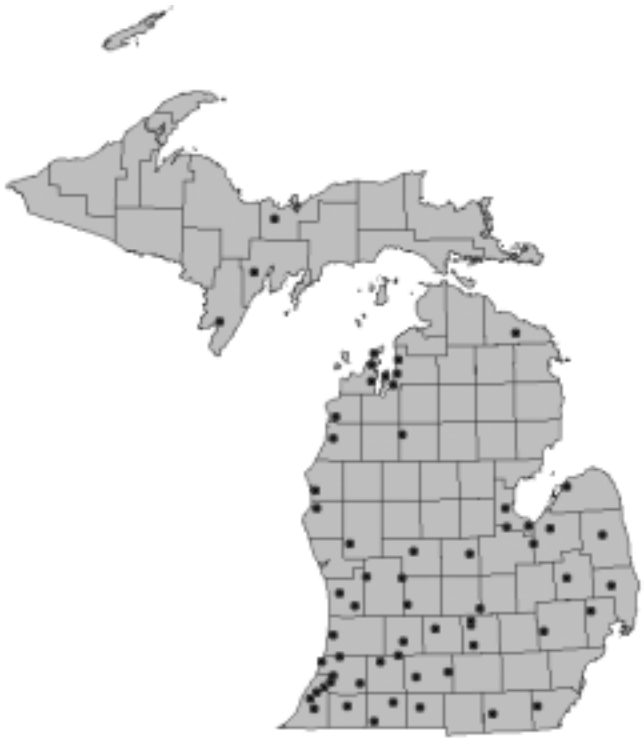
The Tools: Enviro-weather uses data collected from local weather stations to produce weather summaries and weather-based tools and predictions useful to a variety of industries and individuals. Some of these (e.g., a table showing overnight temperatures, a map of Michigan showing current degree-day accumulations (base 50F) and departures from normal, etc.) are accessible from the station page. Others are more specific to particular groups and agricultural commodities. These specialized tools can be viewed by selecting the relevant commodity. For example, there are a number of models that predict insect pests and diseases that are specific to fruit growers and can be viewed by clicking on "fruit" from the station page.

The Weather Station Network: The backbone of Enviro-weather is its weather station network. The network includes all of the original MAWN (Michigan Automated Weather Network) stations and newer stations, many of which were paid for by commodity groups or other local interests. Each station has the same basic weather sensors that measure the following: air temperature at 4 ft above the ground, soil temperature at 2 inches and 4 inches, soil moisture at 12 inches and 24 inches, relative humidity, solar radiation, wind speed, wind direction, precipitation at 1 meter above the ground, and leaf wetness. All stations are installed in an identical fashion and are positioned so they gather weather data representative of the area. Station maintenance and sensor calibration is a priority for Enviro-weather; since data accuracy depends on station maintenance.

What makes the data gathered by Enviro-weather stations especially relevant is that it is accessible in near-real time. Stations transmit their data to servers at MSU via wireless technology (cellular data communication systems). This means that there is only a small lag between the time the data are collected and the time the information is accessible on the website. This type of technology did not exist 5 years ago.

We invite you to check out Enviro-weather's tools and services. We are a valuable resource for many, but we are still growing, developing and adding to our suite of tools and stations. I welcome your questions, comments and ideas and can be contacted at: bishopb@msu.edu or 517-432-6520.

Enviro-weather is a collaborative project between the Michigan Climatological Resources Program and the MSU Integrated Pest Management Program and is supported by Project GREEEN, the Michigan Agricultural Experiment Station, MSU Extension, private donors, and MSU departments of Biosystems & Agricultural Engineering, Crop & Soil Sciences, Entomology, Forestry, Geography, Horticulture, and Plant Pathology along with HortSystems, Inc. The Enviro-weather project staff includes: Mike Brewer, Department of Entomology and Jeff Andreson, Department of Geography, Project Directors; Beth Bishop, Project Co-ordinator; Tracy Aichelle, Chief Programmer; Steve Marquie, Field Operations Manager and System Engineer; Jim Brown, Systems Analyst; Joy Landis, IPM Resources; Aaron, Pollyea, Data Quality.



Current locations for the 62 Enviro-Weather stations in Michigan.

You Can Go Back to the Place, But You Can't Go Back in Time

Harry D. King
Current address: 3844 Battleground Ave, Apt. 63, Greensboro, NC 27410-9434; Email: hking22@triad.rr.com

I would like to tell you this is going to be a happy tale but unfortunately that is not the case. It is an emotional one and a lesson about time and one learned only by having several very similar experiences. I had collected on the Newaygo Prairie, in western Lower Michigan, a number of times back in the 1970s for *Oeneis chryxus* (Chryxus Arctic). In one particular year, 1981, Mo and I had gone up to Newaygo together to look for *O. chryxus* but also in hope of finding *Pyrgus centaureae* (Grizzled Skipper).

Mo had taken a couple of specimens of *P. centaureae* just over into Montcalm County in section 7 in an earlier year. Some of the land was private property that the owner hadn't done much with and to our surprise we came up with about a half dozen specimens of *O. chryxus* in section 5. As I recall these were the first records for Montcalm County. It was a wonderful day to be outdoors and the new discovery just made it better.

Well you know, many years have gone by since that day and I have recalled that afternoon many times, including the excitement and the emotion that accompanies the taking of a new record in the company of a good friend, just as I had many other similar occasions.

About 20 years after that day, I decided to revisit that spot and see how the *O. chryxus* were doing. When I got there I was sure I had gone to the wrong place, but no, I was in sections 5 and 7. Now the private property had been planted to pine trees that were about 5-7 feet tall -- I'm guessing Christmas trees. They were spaced quite a bit apart and other than the trees the area looked about the same.

Still hoping to find *O. chryxus*, I walked out onto the property through the rows of trees sweeping my net as I went. A 100 feet or so onto the property, I realized something was terribly wrong. I hadn't seen even one insect of any kind. Not one bee, not one fly, not an ant, a beetle or anything. As I got farther back into the rows of trees, I found a tractor left by the owner and as I looked at it my heart sunk. It was connected to a pull-behind insecticide sprayer. I still patrolled the property but the only thing I saw that day was one lone fly and he looked like he was lost.

I was so bewildered for several weeks after that to think the *O. chryxus* colony was gone and I decided I was not going to do that again. I still have that memory of Mo and I getting *O. chryxus* there in Montcalm back in 1981 and it's a great one but after revisiting the site, I felt like someone had taken an experience that meant a lot to me and tore it up and threw it away. I told myself I was not going to do that again, it was too painful, but I did return at least twice more before I finally gave it up. This really taught me a lesson: enjoy your time with good friends, nature and the experiences that emotionally shape you because time really doesn't stand still for anyone and you better take notice and enjoy it or you just might miss it.

John Perona: 1920 - 2009

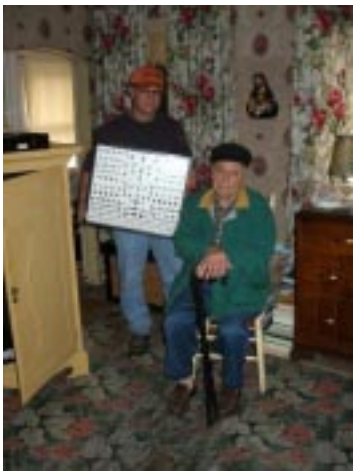
Our friend and honorary member, John Batista Perona, died on Sunday, 1 February 2009. He lived a long 88 years in Calumet, Michigan. John was preceded in death by his sisters, Lucy and Victoria and brothers, Frank and Joseph. He is survived by 3 nieces and nephews.

John's collection of over 8,000 specimens is preserved in the A. J. Cook Arthropod Research Collection at Michigan State University in memory of him and for others to study. His music and friendship will be missed by all of us who knew him.

Articles about John can be found in the following Michigan Entomological Society Newsletters:

December 2004, 49(3/4): 4.
December 2005, 50(3/4):15-16.
May 2008, 53(1/2):7-9, 16.

Ron Priest


Martin Andree and John, 2007


John demonstrating his collecting equipment, 2005


John playing spoons, 2005

Mo Nielsen and John, 2005


John and Dana Richter, 2004

Volunteers participating in the Karner Blue Butterfly Recovery Program make a difference

Heather Keough
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The Karner blue butterfly (KBB) is a federally endangered species that has declined on the Huron-Manistee National Forests over the past century as the oak/pine savannas/barrens habitats on which it depends have been replaced by mature forests due to extensive reforestation and fire control efforts, and the process of natural succession. To meet the recovery goals for viable KBB populations, the Huron-Manistee National Forest's Plan calls for the restoration and maintenance of 20,300 acres of savannas/barrens within designated KBB population management areas and essential KBB habitat. Currently, the recovery effort is focused on developing four viable metapopulation areas within the Manistee National Forest.


Male and female KBB

Since 1992, hand cutting, timber harvests, prescribed burns, mechanical removal of vegetation (i.e., mowing, sheer cutting, masticating, bulldozing), scarification, seeding, and road closures have been used to manage 712 acres of occupied and 796 acres of unoccupied KBB habitat within the 4 metapopulation management areas on the forest.


Reducing woody cover using a sheer cutter

The objective of these treatments is to reduce tree density and the encroachment of trees and shrubs, and promote the growth of native grasses and KBB nectar plant species, especially wild lupine - the sole food source for the KBB caterpillar.


Wild lupine in bloom

Every year, the Manistee National Forest monitors KBB to determine how far populations are from meeting recovery goals, and to evaluate the effectiveness of different management strategies for restoring KBB habitat. Between 2006 and 2008, the number of acres the Manistee National Forest monitored for the KBB increased dramatically (298 acres in 2006, 843 acres in 2007, 812 acres in 2008) due largely to volunteer participation in 2007 and 2008.

Volunteer participation in 2007 and 2008 was incredible! Individuals from numerous private and public partner organizations provided 281 volunteer days (~$37,000 in contributed volunteer time). Participants included but were not limited to the Michigan Department of Natural Resources, Michigan State University, Michigan State University Extension, Big Rapids High School, The Nature Conservancy, Ferris State University, Grand Valley State University, Michigan Entomological Society, Michigan Federated Garden Clubs, Michigan's Conservation Districts, Land Conservancy of West Michigan, and Little River Band of Ottawa Indians.

To those who supported our 2007 and 2008 survey effort, thank you for being so generous with your time! With your support, the Manistee National Forest not only met, but surpassed its monitoring goals. With the help of volunteers, the Forests inventoried 436 acres; locating 34 new KBB subpopulations. In addition, the Forests estimated KBB abundance and assessed habitat conditions within 78 subpopulations covering 580 acres, and examined the influence of weather on KBB overwintering survivorship by collecting hourly temperature and weekly snow depth data within 20 selected subpopulations. The Forests also conducted habitat surveys on an additional 104 acres to evaluate the effectiveness of different mechanical treatments at restoring KBB habitat.


Reducing woody cover using a bulldozer

Those participating in the 2007 and 2008 survey effort made an invaluable contribution to conserving the KBB by helping us dramatically improve our understanding of the KBB's status within the Manistee National Forest, and how to restore suitable KBB habitat. Without good information, our efforts to recover the KBB may fail.

There is still much to learn if we are to prevent this species from disappearing from our local landscape. In 2009, the Forests will continue to monitor KBB to determine: how far designated metapopulation areas within the Manistee National Forest are from meeting recovery goals; develop a habitat suitability model for KBB within the Manistee National Forest; identify high priority areas to target management; and evaluate the effectiveness of different management strategies for restoring KBB habitat.

Volunteers are still needed in 2009 to conduct KBB surveys from early July to early August, as well as in future years. There are opportunities for individuals of all skill levels to participate. Interested parties can volunteer during weekdays, for a days, a week, or more. Reimbursement for mileage and housing may be available.

Volunteer assistance is vital to meeting our KBB recovery goals! Please choose to volunteer this year or next and help conserve a locally endangered species. If you or someone you know is interested in participating, please contact Dr. Heather Keough as given above.


KBB nectaring on butterfly weed

Chasing The Scarce Infant, Leucobrephos brephoides

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Leucobrephos brephoides, The Scarce Infant, is a smallish sized gray and black geometrid moth that flies very early in spring. Being a day flier it needs a good

Leucobrephos brephoides; photo by Jim Vargo

warm sunny day (morning) to be on the wing. Larvae feed on the catkins of Aspen (*Populus*). Good habitat seems to be along sandy roads through swampy areas where its host plant is present. In my experience, *L. brephoides* flies early in the day, often with the geometrid *Archieris infans*, The Infant. Good timing and the ability to "read" the weather are everything if you are targeting *L. brephoides*. Below are notes of my several attempts to collect *L. brephoides*.

After speaking with a Ted Herig and Mo Nielsen, I decided to monitor temperature data at the weather station in Hawks, Presque Isle County, MI. I targeted 50 degree days (DD), using Growing Degree Days Base 50°F.

Area where *L. brephoides* and *A. infans* were collected in Otsego Co., MI.

On 20-21 April 2006, I visited a site east of Wolverine, Cheboygan County, MI, after hearing that this was a good area to see both *L. brephoides* and *A. infans*. On the 20th, I arrived at about 11 am to find *A. infans* already flying in small numbers. I walked along stretches of the road that looked like appropriate habitat until about 2 pm, but no *L. brephoides*.

I returned the next morning at about 9 am after a night of mothing in Otsego County, MI. It was bright and sunny by 10:30 am and several *A. infans* were making their way to the road to sip moisture and warm up. Several *Polygonia faunus* were also present. At about 2 PM, I figured I had missed *L. brephoides* so I started making notes on the phenology. Aspen and Willow (*Salix*) catkins were mostly open and bees were nectaring on them, and the snow was all but gone. The DD50 at Hawks, MI, was 54-62.

On 21 April 2008, I returned to the site east of Wolverine accompanied by Owen Perkins. We searched the road again but had similar results as in 2006, no *L. brephoides*. Again the catkins were all open and snow was gone. The DD50 at Hawks was 68. Later in the day, we met Mo Nielsen and Ted Herig at Mo's "hut" in Otsego County. At about 5 pm, Ted and I walked to a nearby wellhead opening to search for Azures (*Celastrina* sp.). We both noticed an *A. infans* adult go racing by. It was very fast and certainly not the type of behavior we had observed earlier in the day. We saw two more. We both took a swing at the last one but missed. After that no more were seen. Is it possible all three were the same individual flying a route similar to some swallowtails?

On 17 April 2009, Owen Perkins and I headed to the Michigan Upper Peninsula to put out his HOBO weather recorder. On the way up, we planned to stop and look for *L. brephoides* at the Cheboygan County site and also at another site in Otsego County. We stopped at the Otsego site first, arriving at about 10:30 am. Not knowing the exact spot, we drove around on some trails and soon began seeing *L. brephoides* in a small area of aspen. We stayed for about an hour and I collected a few specimens of both *L. brephoides* and *A. infans*. I noticed one *L. brephoides* fly into the crown of an aspen, about 15-20 feet high, where the

Aspen buds, Otsego Co, MI. 17 April 2009

buds were still closed but expanding. There were also large banks of snow still on the ground. The DD50 for Hawks was 19. Both species were tippling on the moist areas near the melting snow. In all, we observed about 25-30 *L. brephoides* and 8-10 *A. infans*. After leaving this site, we went to the site east of Wolverine but only saw one *A. infans*.

Apparently *L. brephoides* has a very short flight period, but its early flight season makes it relatively easy to target once you know when and where to go. I suspect this species is more widespread than records indicate simply because nobody is out collecting when there is still snow on the ground!

Overall, in 2006, I was too late by about 3-5 days. In 2008 Owen and I were closer but still a few days late. In 2009 I decided to abandon the idea of 50 DD50 and go much earlier, relying more on the weather forecast than the number of degree days. We watched for a few warmer sunny days to pass and then when it warmed into the 60's it was time to go. Had I used 50 DD50 as the determining factor, I wouldn't have gone looking until 28 April and that would have again been too late.

Archieris infans; Otsego Co.MI. 17 April 2009

New State and Provincial Arthropod Reports

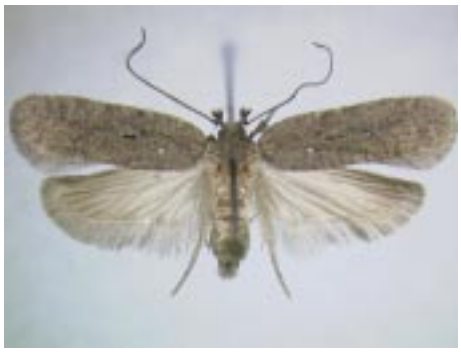
This report identifies five new species in two orders that are new to Michigan. Look through your collection for additional species and consider submitting them for next year's report. You may want to write your own article of a new record especially if there is a story behind your find. See you in the field!

Ron Priest
Department of Entomology, Michigan State University, East Lansing, MI 48824-1115. Email: priest@msu.edu

LEPIDOPTERA
Species: *Agonopterix eupatoriiella* (Chambers)
Family: Elachistidae

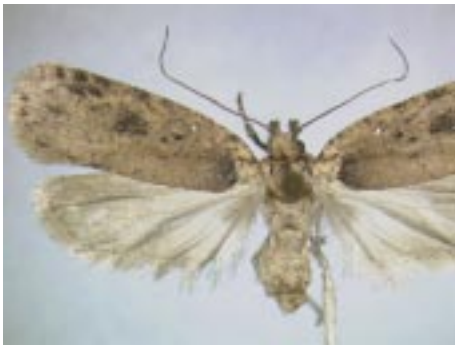
Location: MICHIGAN, Allegan Co.; Allegan State Game Area; 42°36.540'N 86°00.287'W (WGS84 datum); 715' elevation.
Date: 18 March 2007
Host/Habitat: xeric oak/white pine forest w/ scattered cherry, near red pine stand; no snow cover; under loose bark of standing dead oak; 6:35pm ~35°F sunny/ mostly calm.
Collector: Kyle E. Johnson.
Identifier: Kyle E. Johnson 2007; confirmed by Terry Harrison 2008.
Voucher(s): specimen location UW-Madison Insect Research Collection.
Notes: 1 male and 3 females collected from site with similar data. 1 male & 1 female with these data; 2 females collected nearby w/ similar data
Submitted by: Kyle E. Johnson.

Species: *Agonopterix nebulosa* (Zeller)
Family: Elachistidae.



Location: MICHIGAN, Kalamazoo Co., near Gourdneck State Game Area.
Date: adult issued 10 July 1998.
Host/Habitat: larval leaf webs on Antennaria sp. recovered on 12 June 1998.
Collector: George J. Balogh.
Identifier: . Kyle E. Johnson 2009.
Voucher(s): George J. Balogh private collection.
Notes: 3 females all w/ similar data.
Submitted by: Kyle E. Johnson.

Species: *Agonopterix paulae* Harrison and Berenbaum
Family: Elachistidae.



Location: MICHIGAN, Cass Co.; T5S R14W Sec31.
Date: 26 September 1986.
Collector: William Westrate.
Identifier: Kyle E. Johnson 2009.
Voucher(s): George J. Balogh private collection.
Notes: 1 female.
Submitted by: Kyle E. Johnson.

Harrison, T L. and M.R. Berenbaum. 2005. Rutaceae-feeding Agonopterix (Hübner) (Lepidoptera: Elachistidae) in Illinois. Proc. Entomol. Soc. Wash. 107: 162-175.

Species: *Patalene olyzonaria* (Walker)
Family: Geometriidae

Photo by Jim Vargo

Location: MICHIGAN, Washtenaw Co., Cherry Hill Nature Preserve.
Date: 2 August 2006 & 16 August 2008
Host/Habitat: Oak/Hickory forest
Collector: Dwayne R. Badgero
Identifier: Jim Vargo & James Adams
Voucher(s): 2
Notes: Collected at Mercury Vapor light
Submitted by: Dwayne R. Badgero

MECOPTERA
Species: *Boreus nivoriundus* Fitch
Family: Boreidae.

Location: MICHIGAN, Delta Co.; Trombly; 46°01.836'N 87°07.620'W (WGS84 datum); 900' elev.
Date: 24 December 2005.
Host/Habitat: on snowy trail through hardwood forest/mixed forest intergrade; 3:38pm ~30-35°F cloudy winter day.
Collector: Kyle E. Johnson.
Identifier: Kyle E. Johnson 2009.
Voucher(s): 1 female; UW-Madison Insect Research Collection.
Submitted by: Kyle E. Johnson.

The "Hearsay" Hairstreak: Satyrium favonius ontario *in Wayne County, Michigan*

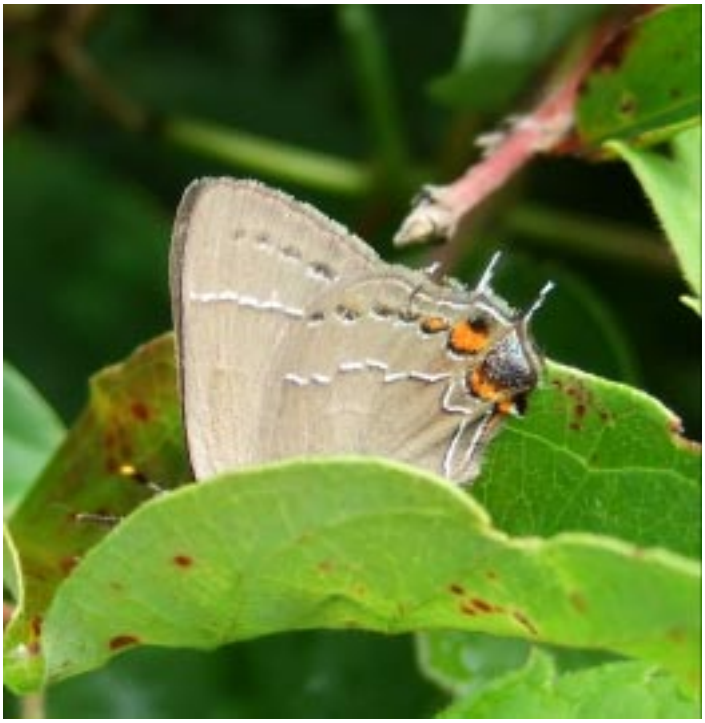
Julie Craves and Darrin O'Brien
Rouge River Bird Observatory, University of Michigan-Dearborn, Dearborn, MI 48128
Email: jcraves@umd.umich.edu

In 2007 and 2008, JC received grants from the U.S. Fish and Wildlife Service to do Odonata surveys at the Detroit River International Wildlife Refuge, Humbug Marsh Unit. This 465-acre unit, located in Trenton and Gibraltar, Wayne County, represents the last mile of natural shoreline on the U.S. mainland of the Detroit River. Habitats include a mature oak-hickory forest, old fields, coastal wetlands, and a large brownfield.

Although focused on Odonata, we have always been on the lookout for other interesting taxa. On 29 June 2008, we encountered a hairstreak in the ecotone between the oak-hickory forest and old field habitats. It landed above our heads, wings closed, and DO reached over his head to get a photograph with a digicam. Because our look at it was brief, it was presumed to be a Gray Hairstreak (*Strymon melinus*), a species we had photographed at Humbug before. Banded Hairstreaks (*Satyrium calanus*) are also common there. Upon examination of the photograph, it appeared to be instead an Oak Hairstreak of the northern subspecies, *Satyrium favonius ontario*.

A note about the taxonomy is warranted here. Clench (1961) assigned a group of North American hairstreaks, including *S. favonius*, to the genus *Euristrymon*. These were later moved to *Fixsenia* (Clench 1978), and the species in question is generally referred to as *Fixsenia favonius ontario* in Michigan (Eagle et al. 2005, MNFI 2007, Nielsen 1999). However, Robbins (2004) followed Ziegler's (1960) placement in *Satyrium* because it was based on a wider range of genitalia characteristics from both genders, and subsequent unpublished molecular evidence supports this decision [R. Robbins, pers. comm.]. Opler and Warren (2002) and NatureServe (2008) have followed Robbins (2004), and so I also use *Satyrium favonius ontario*. The current common name for this species is "Northern" Oak Hairstreak, to avoid the awkward former "Northern" Southern Hairstreak (Cassie et al. 2001).

The characteristics that we believed indicated *S. f. ontario* included the pronounced "W"-shaped postmedian line on the hindwing, the brownish-gray underwing ground color (the *Strymon melinus* we have observed were more dove-gray), and the red cap and chevron-shaped white mark bordering the large blue spot on the hindwing (see photo). Taking a look at nearly 100 photos identified as *Strymon melinus* at BugGuide.net, we found that roughly 20% had some red over the blue spot, but none in combination with a chevron shaped white border and distinctive "W" shape on the hindwing. There and elsewhere on the Internet we found any number of hairstreaks that appeared to have some of the features of either or both species, surely



confounding any possible positive identification. However, nearly all photographs of *S. f. ontario* had the combination of traits visible in the Humbug butterfly.

We are well aware of the pitfalls of identifying insects from photographs, as well as the motto of the Michigan Lepidoptera Society: "Dead and spread - anything else is hearsay." Indeed, we have taken hundreds of voucher specimens of Odonata, as well as some Lepidoptera, ourselves. Unfortunately, we didn't catch this insect. With that disclaimer, based on the photograph and opinions of some out-of-state experts familiar with this subspecies, we feel fairly good about identifying this butterfly as a "Northern" Oak Hairstreak, *Satyrium favonius ontario.*

Assuming this is correct, it is the second record for Michigan, the first being an individual collected on 28 June 1975 in Lenawee County (Oosting et al. 1979). It is listed as a species of special concern in Michigan (MNFI 2007) and as a species of greatest conservation need in the state's wildlife action plan (Eagle et al. 2005). Clench (1971) reported it as "always uncommon, and usually rare," while Nielsen (1999) states that it is uncommon in states adjacent to Michigan.

Various species of oaks (*Quercus* sp.) are the host plants for this species (Gifford and Opler 1983, Nielsen 1999, Scott 1986). Adults have been reported nectaring on white sweet clover (*Melilotus alba*) (Oosting et al. 1979) and wild quinine (*Parthenium integrifolium*), common milkweed (*Asclepias syriaca*), and they especially favor dogbane or indian hemp (*Apocynum cannabinum*) (Clench 1971). All of these species save for the wild quinine are common at Humbug, providing hope that there may be a viable population at this site. The flight period is June (Nielsen 1999). We will thoroughly search for this hairstreak in 2009, nets in hand.

References

Cassie, B., J. Glassberg, A. Swengel, and G. Tudor. 2001. North American Butterfly Association (NABA) checklist and English names of North American butterflies, second edition. North American Butterfly Association, Morristown, NJ. <http://www.naba.org/pubs/checklst.html>. Accessed 12 Dec 2008.

Clench, H. K. 1961. Tribe Theclini. Pages 177 220 in Ehrlich, P. R. (Ed.) How to know the butterflies. Brown Co., Dubuque, IA.

Clench, H. K. 1971. Some records of *Euristrymon ontario* (Lycanidae). J. Lep. Soc. 25:80-82.

Clench, H. K. 1978. The names of certain Holarctic hairstreak genera (Lycaenidae). J. Lep. Soc. 32:277-281.

Eagle, A. C., E. M. Hay Chmielewski, K. T. Cleveland, A. L. Derosier, M. E. Herbert, and R. A. Rustem, eds. 2005. Michigan's Wildlife Action Plan. Michigan Dept. Natural Resources. Lansing, MI..<http://www.michigan.gov/dnrwildlifeactionplan>. Accessed 28 Nov 2008.

Gifford, S. M. and P. A. Opler. 1983. Natural history of seven hairstreaks in coastal North Carolina. J. Lep. Soc. 37:97-105.

[MNFI] Michigan Natural Features Inventory. 2007. *Fixsenia favonius ontario*. Northern Hairstreak. Rare Species Explorer. <htttp://web4.msue.msu.edu/mnfi/explorer>. Accessed 1 December 2008.

NatureServe. 2008. NatureServe Explorer: An online encyclopedia of life. Version 7.0. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed: 16 Dec 2008.

Nielsen, M. C. 1999. Michigan Butterflies and Skippers, first edition. MSU Extension, Michigan State University, Lansing.

Oosting, D. P., D. J. Harvey, and W. H. Wagner. 1979. *Euristrymon ontario* (Lycanidae): First report in Michigan. J. Lep. Soc. 33:151-152.

Opler, P.A. and A.D. Warren. 2002. Butterflies of North America. 2. Scientific Names List for Butterfly Species of North America, north of Mexico. Fort Collins, Contributions of the C.P. Gillette Museum of Arthropod Diversity, Colorado State University, 79p.

Robbins, R. K. 2004. Tribe Eumaeini. Pp. 118 137. In: Lamas, G., ed. (ed.). Atlas of Neotropical Lepidoptera. Checklist: Part 4A. Hesperioidea Papilionoidea. Scientific Publishers, Gainesville.

Scott, J. A. 1986. Butterflies of North America. Stanford University Press, Palo Alto, CA.

Ziegler, J. B. 1960. Preliminary contribution to a redefinition of the genera of North American hairstreaks (Lycaenidae) north of Mexico. J. Lep. Soc. 14:19-23.

Beech Bark Disease in Michigan: An Update

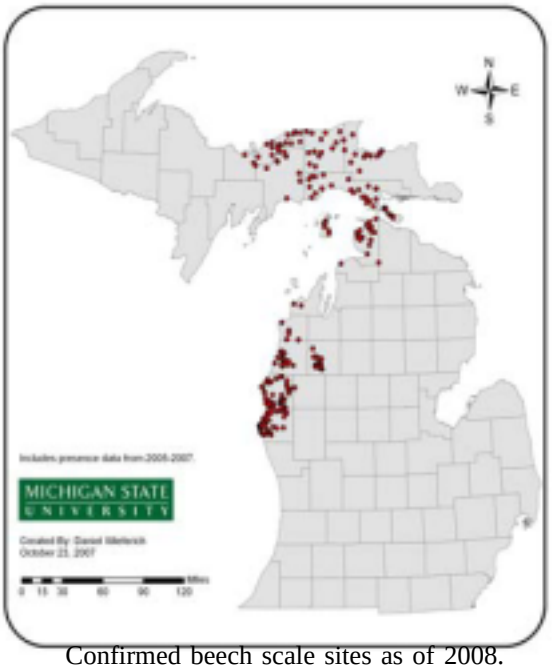
From the "2008 Michigan Forest Health Highlights" prepared by the Forest, Mineral & Fire Management Division, Michigan DNR.

The Michigan Department of Natural Resources (MDNR) in cooperation with Michigan State University (MSU), the University of Michigan and Michigan Technological University continue to monitor the movement of beech scale (*Cryptococcus fagisuga*) and the development and impacts of Beech Bark Disease (BBD). The BBD advancing front (i.e. areas infested with the exotic beech scale prior to fungal infection) continues to spread east and west in the Upper Peninsula (UP) and to new areas in the Northern Lower Peninsula (NLP, See map). Ludington State Park in Mason County was the first area in the state where BBD was detected in Michigan. Beech trees of all sizes are scale covered. Beech snap is extensive throughout the park with beech mortality reaching the 75% mark. Isolated, satellite populations of beech scale occur well ahead of the advancing front in both the Western UP and NLP. These outliers are being studied by MSU to better understand scale movement to new areas, and colonization rates within stands after scale arrival.

The USDA Forest Service Research Facility in Delaware, Ohio, continues to collect scion wood from Michigan's resistant trees to study Beech Bark Disease Resistance. These trees resist scale establishment. Without the scale, beech are not susceptible to infection by *Nectria* fungi that cause beech bark disease. Scions from resistant American beech have been collected from infested areas of both Michigan's UP and LP. Beginning in the fall of 2009, Michigan will establish the first seed orchard with BBD resistant stock. The seed from these orchards will be used to restore an American beech component in BBD-impacted hardwood forests. The long-term objective is to develop regional repositories of resistant beech germplasm and establish seed orchards and seed production areas that consist of genetically diverse populations of resistant beech.

The MDNR continues to identify and protect BBD resistant trees. To date, 19 families of resistant beech from the UP and 9 families from the NLP have been confirmed resistant. Scions will again be collected from some of these trees during the winter of 2009.

Management plans for stands containing beech anywhere in Michigan should now consider vulnerability to BBD. Management goals are twofold: 1) To reduce BBD impacts ahead of the BBD killing front. Decreasing the beech component and maintaining a fully stocked stand helps ensure the production of both commodity and non-commodity forest resource values. 2) To increase tree species diversity thereby decreasing stand susceptibility and vulnerability to BBD. Tree species diversity also protects a stand from future pests which may target a single tree species or genus. A beech component is maintained even in heavily BBD impacted areas. Keeping a minor beech component minimally affects sustained forest productivity, and offers an extended period of mast production. In BBD advancing front areas of the UP it is a real challenge to stay ahead of beech mortality and beech snap in scale infested stands. Often times, the beech component of a timber sale has a significantly reduced value (e.g. salvage value) due to volume losses from beech snap and tree mortality between the time a stand is cruised for sale and when it's actually harvested. Heavily scale infested American beech are considered hazard trees in recreation and other high use areas. Once infected, these trees can snap unexpectedly. Scale-infested beech are removed from areas when this beech snap poses a threat to human safety or property.



Confirmed beech scale sites as of 2008.
Created by Daniel Wieferich, MSU

MES 2008 Annual Meeting Minutes

The 2008 MES Annual Meeting was held on Saturday, June 15, 2008 at the Environmental Interpretive Center, University of Michigan-Dearborn, in Dearborn, Michigan. The meeting theme was, "The Science of Entomology Meeting the Needs of Society". The business meeting was called to order at 4:10 pm by President Wallenmaier.

Treasurer's Report (Martin Andree). Our accounts are in good shape, although Martin is still having a problem collecting GLE page changes from some authors. He is also worried about increased mailing costs and their impact on our expenses. Martin and the board are still looking for someone to take over the treasurer responsibilities. Martin's current job involves a great deal of out of state and international travel, making it very difficult for him to allocate enough time to do a good job on keeping the society's books.

Secretary's Report. Our secretary, Bob Kriegel, was in Chicago on business and unable to attend this year's annual meeting. He sent a written report in advance to several board members to be read at the meeting.

The society's new web address of www.MichEntSoc.org is up and running. This new URL is an alias for the original, much longer URL. The older URL still works too. A combined mailing was sent out in mid May 2008 that included the annual meeting announcement, dues notice, and ballot. Each member got only those notices that were applicable to them. Dues have already been received and processed from almost 100 members at the time of the meeting. All correspondence received through Friday June 6, 2008 had been processed and checks were forwarded to the treasurer. Similarly, Bob Kriegel sent all ballots received through that date with Ron Priest to hand over to Bob Haack for counting at the annual MES meeting.

Newsletter Editor's Report (Bob Haack). Bob needs content for the next newsletter. He reminded all presenters to send abstracts of their presentations to him for publication in the next newsletter.

Journal Editor's Report. Our editor, Therese Poland, was unable to attend the meeting so she submitted her report in abstentia. Therese continues to catch up on the publication schedule. It looks like the first 2008 issue may actually be released in 2008. Also, the first color pages in the journal have been paid for by an author and they look great. Therese advises potential authors that waiting times for publication are short. This is a great time to submit articles for publication in our journal.

Old Business. The status of the new MES brochure was discussed. Therese Poland displayed a draft of the brochure for discussion. There was some discussion on ordering of topics, headlines, grammar and syntax. Several people made suggestions for photographs. The issue of written releases for use of photographs was discussed, as was a suggestion to include the web site URL on the front panel of the brochure.

Bob Haack discussed the results of the election. Fifty ballots have been received so far. Voting closed the previous day, but there may still be some ballots in the society mailbox at MSU.

Discussion on the date for the 2009 annual meeting, which started at the 2008 Breaking Diapause meeting, was continued. Several people liked summer meetings; others thought it was worth trying a fall meeting to see if it would improve attendance. Using a large, all purpose facility was discussed.

New Business. The winners of the meeting's photo salon were announced. The subjects and winners were:

" Life history "Damsel Fly Lunch" Laurie Reed.
" Longhorned beetles: Laurie Reed.
" Flower Beetle: Shannon Moore.
" Luna: Shannon Moore.
" Weevil on milkweed: Laurie Reed.
" Common darner: Laurie Reed.

Tom Wallenmaier brought up the topic of offering an MES award for best entomology project at either the Science Metro Detroit of Michigan Science fairs. Tom will return to the board with a specific request at the next governing board meeting.

Tom also reported on the insect project at the Detroit Library. The library would like live insect demonstrations at the library this summer. Tom solicited the membership for interest; he is also considering getting involved in the project himself. The general merits of using events such as this to promote the society were discussed.

The meeting was adjourned at 5:00 pm.

Robert Kriegel, Immediate Past Secretary

Hemlock Woolly Adelgid Update

Modified from the MDNR 2008 Report. See p 11.

The Hemlock Woolly Adelgid (HWA*; Adelges tsugae*) was inadvertently introduced into the Harbor Springs area of MI on infested nursery stock in 2006. All imported hemlock and adjoining nearby hemlock were removed and destoyed. A perimeter of hemlock were treated with systemic insecticides in 2006 and 2007. The MDA continues to look at other hemlock in the area to determine whether additional infested nursery stock have been planted in Michigan. In addition, HWA monitoring trees were established in several hemlock stands near the initial HWA detection area. No HWA infestations were found in Michigan in 2008.

Michigan Butterfly and Skipper Species and Subspecies that Need Current Vouchers

Dwayne R. Badgero[1] and Owen A. Perkins[2]

[1] 337 Brookhollow Dr. Oxford, MI 48371. Email: NOCTUIDS75@aol.com
[2] 2806 Linwood Avenue, Royal Oak MI 48073-3023. Email: Lepalert@comcast.net
(Both authors are members of the MES - Michigan Lepidoptera Survey.)

We are providing a list of Michigan Butterfly and Skipper species and subspecies that need current vouchers to document their continued presence in Michigan. Contact either author if you know of any voucher specimens collected after the last known voucher, especially any vouchers since January 2000 (see Table). On behalf of the Michigan Entomological Society - Michigan Lepidoptera Survey (MLS), we would like examine such material and enter all vital collection data in the MLS database. Lepidopterists are encouraged to voucher any of the following species in 2009 and beyond.

Butterfly species and subspecies not known to have a voucher specimen taken in Michigan since January 2000 and deposited in a known collection.

Pelham No.*	Butterfly scientific name	Year of last MI voucher	Residency status in MI
95	*Erynnis martialis* (Scudder, [1870])	1968	Resident
160.	*Calpodes ethlius* (Stoll, 1782)	1999	Stray
200.a	*Lerodes eufala eufala* (W. H. Edwards, 1869)	1959	Stray
202	*Lerema accius* (J. E. Smith, 1797)	1998	Stray
245.b	*Atalopedes campestris huron* (W. H. Edwards, 1863)	1971	Stray
294.a	*Battus philenor philenor* (Linnaeus, 1771)	1999	Resident
298.b	*Papilio machaon hudsonianus* A. Clark, 1932	1991	Stray
358.a	*Zerene cesonia cesonia* (Stoll, 1790)	1939	Stray
339	*Abaeis nicippe* (Cramer, 1779)	1996	Stray
373.f	*Euchloe ausonides mayi* F. Chermock & R. Chermock, 1940	1987	Resident
395.a	*Pontia occidentalis occidentalis* (Reakirt, 1866)	1989	Stray
397	*Ascia monuste phileta* (Fabricius, 1775)	early 1900s	Stray
435	*Satyrium caryaevorus* (McDunnough, 1942)	1999	Resident
441.a	*Fixsenia favonius ontario* (W. H. Edwards, 1868)	1975	Stray
478	*Calycopis cecrops* (Fabricius, 1793)	1906	Stray
500	*Parrhasius m-album* (Boisduval & Le Conte [1833])	1964	Stray
543	*Echinargus isola* (Reakirt, [1867])	1937	Resident
548.a	*Plebejus saepiolus amica* (W. H. Edwards, 1863)	1987	Resident
589.a	*Danaus gilippus berenice* (Cramer, 1779)	1995	Stray
627.a	*Speyeria idalia idalia* (Drury, 1873) **	1984	Resident
686.a	*Polygonia gracilis gracilis* (Grote & Robinson, 1863)	1980	Resident
716.b	*Chlosyne gorgone carlota* (Reakirt, 1866)	1934	Resident
747	*Anaea andria* Scudder, 1875	1961	Stray
799	*Oeneis macounii* (W. H. Edwards, 1885)	1986	Resident

*Pelham Number based on: Pelham, JP. 2008. A Catalogue of the butterflies of the United States and Canada with a complete bibliography of the descriptive and systematic literature. J. Res. Lepidoptera 40: 1-658.
** State listed in Michigan as an endangered species. DNR permit required to capture.**

Proposed Changes to the MES Constitution & Bylaws

MES Governing Board

While preparing the MES Constitution & Bylaws for publication in the Fall 2008 MES Newsletter, two errors in wording were detected. We would like to bring these errors to the attention of the membership so that we can begin the formal process of making corrections.

Issue 1. There is a contradiction between the Constitution, Article IV Section 3 and the Bylaws, Article VI Section 2. The text of these two sections is duplicated below:

Constitution, Article IV
"Section 3. Secretary and Treasurer. The Secretary and Treasurer shall be appointed by the Board and shall serve for three years. They shall assume office at the close of the annual meeting next following his/her election."

Bylaws, Article VI
"Section 2. The President-Elect, Secretary, Treasurer, and Members-at-large shall be elected by mail ballot by the following procedure:"

As background information, in 2007, the MES membership voted to change the constitution to its current wording, but did not include any change to the Bylaws. We recommend changing Bylaws, Article VI, Section 2, to bring it into agreement with the constitution. The most convenient manner to do this, and the one recommended by the MES Governing Board, would be to remove ", Secretary, Treasurer," from Section 2.

Issue 2. It appears that an inadvertent change was made in 2001 to the MES Constitution with respect to student membership.

Constitution Article III, Section 5 after changes in 2001 reads:
"Section 5. Student: An individual attending school full time through high school".

This same section prior to 2001 read:

"Section 5. Student Membership. Any person who is enrolled in a recognized educational institution and professes an interest in entomology, whether studying that subject or not, may become a student member at reduced dues to be specified by the Governing Board. Application shall be endorsed by one active member or academic advisor or supervisor and filed with the Executive Secretary accompanied by the requisite fee. Student members shall not be allowed to vote or to hold office, but shall be permitted all other privileges of membership".

In discussions among MES Governing Board members, it was the group's recollection that student members were never eligible to vote or hold office within MES. However, changes in 2001, would allow students to run for office and cast ballots. We recommend adding the following sentence back to the Constitution in Section 5: "Student members shall not be allowed to vote or to hold office."

Both the constitution and bylaws include sections describing how to make amendments.

CONSTITUTION, Article XII - Amendments
Section 1. All proposed amendments shall be presented at an annual meeting. The President shall at that time appoint a special committee to consider the amendment or amendments and to report its recommendations at the next annual meeting. At that time members may make changes germane to the subject and purpose of the amendment, which shall then be referred by mail ballot to the entire membership. If two-thirds of the votes cast are in the affirmative, the amendment shall be adopted.

BYLAWS, Article VIII - Amendments
Section 1. Changes in these By-Laws may be made by a two-thirds vote of any general meeting or by a two-thirds majority of all votes cast in a mail ballot; provided, that written notice of the proposed amendment shall have been sent to every active member at least one month before the date of the meeting at which it is to be considered, or the last date for the receipt of the ballots in case of mail vote.

New book. "Guide to the Freshwater Invertebrates of the Midwest" by Kansas Biological Survey is available for $51.00 including shipping. It is a 230-page hardcover book. Send inquiries to reprint_service01@hotmail.com.

2009 MES Upcoming Elections

Ballots will soon be mailed out for the 2009 elections. We have 2 candidates for President-Elect and 3 for Member-at-Large. The candidates are:

President-Elect
Ethan Bright, Ann Arbor, MI
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Advice from a Golfing Lepidopterist

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I have been a golfer for many, many years, despite my scores and the advice to quit from well-meaning friends. I have been collecting lepidopterans even longer, with much more success. I am now going to reveal the secret relationship between lepidoptery and golfing that has kept me retuning to the links for many decades.

Back when I was still under 10 years old, my brother Gary taught me how to swing a golf club. He still bears a small mark on his nose where I hit him with an unexpectedly long backswing (my aerial net stroke was already well developed). I took to the sport of golf quickly, much to the delight of my three older brothers, who were eager to fill out a family foursome. They had already developed a love of trying different courses, even if it meant a good deal of travel. Once I joined the foursome, my butterfly collecting "range" expanded tremendously beyond the neighborhood barrier I had been held to prior to that time.

I used beaten but functional hand-me-down golf equipment, but that did not matter to me (I'm still that way-I just found a great set of irons at the Goodwill Store!). My golf bag was a perfect place for my net and other collecting equipment. At first I did not care about appearances, but in recent years I have toned it down a bit by acquiring a folding net that fits nicely inside a golf bag pocket.

Golf courses offer wonderful collecting opportunities, as they are in so many different locations and course designers use many different course concepts. Some are virtually all "created" landscapes, with each tree, shrub, rock and water feature carefully planned and placed. Many of the newer courses have taken the alternative track, of carefully placing the holes within beautiful natural settings, often with hilly terrain and bodies of water. Both types can be real gems for butterfly collecting.

Whether largely artificial or more natural, the landscape features and management of golf courses provides certain habitat features that helps the golfing lepidopterist forget about the game and appreciate the course.

The open space of the tees, fairways and greens surrounded by trees and shrubs creates miles of "edge" habitat on each course. The wise golfing lepidopterist does not practice a great deal, lest their golf shot become too accurate and they spend too much time in the middle of the fairway.

Golf courses must water their turf on a frequent basis, virtually daily during hot or dry weather. Butterflies are often found "tippling" on droplets of water on the closely-mowed turf or on the wet areas in sand traps. Muddy areas created by excessive travel of golf carts or course equipment are also great places to investigate. On a golf course, every day offers the chance to find tippling butterflies, whereas we must wait for special opportunities in the natural world.

My most memorable golf course collecting moments are from Michigan courses, although I have played golf in several other states. Back in 1972, I caught my first Zebra Swallowtail (*Eurytides marcellus*) on the 15th fairway of the Hampshire Golf Course in Cass County. It was a summer generation adult with the long tails (still the only specimen I have of this form, from anywhere!) that landed right near my ball (oddly, in the center of the fairway). After handling the specimen, I hit a fantastic second shot, boosted by the collecting adrenalin, no doubt.

My golfing lepidopterist legend status was secured in 2007 by taking two Early Hairstreaks (*Erora laetus*) at the Hawk's Eye Golf Club in Antrim County. It was the morning of May 12, but it was already quite warm, pushing into the 80's in sunny areas out of the wind. As I lined up a putt on the 13th green, a female landed within two feet of my ball! I threw my hat over it and carefully worked my hands underneath to secure the specimen (the folding net was just too far away to risk getting it in hand and loosing the lep!). Egad, I had no envelopes in the golf bag! One of the other golfers in my foursome offered me the cellophane wrapper off of a pack of cigarettes and I quickly folded it into a usable envelope, using one hand and my mouth. Success and a good story to boot. Another specimen was seen on the 17th tee, but I lost track of it quickly as my foursome had to move along. After the round, I marched into the clubhouse fully decked out in collecting and photographic gear, and asked if I could walk out on the course for another look. The management was very cooperative, even shuttling me directly to the 17th tee in a golf cart. Indeed, an early hairstreak was there waiting for me, my camera, and my net.

Now, I think anyone familiar with the early hairstreak should know that one cannot simply "expect" to see one, even on the best of days in known locations. I wish it was possible to document thoughts - because I had actually been thinking about how the course looked like a good site for *E. laetus* while rolling along in the golf cart on the first hole of the day.

In 2008 and 2009, I made several trips to three sites in Grand Traverse County and one in Benzie County, MI, specifically to search for *E. laetus*, trying to add another county or two to its known range. I'll gladly give you the exact locations for three of the sites, but the one at a golf course will remain a secret for now!

MES Presents a Science Fair Award to Grace Lisius for Her Insect Project

Tom Wallenmaier, MES President, attended the 2009 Michigan Science Fair and judged all projects that dealt with insects and other arthropods. After much study and deliberation, Tom selected Grace Lisius, from Redford, MI, as the winner of the 2009 Entomology Award. Grace's project was entitled "Macro-invertebrates of the Rose Garden Pond: Part 2" and was a very thorough and comprehensive account of aquatic insects. At the awards ceremony, Grace was presented with a certificate and a $100 cash award on behalf of MES. Congratulations Grace!

Michigan Cooperative Pest Cadre

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In 2009, The USDA, in cooperation with the Michigan Department of Agriculture (MDA), introduced the Michigan Cooperative Pest Cadre (MCPC) volunteer initiative. The program seeks to involve local organizations, like the Michigan Entomological Society, in the detection of exotic species which may threaten agricultural production and the environment of the United States of America. This is an important initiative intended to increase the likelihood of detecting exotic organisms that may enter the United States through trade or travel. Volunteers will benefit from participating in the volunteer program by learning about exotic species, developing a working knowledge of exotic insect detection trapping methods, and becoming familiar with USDA APHIS's local Plant Protection and Quarantine system.

In 2009, surveys will focus on three exotic insects and one exotic weed; *Anoplophora glabripennis* (Asian Longhorned Beetle), *Sirex noctilio* (Sirex Woodwasp), *Lymantria dispar* (Asian Gypsy Moth), and *Heracleum mantegazzianum* (Giant Hogweed). Activities will involve looking for these exotics while visiting parks, forests, and neighborhoods that you frequent on a regular basis. More ambitious volunteers may travel to further away places specifically to look for these target exotic species.

The United States continues to import many products from overseas. These products bring many benefits, but they also pose several risks. Insects, snails, and other organisms can hitch a ride on items which are imported. Dedicated Customs and Border Protection Officers inspect many shipments that arrive in the US, but it is impossible to look at every shipment.

It is almost inevitable that exotic organisms will enter the US. Once foreign, organisms arrive in the United States there is the potential for great damage to agriculture systems, and plants in our environment. Plant Protection and Quarantine (PPQ) is a program within the Animal and Plant Health Inspection Service (APHIS) of the USDA, and is responsible for responding to invasive species.

PPQ and the Michigan Department of Agriculture constantly monitor the state for the presence of exotic organisms. Insect detection traps, visual surveys, visits to import warehouses, and importer monitoring programs are just a few examples of what PPQ and MDA do to help protect American Agriculture.

PPQ's experience, with the Emerald Ash Borer and other exotics, has shown that early detection is critical if an exotic organism is to be eradicated. Michigan is a big place. The overwhelming area to be covered by a limited workforce is daunting. The MCPC volunteer initiative is part of an effort to engage the public and greatly expand the PPQ's ability to detect exotic pests.

In addition to the MCPC, an Asian Longhorned Beetle (ALB) survey card program was also launched in 2009. PPQ sent out post cards, requesting the recipient to survey their immediate surroundings for ALB. The cards were sent to approximately 5,000 members of The Nature Conservancy in Michigan. Recipients were asked to survey ALB host trees for signs of the insect (ALB host tree list is provided on card), then record findings, and return the card to the address which was listed. Their concern for the natural environment made The Nature Conservancy an ideal fit for this pilot program.

If you are interested in helping out with the 2009 MCPC survey program, or in future years, please contact PPQ Plant Health Safeguarding Specialist David Dehn, Jr. by email at Cooperative.Pest.Cadre@aphis.usda.gov
or by phone at 734-229-1656.

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