

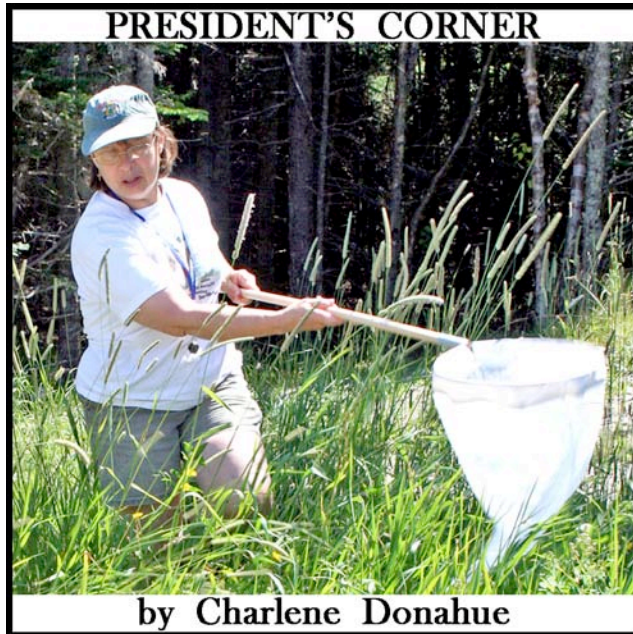
# The Maine Entomologist

A forum for students, professionals and amateurs  
in the Pine Tree State

The Official Newsletter of the Maine Entomological Society

Vol. 20, No. 4

November, 2016



by Charlene Donahue

With a bit of shock I realized recently that the Maine Entomological Society has been in existence for **Twenty Years!** When a group of us old timers decided to visit Dick Dearborn, I decided to pull out all the copies of The Maine Entomologist. It was then that I saw how long it had been, starting with Dick convening a meeting of fourteen people in June of 1997. I then began to reflect on what we have done as a Society and found I was pleased with where we have been and hope we can continue to build on what we have been doing in promoting the understanding of insects in Maine.

Some of the highlights as I remember them:

The MES wrote a letter to the University of Maine supporting preserving the Patch House, as Dr. Edith Patch was world-renowned for her work on aphids, was a pioneer for women in science and advocated for reduced use of pesticides years before Silent Spring.

In 2002 and 2003, we had joint meetings with the Acadian Entomological Society blending the presentation of academic papers with collecting forays. The Acadian Entomological Society continued this tradition in Canada for a number of years. The second meeting on Mount Desert Island sparked the idea for the Acadia National Park Bioblitzes.

Starting in 2004 the Bioblitzes became a highlight for ANP and a model for other blitzes around the country. The group, including MES, that developed the bioblitz blueprint struggled with how to sample the invertebrate fauna in a meaningful way with a minuscule budget. We figured it out but it required a lot of cooperation, donation of time and materials and finding creative solutions to many problems. It was MES members putting in long hours and sharing their expertise so that the blitzes functioned smoothly and produced a product all could be proud of.

Bug Maine-ea has become one of two huge outreach programs for the Maine State Museum (and Earth Day was modeled after Bug-Maine-ea). Again, MES was at the table from the beginning, brainstorming how to bring hundreds of people into the museum to celebrate all things entomological. Many of the activities, displays and demonstrations are staffed by MES members taking time off from work or convincing their bosses that this IS their work, to spend a day at the museum. For years there have been 1500 to 2000 people, mostly elementary school kids, attending Bug Maine-ea. Exhausting, but worth it to see kids and adults get so excited about insects. This event is regularly covered by the press and promoted by 92-Moose radio.

Newsletters; as I went back through the issues there have been four every year since we started covering a wide range of topics. The vast majority of the articles and reports have been written by members (and we can ALWAYS use more submissions). I am impressed with the editors that we have had over the years, they all have done a fantastic job putting out a quality product. I recently started to put together an index for The Maine Entomologist and have gone back eight years so far. In the past eight years there have been six reports of new state insect records and a number of these have been for multiple species. There have been twenty-two requests for research assistance from both academia and governmental bodies. Members have contributed reviews of books, art shows, movies, theater and blogs.

Winter Workshops have been a huge hit, with 20-40 people showing up on cold January Saturdays to further their understanding of insects. And, as with all our activities, to share camaraderie and a love of insects.

Field days have been a mainstay of MES since its inception. This is a time to get together, relax, enjoy the outdoors, collect, photograph or just observe insects in a wide array of habitats across the state. We all learn from one another and find everyone has something to contribute. We have provided species lists to many of the entities who have given us permission to collect on their property. We have had night collecting trips, overnights, island events and winter collecting. Every time we go away happy and glad to have spent time with one another. If you have never attended a field day, come along on one next year. There are no expectations of what one should know, just an interest in the outdoors is all you need to bring – and your lunch...

## **DUES REMINDER!**

M.E.S. dues are payable on a calendar-year basis. If you haven't already done so, please renew now for 2017 to guarantee uninterrupted receipt of the Newsletter; you'll find an insert inside this newsletter. Treasurer Dana Michaud's name and mailing address are also at the bottom of the back page for your convenience. **Dues are now \$15 per year** (see explanation inside), and may be paid up to two years in advance. If the year on your mailing label is "2016", please contact Dana to renew for 2017 or correct the record.

Table of Contents for this issue will be found on Page 2!

### Inside:

- ☛ Annual Dues Reminder & Explanation (below)
- ☛ Minutes of the Annual Meeting (below)
- ☛ A Most Uncommon Visitor (p. 3)
- ☛ Two New Reports on Monarch Butterflies (p. 4)
- ☛ First Zombee Found in Maine (p. 5)
- ☛ Field Day in Lisbon Art Glass (p. 5)
- ☛ M.E.S. Struts its Stuff! (p. 5)
- ☛ Bug Maine-ia is HUGE! (p. 6)
- ☛ Big Wilson Stream Trip Report (p. 7)
- ☛ Dick Dearborn Recognized (p. 8)
- ☛ Book Review: Delmarva Peninsula Odonata (p. 9)
- ☛ Controlled Burns May Not Benefit Butterflies (p. 9)
- ☛ Winter Workshop: Ants! (p. 9)
- ☛ Eagle Hill Summer Seminars in Entomology (p. 10)
- ☛ Web Links of Possible Special Interest (p. 10)

### Annual Dues Reminder AND Increase

With the August issue, we tried an experiment in delivering the printed version of *The Maine Entomologist* with the full-color photos that have been in the on-line version for several years. Reaction has been overwhelmingly positive, so at the annual meeting it was decided to stay with this format, so all members would get the issue in full color. However, the additional costs of color printing meant that a modest increase in dues would be necessary.

**Annual dues will be increasing to \$15 per year starting with 2017**; those who are already paid in advance will continue to be paid in advance with no further money needed. The lifetime membership is still \$200, or less than 14 years of regular memberships at the new rate.

Please submit your dues to Dana Michaud; you'll find a combined T-shirt/Sweatshirt order form *and* dues form inserted into this newsletter, or as a separate attachment if you get the newsletter electronically. Dana's mailing address is at the bottom of the form. Sorry, but we can't handle credit/debit card transactions.

### Minutes of MES Annual Meeting: October 1, 2016

Submitted by Anna Court

About 20 people attended the 2016 MES Annual Meeting at Bob Nelson's home in Clinton on a beautiful sunny day – October 1st. Collecting followed by lunch preceded the business meeting which President Charlene Donahue called to order at about 1:30 p.m.

Attending the business meeting were the following members: David Bourque, Kathy Claerr, Anna Court, Peter Darling, Charlene Donahue, Melissa Duron, Edie and Louie King, Terry and Elizabeth Mazurkiewicz, Dana Michaud, Bob Nelson, and Jon Wallace.

Charlene passed out a few copies of the member list. She said that we have about 105 dues-paying members. If members would like a list, please contact Charlene.

**ACTION:** The group agreed that in the next newsletter, we should include a survey asking for members' areas of entomological interest so that we can revise the interest list.

**ACTION:** The Minutes of the September, 2015, Annual Meeting were approved with one correction. Karen Hopkins didn't resign as Vice President, but declined to run for re-election.

Treasurer Dana Michaud presented the Treasurer's Report which showed a balance of \$1,498.21 in the general account as of August 31, 2016. This showed a decrease of \$679.25 over the general account balance of August 31, 2015.

*The Maine Entomologist*

v. 20, no. 4, p. 2

The balance in the Scholarship Account was \$3,772.55 on August 31, 2016. This is a \$2,324 increase over the scholarship fund balance of August 31, 2015. Dana explained that this large increase was primarily because of a generous gift from the Mazurkiewicz family and numerous donations from MES members in memory of Mike Mazurkiewicz, who died during the previous year. Dana said that the other contributions to the Scholarship Fund came from honoraria for talks, sale of sweatshirts and T-shirts, and \$1 of each member's annual dues.

The Treasurer's Report including the itemized accounting of all income and expenditures. It was audited by Nettie Nelson. **ACTION:** The Treasurer's Report was accepted by vote of the members present.

Members then filled out raffle tickets to win the Bee Hotel made by Bob Nelson.

### NEW BUSINESS

The first item on the agenda was election of officers. President Charlene Donahue, Vice President Kathy Claerr, Treasurer Dana Michaud, Member-at-Large Edie King and Newsletter Editor Bob Nelson agreed to serve another year in these positions. Diane Boretos agreed by telephone to continue to serve as the second Member-at-Large. **ACTION:** This 2016 slate of MES Officers was unanimously re-elected for 2017.

With reference to finances, the group discussed the criteria for receiving an MES scholarship grant, managing the fund, and developing strategies for promoting the fund. The group agreed that a scholarship grant has to go to an MES member and can be used, for example, for travel and expenses to go to the Eagle Hill sessions (which confer two college credits), to the Acadia National Park BioBlitz, or to other professional meetings. The group prepared a list of organizations for outreach and suggested that outreach also go to high school science department heads.



Anna Court, Charlene Donahue, and Edie and Louie King, listen as Dana Michaud explains the Treasurer's report.

- Pete Darling photo

**ACTION:** The group voted to set up a Scholarship Committee which will coordinate outreach, set application procedures, review applications, and create outreach letters. Edie King, Dana Michaud and Melissa Duron volunteered to serve on this committee. Anna Court volunteered to implement the Committee's outreach plans and said she would set up the address list for outreach this fall. The group also voted unanimously to name the Scholarship Fund after

(continued on next page)

November, 2016

### *Annual Meeting Minutes (cont.)*

Mike Mazurkiewicz, to honor his academic contributions as a Maine professor to the field of entomology, and his long-time support of and contributions to the MES and the Scholarship Fund.

Also with reference to the Treasurer's duties, Charlene asked the group whether, since our account is now larger, if there should be any external oversight of Dana with respect to his duties as treasurer. **Action:** The group unanimously agreed that this was not an issue.

The group then discussed dues and honorary memberships. **ACTION:** The group voted unanimously to increase dues to \$15 per person per year to cover the costs of full-color newsletters for all, and to make Richard Dearborn, the founder of MES, a lifetime honorary member. Kathy Claerr agreed to design and produce a certificate of lifetime honorary membership.

The group then discussed membership outreach. It was agreed that we should do outreach about MES as an organization, hoping to increase membership. **ACTION:** Anna Court volunteered to develop the addresses for outreach which would include libraries and relevant organizations. We will either send the Newsletter electronically or by mail if that seems more effective. We will also send copies of the M.E.S. poster designed by Kevin Byron and Monica Russo. The group also voted unanimously to continue printing the Newsletter and poster in color.

The group discussed involving more members in active participation in MES activities and tasks. **ACTION:** The group suggested that an appeal for active participation go out in the next Newsletter and Kathy Claerr volunteered to create some examples for publication.

The group then discussed a second MES business meeting during the year to assess progress toward the action items we agreed upon at the annual meeting. **ACTION:** The group agreed that this meeting will take place at the March Maple Syrup Field Day at Charlene Donahue's home, but that it should be a separate, formal meeting before the Field Day activities.

The group planned MES activities from October 2016 to October 2017, as follows (dates are tentative):

October 29: Visit to Richard Dearborn at his home in Mt. Vernon. Dick was the founder of MES and the first president. He will receive an honorary lifetime membership. Coordinator: Charlene Donahue.

November 19: Visit to Jim Nutting's insect displays in Lisbon Falls. Coordinator: Kathy Claerr.

January 14: Winter Workshop - ANTS! The winter workshop has been a precursor to the ANP bioblitz for many years. The status of the blitz is uncertain and Kathy Claerr suggested ants as a focus for the workshop. Aaron Ellison, author of *A Field Guide to the Ants of New England*, may be willing to lead the workshop. Coordinator: Charlene Donahue.

March 25: Maple syrup insect collecting at Charlene Donahue's home in Jefferson. The field day events will be preceded by a business meeting to discuss progress on action items. Coordinator: Charlene Donahue.

May 6: MES will participate for the second year in "Insect Day" at the Orono Library; collecting/identification event on the trails behind the Edith Patch house on College Ave. Coordinator: Kathy Claerr.

May 20: Field Day at Kathy Claerr's home in Bowdoinham. Coordinator: Kathy Claerr.

June 10: Mayfield Plantation Field Day. The group will meet in Bingham at the large grocery store there. Coordinator: Bob Nelson.

June 23-24: Moth night at Roger Rittmaster's home in Camden. This would be an overnight event. Coordinator: Roger Rittmaster.

July 8th: Insect Photography with a Maine Naturalist. This would take place in Augusta using the Maine Forestry Department's laboratory with nature photography taking place at the Arboretum in Augusta. Coordinator: Roger Rittmaster and Charlene Donahue.

July: Possible Acadia National Park BioBlitz. ANP has not put forth any information on a bioblitz in 2017.

August – weekend of August 12th or 19th: Collecting in the vicinity of Katahdin Woods and Waters National Monument. This would be a two day event. Collecting would have to be outside the National Monument. Possible accommodations are: Lunksoos Lodge T3R7 WELS, Charlene's camp T4 R7 WELS, local motels or remote camp sites. Coordinator: Diane Boretos.

September 12: Bug Maine-ia at the Maine State Museum. Coordinator: Joanna Turow.

September 16: Field Day in the Kittery/Berwick area coordinated with the Mount Agamenticus Nature Center. Coordinator: Peter Darling.

September 30: MES Annual Meeting at Bob & Nettie Nelson's home in Clinton. Coordinator: Bob Nelson.

The group discussed issues that arose at the July 2016 Bio-Blitz at Acadia National Park -- specifically, the increased cost this year compared to previous years (i.e., costs for housing) and the lack of communication and coordination with MES on the Bio-Blitz. On the cost of housing, Charlene shortened the MES Bio-Blitz to lower the high cost of housing. This didn't leave time enough to identify species, however. Also, MES is a significant provider of services for the Bio-Blitz and wants more input in planning the event. **ACTION:** Charlene Donahue agreed to have discussions with the National Park staff on these issues.

The group also discussed doing outreach for MES events. Action: Anna Court and Kathy Claerr agreed to strategize ways to do this. One idea is to put a press release in local newspapers, online calendars, and newsletters of relevant organizations. Anna Court offered to write and place the publicity material.

Nettie Nelson picked the winning raffle ticket for the Bee Hotel. The winner was Elizabeth Mazurkiewicz, Mike's daughter.

**Update:** The group had decided to add a hat to MES' collection of clothing for sale. Peter Darling will be responsible for this.

The group voted to adjourn the meeting at approximately 3:30 p.m.

\* \* \* \* \*

### **A Most Uncommon Visitor by Dave Bourque**

During the summer, whenever I have an odd twenty minutes or so, I like to walk around my house and see what insects might be resting there. It's a white brick house, and over the years I have made some nice finds on it.

One day in late June I was walking around the garage. There is a small patch of nightshade there, and often I can find some Chrysomelid flea beetles there. This particular day, I was noticing that the leaves were peppered with holes, as usual, but then on the top of one leaf was something odd.

At first glance, it looked like a paper wasp that had caught something. As I looked closer, however, I realized what it was: a mantisfly, in the Neuroptera! I did have a vial with me, though not my net, but luckily I was able to catch it.

*(continued on next page)*



### *A Most Uncommon Visitor (cont.)*

I kept it alive for almost a month to observe it. They look like one of Nature's experiments: a wasp-like body with praying mantis front legs. The rather short antennae were constantly quivering.

They're rather tame, and don't readily take to flight. When confronted, they raise their front legs up like a boxer.

When it was getting really weak, I killed it to add to the collection. I think it's the common and widespread species *Climaciella brunnea*.



*Climaciella brunnea*, the Wasp Mantidfly.  
Photo by Scott Nelson, used with permission.

\* \* \* \* \*

### **Two Recent Reports Relating to the Monarch Butterfly (*Danaus plexippus* L.)** by Tony Roberts

Other butterflies flutter by, dance, flit or, in the case of the skippers, dart. Only the Monarch soars, eagle-like, on broad, latex-reinforced wings with an effortless majesty to match its name. So far birdlike, it seems right to find Monarchs in a global subfamily of the Nymphalid butterflies—the Danainae or Milkweed Butterflies—known both for its migrations and its food plant-derived impalatability/toxicity. Distasteful and even deadly to predators, the Monarch can afford its lazy flight and advertise its carelessness with bright 'Code Orange' tiger-striped warning coloration. It can also safely aggregate in the millions for an annual migration that carries it >4000 km along defined corridors each fall.

These stunning migrations were documented by C. B. Williams in "The Migration of Butterflies" (1930) with citations from Toronto dating to 1861; and from the 1950s on they were the subject of a series of 20th-century studies by a later Torontoan, F. A. Urquhart, notably in his book, "The Monarch" (1960), involving a program of physical tagging and recapture-reporting aimed at pinning down the butterfly's detailed itinerary.

The travels of a separate, Pacific Coast Monarch population, with overwintering sites in southern California (Pacific Grove/Monterey) were by then already well-documented. The travels of Monarchs from East of the Rocky Mountains and up into Central and Eastern Canada was, however, still poorly understood. Our knowledge ended entirely at the waters of the Gulf of Mexico. Small year-round

populations identified in FL, GA and NC and occasional, possibly storm-driven pockets in the Caribbean were plainly insufficient to account for streams of migrants in the millions passing through such known "funneling points" as Cape May, NJ, in the East and Peninsula Point, MI in the Midwest.

Remarkably, it was not until 1976 that Urquhart was at last able to identify the small cluster of mountaintops clothed in Oyamel Pine in Michoacan State, Mexico, where we now know the great bulk of Monarchs pass their winters in reproductive diapause, and whence, having mated early in the spring, they return across the Gulf to lay their eggs in the United States.

Studies of this remarkably long-lived species and its still more remarkable migration continue apace. And they do so with increasing urgency as the numbers of Monarchs returning from Mexico to the States in the spring have been plummeting for at least a decade. Courtesy of Bob Nelson, I have recently had a chance to look over two papers on the subject, each of which helped me to correct "pseudodoxia"--Thomas Browne's 'Vulgar Errors'-- I had been carrying around, one for many decades and the second, recent and more troubling.

When I was a pup in the mid-20th century, it was often thought, following Scudder (1881), that the eastern population of Monarchs migrated their thousands of miles south in the fall and then straggled their way back in the spring and summer as far as Canada to repopulate the species (though Klots in his 1951 *Field Guide* taught us better.) Gradually, however, tagging and local observation supplemented by later chemical studies, supplanted this "single sweep" model with one that mainly (>90%) favors staggered broods beginning in Spring in the Gulf States and gradually recolonizing the rest of Eastern North America in generational stages (Malcolm *et al.*, 1993.)

"Migratory Connectivity of the Monarch Butterfly" by Miller *et al.* (2012) now adds new data confirming the major contribution of this "successive brood" strategy. Yet it does so in a way at once eye-popping and mind-numbing to this aging amateur—mainly by adding to earlier comparative studies of signature plant-derived poisonous cardenolide chemicals in Monarchs feeding as larvae on different species of milkweed, southern and northern. New assays of stable hydrogen isotopes, which are found to vary with latitude, are fixed in individuals at the moment of their emergence from the chrysalis. Such assays are now apparently made with molecular sampling machines and interpreted by computers using statistical algorithms—and if you can understand a word of this, I can only say, nets down, my hat's off to you! Nevertheless, the lesson is now clear and past debating.

A second, more recent, 'vulgar error' concerns the role of herbicidal spraying on North American cropland planted with GM herbicide-resistant seed. Based on >6000 statistically adjusted NABA Monarch sightings from Eastern North America gathered over 22 years, Inamine *et al.* (2016) concluded that summer populations of *D. plexippus* in fact continue to rebound to stable levels in the United States (always allowing for ten-fold annual fluctuations!), suggesting that the so-called "milkweed limitation hypothesis" of various recent workers, widely touted by environmental organizations in their fund-raising, is not in fact determinative. Rather, the authors blame conservation failures in Mexico for a catastrophic collapse of Monarch populations returning to the States in the early spring, the deficit being largely repaired by succeeding generations, most notably in the Midwest and Northeast, roughly north of the 35th parallel. Caveat donor!

(continued on next page)

References:

Ackery, P. R and R. I. Vane-Wright, 1984. *Milkweed Butterflies*, British Museum and Cornell University Press, Ithaca, NY; 425 pp. [The standard reference.]

Inamine, H., S. P. Ellner, J. P. Springer and A. A. Agrawal, 2016: Linking the continental migratory cycle of the monarch butterfly to understand its population decline. *Oikos* 125:1081-91, doi:10.1111/oik.03196. [Online Open article]

Klots, A.B. 1951. *A Field Guide to the Butterflies of North America, East of the Great Plains*. Houghton Mifflin Co., Boston; xvi + 349 pp..

Malcolm, S. B., B. J. Cockrell, and L. P. Brower, 1993. Spring recolonization of eastern North America by the monarch butterfly: successive brood or single sweep migration? pp. 253-267 in: *Biology and Conservation of the Monarch Butterfly* (Stephen B. Malcolm and Myron P. Zalucki, eds.); Natural History Museum of Los Angeles County, Science Series, v. 38; Los Angeles, CA.

Miller, N. G., L. I. Wassenaar, K. A. Hobson, and D. R. Norris, 2012, Migratory connectivity of the monarch butterfly. *PLoS ONE* 7(3):1-6; e31891.doi:10.1371/journal.pone.0031891. [open access]

Scudder, S. H., 1881. *Butterflies, their structures, changes and life histories*, New York, Henry Holt & Co.; 352 pp.

Urquhart, F. A., 1976. "Found at last: the Monarch's winter home," National Geographic Magazine, Washington, DC; (August, 1976, issue).

Williams, C. B., 1930. *The Migration of Butterflies*, Oliver and Boyd, Publishers, Edinburgh and London; 473 pp.

\* \* \* \* \*

**Apocephalus parasitoid fly found in Maine Honeybee – Maine's First Zombee**

The native Maine Phorid fly *Apocephalus borealis* was documented as a new parasitoid on the domestic honeybee in 2012 in San Francisco. Long-time M.E.S. members may remember the story on this topic in the February, 2012, issue of *The Maine Entomologist* (accessible from the archives on the web page if you've misplaced your copy, or have joined since then).

The type locality for *A. borealis* was Salisbury Cove, on Mount Desert Island, when it was first described in 1924. Though its normal host here is unknown, the first record of it infecting a honeybee in Maine has now been confirmed. This specimen was from Cape Elizabeth; a second suspected case is being investigated in Frankfort, though that is expected to be negative. The pupae from the Cape Elizabeth specimens have been sent to Frank Drummond at the University of Maine.

*A. borealis* has also been detected parasitizing honeybees in Halifax, Westville and Stellarton, Nova Scotia. Thus far, there are no reports of it in honeybees from New Brunswick.

Most infestations of honeybees have turned up on the West Coast, from California to British Columbia, but a number of East Coast sites have also tested positive. A colony in Brookings, South Dakota, is the only site between the Rockies and Appalachians where the species has thus far been confirmed.

The February, 2012, issue of the newsletter included several excellent photographs and can be downloaded from the M.E.S. newsletter archive web page. There is also a link on the M.E.S. web page to the Zombee Watch web site, which documents all known occurrences of parasitized honeybees and includes much additional information.

Many thanks to Dr. John Hafernik of San Francisco State University for his ongoing work on this important pest, and for bringing the Cape Elizabeth record to our attention.

- B.N.

\* \* \* \* \*

**Field Event in Lisbon November 19th!**

Hey! November field trips return! Mark your calendar for November 19th. MES will visit Jim Nutting's Butterfly and Insect Museum at Maine Art Glass Studio in Lisbon Falls. Jim will give us a tour of the glass work studio, as well as his insect rearing room. Jim hopes to have some live walking sticks (and other arthropods?) to show us. (Butterfly rearing season is in the spring, unfortunately.) And we can peruse his stunning inventory of tropical butterfly stained glass boxes and shadow boxes.

Meet at Dr. Mike's Madness Cafe, 21 Main Street, Lisbon Falls at 11:30 for lunch beforehand, if you like.

Museum tour starts at 1:00 p.m. at the Maine Art Glass Studio, 51 Main Street, Lisbon Falls.

Contact person is Kathy Claerr: 666-3551.

\* \* \* \* \*

**MES Struts its Stuff by Kathy Claerr**

Has it happened to you? Somehow a conversation turns to your penchant for insects, and the partners in this conversation ask questions, trying to get a picture in mind of what the heck you're talking about. Or, they themselves confess to a long-time interest in "bugs." Your dilemma: how to explain fully-- but succinctly-- about our Society, its purpose and its activities? MES has a brief, informal brochure with an application for membership that members can use as an invitation to check us out. But if you're at a large gathering, such as Bug Maine-ia, or Insect Adventures at the Orono Library, it is really helpful to have major visuals to assist in the explanation.

**MES now has a three-panel, folding display available for taking on the road!** The display measures 72 by 36 inches, folds to 24 by 36 inches, and weighs 16 pounds. This piece is durable and of professional quality, and comes with a convenient, protective nylon carrying case. The information on the display covers current aspects of MES functions. Prominently at the top, the reader learns our mission is to serve as "a forum for students, educators, professionals and amateurs."



The new M.E.S. folding three-panel display.

The six sections depict MES's diverse activities, primarily through photographs. Readers will see that MES has participated for 14 years in the BioBlitz at Acadia National Park (1), and that we collaborate in outreach (2) programs, such as Bug-Maine-ia. They can peruse titles and abstracts of professional (3) papers published by some of our

(continued on next page)



**M.E.S. Struts Its Stuff (cont.)**

most accomplished members. Who wouldn't think well of MES as they see that we offer scholarships (4) to our members? They see photos of us enjoying field trips (5), and busy at workshops (6). Finally, we encourage interested folks to join.

A key aspect of the construction of the display is that the visual elements are attached to the tri-fold with Velcro. This plan allows maximum usefulness over time. As updated photos come in, as we participate in events new to MES, or we wish to display information targeted at a particular audience, the information on the display can be readily changed.

Currently the display is stored at Kathy Claerr's house and can be requested for use through Charlene Donahue. When you get a chance to view the display, look for yourself in the photos, and see how many folks you can name!

Postscript: The number and type of photographs available to include in the display seemed a bit limited. Kathy Claerr would like to request (via email if possible) recent photographs you will share for MES purposes of MES members in action during MES-sponsored events. In particular, recent BioBlitz, workshop and field trip photos would be helpful. As you shutter bugs out there attend events, consider taking a few shots of people for the display and the newsletter. Please add to our organization's pictorial history!

To borrow the display for an event, contact Kathy Claerr (kclaerr1@comcast.net) or Charlene Donahue (by phone at 207-485-0960 or donahuecp15@gmail.com)

\* \* \* \* \*

**Bug Maine-ia is HUGE for 2016!**

by Joanna Turow

Tuesday, September 13, 2016, was a huge day for insects! Some 1821 teachers, parents, students, and homeschoolers swarmed the Maine State Museum for the 14th annual Bug Maine-ia event.



**Edie King had a regular stream of eager young entomologists enjoying her moth and butterfly specimens and many photos.**  
*photo by Joanna Turow*

Students followed a paper "ant trail" leaping from ant to ant in and around the museum and past 22 different presentations. Eventually, they arrived outside to try their hand at collecting and identifying insects with the help of entomologists from the Maine Forest Service and the Maine Entomological Society.

Here is a sampling of what they found as they explored insect life in Maine and beyond. Students were especially

drawn to the largest and most unusual insects and other arthropods on display, like tarantulas, a Giant African Millipede, and an assortment of brightly colored exotic butterflies, but the less showy and hardworking insects also got their day in the sun, such as those featured at the *Insects on the Farm* display put on by the Maine Department of Agriculture and Maine Agriculture in the Classroom.



**President Charlene Donahue and Conservation Aide Amy Ouellette had a busy table much of the day at Bug Maine-ia.**  
*photo by Joanna Turow*

Students got a chance to "dive" down under to take a closer look at the insects in our water that act as important water quality indicators, as seen at the hands-on display run by the Maine Department of Environmental Protection's Biological Monitoring Unit. The Kennebec County & Maine State Beekeepers Associations brought a live honey bee hive so everyone could observe the hardworking bees performing their normal daily chores.

The villains of the day were the Emerald Ash Borer and the Asian Longhorned Beetle, and students were thoroughly educated about these two tree-killing pests by the Maine Department of Agriculture, Conservation and Forestry and USDA Animal and Plant Health Inspection.

An unexpected but very popular display featured Allison Kenney's amphibians and reptiles, whose voracious appetites help keep the insect population in control.

Dana Michaud and Kathy Claerr of the Maine Entomological Society kept the students enthralled with a variety of other Maine and exotic insect specimens and live creatures. Museum visitors had the opportunity to make origami bugs to take home with them; a chance to examine how different cultures view insects at the Hudson Museum's display of insect inspired art and jewelry; and the most daring students took a taste of roasted crickets!

*(continued on next page)*  
**November, 2016**



**Bug Maine-ia (cont.)**



**Kathy Murray enthusiastically helped young entomologists-in-training learn how to recognize the different kinds of damage that garden pests can create.**

*photo by Joanna Turow*

Moving farther into the museum galleries, visitors came across Charlene Donahue and Edie King, where they could grab a magnifying glass and take a closer look at the insects living in Maine forests. Visitors followed the “ant trail” downstairs to sign their names in oak gall ink, made with the help of the oak gall wasp.

Right next to the museum’s reconstructed Thomas Rod Shop, visitors could see detailed fishing flies being constructed by Master Maine Fishing Guide Sean McCormick. And no one wanted to miss the chance to view educator Jon Wallace’s 550-million-year-old fossils of bugs!

As the day ended, students could be heard spouting newly learned insect facts to their teachers and chaperones and excitedly discussing who had seen the biggest, ugliest, or coolest bugs. To be sure, they all left a little bit more aware of the big role insects play in all our lives!

The Maine State Museum’s 15th annual Bug Maine-ia will be celebrated on September 12, 2017, please mark your calendars, this is one event you won’t want to miss!

\* \* \* \* \*

### **Report on the August Big Wilson Stream Field Trip**

**By Anna Court**

Diane Boretos led five MES members and two fellow-travelers on this adventurous field trip on August 8th. MES members participating were Kathy Claerr, Anna Court, Pete Darling, Karen Hopkins, and Bob Nelson. Karen Johnson and Donne Sinderson from the Brunswick area joined us. They are in the Master Naturalist Program and came on the MES Field Trip to deepen their knowledge of insects.

We piled into three cars/trucks – necessary for negotiating rough roads to Big Wilson Stream where the first trip-related adventure occurred: Bob Nelson got a flat tire on his truck, and the group split up with Pete and Karen staying with Bob and the rest going on to the stream.

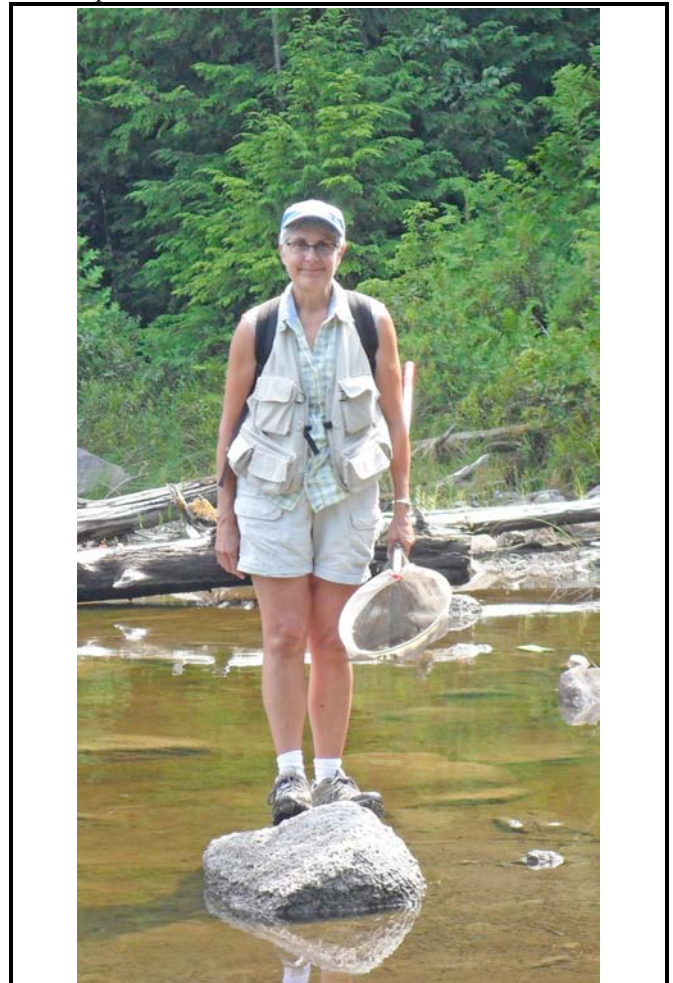
Our destination was the 65-acre Hardwood River Terrace Floodplain on the east side of Big Wilson Stream in Elliotsville Township. This is a rare natural community type, dominated by hemlock and northern hardwood species including red oak. The area is a Maine Natural Heritage Program site.

Eventually we all met up again after crossing Big Wilson Stream, which was at low water because of the lack of rain

this summer. The crossing was still challenging, however, and especially so for a few members of the party who had never crossed a stream on foot. Serious bugging started once we’d gotten across.

But not for long. The weather forecast had predicted mostly sunny skies but with some cells of severe thunderstorms here and there. Diane was more alert to the possibilities than the rest of us and anticipated that the rumblings of thunder we ignored were ominous. She strongly urged us to hurry back across Big Wilson Stream and to our cars/trucks. We almost made it to the vehicles before the downpour began.

The storm was short-lived but exciting; we got wet but were undaunted. Diane, who lives in the area and has a vast knowledge of the terrain because of her experience as a certified tracker, took us to another location to continue our field trip. This was the beautiful Bodbrook Valley between Borestone Mountain and Barren Mountain in Elliotsville Township.



**Kathy Claerr practiced her rock-balancing skills on the edge of the pond before setting off in quest of ants.**

*photo by Anna Court*

In the valley, we walked the short path to a small pond. A moose was feeding in the shallow pond and we approached quietly enough to watch it for a short time. Once the moose noticed us and ambled out, we commenced collecting insects at the edge of the pond.

The field trip was productive as well as adventurous. Carabid specimens collected and identified by Bob Nelson: in Monson: *Carabus nemoralis*; in the woods on the east side of Big Wilson Stream, (Elliotsville Township): *Pterostichus*

*(continued on next page)*

*November, 2016*



**Wilson Stream Field Trip (cont.)**

*lachrymosus* and *Pterostichus pensylvanicus*; in the Bodbrook Valley (Elliottsville Township): *Bembidion versicolor*, *Chlaenius sericeus*, *Pterostichus corvinus*, *Pterostichus patruelis*, *Elaphrus olivaceus* and the relatively rarely collected *Elaphrus cicatricosus*. Kathy Claerr collected a mushroom-eating Tenebrionid, *Bolitotherus cornutus*. On the way home, Bob stopped in Kingsbury Plantation, and collected a specimen of *Pterostichus coracinus*.



**Karen Hopkins takes a photo, and Diane Boretos watches closely, as a young moose feeds in the pond at our second stop.**



**The moose seemed fairly nonchalant as she became aware of our presence and calmly exited the far side of the pond.**  
*photos by Anna Court*

\* \* \* \* \*

**Dick Dearborn Recognized With Life Membership**

At the 2016 MES annual meeting, a unanimous decision (with virtually no discussion beyond “Hear, hear!”) was made to make Richard Dearborn a Lifetime Member of the Maine Entomological Society. Back twenty years ago, Dick was **THE** moving force behind the formation MES, and he worked tirelessly for years to make MES the success it is today.

A number of MES veterans spent a morning with Dick and his wife Marj at their home in Mount Vernon on October 29th. We reminisced about the past twenty years, and presented Dick with a certificate attesting to his Lifetime status.



**Marj and Dick Dearborn, with his Lifetime Membership plaque.**  
*photo by Edie King*

Of the 14 people who convened the first meeting of the Maine Entomological Society back at the Viles Arboretum in June of 1997, four made it to Dick's house; Dick – of course, plus Charlene Donahue, Bob Nelson and Edie King. Two of the original members have passed away (Sam Ristich and Mike Mazurkiewicz), two others have dropped their membership, but the others are all still members. Talking insects with friends was a great way to spend a rainy morning. Dave Bourque, Dana Michaud, Karen Hopkins, and Peter Darling also joined the gathering, and numerous others sent their best wishes.



**Charlene and Marj Dearborn share a hug and a laugh as Dave Bourque stands by.**

*photo by Edie King*



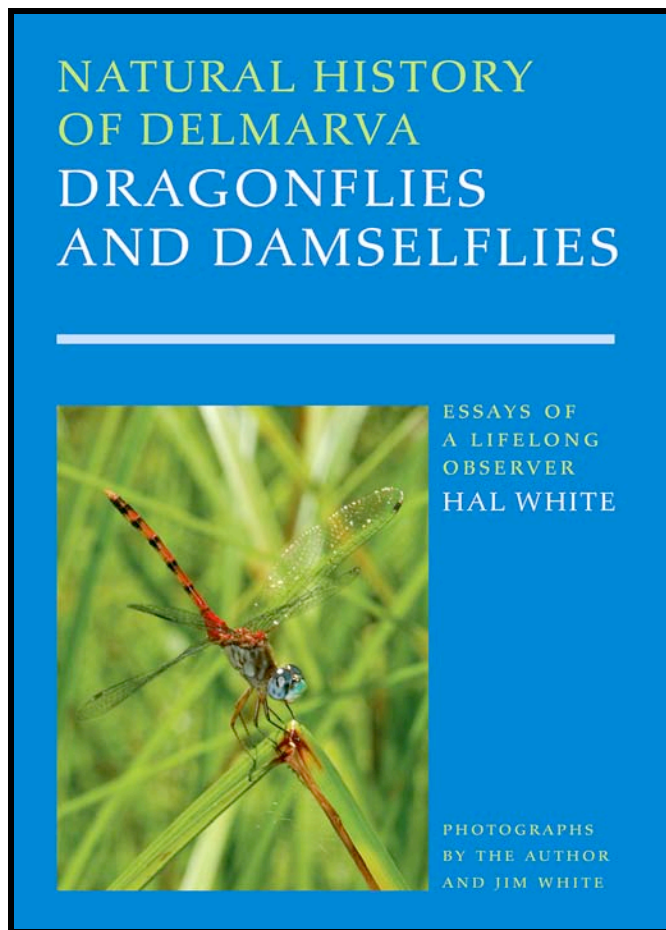
**Book Review:**

**Natural History of Delmarva Dragonflies and Damselflies: Essays of a Lifelong Observer, by Hal White**

(University of Delaware Press, in collaboration with the Delaware Nature Society, 2011; ISBN 978-1-61149-000-8, 9 1/4" x 6" x 3/4" thick; 284 pp., softbound on glossy paper)  
reviewed by Richard Hildreth

Harold (Hal) B. White, III, is Professor of Biochemistry in the Department of Chemistry and Biochemistry at the University of Delaware, where he has worked since 1971.

He is also an outstanding odonatologist. He has been collecting, studying, and has had a passion for odonates since his high school days, and is a nationally known expert on them. He has studied and published material on Odonata from Delaware, Pennsylvania, New Hampshire, Massachusetts, and Acadia National Park in Maine. His writing is clear and always interesting.



His collecting at Acadia National Park resulted in a lot of very interesting specimens being added to the Park collections. Best of all, he carefully wrote up his results and these were published: "Dragonflies and Damselflies (Odonata) of Acadia National Park and Vicinity, Maine" (*Entomological News*, v. 100, no. 3, p. 89-103; May-June, 1989).

Dr. White has compiled a list of all the odonates ever found in the Delmarva region to our south. The names (English and scientific) are listed in proper taxonomic order. Each of the names on the list is also the title of a short essay (a two-page spread in the book), each of which always includes one or more excellent color photographs.

One example of these essays is titled "Western Vagrant, *Sympetrum corruptum* (Variegated Meadowhawk)." This is a very common western species with distinct wandering tendencies. It is, however, very rare on the East Coast. The essay on this species tells the story of when Dr. White found and collected this species at Sand Beach at Acadia National Park – the first and only specimen ever recorded from Maine.

For those with an interest in odonates, you will probably be delighted by these little stories. For those who think they might like to study odonates, this book will be useful to gain an introduction to just about all aspects of odonate study. It is not a field guide, but in some cases the photos and information may be helpful in identifications.

I learned a lot and derived great pleasure from reading these little essays.

\* \* \* \* \*

**Prescribed Burns May Do More Harm than Good for Some Butterflies**

A recent study<sup>(1)</sup> on prescribed burns turned up some disturbing results: prescribed burns intended to help preserve the habitat of threatened butterfly taxa might actually do more harm than good, if not managed properly.

The study focused on the atala hairstreak, *Eumaeus atala* Poey, and the frosted elfin, *Callophrys irus* Godart, both at-risk species in Florida. The former is not known in Maine, but the latter used to be found here, but is now considered extirpated from our fauna<sup>(2)</sup>. According to the Butterflies and Moths web site<sup>(3)</sup>, *C. irus* is often found in small, isolated populations, in meadows and disturbed marginal habitats, where larvae feed on members of the Fabaceae (pea family); the site suggests that habitats should be maintained by controlled burns "or other physical means."

Due to the greater rarity of *C. irus* in Florida, the studies were conducted on laboratory-reared larvae of *E. atala*, which has similar habits to *C. irus* – particularly with pupation taking place in the leaf litter or upper soil surface beneath host plants.

What was found in the Thom *et al.* study was that mortality of pupae in prescribed burns was inversely related to depth of pupation below the soil surface. Mortality was 100% of pupae in the loose leaf litter, but dropped to 50% for those that were 1.75 cm below the soil surface. Pupae more than 2.8 cm below the soil surface all survived the surface burns.

Additional laboratory work showed that pupal survival decreased with increased time of exposure to temperatures above 40°C.

- B.N.

**References:**

- <sup>(1)</sup> Thom, M.D., J. C. Daniels, L. N. Kobziar, and J. R. Colburn (2015): Can Butterflies Evade Fire? Pupa Location and Heat Tolerance in Fire Prone Habitats of Florida. PLoS ONE 10(5): e0126755. doi:10.1371/journal.pone.0126755
- <sup>(2)</sup> <http://www.colby.edu/MES/MaineButterflyChecklist-05.htm>
- <sup>(3)</sup> <http://www.butterfliesandmoths.org/species/Callophrys-irus>

\* \* \* \* \*

**Winter Workshop, ANTS (Formicidae)**

**Augusta: Saturday, 14 January 2017  
9:30 a.m. to 3:00 p.m.**

The 2016 MES Winter Workshop topic is Ants! with Dr. Aaron Ellison. There is a lot more to ants than you might expect from a cursory inspection of these tiny creatures.

Come to Augusta for a fascinating dip into the world of ants. We will cover ant ecology, biology and taxonomy with an expert on the subject. Aaron Ellison is the Senior Research Fellow in Ecology at the Harvard Forest, and co-authored A

(continued on next page)

**Ant Workshop (cont.)**

*Field Guide to the Ants of New England* (2012). Aaron will happily sign copies of the Field Guide, and will bring copies for sale @ \$30 (\$10 less than on Amazon.com).

Also, bring any ants you have collected and would like to have ID'd; Aaron is always keen to expand the Maine list!



Aaron has collected ants in Maine, including two trips into Baxter State Park. One collecting trip was to the northern end of the BSP with MES members and a climb up North Traveler Mountain.

The workshop will take place at the Maine Forest Service Southern Regional Headquarters in Augusta off Route 3; directions are below. The workshop is open to people with any level of experience or simply an interest in the natural world.

Please pre-register by January 1st; There is a \$20 fee for the workshop; *please bring your \$20 with you* to the workshop so we do not have to reimburse money if the workshop is canceled. There is a limit of 30 people and we usually fill these workshops to capacity, so sign up early.

To register for the workshop: e-mail Charlene Donahue [charlene.donahue@maine.gov](mailto:charlene.donahue@maine.gov) or call her at 207-485-0960. If weather is threatening on the day of the workshop, call Charlene. If you cannot make it for some reason, please call so that if there is a waiting list, others on that list can attend.

Bring a bag lunch; coffee and tea will be provided. There are microscopes available but if you can bring one, please do so.

**Directions:**

**From north or south on Interstate 95:** Take exit 113 and merge onto Route 3, heading eastwards toward Augusta/Belfast. Cross the Kennebec River and keep going straight on Route 3. At 5.9 miles from the Interstate, you'll go up a hill and turn right at the top (Maine Department of Conservation sign) onto Conservation Drive.

**Either** 14 Conservation Dr. **or** 2870 North Belfast Ave., Augusta, might work in your GPS (depending on your unit), the facility is at the TOP of the hill.

\* \* \* \* \*

**Summer Seminars and Field Courses for 2017 at Eagle Hill Institute in Steuben**

The 2017 summer program of field and lab courses have been set at the Eagle Hill Institute in Steuben, Washington County. Those of particular potential interest to the M.E.S. community will include the following:

- May 28-June 3** Microlepidoptera: Collection, Preparation, Dissection, Identification, and Natural History, with Jason Dombroskie
- June 11-17** Systematics, Biology, and Ecology of Important Lotic and Lentic Aquatic Insects: Mayflies, Stoneflies, Caddisflies, Odonata, and Coleoptera, with Steven Burian
- June 25 – July 1** Moths and Butterflies: Identification, Specimen Preparation, and Taxonomy, with

- July 2-8** Hugh McGuinness and Bryan Pfeiffer  
Dragonflies and Damselflies: Field Techniques and Identification, with Bryan Pfeiffer
- July 9-15** Native Bees as Pollinators: Diversity, Ecology, Conservation, and Habitat Enhancement, with Sara Bushmann and Kalyn Bickerman
- July 23-29** Spiders: Identification, Biology, and Ecology, with Kefyn Catley
- July 30-August 5** Art and Science of Photographing Insects and their Kin, with Kefyn Catley

For a complete list of all summer programs offered at the Eagle Hill, as well as registration and cost information, click on the link on the M.E.S. web page, or go directly to <http://www.eaglehill.us/programs/nhs/nhs-calendar.shtml>

**Web Links of Possible Interest: Birds as vectors for Hemlock Woolly Adelgids, and two links on Edith Patch**

Kathy Claerr found a cool web link to a story on birds as vectors of transmission for Hemlock Woolly Adelgids (*Adelges tsugae*): <http://tinyurl.com/hr9ketn>. There's a link at the end of this article to the formal paper published in *Environmental Entomology* that documents the details of the study.

Charlene Donahue also found a great article in *Entomology Today* about Edith Patch, former University of Maine Professor of Entomology and first woman President of the Entomological Society of America. The entire article can be found at <http://tinyurl.com/h2cpn66>. Edith Patch's insect collection is now at the Maine State Museum, save for her aphids, which are on loan to the Canadian National Collection of Insects in Ottawa.

You can download a free digital copy of Cassie Gibbs' biography of Patch, entitled *Without Benefit of Insects: The Story of Edith M. Patch of the University of Maine* at <http://tinyurl.com/znhsqzp>.

- B.N.

**COMING M.E.S. EVENTS in 2016-17**  
(details of most events will be in future newsletters)

- 19 November** Field day at Maine Glass Works, Lisbon (see note on p. 5)
- 14 January** ANT workshop (see story on p. 9)
- 25 March** Maple Syrup collecting day in Whitefield
- 6 May** "Insect Day" at Orono Public Library
- 20 May** Field Day at River Point Conservation Area, Falmouth (changed from what's in the *Minutes*)
- 10 June** Field Day in Mayfield Plantation
- 23-24 June** Moth Night in Camden
- 8 July** Insect Photography workshop, Augusta
- July** Acadia National Park BioBlitz (tentative)
- August** Weekend of the 12th or 19th - Field Days in or near Katahdin Woods National Monument
- 12 September** Bug Maine-ia at the Maine State Museum
- 16 September** Field Day – Kittery/Berwick area, coordinated with Mount Agamenticus Nature center
- 30 September** M.E.S. Annual Meeting in Clinton  
(See <http://www.colby.edu/MES/> for more detailed information; new information on any event will be posted as it is received.)

*The Maine Entomologist* is the quarterly newsletter of the Maine Entomological Society. Dues are \$15 per year. Checks should be made payable to the M.E.S. and sent to Mr. Dana Michaud, M.E.S. Treasurer, at 3 Halde Street, Waterville, ME 04901-6317. Our records show your dues are paid through the year printed on your mailing label; please contact Dana if you believe this is in error. *Individual articles reflect the opinions of the authors and mention of any specific commercial products or businesses should not be construed as formal endorsement by the M.E.S. of any such product or business.*