



# Newsletter

of the

Michigan Entomological Society

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## Breaking Diapause 13 March 2010

The next MES Breaking Diapause gathering will take place on 13 March 2010 on the Michigan State University campus in East Lansing in Room 244 Natural Science Building. We will meet from 9 am to late afternoon.

## Update for the 2010 MES Annual Meeting

### Ethan Bright, President-Elect

701 Mt. Pleasant Ave., Ann Arbor, MI 48103. Email: ethanbr@umich.edu

The 2010 MES annual meeting will be held in June 2010. The tentative date for the official 1-day meeting is Saturday, 26 June. The tentative location is the Kettunen Center near Tustin, Osceola County, MI. The Kettunen Center is a full-service conference center run by 4-H, providing lodging, meals, and meeting rooms. We'll be able to arrive on Friday afternoon, depart on Sunday, and have up to 5 meals. Insect collecting is allowed at the Kettunen Center, which is located on Center Lake and has 160 acres of forests and wetlands. "Climate Change" will be the general theme of the meeting, but members can speak on any topic they wish. More details will be provided in the spring 2010 issue of the MES Newsletter and on the MES webpage.

## Submit Your First State Arthropod Reports for 2009

### Ron Priest

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

IT'S TIME AGAIN TO SET THE RECORD STRAIGHT! Have you recovered an arthropod species not before recorded from your state or province? Perhaps you've recovered one a few years ago which has not yet been reported in print. That information is important to document. Publishing new state records significantly adds to our understanding of a species range as well as their expansion.

Submit your record(s) for our next newsletter. If you're not sure of the identity of your specimens, then bring them along to our next Breaking Diapause meeting, Saturday, 13 March 2010.

The more information you have regarding your recovery the better. Include as many of the following points as you have: species name, common name (if

there is one), family, collector, date and location of recovery, method of recovery, identifier, habitat, current specimen(s) location, and a photograph. Of course, you will be credited for all your information!

Send your information to Ron Priest, using the above contact information. If you have questions, do contact me by Email, phone: 517.353.3891, or U.S. mail. I look forward to hearing from you, learning what's new, and seeing your records in print.

## MES Desperately Needs a New Treasurer

Our current MES treasurer, Martin Andree, recently submitted his resignation letter to the MES Governing Board.

As mentioned before, Martin has a new job that requires a great deal of national and international travel, and thus he has little time to conduct MES business. Martin has served as the MES Treasurer for the past 5 years, and we thank him for all his efforts, and bringing us into the computer age.

For bookkeeping, MES uses Excel and Quickbooks. Consider serving MES as treasurer. You can contact any of the Board members (see p. 2) if interested.

## 2009-2010 Officers of MES

President .....	Erwin "Duke" Elsner
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### Current Annual Dues Schedule

Student (through High School) .....	\$12.00
Active .....	\$25.00
Institutional .....	\$45.00
Sustaining .....	\$35.00
Life .....	\$500.00

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### Websites for selected Michigan Organizations that Deal with Entomology

Michigan Beekeepers Association

<http://michiganbees.org/>

Michigan Mosquito Control Association

<http://www.mimosq.org/>

Michigan Pest Management Association

<http://www.mipca.org/>

SEMBA, the Southeastern Michigan Beekeepers Association. <http://www.sembabees.org/>

SEMBA, Southeast Michigan Butterfly Association

<http://www.sembabutterfly.com/>

## 2009-2010 MES Election Results

**President-Elect: Ethan Bright**, Ann Arbor, MI.

Ethan's interests focus on aquatic insects of stream ecosystems, with an emphasis on Chironomidae, Trichoptera, Odonata, Plecoptera and Ephemeroptera of the Great Lakes region. Ethan is very involved in the Michigan Odonata Survey and is completing his Ph.D. in entomology at the University of Michigan.

**Member-at-Large:** We filled two positions in 2009 because John Keeler resigned his position as Member-at-Large to become the MES Secretary. The two top vote getters were **Ted Herig** of Haslett, MI and **Laurie Reed**, of University Center, MI. Based on a coin flip, Ted will fill the 3-year opening, and Laurie will fill the last 2 years of John Keeler's 3-year term.

**Ted Herig** has been interested in insects and the natural world since his youth. Nowadays, he concentrates his efforts on Lepidoptera, with recent studies on the cherry gall azure (*Celastrina serotina*) and larvae of *Papaipema* moths.

**Laurie Reed** is a faculty member in the Department of Physics at Saginaw Valley State University, with keen interests in astronomy. However, in just the past few years she has become very interested in insect photography, especially Odonata.

Thanks to all candidates for running for office.

**Notice.** The Entomological Foundation requests your help in exciting young people about science through insects. The Foundation is looking for ideas for science projects to add to its new web site. Authorship credit will be cited for submitted science projects published on the Foundation's web site. The target audiences for the projects are students, teachers, and families.

Students of elementary, middle, and high schools, and their parents are constantly searching for exciting ideas for science projects. In response to this growing need, the Foundation will create a web site containing a collection of science projects, based on grade level, the majority of which will involve insects or be built around an entomological question. The Foundation's goal is to develop an interest and understanding of scientific laws and principles that underlay the natural world. Anything that relates to insects is welcome.

Please submit your project to April Gower at the Foundation at [april@entfdn.org](mailto:april@entfdn.org) and please indicate if you would be willing to be identified as a contact for further questions by the users of the site. Our plans are to identify and include on the website a "mentor" or resource for each listed project. To see an example of a project, provided by Dr. Nan-Yao Su, please go to: <http://www.entfdn.org/ScienceFairExperiments.htm>. The project contains a question that catches a student's imagination and contains an experiment that is very simple and can be done by using common household items.

If you have any questions, please contact April Gower at the Foundation, 301-459-9083 or [april@entfdn.org](mailto:april@entfdn.org)

## Cryptamorpha desjardinsii (Coleoptera: Silvanidae) Found on an Asian Orchid in Wisconsin

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**O**n 18 June 2009, my wife purchased a potted White Phal Orchid (*Phalaenopsis* sp.), commonly known as a “moth orchid,” from the Home Depot store on the west side of Madison, Wisconsin. These Taiwanese orchids are being distributed by United Central Orchids, Inc., of Minooka, Illinois. On the next day, I observed and collected a small beetle that was found on the orchid flowers. From the illustrated keys in Thomas (2002), I tentatively identified the specimen as the introduced species, *Cryptamorpha desjardinsii* (Guérin-Méneville, 1844) (Coleoptera: Silvanidae), an “immigrant from tropical Asia” that is reportedly established in Florida and Alabama (Thomas 2002; p. 325).

The beetle (see photo), just over 4 mm in length, displays prominent parallel grooves on each side of the head (Thomas 2002; Fig. 4.80), while the third tarsomere is distinctly bilobed (Thomas 2002; Fig. 14.80). The structure of the pronotum, and coloration of the elytra, both closely match the habitus (Thomas 2002; Fig. 16.80). *Cryptamorpha* is a speciose genus, with 27 valid species recognized from Asia and the Pacific region (Thomas 2009). But within North America, only *C. desjardinsii* has been found to date, whose range is described as “cosmopolitan” (Thomas 2009).

There is no previously reported association between the beetle and orchids. Thomas (1993; p. 14) reports *C. desjardinsii* as having been collected in Florida from the dead leaves of cabbage palmetto; collected in France on imported bananas and

pineapples (where larvae were observed to be predaceous); and in Hawaii, where larvae were found beneath leaf sheaths of sugarcane that were infected with sugarcane smut (on which they fed). Additional introductions of *C. desjardinsii* have been reported from Puget Sound, WA, and New York, NY (Thomas 1993; p. 14), but neither of these events led to the beetle’s establishment. Like other members of the silva-



*Cryptamorpha desjardinsii*. Photo by Daniel K. Young. Scale bar = 1 mm.

nid subfamily Brontinae, *C. desjardinsii* is believed to feed principally upon ascomycetes and other fungi (Thomas 2002) and is not likely to become an economic threat. Nor is this silvanid likely to become established (outside of greenhouses) in a strongly temperate climate such as that found in the Upper Midwest.

Nonetheless, this episode might help to explain how this species first entered this country, and indicates that it could easily occur elsewhere, wherever similar means of transport exist. Because the orchid grower’s business is located in the Chicago area, that city might represent the most recent point of entry. Thus, importers and growers of *Phalaenopsis* orchids should be aware of this insect’s occurrence and watch for possible repeated instances of this kind. But from its widespread distribution and probable establishment in the southeastern U.S., *C. desjardinsii* is not considered a “reportable” organism by USDA APHIS and does not require any regulatory action when found (James E. Zabloutny, USDA APHIS, personal communication).

I wish to thank Daniel K. Young (Department of Entomology, University of Wisconsin-Madison) for providing the specimen photo; Michael C. Thomas (Florida State Collection of Arthropods, Gainesville) for confirming the identification of *C. desjardinsii* and providing valuable information on the genus and species; and Robert A. Haack for editorial services.

### References

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- Thomas, MC. 2002. Silvanidae Kirby 1837. Pages 322-326 in: RH Arnett, MC Thomas, PE Skelley, and JH Frank (eds), *American beetles*, Vol. 2, Polyphaga: Scarabaeoidea through Curculionioidea, CRC Press, Boca Raton, FL.
- Thomas, MC. 2009. A preliminary checklist of the flat bark beetles of the world (family Silvanidae). On-line at: <http://www.fsca-dpi.org/Coleoptera/Mike/chklist5.htm>

### Notice: Savanna Ecosystem Restoration Project for the Karner Blue Butterfly.

The US Forest Service, Huron-Manistee National Forest, which is located in Lower Michigan, has announced in its Schedule of Proposed Actions (SOPA) for October-December 2009 a Savanna Ecosystem Restoration Project. This project is aimed in large part at improving habitat for the endangered Karner blue butterfly. Public scoping is planned to start in late 2009, with work planned for June-July 2010. The announcement is posted at: <http://www.fs.fed.us/sopa/components/reports/sopa-110904-2009-10.html#6>. In part, the project is described as: Restoration and creation of savanna by reducing forest canopy to 10-50% canopy closure, burning, seeding of nectar plants, and herbicide treatment of invasive plant species. Treatment area is 3,000 acres. The areas planned for treatment include: UNIT - Baldwin/White Cloud Ranger District. STATE - Michigan. COUNTY - Muskegon, Oceana. LEGAL - T13N, R17W, Sec 36, T13N, R16W Sec 1-5, 9-16, 19-36, T13N R15W Sec 2-10, 16-18, 19,20,29,30, T11-12N, R 17 W Sec 1,2, T12N, R16W Sec 4-6. Grant, Otto & Greenwood Townships, Oceana County, Montague-White Hall & Blue Lake Township, Muskegon Co. For additional information, contact Christopher Frederick at [cfrederick@fs.fed.us](mailto:cfrederick@fs.fed.us) or by phone (231-745-4631x3138).

# Evaluation of Trap Designs and Host Volatile Combinations for Attraction of the Emerald Ash Borer, *Agrilus planipennis* (Coleoptera: Buprestidae)

Therese M. Poland<sup>1</sup>, Deepa Pureswaran<sup>2</sup>, Peter de Groot<sup>3</sup>, Gary Grant<sup>3</sup>, Toby Petrice<sup>1</sup>,  
Deborah G. McCullough<sup>4</sup>, and Andrea C. Anulewicz<sup>4</sup>

<sup>1</sup> USDA Forest Service, Northern Research Station, 1407 S. Harrison Rd., Rm. 220, E. Lansing, MI 48823. E-mail: tpoland@fs.fed.us. <sup>2</sup> Canadian Forest Service, Atlantic Forestry Centre, Frederikton, New Brunswick.

<sup>3</sup> Canadian Forest Service, Great Lakes Forestry Centre, Sault Ste. Marie, Ontario. <sup>4</sup> Department of Entomology, Michigan State University,

E. Lansing, MI 48824 (A poster at the 2009 MES Annual Meeting)

**I**mproved survey tools are needed for early detection of emerald ash borer (EAB), *Agrilus planipennis* Fairmaire (Coleoptera: Buprestidae), infestations. EAB is native to eastern Asia and was discovered in North America in 2002 (Haack et al. 2002). It has killed an estimated 40 million ash trees in Michigan and tens of millions in surrounding states. Past survey techniques involving visual inspection, girdled trap trees, and trunk dissection are less than ideal because external symptoms are not evident for at least a year after attack and trap trees are destructive and labor intensive.

A suitable trap baited with attractive semiochemicals is being pursued. EAB is attracted to the color purple (Francese et al. 2005), and to blends of ash leaf volatiles (de Groot et al. 2008) and Manuka oil, which contains 4 of the 6 antennally-active sesquiterpenes present in ash bark volatiles (Crook et al. 2008a). Adults are also visually attracted to each other at close range (Rodriguez-Saona et al. 2007). Both purple and green elicit retinal responses from EAB (Crook et al. 2008b). In 2008, USDA APHIS used purple prism traps baited with Manuka oil and hung in the canopies of ash trees for a broad-scale survey program. While some beetles were captured and new infestations detected, these traps are only moderately attractive and continued research is required to develop optimal survey and detection traps. Our objectives were to 1) evaluate attraction of EAB to purple prism traps baited with various combinations of ash volatiles; and 2) compare attraction of EAB to traps of different colors and shapes and with EAB decoys.

We conducted four trapping experiments to evaluate EAB attraction to different volatile combinations. In the first experiment, we compared EAB attraction to purple prism traps baited with a 4-component leaf blend (hexanal, trans-2-hexenal, cis-3-hexenol, and trans-2-hexenol) with and without Manuka oil, or cis-3-hexenol with or without Manuka oil. In the second experiment, we compared Manuka oil combined with the 4 component leaf blend to Phoebe oil with and without the leaf blend or cis-3-hexenol. Phoebe oil is a steam distillate of the Brazilian walnut tree (*Phoebe porosa*) and contains 5 of the 6 antennally-active sesquiterpenes found in ash bark volatiles. In the third experiment, we evaluated EAB responses to different doses of cis-3-hexenol. In 2007 we found high levels of limonene and ocimene emitted by ash trees under heavy attack by EAB. In the fourth experiment, we tested whether limonene, ocimene, or both enhanced attraction of EAB to

the 4-component leaf blend plus Manuka oil. Traps were set out in randomized complete blocks (10 reps per experiment) at field sites with low EAB populations.

In general, trap catches were low and variability was high, obscuring some evident trends. In the first experiment, we found that cis-3-Hexenol was as attractive as the 4-component leaf blend and when combined with Manuka oil captured more EAB than unbaited traps. In Experiment 2, Phoebe oil on its own captured more EAB than unbaited traps. Combining Phoebe oil with the leaf blend or cis-3-hexenol did not enhance its attractiveness. These combinations were equal to cis-3-hexenol, leaf blend or leaf blend plus Manuka oil. In Experiment 3, trap catches were too low to determine differences in attraction to various doses of cis-3-hexenol. Finally, in Experiment 4, neither limonene or ocimene alone or combined enhanced attraction of EAB to the leaf blend and Manuka oil but the 4 components together caught more EAB than the unbaited control.

We also conducted two experiments to compare EAB visual attraction to traps of different colors and shapes and with EAB decoys. In the first visual trapping experiment, we tested flat rectangular purple traps with 0, 1, or 25 dead EAB adults as decoys; a giant EAB decoy trap (a 60-cm-tall and 15-cm-wide photo of an EAB adult showing the dorsal view), and 60 x 15 cm purple or green oval traps in the shape of an EAB silhouette. In the second visual trapping experiment, we compared purple and green prism traps, and prism traps that were purple on top and green on the bottom, or green on the top and purple on the bottom. All traps were baited with Manuka oil.

Rectangular purple traps with 1 or 25 dead EAB decoys captured more EAB than giant EAB decoy traps. Purple rectangular traps and green or purple oval traps without decoys were intermediate. There was no difference in EAB attraction to purple or green traps or traps that were half green (top or bottom) and half purple (bottom or top).

Overall, these results indicate that cis-3-hexenol and Phoebe oil are effective attractants for EAB and that the color green and the addition of EAB decoys did not significantly enhance visual attraction of EAB compared to the color purple.

## References

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- Rodriguez-Saona, C., J. R. Miller, T. M. Poland, T. M. Kuhn, G. W. Otis, T. Turk, and N. McKenzie. 2007. Behaviours of adult *Agrilus planipennis* (Coleoptera: Buprestidae). *The Great Lakes Entomologist* 40: 1-16.

## Reestablishing the Karner Blue Butterfly

Tom Schneider, Curator of Birds

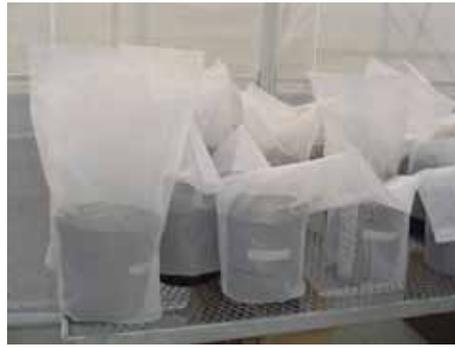
Detroit Zoological Society, 8450 W. 10 Mile Rd., Royal Oak, MI 48067

Email: [tschneider@detroitzoo.org](mailto:tschneider@detroitzoo.org)

The Karner blue butterfly (*Lycaeides melissa samuelis*) (Lepidoptera: Lycaenidae) is a federally listed endangered butterfly species that completes two generations per year and depends on oak savanna ecosystems with extensive patches of lupine (*Lupinus perennis*), its host plant. Karner blues historically ranged over a wide geographic area from New Hampshire to Wisconsin, though they have been extirpated over many parts of their range. However, there are still several areas in Michigan with existing populations, all on the western side of the state. They historically occurred in southeastern Michigan, such as at Petersburg State Game Area (PSGA) in Monroe County, MI, which is land managed by the Department of Natural Resources. Karner blues have not been observed at PSGA since the late 1980s.

PSGA is part of the Oak Openings area, a 100 square mile community of wet prairies, savannas, and oak barrens that stretches southwestward from Petersburg, MI to Liberty Center, OH. Agriculture and other habitat modifications resulted in the extirpation of many species dependent on these habitats, including the Karner blue butterfly.

In 1998, the Toledo Zoo started a reintroduction program at the Nature Conservancy's Kitty Todd Preserve in northwestern Ohio and they have been successful in reestablishing Karner blues at this and other sites in Ohio. The Detroit Zoologi-



Breeding pots for adults



KBB rearing facility

cal Society felt it was a natural extension of this program to attempt a reintroduction of Karner blue at PSGA.

The Detroit Zoo partnered with the Michigan DNR in preparing the site at PSGA where the butterflies were going to be released. This involved floral surveys to determine the lupine density and the availability of nectar plants. The DNR performed habitat improvements including burns and invasive plant removal. Thousand of seeds and plugs of both lupine and nectar plants were planted. By 2008, we felt the site was ready for Karner blue releases.

We followed the Toledo Zoo's breeding protocols which involve collecting a small number of gravid 1st-generation female Karner blues and rearing the resulting larvae to adults. We collected females at Michigan's Allegan State Game area and transported them to the breeding facility at the Detroit Zoo. These females laid their eggs on lupine plants, and zoo staff reared the caterpillars through their larval stages. Once they metamorphosed to adults, they were transported to PSGA where they were carefully released. The goal is that these butterflies will lay eggs that will overwinter and eclose the following spring.

The first reintroductions occurred in July 2008 when about 240 adult Karner blues were released. In late spring 2009, several 1st-generation Karner blue adults were observed by Detroit Zoo staff at PSGA while monitoring the first flight. Another 300 adult Karner blues were released in July 2009 and we will again be monitoring the release location in spring 2010 to see if the butterfly successfully overwintered again. We anticipate that releases will occur for at least five more years, at which point we hope the population will be self-sustaining.

This restoration effort is a cooperative effort with a large coalition of conservation partners in Ohio and Michigan. Hopefully, the Karner blue butterfly will become a permanent resident on the dunes of the Oak Openings of Ohio and southeastern Michigan.

### See earlier PSGA report:

Palombi, L. 2007. Butterflies at the Detroit Zoo and butterflies in the field: the best of both worlds. Newsletter of the Michigan Entomological Society 52(1-2): 5-6.



KBB adult feeding



KBB adults being transported to the field



KBB adult feeding

## Native Plants for Native Insects

**Torrey Wenger, Conservation Education Assistant**

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**T**he question on everyone's mind after the October 2009 MES annual meeting was "Bed bugs? Eek!" (And many thanks to Mark Sheperdigian for that wonderful, if very disturbing, presentation.)

No, the real burning question was "How can I support Michigan's insects and the ecosystems that depend on them?" The answer, from keynote speaker Dr. Doug Tallamy, is quite simple: Native plants. Dr. Tallamy has authored or co-authored a growing number of peer-reviewed journal articles that explore the use of native and exotic plants by caterpillars (the insect group for which very good host plant records exist). In 2007, he expanded on these articles by writing a general audience book - *Bringing Nature Home* - a call to action in defense of functioning suburban ecosystems. He cogently argues that if exotic plants support 1/35th of the caterpillar

biomass of native plants, then we can expect 1/35th the caterpillar-predator biomass in those systems. The problem comes in that nearly everything, from other insects to baby birds, eats caterpillars. The easiest way to



**Horsemint, *Monarda punctata***

improve the suburban ecosystem is to add native species to the landscaping.

This of course brings up more questions: What exactly is a native species? Where can I find them? Does local genotype matter? Why should I care, anyway?

A good working definition of a native plant is any species that fits into the food web. The European genotype of Common Reed (*Phragmites australis*) hosts 170 insect species in its native ecosystem but is eaten by only five insect species here in the United States. The US population of this plant is obviously in the wrong place. Plants and insects have co-evolved defensive chemicals and counter-measures. Specialists can only eat a few closely related plant species but even generalists do poorly on exotic plants. If we want to maintain our insect populations (to say nothing of all the other species that eat insects), we need to have plants that native insects can digest.

Luckily, native plants are becoming easier to find. Michigan Native Plant



***Trillium grandiflorum***

addresses all native flora, not just flowers. Their website, [www.wildflowersmich.org](http://www.wildflowersmich.org), provides pictures of native gardens and a suggested reading list.

The question of local genotypes causes much discussion among ecologists and botanists. Local genotypes will, of course, be best adapted to local conditions. Switch grass from Wyoming has adapted to markedly different winter conditions than what Michigan's switch grass has historically endured. The safest course is to use local genotypes whenever possible.

Why should people care about the suburban ecosystem? Because the suburbs are huge, over 45 million acres! With only 5% of the United States undeveloped and "wild," natural communities have little option but to exist in suburban landscapes. If the plants present in those landscapes cannot support the first trophic level - herbivorous insects, primarily - there will be no higher trophic levels. Complexity and redundancy create ecosystem stability, like a huge Jenga tower. Every relationship that is destroyed and every species that is extinguished is another block pulled out of the tower. Just like in the game, it's hard to tell which action will make the whole structure fall. Humans depend on ecosystem ser-



**Black swallowtail, *Papilio polyxenes***

vices (where did you buy your oxygen this morning?) so our own enlightened self-interest should dictate that we protect ecosystem stability. Adding native plants to our yards is a step nearly everyone can take. Once native landscaping becomes as prevalent as backyard bird feeders, we'll have taken a huge step towards long-term sustainability.



**Hummingbird moth, *Hemaris* sp.**

## 2009 MES Annual Meeting Highlights



The 2009 MES annual meeting was held on Friday, October 9th, at the RAM Conference Center near Roscommon, MI. Many members arrived on Thursday and stayed through Saturday. The nights were cold, so few insects were active, but a few intrepid members still put out lights and bait. The meeting was organized by Erwin “Duke” Elsner, and he did a great job. Duke brought arthropod-related



science fiction movies to show on Friday night. Our featured speaker was Dr. Doug Tallamy, Professor and Chair of the Department of Entomology and Wildlife Ecology at the University of Delaware, and author of *Bringing Nature Home*. Pictures and abstracts from the meeting are shown on pages 20, 24-29. Thanks to Duke for organizing a memorable meeting, and Doug for such an interesting talk!

## Pollinator Gardens Established at Lumberman’s Monument

### Bill Carpenter, Extension Educator

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**US** Forest Service (USFS) staff and MSU Extension Master Gardener volunteers are working on an innovative project at the Lumberman’s Monument, which is part of the Huron-Manistee National Forest (HMNF) located along the Au Sable River in Oscoda Township, Iosco County, Michigan.

Three separate areas were planted starting in August 2009 by the Master Gardener volunteers, using native Michigan plants from WildtypeDesign, Native Plants & Seeds of Mason, MI. Greg Schmidt, USFS Botanist on the HMNF in Mio, MI, helped the volunteers with plant selection and advice. The Iosco County Extension office assisted with administrative matters and USFS provided funding for the plants and materials.

Nationwide, Extension and USFS, both part of the US Department of Agriculture, have been interested in demonstrating the role of native plants in attracting and supporting insects that pollinate many of the plant species found in forests and prairies across the country. The Italian honey bee has declined in population over the last decade and biologists and agriculturalists are recommending a move towards native pollinators. Insect pollination is needed to produce many of the fruit, vegetable and ornamental plants that our society depends upon. In addition, many landscape professionals and researchers are recommending the use of plants native to one’s area since they are often more resistant to an area’s pests, better adapted to the soils and weather, and less likely to become invasive pests than species introduced from Europe or Asia.

The native pollinator gardens are a way of demonstrating how landscapers and home gardeners can use native species and native pollinators in attractive ways for their own landscaping. The public is welcome to visit and enjoy the three gardens that surround the headquarters building at Lumberman’s Monument.



From left to right: Master Gardener (MG) volunteers Peg Gutmann, Jean Thomas, Sandy Chatel, Extension Educator Bill Carpenter and MG volunteer John Le Clair planting the new native pollinator garden at the USFS Lumbermen’s Monument. Not shown: Denny Curtis, Florence Heine.

Plants used at the Pollinator Gardens. Source of plants WildtypeDesign, Native Plants & Seeds, Mason, MI. Information supplied by botanist Greg Schmidt ([gjschmidt@fs.fed.us](mailto:gjschmidt@fs.fed.us)), US Forest Service, Huron-Manistee National Forest, 107 McKinley Rd, Mio, MI 48647

<i>Aquilegia canadensis</i>	Columbine
<i>Asclepias incarnata</i>	Swamp milkweed
<i>Asclepias tuberosa</i>	Butterfly weed
<i>Ceanothus americanus</i>	New Jersey tea
<i>Echinacea purpurea</i>	Purple coneflower
<i>Helianthus giganteus</i>	Tall sunflower
<i>Lobelia cardinalis</i>	Cardinal flower
<i>Monarda fistulosa</i>	Wild beramot
<i>Oligoneuron rigidum</i>	Stiff Goldenrod
<i>Penstemon hirsutus</i>	Hairy Beard Tongue
<i>Symphotrichum cordifolium</i>	Heart leaf aster
<i>Symphotrichum laeve</i>	Smooth blue aster
<i>Vernonia missurica</i>	Ironweed
<i>Veronicastrum virginicum</i>	Culver’s Root



**Above.** One of the many species of weevil perched on the edge of a wildflower. The weevils tended to bolt for cover when they spied an oncoming camera lens and so can be challenging to photograph because of their relatively small size and near constant motion. Photographed along the River Trail at the Chippewa Nature Center in Midland, MI.

**Laurie Reed**

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**H**ere are five photos that I took in Michigan during spring/summer/fall 2009 that were displayed at the MES 2009 Annual Meeting. Note that none of these specimens were captured and my identifications are based purely on what I can see in each photograph. If I have misidentified anything, I am happy to be corrected.



**Above.** Syrphid fly perched on sedum in the gardens of Sally Shepardson and Jonathan Leonard in Freeland, Michigan. These tiny flies are beautifully marked and easier to photograph than one might think. I have spent hours and hours patrolling Sally and Jonathan's gardens and have recorded some of my best insect images there.



**Above.** Mating dragonflies photographed inside Seney National Wildlife Refuge in Michigan's Upper Peninsula. These are probably ruby meadowhawks (*Sympetrum rubicundulum*) but I didn't have the heart to interrupt them to ask. These dragonflies were so busy that I was able to get close enough to record full-frame images of them with my 12-megapixel camera.



**Above.** Female halloween pennant (*Celithemis eponina*) photographed in the Wetlands Area of Chippewa Nature Center in Midland. My thanks to Steve Ross for helping me find and stalk this very but beautiful little skimmer.



**Right.** Male midland clubtail (*Gomphus fraternus*) photographed along the Meadow Mouse Trail at the Chippewa Nature Center in Midland.



**RAM Conference Center (above). Night collecting. Kyle Johnson (L), and Ted Herig (R)**



## Lepidopteran Use of Native and Alien Ornamental Plants

Doug Tallamy

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In light of the wide-scale replacement of native plants in North America with introduced, invasive species and non-invasive ornamental plants that evolved elsewhere, we compared the value of native and introduced plants in terms of their ability to serve as host plants for Lepidoptera. Insect herbivores such as Lepidoptera larvae are critically important components of terrestrial food webs and any reduction in their biomass or diversity due to the loss of acceptable host plants is predicted to reduce the production of the many insectivores in higher trophic levels. An exhaustive search of host records in the literature enabled us to rank all 1385 plant genera that occur in the mid-Atlantic states of the U.S. by their ability to support Lepidoptera richness. Through several statistical comparisons we found that woody plants support more species of moths and butterflies than herbaceous plants, native plants support more species than introduced plants, and native woody plants with ornamental value support more Lepidoptera species than introduced woody ornamentals. All of these differences were highly significant. Our rankings provide a relative measure that will be useful for restoration ecologists, landscape architects and designers, land managers, and homeowners who wish to raise the carrying capacity of particular areas by selecting plants with the greatest capacity for supporting biodiversity.



## The European Oak Borer, *Agrilus sulcicollis* (Coleoptera: Buprestidae): New to Michigan and the United States

Robert A. Haack,<sup>1</sup> Toby R. Petrice,<sup>1</sup> and James E. Zablotny<sup>2</sup>

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The discovery of *Agrilus sulcicollis* Lacordaire (Coleoptera: Buprestidae) in Ontario, Canada was first announced in 2008. In Canada, specimens were collected in the field on red oak (*Quercus rubra* L.), on sticky traps, and also found in insect collections that dated back to 1995 (Jendek and Grebennikov 2009). When we heard of this discovery in late 2008, we looked at our unidentified *Agrilus* specimens that had been collected in Michigan during various field studies of the emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, that started in 2003. And as luck would have it, we had also collected *A. sulcicollis*.

Overall, we had specimens from four Michigan counties (Ingham, Oakland, Saint Clair, and Washtenaw) that had been collected during 2003 to 2008. Our specimens had been collected on sticky traps and also reared from English oak trees, *Q. robur* L., that were growing on the Michigan State University campus at the Tree Research Center. In November 2009, confirmation was made that *A. sulcicollis* adults were also collected from traps in two counties in New York (Monroe and Orleans). These traps had been placed in the field in New York as part of the national EAB survey. Information from the literature was provided on the native range, host range, and general biology of *A. sulcicollis* in Europe. Our findings will be published in the next issue of *The Great Lakes Entomologist* (Haack et al. 2009).



### Selected readings

- Burghardt, K. T., D.W. Tallamy and W. G. Shriver. 2008. The impact of native plants on biodiversity in suburban landscapes. *Conservation Biology* 23: 219-244.
- Louv, R. 2005. *Last Child in the Woods*. Algonquin Books.
- Tallamy, D. W. 2007. *Bringing Nature home*. Timber press.
- Tallamy, D. W. and K. J. Shropsire. 2009. Ranking lepidopteran use of native versus introduced plants. *Conservation Biology* 23: 941-947.
- Wilcove, D. 2008. *No Way Home*. Island Press

### References

- Haack R. A., T. R. Petrice, and J. E. Zablotny. 2009. First report of the European oak borer, *Agrilus sulcicollis* (Coleoptera: Buprestidae), in the United States. *The Great Lakes Entomol.* 42: in press.
- Jendek, E., and V. V. Grebennikov. 2009. *Agrilus sulcicollis* (Coleoptera: Buprestidae), a new alien species in North America. *Canadian Entomologist* 141: 236-245.



## Please Help Distribute MES Brochures

We developed the MES brochure in 2008 to advertise the Society and increase membership. We had several thousand copies made. Many have been distributed to schools, nature centers, and zoos. But a few thousand still remain. If you would like a supply to hand out at schools or meetings, please request some. Or if you know of a location, like a nature center, which could use a supply, please send us their address. You can contact any of the current MES Governing Board members, but since the brochures are stored in East Lansing, it may be easiest to contact Bob Haack, Therese Poland, or Ron Priest. The brochure was printed as a tri-fold in full-color. Please help distribute the new brochure and thereby help MES to grow.

## **Wanted: Hordes of Insects for Native Birds**

### **Kay Charter**

Saving Birds Thru Habitat, 5020 N. Putnam Road, P.O. Box 288 Omena, MI 49674

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Website: www.savingbirds.org

**B**y late summer of 1992, my husband and I had been birding for more than a decade. Although we had heard rumblings of a decline in the brilliant and beautiful avifaunal group known as Neotropical passerines, we did what many birders did then and still do, which is to go into denial over the losses.

family crept out from under a brush pile that had served as the protective covering for their nest. It was the nestlings' first time out of the nest. The tiny parents led their four offspring scrambling through leaf litter, searching for spiders and insects.

It was a thrilling sight, and it was one that very few people are ever fortunate enough to witness. I sat stone still, held my breath, and savored the exquisite moment with one of my very favorite species. It was the most exhilarating birding experience of my life up to that time, and it remains so today. My joy, however, was short-lived. As I watched the little birds at my feet, my happiness was crowded out by the realization that the habitat upon which they depend - the kind of dense, damp cedar/hemlock woods where the



an idea: If my husband and I sold our home on the water, we could take the money and go inland. There we would purchase a large tract of habitat where we could establish a safe haven for the birds we were losing. My mate thought it a great suggestion and in quick succession, the house on the bay was sold and we purchased a 47-acre tract of varied habitat that includes upland meadows, woods, a wetland and a stream running across it. Thus was Charter Sanctuary established in the spring of 1993 in Michigan's Leelanau Peninsula near Omena.

This new adventure grew out of a determination to offer assistance to our troubled migrant bird populations. In order to cement this assistance, we placed conservation easements on the property to protect it in perpetuity. While these actions were both exciting and satisfying, it didn't take long to figure out that 47 acres wasn't going to save a lot of individual birds. We extended our efforts by bringing school children, garden groups and others to our land for tours to teach them about the plight of these marvelous migrants.



**Charter Sanctuary nesting species over the past 16 years includes 2 shorebirds, 4 woodpeckers, 2 rails, 2 cuckoos, 7 sparrows, 7 flycatchers, 2 vireos, 6 warblers, 3 thrushes, 3 swallows, 6 ictherids, 2 mimids and 7 fringillidae. When we bought the property, we knew native plants were important, but didn't know why they were important.**

At the time, we were living in a home on Grand Traverse Bay, in northwestern Lower Michigan, that we had built ourselves. This was to be our retirement home; we were done with moving. Both the notion of this as a retirement home, and the denial over declining bird populations, changed when I had a powerful experience with a family of winter wrens. I was working at the edge of our driveway, a simple, narrow cut through a cedar/hemlock woods. Except for the opening and the gravel surface, the habitat was as it has been for...decades? Eons? Well, for a very long time. As I worked, the bird

birds and I were sharing this rare moment - was vanishing. I'm neither a biologist nor a botanist, but I knew that declining habitat meant a declining winter wren population. It was a sobering realization. And it brought me face to face with the reality at the heart of the rumblings we'd been hearing.

A world without winter wrens was unthinkable. The awful possibility triggered



**Winter wren. Magee Marsh Wildlife Area, on Lake Erie, near Toledo, Ohio. Photo by Robert Epstein.**



Passionate pleas for help triggered a sympathetic reaction in our visitors, and most asked how they could make a difference. From the start, I said that using native plantings in our personal landscapes would benefit the birds. The problem with my suggestion was that, when people asked why native plants are helpful, I did not know the answer. Over time, I learned by observation.

The first lesson came when a female oriole began taking sugar water from our nectar feeder back to her nest (see photo, above). This was atypical behavior. Although orioles often take sugar water, they do not do so once they begin feeding young. Then their focus is on finding enough insects to raise their broods. According to Doug Tallamy, author of *Bringing Nature Home*, virtually all terrestrial birds must have insects to raise their nestlings. My husband and I reasoned that the mother bird was unable to find the insects she needed and had resorted to a desperate attempt to keep her nestlings alive with sugar water. Armed with what we believed to be a fact, we purchased mealworms throughout the following weeks in order to help the oriole female feed her young.

Our assistance worked; she visited the mealworm dish many times while her young were still in the nest (see photo, below). Once they fledged, she brought them to a branch near the feeder, where she continued to take mealworms to them until they were ready to find food on their own.



The other lesson involved our nesting bobolinks. This lovely bird of damp meadows and hayfields is - along with all other prairie species - in very serious trouble. We were thus delighted when they nested on Charter Sanctuary the second year after we bought the property. At their peak, we had seven singing males. But as spotted knapweed moved in, bobolink numbers went into a decline here. Within a couple of years, there was little left in our upland meadow except for this highly invasive plant from the Ukraine.

As the bobolink population slumped, I believed that the biggest problem for them was that when the knapweed came in, the insects left. Not only did we not find insects on the knapweed, but it occurred to us that if there were insects feeding on the plant, it would not be invasive. From that, we made the leap in logic that if there were insect herbivores eating any of these invasive plants, they would not take over as they do. I was so convinced of the truth of that assumption that I began telling people that native plants are important because they host more insects than non-native plants.

When Saving Birds Thru Habitat (<http://www.savingbirds.org>) was established in 2001, native plants were at the core of our message, and we continued to teach that these native plants are essential because they host native insects. While he didn't interfere with it, our first Board President, who is a man of science (although not the earth sciences), was troubled about that message because he could not find any research supporting it. The appearance of Tallamy's book in the fall of 2007 was most helpful on that account.

This message is one that all who are concerned about conservation and wildlife - regardless of whether their primary interest is insects, amphibians, reptiles or birds - must help to get out to the general public as well as the scientific community. A great deal has been lost. But, as Doug Tallamy says in his book, we can create suitable habitat by simply using native plants in our yards.

#### References

Tallamy, D. W. 2007. *Bringing Nature Home*. Timber Press.

## Bed Bugs: Back with a Vengeance

**Mark D. Sheperdigian**

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After a virtual absence of almost 40 years, bed bugs (Hemiptera: Cimicidae) have reemerged to become the most important urban pest of the decade



throughout the United States. Bed bug infestations, beginning on both U.S. coasts, have been moving more or less

steadily inland since the early 2000s. While many explanations have been proposed, none adequately explain the full picture of this resurgence. In Michigan, we have some populations that are very susceptible to pesticides and others that are highly resistant, sometimes in the same building.

While bed bugs are not new, the pest management industry is having to blaze the trail all over again and academia is having to reexamine this once obscure insect. The old tactics of control are no longer valid as older pesticides and the application techniques have disappeared over the years. New methods are coming to the forefront, however, and new products are beginning to show promise.

Unfortunately, the public is profoundly unprepared to deal with a problem that was once commonplace. Before the science is complete, the courts will have to set precedents and make rulings that will shape the way we live and move. This tiny insect, whose newly hatched first instars are truly pinhead sized, seems poised to take a prominent role in the new millennium.

## Ultrastructural Morphology of *Bittacus strigosus* Sperm

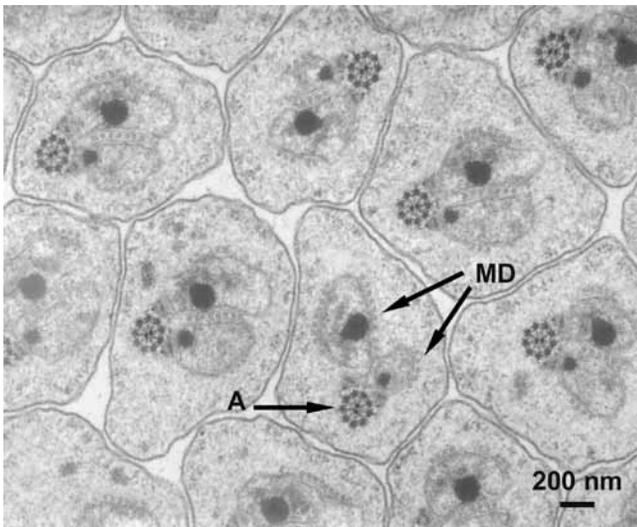
Sally Shepardson, Kathleen Pelkki, and David Stanton

Biology Department, Saginaw Valley State University, University Center, MI 48710

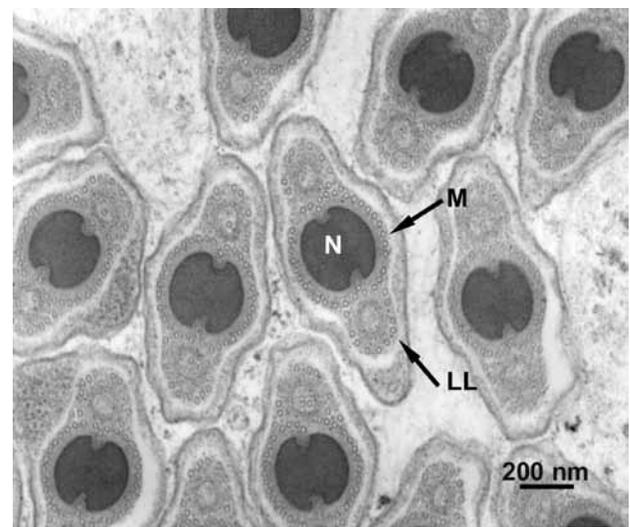
Email: sps@vmail.svsu.edu

**B***ittacus strigosus* is a member of the family Bittacidae (hangingflies) in the Order Mecoptera (scorpionflies). Phylogenetic relationships among insects can be clarified by comparison of ultrastructural characteristics of sperm. Sperm ultrastructure of *B. strigosus* has not been established. The intent of this study was to document details of *B. strigosus* sperm ultrastructure,

using a transmission electron microscope. This information was compared to published data regarding the sperm ultrastructure in scorpionflies in the genus *Panorpa* (Panorpidae). Previous molecular studies have indicated a close phylogenetic relationship between these two genera. Phylogenetically significant structures were comparable in the two genera, supporting the molecular evidence of their close phylogenetic relationship within the Order Mecoptera.



Transmission electron micrograph of developing flagella. MD, Mitochondrial Derivatives; A, Axoneme



Transmission electron micrograph of developing nuclei. N, Nucleus; M, Manchette; LL, Lateral Lamellae



## Challenges of the Modern Extension Agent

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**T**he modern university extension agent has had to make many changes in their approach to fulfilling the role of outreach educators in the communities they serve. Rapid advances in agricultural technologies and new plant cultivars are being adopted by the leading edge producers well before extension agents can learn enough about the new advances to be valuable advisors. Agents are now often more involved with transferring these advances to other growers after the initial experimentation and demonstration of value by the leading producers. The turnover of new information is occurring at a rate that makes printed bulletins become out-of-date rapidly, necessitating a greater reliance on web-based information resources. Unfortunately, the

lack of assurance of the quality of information on the web can lead to real problems as people try to rely on this information source. Modern agents have to spend a good deal of time surveying the web for information and making critical judgments on the usefulness of web resources. It is common for people to make erroneous identifications of insects by combining web page information with limited knowledge of such a vast group of creatures.

## 2009 Forest Health Update for Michigan

### Roger Mech

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**E**xotic invasive organisms are an increasingly serious threat to the health and productivity of Michigan's 19 million acre forest resource. Pests like oak wilt, emerald ash borer and beech bark disease, and invasive plants like garlic mustard and buckthorn, threaten to permanently eliminate genera of native trees and plants from the state.

Periodic forest declines are also serious problems that have caused significant mortality to sugar maple, paper birch, ash and other important species in recent years. Drought is an important trigger for forest declines, the process of slow, progressive loss of health and vigor primarily affecting mature and over-mature forests. Decline models have identified important factors involved in forest decline, including predisposing, inciting and contributing factors. Climate, soil, age, defoliation and attack by 'secondary' pests like bark beetles play important roles in the process.

Asian longhorned beetle, *Anoplophora glabripennis*, a cerambycid native to China and other Asian countries, has been accidentally introduced into the U.S. in several locations, most recently in Worcester, MA (Haack et al. 2010), where the current (Nov 2009) quarantined area covers 74 square miles. ALB favors sugar maple but attacks and kills a variety of hardwood species.



Emerald ash borer, *Agrilus planipennis*, continues to spread across Michigan's northern hardwood forests, including in the Upper Peninsula where it is now 5 counties: Mackinac, Chippewa, Schoolcraft, Delta, Houghton and, most recently, Alger. Efforts to contain the pest continue, along with research to identify biocontrols and to develop effective forest management tools.

Michigan's beech forests are being threatened by beech bark disease (BBD), a combination of exotic organisms that were accidentally introduced to Canada in the late 1890's and into the U.S. in the 1930's. Areas of dead and dying beech are expanding in the eastern Upper Peninsula, and beech mortality from BBD is occurring in the northern Lower Peninsula. Trees infested with the exotic beech scale, *Cryptococcus fagisuga*, eventually become infected with exotic or native species of *Neonectria* fungi and die or break prematurely. A project is now underway by U.S. Forest Service researchers in Ohio to develop beech trees resistant to BBD. The goal is to replace forest trees killed by BBD with resistant varieties.

Efforts to detect and eradicate hemlock woolly adelgid, *Adelges tsugae*, following an accidental introduction in Emmet County, MI, in 2006 are meeting with success. In cooperation with MDA, the MDNR is continuing to monitor natural stands of hemlock, and hemlock adjacent to nurseries that sell hemlock planting stock. To date, no new infestations have been detected in Michigan.

Oak wilt, *Ceratocystis fagacearum*, a serious vascular disease primarily of red oak trees, is spreading steadily across the oak forests in Michigan. Prevention is the key to stopping this spread, since treatment of the disease is costly, time-consuming and not always effective. Avoiding activities that cause wounds, like pruning or harvesting adjacent trees, during the spring and early summer is important, since nitidulid beetles that feed on sap from fresh wounds are responsible for overland spread of the oak wilt fungus.

*Sirex noctilio*, an exotic woodwasp that attacks pine trees, has been detected in four counties in Michigan's thumb area. Females of this woodwasp can kill trees by drilling their ovipositors into the outer sapwood to inject a symbiotic fungus (*Amylostereum areolatum*), toxic mucus,

and eggs. The fungus and mucus act together to kill the tree and create a suitable environment for larval development. It appears that damage may be limited to trees already under stress from other causes and that periodic thinning to maintain vigorous growth will keep problems to a minimum from this new pest.

### References

- Haack R. A., F. Hérard, J. Sun, and J. J. Turgeon. 2010. Managing invasive populations of Asian longhorned beetle and citrus longhorned beetle: a worldwide perspective. *Annual Review of Entomology* 55: 521-546.

## A Change to the MES Bylaws Was Approved

**A**s mentioned in the last issue of the MES Newsletter (p. 14), we discovered a few wording errors while preparing the MES Constitution & Bylaws for publication in the Fall 2008 MES Newsletter. The errors in the Constitution will require a year or so to correct (since we must follow our approved procedures), but changes to the bylaws only require a 30-day notice prior to a vote by the membership. Given that, the members present at the 2009 MES Annual Meeting voted unanimously to approve the one suggested changes to the Bylaws.

The issue was to bring agreement between the Article IV Section 3 of the Constitution and the Article VI Section 2 of the Bylaws. The original text of these two sections is shown 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.*

#### Bylaws, Article VI

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

The change approved was to remove "Secretary, Treasurer," from the Bylaws.

## Entomology and its Problems When Collecting

### Arthur Yates

(Newsletter Editor's note: This is the text of a talk presented to the Detroit Entomological Society, 17 Dec 1943.)

**M**r. Chairman, members of the Entomological Society and guests. I am going to call my talk, "Entomology and its Problems When Collecting." Entomology, as you all know, is the science which treats insects in the most general sense. It is a form of Zoology dealing with the distribution, habits and classification of insects. For the practical entomologist an insect is apt to mean not only an animal of fair size, but one capable of being preserved in the dry state without excessive loss of shape or beauty and with the wings spread to show off the insect to the best advantage. In consequence, Lepidoptera and Coleoptera, with their large array of colors, claim the most attention of collectors, while Diptera and softer-bodied insects are greatly neglected. Speaking for myself, I have never given the latter a thought. For one good reason I have never had the time to cover any territory outside of Lepidoptera, which really takes all of my spare time. Trying to accomplish too much would court disaster when you have a time limit on your leisure hours. On several occasions I have been tempted to collect Coleoptera when I have come upon them in my field work and when scouring the woods. In my collecting treks I have run into some very odd problems or phenomena, which I have failed entirely to understand. I will tell you some of these experiences.

About 40 years ago, in England, I took 17 *Trochilium culiciforme*, The Red-belted Clearwing Moth, on the cut-over birch, which was about 3 to 4 feet high, on a sunny morning. This insect was considered, at that time, a fairly rare insect. I could have easily taken a hundred specimens that morning. I did

not know the value of them at the time. That evening I found out, from a more experienced collector, their worth. I did some good exchanging with them. The weather being about the same, I watched this coppice wood for over a week, but I never saw another, and I only took one other specimen the balance of my years in that country.

On another occasion, just before dusk in a potato field which was in full bloom, I took 8 *Acherontia atropos*, The Death's Head Hawk Moth, on the bloom. They measured about 4.5 to 5 inches wing spread. On this same evening I am speaking of I also took 3 *Chaerocampa nerii*, The Oleander Moth, which was considered rare. I watched this same spot nightly until the blooms died off but never saw another. The remainder of my time there I got an occasional Death's Head but I never saw The Oleander again. On another evening, with an Acetylene lamp and net, I took 13 specimens of the Large Green Emerald Moth, about 2 to 2.5 inch span. It was a beautiful insect, a delicate green with white lines and white dots along the outer margin of the wings. It was nowhere common and it only frequented the borders of certain local woods. That night I could have taken 25 to 30 had I persevered. I went there every night for the next two weeks but I never saw another, nor did I ever see this insect again on the wing the balance of my time there. This is still a mystery to me to this day, for I collected along the borders of this same wood for five years after that. These are three examples which I well remember. They are very similar to some of my experiences in this country, which I am going to tell you about.

Many evenings I have been out in really suitable atmospheric conditions and I have failed miserably in collecting anything of consequence, while on other occasions I have gone out on an unsuitable night and have been very successful. Some nights I have blamed the cold wind blowing up, while on others the clouds have cleared and the moon has shone so brightly that it has taken the

blame for the failure. At other times I could find no excuses at all. Sometimes they commence to come in when you are getting ready to pack up and leave and then you feel you would like to stay longer, but you have to get some rest for you have work to do the next day. On the way home you try to figure out what was wrong the early part of the evening. There must be some reason for all this but I have not been able to figure it out to my entire satisfaction. As you all know this is the uncertainty of collecting. I will now mention some problems I have met up with in Michigan.

Seven and 8 years ago I took many *Apantesis virgo*, The Virgin Tiger Moth, on the green foliage of carrots during the morning in my garden at Roseville, Michigan. These two years I could probably have taken a hundred specimens. Now, with all the victory gardens around me, there are more carrots grown than ever but, alas, the moths are missing for I have not taken another since. About 12 years ago I took 14 *Anisota rubicunda*, The Rosy Maple Moth, at light at Roseville. That night I could have taken 50 or more. I have not taken one since in that locality and they seem to have entirely disappeared. A few years ago I could have taken swarms of *Amphion nessus*, The Nessus Sphinx, in my garden on the Pinks, during the month of June just before dusk. I think I saw two this year so they seem to be dwindling out. On June 15, 1939 I took 1 *Xylophanes tersa*, The Tersa Sphinx, on the same Pinks. I still grow clumps of them in the hope of enticing another one. Nine years ago I could get plenty of *Celerio lineata*, The Striped Mourning Moth, which used to swarm over the Honeysuckle bloom in the evening at dusk. They seem to have disappeared as suddenly as they came, for I have not seen them since, although the Honeysuckle is more plentiful. Five years ago I had another strange experience with this insect. At Oden near Petoskey, in northern Lower Michigan, at near dusk, they were swarming all over the Petunias in vases in front of a large residence there on August 18th. I was up in this

section after this. The vases are filled annually with this flower but this moth entirely disappeared from that night on. I took 1 *Meganostoma caesonia*, The Southern Dog Face, near Walnut Lake on May 23, 1939. I am still looking for another but so far I have been unsuccessful. In Kelly Woods on the east side of Detroit, a few years ago I took quite a nice series of *Terias lisa*, The Little Sulphur. I still collect in this section but I have not seen them again. I also saw *Utetheisa bella*, The Beautiful Utetheisa, in other years but not this year. I took my series of *Papilio troilus*, The Spicebush Swallowtail, there and have never taken them elsewhere. *P. cresphontes*, The Giant Swallowtail, can be taken there in the late afternoon. In Utica Woods, Mr. Newman and myself, during April 1941, took, on different dates, 2, 8, 17, 7 and 2 of *Deidamia inscriptum*, The Lettered Sphinx. We could not have cleared this wood out of this moth, as this wood covers such a large territory, yet we have not seen any since. Also the same year, we took 3, 2 and 1, on different dates, of *Deidamia inscriptum*, Cerisys Sphinx, and they also seem to have gone.

I must say a few words about the cocoons of *Samia columbia*. Mr. Newman and myself have done some tough sledding in the Tamarack swamps of Oakland County, being up to our knees in water at times. I consider this insect is getting very scarce, for most of the cocoons we have found are parasitized, or they have been drained out by the Woodpecker, which seems to be the chief culprit. I would like to state that climbing the Tamaracks with rubber boots on, and slipping into cavities in the swamps is about the toughest exercise you can get, and you surely deserve, and earn, your perfect cocoon, if you have the luck to get one.

On August 15th, 4 years ago, while taking a trip from Baraga, Michigan, where I was staying, to the top of the Upper Peninsula, I saw swarms of *Basilarchia arthemis*, The Banded Purple or The White Admiral, on the sandy roadways and on the foliage at the edge of the woods around 10 o'clock in the morning. I neglected to take any that morning, thinking I could take all I wanted on other days, for I was staying there another week. The next morning, the weather being about the same, I took a drive through the sandy roads in the woods to Sturgeon Falls. I took 7 in all on the way there, and the balance of the week I drove around miles in the most likely places and only took 17 in all, which seemed strange to me after seeing them in such abundance the first day out. I have been across the Straits quite a few years in August and September and have examined the bark of thousands of trees, but I have never taken an insect on bark beyond Sault Ste. Marie. Around the tree trunks near the Locks, I have taken quite a few *Catocala* at different times. After breakfast every morning I visited the park by the Locks. One morning a park officer, seeing me looking around the tree trunks, wanted to know what I was doing. I explained to him and he became so interested he would locate them for me before I got out in the morning. He always seemed disappointed if he failed to find one, which happened quite often.

From Mackinaw City to Petoskey, I have taken quite a

series of *Catocala relictata*, also the form *C. r. bianca*, and 2 *C. semirelictata* and also other underwings but no Butterflies at all. After going to Petoskey, Michigan, for about 5 seasons, I got to be well known by most everyone there, for I always carried my satchel with the usual paraphernalia and also my net in case it would be needed. Some folks would tell me where to get Minnows, thinking I was out to get Fish Bait. On one occasion a car pulled up along side my wife and myself in the park. The owner got out and said his wife was very inquisitive, and had watched us for a year or so looking around the trees and she couldn't rest any longer until she found out what those folks were doing with the bag and net around the tree trunks. Of course I had to explain to them, as I had done to so many others and from then on we were very good friends. It turned out that he came there for a vacation in the summer, being a retired business man from Indiana.

This year I stayed at Rogers City, between Alpena and Cheboygan, I explored the woods and any likely meadowland for miles around. I only took 1 *C. relictata* and I think 1 *C. semirelictata*. I looked at thousands of tree trunks but they were entirely barren of results. I took 1 White Admiral, the first I have taken south of the Straits, 2 Compton's Tortoise and a few other butterflies on the wild mint bloom near the Lake Huron shoreline. Nothing seemed to fly at night at all. I was quite disappointed with the results after 8 weeks collecting around that district. In my talks with different persons I have met I have been led to believe that the end of June and through July is the best time to collect in Northern Michigan. It was very amusing to me to hear some of the descriptions of some of the insects, such as 7 or 8 inches across, covering the gas station lights at night in July, and all colors of the rainbow. I think the majority of these folks believed what they told me, the chief trouble seemed to be that their enthusiasm and imagination always got the better of them in trying to create an impression on me. No doubt most of you have experienced the same thing.

In conclusion, from these experiences and others I have had to contend with, I would say to take advantage of every opportunity you get. Anyway, get your series and a few spares when you can, for you never know when you will see some of these insects again. They disappear and reappear from time to time, often for very lengthy periods, for some unexplainable reason. There must be an answer to some of these experiences and I hope to hear from some of you as to your opinion of the reason for these strange phenomena or to hear any similar experiences you may have encountered in your collecting trips. I thank you.

**Note:** We reprinted another one of Arthur Yates' talks from 20 March 1942 in the December 2006 MES Newsletter.

Yates, A. 2006. Collecting in England in my earlier days. Newsletter of the Michigan Entomological Society 51(3-4): 14-16.



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## **MES Historical Notes**

**Robert A. Haack,  
Newsletter Editor**

**1984 - 25 years ago.** In early 1984, Gary Dunn was President; Dave Evans was President-Elect; Ron Priest was immediate Past-President; Mo Nielsen was Executive Secretary; Ed Voss, Glenn Belyea, and Fred Stehr were the three Members-at-Large; Dave Gosling was Journal Editor; and Lou Wilson and George Heaton were the Newsletter Editors. The 30th MES Annual Meeting was held at the W. K. Kellogg Biological Station in Kalamazoo County on 8 June. The keynote address was made by Austin P. Platt of the University of Maryland. He spoke on the evolution of North American admiral butterflies. Some of the MES Newsletter stories in 1984 dealt with the formation of YES (Young Entomologist's Society); "Mr Sticky" - a new trap for cockroaches; carabid collecting on Beaver Island;

and the donation of the Virgil J. Warcznski butterfly and moth collection to the Chippewa Nature Center in Midland, MI. Annual dues were \$8 per year for active members, and \$15 per year for libraries. Journal page charges were \$30 per page. There were 404 members in good standing and 142 library subscriptions at the beginning of 1983.

**1959 - 50 years ago.** In early 1959, Irving Cantrall was President, Roland Fischer was President-Elect, Dominic DeGuisti was immediate Past-President, and Roland Fischer was the Executive-Secretary. The 5th annual meeting was held on 28 March on the Michigan State University (MSU) campus. There were eight presentations. Ted Hubbell spoke on the *Schistocerca alutacea* complex, George Steyskal on entomological illustrating, Dean Haynes on statistical tests for oviposition preference, Irving Cantrall on flightless grasshoppers, E.C. Martin on nectar, Ed Voss on yucca moths

in Michigan, R. A. Scheibner on plastic mounts for displaying insects, and Ted Kohn on "Entomologist Eaters of Mexico." Work began on developing a list of Michigan's insects, with final completion planned for 1962. The initial list had 17,000 species. The Entomology Department at MSU was on local TV (Channel 10) in 1959, presenting a 15-minute show twice a month at noon. Some of the topics were: Insects - good, bad, and indifferent; 4-H entomology projects; Embedding insects in plastic; Making an insect collection; Controlling insect pests of fruit; and Butterflies and moths. The Walter C. Stinson Lepidoptera collection was donated to MSU, which included about 5700 Michigan specimens, representing about 1100 species. MES membership dues were \$2 per year. I have found no records on the MES membership in 1959. In 1957 there were 86 members.