

# The Maine Entomologist

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

The Official Newsletter of the Maine Entomological Society



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## *Sphex pensylvanicus* in Southern Maine

by Monica Russo

Photos by Kevin Byron

*Sphex pensylvanicus* is a large fossorial hunting-wasp about 1 $\frac{1}{8}$ " long. It is black with dark wings, which in good light have a violet iridescence. A member of the family Sphecidae, it is often called The Great Black Wasp of Pennsylvania, after an observation made by the American naturalist John Bartram around 1749, which was reported to the Royal Society in London.



Fig. 1. A female *Sphex pensylvanicus* excavates a burrow at the Kennebunk Plains. - Photo by Kevin Byron

The female digs an underground nursery in sandy soil during the summer, creating an obvious tumulus around the entrance hole. She hunts for katydids and grasshoppers and carries them to the nest site, and then drags her prey down into the nest by its antennae. The tumulus looks like a lopsided volcano, with an entrance hole big enough to stick a pencil into. On August 14, 1998, I watched one female make 15 trips down into the nest burrow to excavate and drag out dirt. She took a break for several seconds to preen, and then went down again to drag out 11 more loads of dirt. This was about 10 feet from a small pond off Route 111 in Arundel.

I found the Great Black Wasp at four additional sites here in southern Maine:

- At the Arundel Town Dump. (at the time, an open landfill) I collected a female on August 10, 1994.
- In Arundel at our cabin, I collected a female on July 16, 1999, and also on August 26, 2001.
- Near the Dutch Elm Golf Course in Arundel, in a friend's garden, I collected one male on July 14, 2006.

- Also near the Dutch Elm Golf Course, I watched at least four at once, feeding at cultivated *Veronica* flowers, during the summer of 2007.
- Again next to the golf course at least eight were in view on *Veronica* flowers on July 30 and August 17, 2008.
- At the Kennebunk Plains, a female at a tumulus with a grasshopper on the ground nearby entered the burrow, backed out, lined up the grasshopper head to tail, and brought it right to the entrance. She went in, came back out and then dragged the hopper in head first. August 20, 2008.



Fig. 2. A *Sphex pensylvanicus* feeds on cultivated *Veronica* flowers in Arundel. - Photo by Kevin Byron

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**IMPORTANT NOTE: BUG MAINE-IA  
HAS BEEN CANCELLED!**

*Sphex pensylvanicus (cont.)*

Since those observations, I have not been able to do much in the way of field observations or collecting. It would be interesting to find out if this species has been seen farther inland or north. It was not listed in the 1983 Forest Insect Survey of Maine: Order Hymenoptera (by Dearborn, Bradbury and Russell), but I suspect it should have been seen by others in recent years. You can read about the life of this species and other wasps in *Wasp Farm* by Howard Evans (1963; Comstock/Cornell University Press).

*Sphex pensylvanicus* has been well documented in upstate New York in the 1980s by Frank Kurczewski in the April, 1998, issue of the *Journal of Hymenoptera Research*. Another interesting *Sphex*, the Great Golden Digger (*Sphex ichneumoneus*) was very well investigated and documented by Sam Ristich in the October 1953 issue of *The Canadian Entomologist*. I have always been grateful to have had the support, enthusiasm and expertise of Sam in years past in observing insects.

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**Maine: Visit for a Week, Stay for a Lifetime**  
By Tom Schmeelk

For a slight change of scenery from the normal doom and gloom that is the reality of most forest entomology, I figured I could write about my experiences during my first couple of years in Vacationland.

I came to Maine almost two years ago to pursue a career as a forest entomologist for the Maine Forest Service. These first two years have been informative, hectic, pleasant and anything but boring. Coming from New York’s Department of Environmental Conservation where I worked as an “entomological assistant” in programs such as southern pine beetle, Emerald ash borer, Oak wilt and many others had prepared me well for my current work. With many similarities but also many differences I slowly navigated (learned) my way through the programs I would be in charge of.

My largest program as far as time commitment goes is definitely Browntail moth (BTM). Learning its biology, history in Maine and the problems it causes for the citizens of Maine was much easier than getting over my fear of public speaking, which turns out would be a large part of the job. Luckily for me, the townsfolk did not rise-up with pitchforks and torches like I had imagined they would and just wanted to learn, which was pleasantly surprising.

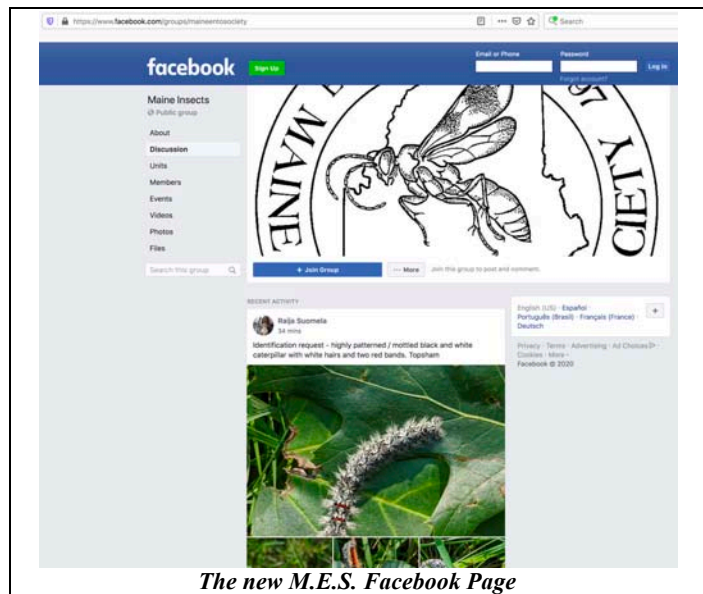
One of my other programs is winter moth, which has a very successful biocontrol program that was pioneered and designed by my predecessor Charlene Donahue. It is a great feeling to have a successful biocontrol program and to be able to bring a forest pest down to acceptable levels (still waiting for this to be the case with BTM). Unfortunately, there is a downside to having a biocontrol program be this successful: it can be TOO effective and lose funding, since the species has been deemed naturalized in other parts of New England, but that is another story entirely.

For decades the Maine Forest Service has had an amazing group of volunteers running light traps across the state to monitor for a number of both native and introduced

defoliators. For example if a we began seeing an increase in the number of Saddled Prominent moths (*Heterocampa guttivitta*) in a particular set of light traps, we would know to expect defoliation attributable to that species in that region. This is one of the longest running data sets the Maine Forest Service has and has been ongoing since the 1940s. That being said, many of our volunteers are “retiring” from operating a light trap after decades of service, so I will use this soapbox to shamelessly advertise that we are always looking for new volunteers.

Overall I have enjoyed my time in Maine so far, the people have been very kind; I often get asked in for coffee when I arrive for a field visit at someone’s home, which took me by surprise when I first arrived. I have learned so much these past years and added many valuable skills to my entomologist’s toolbox which now includes everything from grant writing to aerial surveys. I have also enjoyed exploring Maine’s insect fauna, which is quite different from what I had grown up with in eastern New York. In Maine as the eastern deciduous forest transitions into the boreal forest it creates many niches, both ecological and professional.

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*The new M.E.S. Facebook Page*

**MES Social Media Project is UP and RUNNING!**  
by Kathy Murray, Hillary Peterson and Hailey Mealey

What’s the buzz with social media? Social media platforms such as Facebook, Twitter and Instagram can be powerful tools for outreach and education. Recognizing the need and opportunity to reach new and diverse potential members, MES launched a Facebook Group and an Instagram account this spring to expand our outreach and support curiosity and enthusiasm for insects. Several names were floated, and we landed on ‘Maine Insects’ as an easily recognizable and simple name for both platforms.

An experienced and talented recent UMF graduate, Hailey Mealey, was tapped to create these MES social media accounts and two MES members have stepped up to serve as co-administrators. The team works together to ensure these outlets function as intended. Both platforms were given a ‘soft launch’ in May but were rapidly discovered and shared!

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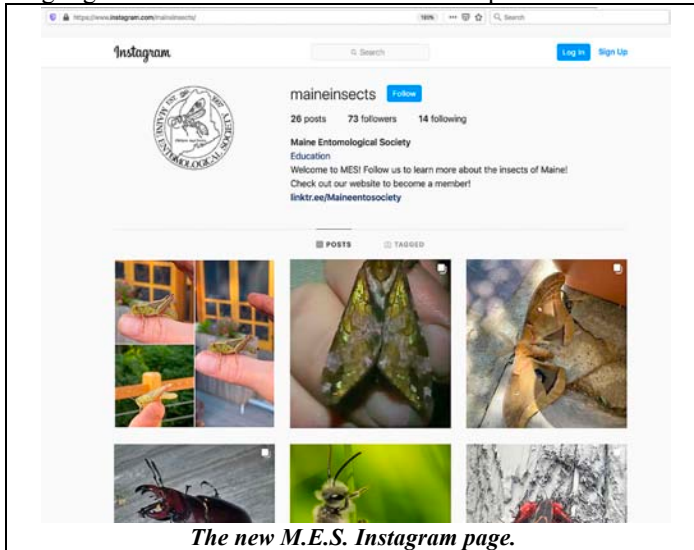
*M.E.S. on Social Media (cont.)*

As of this writing, the Maine Insects Facebook Group has 253 members and the Instagram account has 43 followers. Apparently, Maine insects are a popular topic among social media users!

All MES members are encouraged to join in the fun! If you are not already a Facebook user, you will need to sign up at Facebook.com, or download the Facebook application to your smartphone or tablet. Then, search for Maine Insects, click ‘follow’, agree to the rules (set to deter any misuse) and the account administrators will approve you to join the group.

Do the same for Instagram--go to Instagram.com, create an account, search for ‘maineinsects’ and click the ‘Follow’ button. To date, most of the Facebook Group posts from members have been photos, many of which are amazing. Many include requests for help with identifying the insect in the photo. Anyone in the group can comment or chime in with an identification. It turns out, we have some skilled taxonomists in the group!

Both platforms can also be used to share announcements for workshops, field days and other events. We created Facebook Group ‘events’ to share information about two recently announced field days. With the Instagram platform, only the administrator can post content, but Hailey has done a great job posting interesting fun facts, announcements and photos of insects to generate interest and direct followers to the MES website and Facebook Group. A recent post highlighted the benefits of MES membership.



*The new M.E.S. Instagram page.*

MES plans to keep these social media accounts active but we need additional help from MES members. Share your own photos, announcements, interesting facts, and more! Volunteer to serve as a co-administrator!

To learn more about joining this MES effort, contact Kathy Murray (kdmurray50@gmail.com) or Hillary Morin Peterson (hillary.m.peterson@gmail.com). Or, you can send your photos, bug facts, announcements or other resources (books, webinars, Ted Talks, or films about insects are all great for social-distancing!), to Kathy, Hillary or Hailey (Haileyjmealey@gmail.com) and we will share them on social media for you.

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## **An Itch for Answers: Why Browntail Moth Parasitoids May Not Control the Infestation**

*(A 2020 University of Maine M.S. thesis Summary)*

**by Karla Boyd**

In Maine, browntail moth has become an extensive human and forest health pest over the past several years. Both a public and forest health risk, browntail moth can cause mild to severe dermatitis in humans and complete defoliation of hosts in some areas.

Introduced in 1897, browntail moth became widespread throughout the northeastern U. S. and southern Canada by 1915. During this time, the U.S. Department of Agriculture launched a massive biological control effort to introduce browntail moth parasitoids and predators throughout the infestation area with hopes to reduce or eradicate browntail throughout the Northeast.

Soon after, populations of browntail moth began to decline, and by the mid-century, the only detectable populations were left in isolated pockets along Cape Cod, Massachusetts and in the Casco Bay Region, Maine. The reason for this decline is not clear.

After small outbreaks in the 1990s and early 2000s, a more significant outbreak of browntail moth began in 2015 and grew to encompass most of the southern, mid-coast, and central regions of Maine. This most recent outbreak has piqued interest in understanding and managing infestations, with many local municipalities and groups contributing funding for research on browntail moth.



**Karla looking for adult browntail moths in Harpswell, 2019.**

*- photo by Holland Havercamp*

My research at the University of Maine assessed the survival of the browntail moth population in Maine with a focus on the natural enemies that are impacting their populations during the current outbreak. While there have been previous studies on the biology and ecology of browntail moth in Maine (Schaefer 1974, Elkinton et al. 2006, 2008), the more recent of these, dating back to the 1970s, did not take place during outbreaks. A new assessment of these natural enemies during this current browntail moth outbreak was needed to better inform management practices.

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**Browntail Moth (cont.)**

Although extremely hazardous, we collected browntail moth pupation nests across the state of Maine (southern coast, mid-coast, central, and inland), adding new sample sites to the project as the years progressed to incorporate new populations within the expanding infestation area. Nests were reared in a laboratory setting under optimal conditions and observed for emergence of healthy adult moths, parasitoids, and fungi. Some parasitoid identifications were completed at the Smithsonian Institution in Washington, D.C., by Michael W. Gates.



**Browntail moth pupation nest in red oak leaves, 2019.**  
- photo by Karla Boyd

Results showed that browntail moth has a complex of at least nine parasitoids, including six primary and three secondary or tertiary hyperparasitoids. Notably, many of these species are the same species that were initially released in the early 20th century for browntail moth control. The specialist *Townsendiellomyia nidicola* (Townsend) (Diptera: Tachinidae) was by far the most frequent primary parasitoid observed across all sites. The generalist *Compsilura concinnata* (Meigen) (Diptera: Tachinidae), which also attacks native silkmoths in North America, was seldom recorded on browntail moth. We also observed the fungus *Entomophaga aulicae* (E. Reichardt), which was confirmed in our molecular lab in 2017. This fungus was observed throughout our study attacking larger browntail moth caterpillars, and caused considerable mortality in densely infested areas of Maine in both 2017 and 2019.



**Rearing containers for browntail moth and parasitoid emergence.** - photo by Karla Boyd

In addition to primary parasitoids, several hyperparasitoids (parasitoids that attack other parasitoids) were recorded. We found that between 2016 and 2018 the abundance of hyperparasitoids increased while some of the primary parasitoids decreased in number. Particularly, *Monodontomerus aerus* (Walker) (Hymenoptera: Torymidae) and *Dibrachys microgastri* (Bouche) (Hymenoptera: Pteromalidae) were the two hyperparasitoid species found the most frequently. Although *M. aerus* has been observed on browntail moth in Maine before, our observation of *D. microgastri* is a first for browntail moth in Maine.

These species are unique in their ability to parasitize at multiple levels (primary, secondary, or tertiary) and produce multiple individuals per browntail moth host and are sometimes parthenogenic (asexual). Many of the primary parasitoids that successfully parasitize browntail moth are suppressed by these hyperparasitoids, which may exacerbate the issue of browntail moth throughout the state. This phenomenon of top-down control has been observed in Spain populations of browntail moth, although there is a more diverse parasitoid community in Europe than in North America.



**A male and female *Monodontomerus aerus* (Walker) collected from pupation nests.** - photo by Karla Boyd

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August, 2020

**Browntail Moth (cont.)**

Our findings indicate that the browntail moth parasitoids are a part of a complicated system where hyperparasitoids may be creating a greater browntail moth problem. Although discouraging from the perspective of biological control, our results will better inform management options and give insight to the population dynamics of browntail moth during an outbreak. Our observations of the fungus *E. aulicae* have prompted the Maine Department of Agriculture, Conservation, and Forestry Entomologists to conduct investigations into how to facilitate the spread of the disease to browntail moth across Maine.

The University of Maine has been my home for more than 7 years. I have enjoyed my time there and look forward to new bug adventures elsewhere. With the help of my advisor, Dr. Eleanor Groden and other colleagues at the University of Maine and Maine Forest Service, we are looking to publish several manuscripts both from my thesis and other browntail moth projects I have been a part of. I would like to thank M.E.S. for their help sponsoring my trip to the Smithsonian Institution in August of 2018 and for their continued enthusiasm in my progress.

I would also like to acknowledge the last graduate student who worked on browntail moth, who completed his Ph.D. at the University of Maine in 1974: Paul W. Schaefer, who passed away on June 26th, 2020, after a long, fruitful entomological career. His obituary can be viewed at: <https://tinyurl.com/y3m5f2kd>.

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**Nursery Web Families**  
by Dana Wilde

Tucked underneath the petals of a day lily in our flower garden early in July, my wife, Bonnie, spotted a net full of tiny black balls. Spiders are primary persons of interest at our house, and so we wondered if they were spider eggs, and decided to watch what happened.

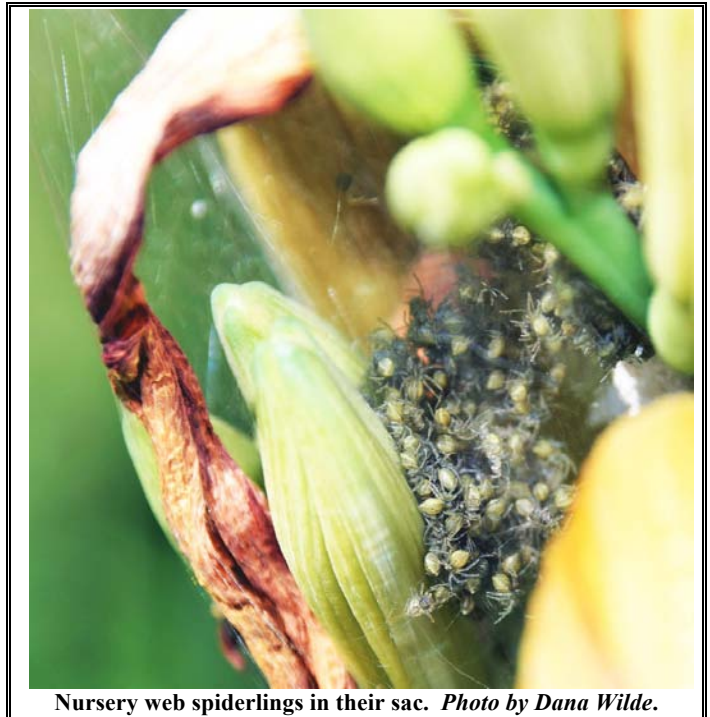


A nursery web spider (*Pisaurina mira*) mother and her babies in Troy, Maine. Photo by Dana Wilde.

Less than an hour later, the eggs had hatched. The silk sac was teeming with newly hatched nursery web spiderlings. The mother, true to the behavior of her species, *Pisaurina mira* (family Pisauridae), was standing guard nearby.

Unseen by us, she had carried her egg sac around for a few weeks, holding it underneath her body with her chelicerae. When hatching time approached, she found a suitable site in the day lilies, spun the nursery web, and then watched over it as the eggs incubated. A study of nursery web spiders led us to believe there were probably somewhere around 265 eggs, each about 1.15 millimeters in diameter, about the size of a poppy seed.

Over the next few days, we noticed that this mom rearranged the web, separating the brood into two different, but connected sacs. Then later we found them combined back together again into one sac.



Nursery web spiderlings in their sac. Photo by Dana Wilde.

One morning while we were watching the ball of spiderlings, Bonnie spoke and they all jumped as if startled. When they settled back down, Bonnie waited a few moments then said, "Hello spiders!" and again they jumped and teemed as if they were startled. A few moments later, the same thing, though a little less frantic on the spiderlings' part. I went to get the camera to see if we could get a video of spiderlings startled by a human voice.

When we got the camera going, Bonnie said "Boo!" and this time a few spiderlings hopped up and scuttered around, but the preponderance of them were now unfazed. The next time, only one or two jumped at the voice. When we tried it over the next day or two, they paid no attention to us. We wondered if they actually registered the sound waves and learned there was no threat associated with them. Or had the mother been the one to register the sound, then signal through the silk for the kids to scatter, and after a few times recognize, as the adult, that the sound was not a sign of a threat?

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**Nursery web spiderlings (cont.)**

Five days after hatch day, I saw some tiny little nursery web spider exoskeletons caught up in the silk. Some had undergone their first molt, and the new juveniles had set off to fend for themselves. The mother was still standing guard, which is an uncommon practice among spiders generally, but not unique. Two days later, eight days after hatch day, the nursery web was empty, and the mom was nowhere to be seen.

The whole cycle had completed, and we felt like this *Pisaurina mira* brood was going to be the spidering highlight of the summer. And it was, for about two days, until we found another nursery web brood hidden away under another day lily. This one was about three or four days younger than the original family. These spiderlings also jumped when we spoke, then quickly got used to our voices, and a couple of days later, their little molts were dangling in the silk and they were off.

Off with it, it turned out, at least four or five more broods whose webs were also tucked away in the day lilies. It had been practically a summer colony of nursery web spider families. What a world!

**Reference:**

Anderson, J.F. 1990. "The size of spider eggs and estimates of their energy content." *Journal of Arachnology*, vol. 18, pp. 73-77.

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**Rock pools: Diverse ecosystems or glorified puddles? Probably both!**

**by Chase Gagne**

*(A 2019 University of Maine M.S. thesis summary)*

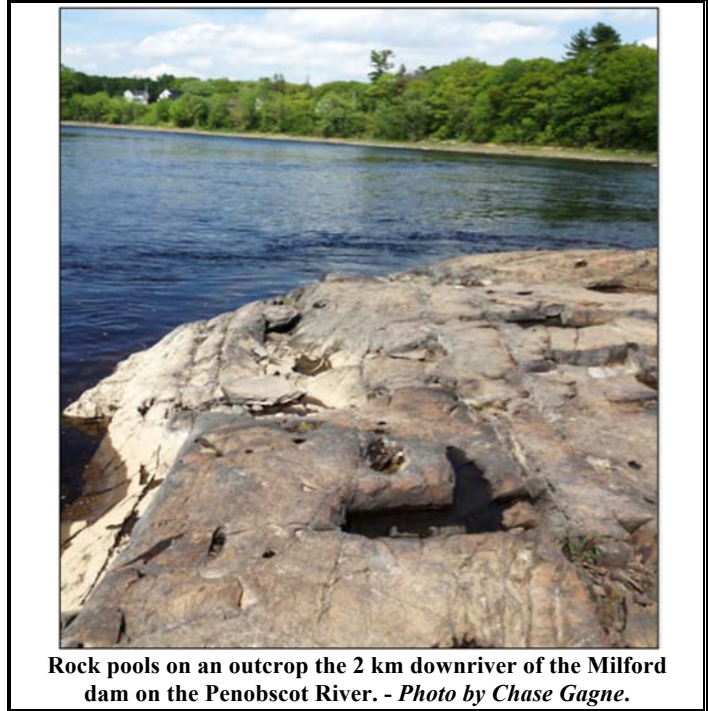
Small temporary collections of water in cracks or depressions of rock outcrops, known as rock pools, can be found almost anywhere there is exposed rock. Generally filled by rainwater, rock pools are common in Maine on mountaintops, shorelines, and along the rocky banks of major rivers. As aquatic insect ecosystems, rock pools have been generally understudied globally and have never been studied at all in Maine!

My research set out to collect pilot data on Maine rock pools, specifically those along the banks of the Penobscot River, and to construct a basic understanding of what the insect communities of rock pools look like. This was done by selecting and collecting from ten rock pools at each of four sites (for 40 total pools), spread from just below the Milford dam to Eddington.

As it turns out, rock pools along the Penobscot are fairly diverse ecosystems! Since these pools were adjacent to a river, a major component of several pools was river-dwelling insects, like mayflies, caddisflies, and riffle beetles, that got washed into them when the river swelled over the outcrops after rainstorms. Pool communities also featured predators, especially *Pantala* ("rainpool glider" dragonflies) and *Laccophilus maculosus* (a predaceous diving beetle).

The real diversity however came in the form of mosquitos and midges, which dominated the rock pools and comprised about 97% of the total number of individual insects collected. The non-biting midges (Chironomidae) were exceptionally diverse. Eighteen genera within this fascinating family were identified, led mainly by *Dicrotendipes*, *Chironomus*, and

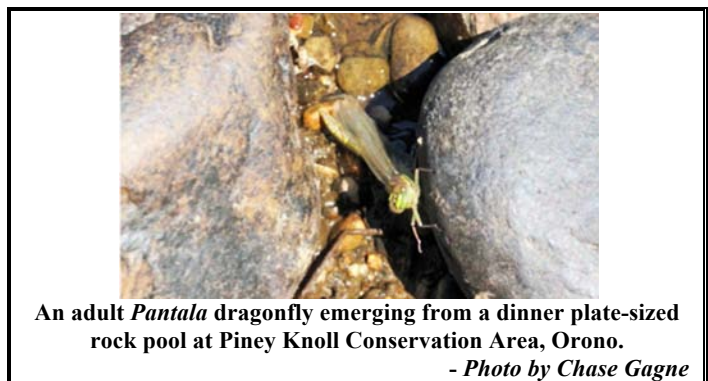
*Polypedilum*. Two mosquito species (*Aedes atropalpus* and *A. japonicus*) were quite abundant, along with the biting midge genus *Dasyhelea*.



**Rock pools on an outcrop the 2 km downriver of the Milford dam on the Penobscot River. - Photo by Chase Gagne.**

Along with describing rock pool communities for the first time in Maine, I also wanted to figure out what physical and environmental factors were most important for structuring them. I conducted an experiment manipulating the length of time rock pools contained water (known as the "hydroperiod") to dive deeper into this question. I found that these diverse rock pool communities were driven mostly by hydroperiod and pool size. In general, larger pools and pools that held water for longer stretches of time tended to be more diverse.

My research created a baseline of knowledge about rock pools in Maine that can be greatly expanded upon through future research and collecting. Since rock pools are so common and the only equipment needed to sample them is an aquarium net and alcohol, I strongly encourage everyone to collect aquatic bugs from them! My study was only conducted in a small area of Maine, so sampling any type of rock pool almost anywhere else in the state will likely lead to new additions to the list of pool-dwelling fauna!



**An adult *Pantala* dragonfly emerging from a dinner plate-sized rock pool at Piney Knoll Conservation Area, Orono.**

**- Photo by Chase Gagne**

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## THREE WASP “CLASSICS”

By Monica Russo

Here are three publications that are probably very hard to find now, but if you can, they are quite interesting.

### *Wasps And Their Ways*

by Margaret Morley (Dodd, Mead & Co., N.Y.; 1900)

This book has excellent line illustrations on nearly every page (but no credit to the illustrator unless it's Morley herself.) Chapters include discussions of workers, queens, drones, and nest structure. There are details of legs, wings and even tongues. Potter wasps, mud-daubers and digger wasps are covered. This is not a field guide, but provides excellent life histories.

### *The Hunting Wasps*

by J. Henri Fabre (Dodd, Mead & Co., N.Y.; 1915)

There are no illustrations, and of course the species covered are European (*Sphex flavipennis* and *Sphex languedocian*) with life histories, prey handling, and some experiments, such as the author cutting antennae off prey, so the *Sphex* has to figure out what to grasp it by. There's an interesting description of an August day in 1878, when the author's son Emile alerts him to “a *Sphex* dragging her prey under the plane trees.”

### National Geographic Magazine. July, 1937.

There are two feature articles: *POTENT PERSONALITIES – WASPS AND HORNETS* by Austin Clark. There are lots of photos: cutaway views showing nest interiors, a Tarantula Hawk with prey, and a potter wasp on its nest.

The companion article is *FARMERS' FRIENDS AMONG THE WASPS* by Hashime Murayama. There are 12 wonderful color paintings by the author, including Cicada Killers with prey, and a variety of bees and wasps on flowers and nests.

(This 1937 issue has another feature article that is not insects, but a very interesting feature story on birds of prey by the famous Craighead brothers, Frank and John.)

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### Oops! Maybe That *Wasn't* Such a Good Idea!

A recent paper by long-time M.E.S. members Chuck Lubelczyk and Phillip deMaynadier, with four coauthors\*, reported results of a study of the use of imported dragonfly nymphs in attempts to bio-control mosquito larvae in southern Maine wetlands. It turned out that the two sources for such imported dragonfly nymphs, in Massachusetts and North Carolina, had 6.8% and 38.5% non-native species in their shipments, respectively. Introducing the nymphs into artificial pools in forest wetland settings didn't show any impact on mosquito wriggler populations. More of concern, however, was the potential for introducing other non-native plant and animal taxa in the waters used in shipping.

Anyone wanting a pdf copy of the paper can contact Bob Nelson (BeetleBob2003@gmail.com).

\* Lubelczyk, C., et al., 2020: Importation of Dragonfly Nymphs (Odonata: Anisoptera) to Control Mosquito Larvae (Diptera: Culicidae) in Southern Maine. *Northeastern Naturalist*, v. 27, no. 2, pp. 330-343.

## Dana Wilde to Discuss Spiders at Annual Meeting

Two very important items will dominate the agenda for this year's M.E.S. Annual Meeting, scheduled to be in-person on Saturday, September 26th, at Bob and Nettie Nelson's home in Clinton. The first is the election of new officers for the coming year - neither the President nor Vice President will have incumbents seeking re-election. The new 2021 Executive Board will also launch a search for a new Webmaster to re-design the M.E.S. web page.

The second special attraction is that Dana Wilde, long-time M.E.S. member and local author (see p. 5), will be on hand to discuss spiders and sign your copy of his new book on Maine spiders (if you don't already have one, they're available from North Country Press in Unity - <https://www.northcountrypress.com/a-backyard-book-of-spiders-in-maine.html>).

Minutes of the 2019 Meeting were published in the November, 2019, issue of the newsletter, on p. 2-3. Please be ready to bring any errors to our attention, since one of the agenda items will be to confirm to accept (or amend) these minutes.

If the weather's good, we'll meet outside; if not so great, we'll find some way to get together inside. Everyone should bring a mask to be safe - and if it looks like it could be a good outdoors day, please bring your favorite folding lawn chair (though we do have maybe a dozen here for those who may not have one).

The grounds will be open for collecting, as usual, with some changes since last year as to habitats, and we'll try to have pathways cleared through the brush down in back for exploration. Our perennial sunflowers should be in full bloom at this time, and are usually a haven for late-season Lepidoptera, Hymenoptera, Diptera and other nectar and pollen feeders.

We'll have oven-roasted chicken and vegan chili available, and invite everyone to bring something else to add to the regular pot-luck luncheon that precedes the business meeting.

We'll be ready for guests by 10:00 a.m., so people can spread out across the fields and forest for collecting. Lunch will begin around noon, Dana Wilde will discuss spiders at 1:00, and the business meeting will start at ~1:30. Dana Michaud will be in attendance, so this'll also be a good opportunity to renew your membership for 2021 (hint!).

Please do let us know if you're planning to attend to help with our planning; preferably via e-mail at BeetleBob2003@gmail.com; or by phone at 207-426-9629 - just expect to talk to a machine, since we're getting so many political robocalls these days we rarely answer the phone right off.

Signs will be posted at the ends of the Clinton off-ramps (like below) from I-95 to guide you to the meeting. Please contact Bob if you need directions from another route.



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## A Correction and an Apology

In the May issue of the MES Newsletter, I announced what I truly thought at the time was a so-called 'adventive' visitor from Down Under, in the form of the Australian Papaya Moth, *Opogona papayae* Turner.

I was in error. The moth flying here is actually a similarly marked species from a different family, *Plodia interpunctella* (Hubner). My mistake was pointed out to me by an old friend, Dr. Steven Passoa, an APHIS veteran in Columbus, OH, and it was a humbling one indeed!

I was totally wrong to jump to any conclusions now that I have reached an age at which I can no longer manage the dissections that are essential to any proper identifications.

I owe a sincere apology to all MES readers, to our Editor, and in particular to our Honorary President, Charlene, and to her opposite number in Maine's Agriculture Department, Karen Coluzzi, for my inexcusable confidence in making this false claim.

Everyone has been over-generous to me in forgiving my error, but I can't quite bring myself to join them yet. I am hoping this fraternal confession will help!

On another note entirely, I have been at once challenged and delighted to see that last month's sudden heat wave has begun at last to bring a sample of the new fauna that will finally replace the remnants of the old "relict" Boreal fauna that it was my good fortune to be able to inventory here as it made it's last stand since the retreat of the glaciers some 12,000 years ago.

- Tony Roberts

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## Book Review: by Dana Michaud

*The Language of Butterflies*, by Wendy Williams; published in June, 2020 by Simon and Schuster; 256 pp. with 34 color photographs; list price \$26.00; ISBN13: 9781501178061.

*The Language of Butterflies*, by Wendy Williams, is one woman's "gobsmacked" epiphany while researching the world of the butterfly. Williams, always aware of these fluttering, dazzling creatures since childhood, immersed herself via reading and seeking out lepidopterists - and took a journey that opened her eyes to the wonderful world of Earth's 15,000+ species of butterflies (20,000 species if skippers are included).

In Part I, Chapters 1-5 entitled "The Past," Williams explores various topics including fossils, famous butterfly collectors, and various evolutionists including Darwin, Wallace and Bates, who studied speciation and variation, and ending with the colorful illustrations artist Maria Merian and her place in butterfly history.

In Part II, Chapters 6-11, "The Present," Williams familiarizes herself with a few species of butterflies, including the western migration of the Monarch and the efforts of many involved in studying and saving them. She visited the Willamette Valley in Oregon to meet those whose efforts brought back a butterfly once thought extinct: it had

been rediscovered by an amateur teenage lepidopterist, then was listed as endangered, but now numbers over 28,000!

She also explores the pertinent questions that carried over to saving Kerner's Blue in New York. Here, the species was estimated to number 500 or so individuals, but now has increased to over 15,000. The knowledge acquired in this study may also have explained why the range of the Regal Fritillary has shrunk tremendously.

In Part III, Chapters 12-14 plus the Epilogue, "The Future," the eastern and western migrations of the Monarch take Williams to both the eastern and western parts of the U.S. to encounter those engaged in studying these populations in hopes of preventing their extinctions.

In her Epilogue, Williams' pilgrimage to the Mexican overwintering site for Monarchs at El Rosario's Biosphere Preserve portrays a second epiphany. Her warnings of its fragile and precarious existence include a dash of hope, reminding us it's not too late to care or do something about it. The efforts of all concerned are important, like those of five-year-old Amelia in Chapter 6, who in tagging a Monarch in Oregon set in motion a documented 23-day journey to Santa Cruz, California (south of San Francisco) to join an overwintering flock of over 10,000. Williams called her efforts a genuine "butterfly effect."

Although a dazzling dusk jacket photo of "Morphos galore" adorns the book, *The Language of Butterflies* is well worth the price, both because of the easy read and the treasure trove of information that Williams reveals that she's learned about butterflies while researching them.

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## September Field Day - Viles Arboretum, Augusta

A *new* field day has been scheduled on **September 12th** at Viles Arboretum in Augusta, where the M.E.S. came into existence in 1997. Contact Dana Michaud (by phone at 872-7683) if you're planning to attend. We'll meet at 10:00 a.m.; Viles Arboretum is 0.7 mile south of Eastern Avenue (State Route 17) on Hospital Street (State Route 9), across the road from the Riverview Psychiatric Hospital and state office complex. Bring collecting gear, lunch, water and a mask.

### COMING M.E.S. EVENTS in 2020

**September 12** Field Day at Viles Arboretum, Augusta (see above).

**September 26** Annual Meeting, Clinton (Kennebec County)(see p. 7)

**October** Field Day (still open as to where and when; this will be posted on the web site when scheduled)

**April, 2021** Symposium - *Working Title*: Bridges: The spectrum of entomologically related interests in Maine and the region. **Coordinator: Kathy Claerr.**

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(See <http://www.colby.edu/MES/> for more detailed information; new information on any event will be posted as soon as 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.