The Maine Entomologist

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

The Official Newsletter of the Maine Entomological Society

Vol. 16, No. 4 November, 2012

PRESIDENT'S CORNER

by Charlene Donahue

What a fantastic Moth year this has been (that includes butterflies that are day-flying moths)! Jean Dane has been collecting moths at her house in Washington for half a dozen years or so, not long in the greater scheme of things, but this year she identified over FORTY species she had not seen before. The Maine Forest Service runs 25 light traps across the state from mid-June through July monitoring for forest pests. The amount of material was larger then it has been in years.

I do not have time to look up everything I see in each box but I have been found a number of species not in the MFS collection. I subscribe to the butterfly survey list server and they have been inundated with sightings across the state. This included numerous sightings of the rare visitor, the Giant Swallowtail. On the down side, forest pest Leps such as Bruce spanworm, fall cankerworm, gypsy moth and the recent invasion of winter moth, are also up, along with the itch-causing hickory tussock. What is it that triggered this increase? The mild winter? Condition of the trees? A confluence of many species population natural cycles coinciding? El Nina?

As I mentioned above, winter moth has recently been found in Maine in the coastal communities of Harpswell and Vinalhaven. In addition, Bruce spanworm and fall cankerworm have increased in number over the past two years. The males of these three species all fly in November (the females are flightless.) If you notice large numbers of moths over the next month(s) I would appreciate hearing about where you see them.

In September, the University of Maine insect collection was moved to Augusta amid a flurry of media coverage. The press release was picked up across the country, both paper and TV crews were on hand and Bill Green did a follow-up story. (Search for: "UMaine donates 'priceless' insect collection to Maine State Museum" and see **http://tinyurl.com/d5d2vgt** .)

The new Maine State Museum director came to see the move and said he had never seen an insect collection before. He was blown away by how beautiful the insects were – and these are in dusty old drawers! He said he could see how people would be fascinated by them and how the collection was a valuable State asset.

Maine Entomological Society members are stepping up to help curate the UM material. In October Bill and Kathy Urquhart, Jean Dane and new MES member Pat Durkin attended a collection work day in Augusta. They sorted unprocessed material and unpacked boxes of insect drawers. The following week Dave Bourque and Dana Michaud, who have been helping curate the MFS insect collection for years, made a preliminary assessment of the UM collection. And finally Peter Darling has taken on the Herculean task of transcribing the log books into the computer. Many of the specimens in the collection only have 'lot numbers' on them and the collection information is all in the log books. Hopefully over time labels can be made for these specimens.

As always, if you are interested in helping with the State insect collections let me know, as there are lots of different tasks to be done.

* * * * *

P.S. An eight-year-old friend of mine, Natalie Emmerson, dressed up as an entomologist for Halloween!

Natalie Emmerson outfitted as a real entomologist for Halloween. Doubtful she *scared* anyone except the moths and other fall insects that were out and about! (And any resemblance to M.E.S. President Charlene Donahue is strictly coincidental!)
Photo by Carrie Emmerson

IMPORTANT DUES REMINDER!

M.E.S. dues are payable on a calendar-year basis. If you haven't already done so, please renew now for 2013; you'll find a clip-out form in the insert inside this newsletter, and Treasurer Dana Michaud's name and mailing address are also at the bottom of the back page for your convenience. Dues are $10 per year, and may be paid up to two years in advance. If the year on your mailing label is "2012", please contact Dana to renew for 2013 or correct the record.

☛ *In this issue:*

What a Day at Jugtown Plains!

by Charlene Donahue
(Jugtown Plains Field Trip: August 18, 2012)

What a great field trip we had in August! Never stay home because of the weather. It was pouring when I left my house on Saturday morning and a chance of rain was predicted for the whole day. But we never got a drop on us in Casco and the cloud cover kept the temperature down and the insects less inclined to fly.

So the nine of us, including two newbies who joined on the spot, collected, photographed and observed many insects. Caterpillars definitely topped the list of specimens encountered. We identified over 2 dozen Lepidopteran species. Of course, Orthoptera were out in force as well with more than a dozen species of grasshoppers and crickets. An unusual Bolas spider (*Mastophora* sp.) was admired and photographed before being collected for Dan Jennings.

Pixy Williams of the Otisfield Conservation Commission met us at the parking area and introduced us to the conservation area and gave us some history about the area. We almost didn't get any farther then the first white oak that we inspected. It had a beautiful Polyphemus caterpillar (*Antheraea polyphemus*) on it, numerous red-humped oakworm (*Symmerista canicosta*), a white-blotched prominent (*Heterocampa umbrata*), scarlet oak sawflies (*Caliroa quercuscoccineae*) and stinkbugs. But eventually, people moved on to a field where the grasshoppers were in abundance and of course Bob Nelson headed off to the wetlands to tread for carabids. Tussock caterpillars of many species were everywhere.

When we returned to the cars for lunch numerous insects were found around the edge of the parking lot, including a lovely yellow tiger swallowtail caterpillar (*Papilio glaucus*) that posed for pictures. A couple of interesting galls were found as well. One was a wool sowers gall on oak (formed by Cynipid wasps, *Callirhytis seminator*) that also had *Torymus* sp. parasitic wasps emerge from it.

You did not have to go far to find something interesting on this trip!

* * * * *

The fastest runners among insects are cockroaches, which can move almost a foot per second. Although this only translates to just under 1.5 mph, for their size it's the equivalent of a human being able to run 40 mph. Cockroaches are also the oldest known true insects, dating back at least 300 million years.

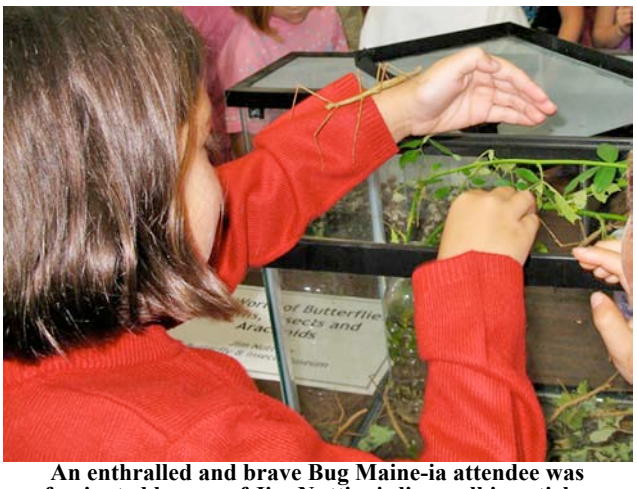
Bug Maine-ia Wows 'Em Again!

by Joanna Turow

On September 12, 2012 the Maine State Museum celebrated the tenth annual Bug Maine-ia with 2342 enthusiastic visitors. The event transformed the normally subdued history and natural science museum into an entomological wonderland.

This year 93 home-school groups and 33 school groups interacted with 19 different stations spread throughout the Cultural Building atrium and into the Maine State Museum lobby and exhibit galleries. It was wonderful to watch crowds of students looking through microscopes, vying to get their questions answered, pushing their faces up against an aquarium full of water insects, or delicately holding a moth with tweezers as they examined the life of insects from every possible angle.

Dick Dearborn was once again surrounded at Bug Maine-ia by a crowd of youngsters wanting to experience his collection of woolly bear caterpillars.
Photo by Jean Dane



An enthralled and brave Bug Maine-ia attendee was fascinated by one of Jim Nutting's live walking sticks.
Photo by Jean Dane.

This year's event featured exhibits on how insects can predict the severity of winter, what they can tell us about water quality, and how insects can affect the plants that we eat, as well as a look at how other cultures view "bugs." Some cultures see insects as added protein to their diet, others see beautiful beetles as components for a necklace.

continued on next page

Bug Maine-ia (cont.)

Students were invited to solve insect puzzles while they learned about Edith Patch's pioneering work, and to collect insects from the museum grounds to be identified by Maine Entomological Society volunteers.

Overall, Bug Maine-ia is a unique and quite wonderful opportunity for students to interact with scientists and environmental educators, ask the experts their most difficult bug questions, and participate in hands-on science. Bug Maine-ia truly transforms the museum with an energy that is felt throughout the building. We are thrilled and a bit amazed to be celebrating the tenth year of hosting the event and are looking forward to next year's Bug Maine-ia, which is scheduled for September 11, 2013.

* * * * *

Annual Meeting Held Beneath Sunny (if breezy & cool) Skies

by Bob Nelson

The Annual Meeting of the Maine Entomological Society was convened at Rock Ridge in Clinton following lunch, at about 1:00 p.m. on Saturday, September 15th. A dozen M.E.S. members, two non-members, and one shaggy dog were in attendance.

President Charlene Donahue asked if there were any corrections to the report of the previous annual meeting, published in the November, 2011, issue of *The Maine Entomologist*. Hearing none, the report was accepted as correct.

Treasurer Dana Michaud presented his report on the finances of the Society. Both the Scholarship Fund and General Fund accounts have shown modest growth in the past year. Nettie Nelson applied her accounting expertise to audit the books and confirmed the accuracy of Dana's accounting of Society funds.

Given that no candidates had come forth seeking to replace any incumbent, all officers from 2012 agreed to continue in service and were re-elected for 2013 by unanimous vote of those present.

Status of the Scholarship Fund resulted in discussion of whether we should reach out to University of Maine students. Charlene Donahue, Peter Darling, Edie King and Domenica Woo will comprise the Scholarship Committee that will investigate appropriate outreach efforts.

Edie King, Peter Darling and Dana Michaud volunteered to serve on the selection committee for photos for the 2013 M.E.S. calendar. There was also discussion of the fairness of a $15 charge for all mailed calendars ($12 for the calendar and $3 for mailing) for people ordering multiple calendars by mail. Charges of the USPS were consulted, based on the weight of the calendar, and a compromise was reached that calendar costs would remain $12 per calendar for picked-up items, and $15 for one calendar mailed to a single address. Multiple calendars mailed to the same address after the first would be at a cost of $14 per additional calendar; thus, two calendars mailed to the same address would be $29, three would be $43, etc. This will barely cover costs of mailing and was considered fair to all concerned.

There was discussion of potential problems in the bylaws (e.g., setting of dues at a flat figure per year, no set policy regarding family memberships, etc.), and it was decided that proposed changes in the bylaws should be sent to Charlene for synthesis and inclusion in the November newsletter. The vote on any proposed changes would be held at the Winter Workshop in Augusta, on January 19th, 2013.

The 2013 Acadia Entomological BioBlitz will be focused on Coleoptera and will be held July 12-15, 2013, with principal focus on Mount Desert Island. Other 2013 field days have tentatively been scheduled in Winter Harbor, Embden, Whitefield, and Norway. Full details will be posted on the M.E.S. web page when they have been finalized.

A major coup has been scored in that the University of Maine entomology collections, comprising some 110,000 specimens, are being relocated to the Maine State Museum collections in Augusta. Lack of funding for proper curation of the collection in Orono had led to fears of its being lost, including many thousands of historic specimens from the 19th and early 20th Centuries. The Cabinets arrived September 6th; the collection should be arriving in Augusta on October 20th.

Bob Nelson will be working on T-shirt redesign, and the M.E.S. brochure/flyer also needs revision. There was also discussion of possibly creating and issuing official M.E.S. membership cards.

Next year's Bug Maine-ia will be on Wednesday, September 11th; the Annual Meeting will be held on Saturday, September 14th, 2013, once again at Rock Ridge in Clinton.

* * * * *

Finding *Eremnophila*

by Monica Russo

On August 3rd, just 15 feet from our front door, Kevin and I were looking at the digging sites of a few *Ectemnius* wasps. These are solitary wasps that hunt for dipterids to stock their nests, and they produce an obvious tumulus (mound) of excavated earth, with an entrance hole at the top, like a tiny volcano. We've had *Ectemnius* wasps for at least 10 years. Our tiny cabin in the woods sits at the end of an old 400-foot dirt logging road that has never been "improved," so it is ideal for these fossorial wasps.

It was just after 5:00 p.m. As we looked for new tumuli, Kevin noticed what appeared to be an *Ammophila* wasp, another fossorial hunting wasp, which we have also had digging along our driveway. I thought it was interesting that she was digging within a couple of feet of one of the *Ectemnius* tumuli.

But as we watched the newcomer, I realized something just didn't jibe. Most female *Ammophila* have bright orange on their abdomens, and this one did not. And there were bright white or silver patches on her thorax. Fortunately, Kevin was able to take several shots of her as she dug.

Like other fossorial wasps, only the female hunts and digs. She entered the hole, and repeatedly backed out with a wad of excavated earth, and few several inches away with each load. The dirt was dumped with such force that you could hear it being flung down. (*Ammophila* wasps do not leave a tumulus mound at the entrance hole.) But because she was all black and had no orange color, I felt sure she had to be something other than an *Ammophila*.

About an hour later, I went out to look at the questionable *Ammophila*, and she was now looking for debris to close up her entrance hole. She was pulling at small pieces of dead leaves, grass, and pine needles, dragging bits back to the hole. She picked up one pebble about the size of her head and rejected it, and then picked up a small piece of bark about a half-inch long, but rejected that also. She even raised up the end of a small pine cone! What a feat!

But *Ammophila* wasps are renowned for filling in their nest entrances with dirt and then tamping it down with a small pebble. This has been well-documented. When first observed, it was suggested that this was a "tool-using" insect. I have seen *Ammophila* choosing pebbles for this purpose, and even have a vial containing four pebbles which I retrieved after observing the wasps pick them up in their mandibles. But the female working here was not using much dirt, and no pebbles that I could discern.

continued on next page

Finding* Eremnophila *(cont.)

The next day, August 4th at about 9:00 a.m., the hole was still covered. At 10:30, it was open, and she was seen excavating again. Later, at 12:30, it was closed and covered over, and she was not seen again.

Our *Eremnophila aureonotata* in Kennebunk. *Photo by Kevin Byron*.

A close look at Kevin's photos, and some frantic research, has led me to identify her as *Eremnophila*. The indigo blue on her abdomen, and the silvery angular patches on the side of her thorax, are the hallmark of *Eremnophila aureonotata*. This species is not on the Hymenoptera list of the Forest Insect Survey of Maine (Dearborn et al., 1983), so we wonder if anyone else has seen this interesting hunting wasp. She reportedly stocks her nursery with a single large lepidopteran larva, often a *Heterocampa* tussock moth caterpillar.

***References*:**

Dearborn, R. G., R. Bradbury and G. Russell, 1983. The Forest Insect Survey of Maine - Order Hymenoptera. Augusta, Maine: Maine Forest Service; 101 pp.

Finnamore, A., 1982: The Sphecoidea of Southern Quebec (Hymenoptera). Memoirs of the Lyman Entomological Museum of Cornell University, no. 11; 348 pp.

* * * * *

A Day in the Field

by Brandon Woo

On October 27, 2012, I met up with fellow M.E.S. members Dana Michaud and Dave Bourque for a day of collecting at two different locales near my house: the Kennebunk dump and the Kennebunk Plains. The day started off cloudy and very wet, but gradually became warmer and sunny.

We began at the dump, an enormous field surrounded by woods. It had recently been mowed, and there were many large hay bales on the tops of the rolling hills. Sweeping the grasses and searching by eye didn't turn up too much, except for extremely high densities of northern green-striped grasshopper nymphs (*Chortophaga viridifasciata*), destined to become adults in May. Then, Dave came up with the idea to turn over the hay bales. This exposed many sowbugs, centipedes, millipedes, and spiders, along with some small white leafhoppers. As we moved on to other hay bales, we noticed that there were larger numbers of beetles and true bugs in the sides of the bales which were partly wet and partly dry, so we concentrated our efforts there. We turned up a number of interesting critters, including numerous aleocharine rove beetles, *Stenus* sp., woolly bear caterpillars (*Pyrrharctia isabella*), and three "turtle bugs" (Pentatomidae: Podopinae), uncommon tiny black stinkbugs.

Haliplus* sp. caught by dip-netting in a Kennebunk Plains pond. *Photo by Brandon Woo.

Languria mozardi* (Languriidae), in real life bright orange and black. *Photo by Brandon Woo.

Some time afterwards, the sun began to peek through the clouds, and started to invigorate the insects. Dana came up with another trick: beating the sides of the bales as you would beat a tree. This was our gold mine; we collected a large number of unusual insects. Some of these included *Fitchia aptera*, a brachypterous reduviid (assassin) bug, a thread-legged bug (Reduviidae: Emesinae), some reddish spiders, a bright green long jawed orb-weaver (probably *Tetragnatha*

continued on next page

viridis), and quite a few clover stem borers (*Languria mozardi*), a beetle that is usually described as common, but for some reason doesn't seem to be too abundant in Maine. One of my most interesting finds was *Telephanus atricapillus*, a bark beetle representing a family that I had never before seen, Silvanidae. Small numbers of ants and plume moths became active as we circled back towards our starting point.

After lunch, we headed to the Kennebunk Plains, an area known for having great collecting opportunities. It features a coastal sand plain grassland with the largest population of the wildflower Northern Blazing Star (*Liatris borealis*) in the world. Also, there is a wooded area leading down to a good-sized pond. We didn't discover much walking through the plains, but dip netting in the pond yielded some interesting insects, including water boatmen, backswimmers, an enormous burrowing mayfly nymph, and a water scorpion (*Ranatra sp.*). I encountered another family of beetles that I had never seen before, Haliplidae (crawling water beetles), with the capture of three *Haliplus* sp.

Near the point where the pond drains into a stream, we discovered a trout dying from a fungus; its whole back end was coated in fungal hyphae. We noted the presence of a large darner patrolling the pond, a seemingly late occurrence for such an insect. Trekking into the forest didn't turn up too much, so we eventually headed back to our starting point. We said our goodbyes and left for our respective houses. I managed to take good photos of most of my catch, and revisited the plains a few days later to return the aquatics to their home. All in all, it was a very nice time spent with good friends and good bugs!

* * * * *

STINK BUGS?!

by Fred Gralenski

STINK BUGS! Who in his right mind would write a column about STINK BUGS? Maybe the election fever has clouded my sense of control and, zombie-like, forced me into a weird direction, so here it is. I really haven't been drinking; not that I remember, anyway.

Stink bugs belong to the family of bugs (order Hemiptera) called the Pentatomidae. This is a large family of bugs and the "Penta" part of their name comes from the antenna, which has five segments. Stink bugs generally have a stubby, shield-shaped body less than half an inch long.

True to their common name, both adults and nymphs are equipped with large scent glands on the undersurface of their bodies, and bring these into play when disturbed. A few of our stink bugs are neat predators, like the Two-Spotted Stink Bug and the Spined Soldier Bug, both of which voraciously feed on hairless caterpillars and larvae of beetles like the Colorado potato beetle. These predacious stink bugs have a pointed straw-like beak and they skewer their victims and hold them up in the air and suck out the juices.

However, most of our stink bugs here in the Quoddy region are of the nuisance type, and use their needle-like beak to bore a hole into a favorite plant and suck out the juices. Some, like the Banasa Stink Bug, like to feed on fruits and berries. If you sometimes casually eat berries, like I often do, by grabbing a handful of blueberries or blackberries, then stuffing them in your mouth to separate the good parts, you most likely have tasted a stink bug.

I'm pretty sure most of us have done that, but try to forget and consider it too yucky to even mention, which is unfortunate because in some parts of the world stink bugs are sought out as a flavoring. Apparently, this is true to some extent in Mexico, and stink bugs are used a flavoring for a sauce used on tacos and other Tex-Mex treats, and even to a greater extent in Southeast Asia.

***Banasa dimidiata*, green with dark brown markings, is one of our common pest stink bugs. Below, the predominantly black and red Twice-Stabbed Stink Bug (*Cosmopepla lintneriana*) is also a common Maine native.**
Photos by Fred Gralenski

The primary chemical in the stink bug's arsenal is an aldehyde called trans-2-decenal. This is sold commercially as a 'flavor and fragrance agent', and it is sold by such companies like Sigma-Aldrich, where one can purchase a 200 gram bottle (a little less than a cup) for only $146 plus shipping and tax. Just think. For under 200 bucks you can masquerade as a giant stink bug. With Halloween behind us, it's time to prepare for next year! Get your costume ready and be the hit (stink) of the neighborhood. Trans-2-decenal is listed as insoluble in water but soluble in alcohol, and supposedly washes off easily with warm, soapy water.

How can the same chemical that most of us consider foul smelling and stinky be considered a 'flavor and fragrance agent'? It turns out there are quite a few chemicals in that category. As a matter of fact, the smell of a stink bug is likened by some to Cilantro, or Coriander, and the chemical compound is very similar.

There is a love-hate relationship to the use of cilantro by famous chefs. Julia Child apparently despised cilantro, but others praised its use. Cilantro is lauded by many herbalists not only for its taste and fragrance but as a means of removing the heavy metals, like mercury, that can accumulate in the body. And some 'studies' have even stated that the like/dislike of cilantro is a genetic characteristic in people. Supposedly you can get to like or dislike cilantro with much training, but you are predisposed one way or the other at birth.

continued on next page

Stink Bugs! (cont.)

Your attitude about cilantro was selected by your parents. Blame them. What about politics? Has someone determined that Republicans like cilantro but Democrats don't, or is it the other way around? Anyway, when some pollster asks you if you like cilantro, be careful and refer them to your pet stink bug.

* * *

This article first appeared, in slightly different form, in* Quoddy Nature Notes *on 28 September, 2012.

* * * * *

Entomologists Are NOT the Only Ones Having All the Fun!

by Domenica Vacca

Most people mulling over their options for what to do on an upcoming spring or summer Saturday, would probably skip right past the choice of a Maine Entomological Society (MES) field trip. Images of black flies, deer flies, mosquitoes, and ticks all swarming down on you, sweating, and of course, all the discussions involving weird scientific terminology that will make you feel like you're not really smarter than a 5th grader, immediately direct you to your next possibility, even if you actually did pause in consideration. Sure, if you were one of those guys who like the creepy crawly things, okay, maybe. But the average person? Doubt it.

Well, I'm here to tell you, think again!

I've been going on these field trips for about six years now. At first I thought, "Well, I'm just here for my young son. As long as he's enjoying the field trips, I'll be fine." And sure, he loves them - but he's a budding entomologist. After a while I realized that it wasn't just a mom enjoying the sight of her son engaging his passion. I too, looked forward to the trips. I enjoyed planning them, attending them, and then recapping the day's events.

So what's the allure? No, I didn't pass over to the entomology world. I still recoil at the site of any insect eating its prey, or scream and swat hysterically if anything flies within a foot of me, and God forbid something lands on me... Well, at least the others get a good laugh in at my expense. But still, I return. Why?

It's really not that complicated. There are several very logical explanations - all of them important.

For one, it gets me out into the great outdoors, each time at a different locale somewhere in Maine. We usually try to pick a place encompassing different ecological habitats. It may be a new property that has never been researched or one that has changed and warrants further review. Occasionally we meet on private properties, that one would never have had the opportunity to see. And the mosquitoes, flies and ticks are never that bad. Really.

Another bonus to being outdoors with the MES enthusiasts is that many of our members have many other passions besides entomology, which always invites lively discussions. Geology, wildflowers, trees, maple syrup, stamp collecting, comic books, star trek, photography, current events, and food are just some of the many topics that circulate while we adventure into the insect world. Topics on insect behavior alone, I believe, can't help but peak the curiosity of even the least interested.

But, by far the most important treat of going on an MES field trip is the camaraderie of enjoying the outdoors in the company of the friendly MES members and the family and friends who may join us. It's so enjoyable and relaxing to be walking along, talking, collecting, learning, having fun. Lunch is always like a splendid picnic among friends. And sometimes we'll get together for ice cream or yet more food, at the end of the day.

Yes, they're serious about their collecting, and a lot of the enthusiasm and terminology of a particular find goes "over my head." Professionally, when called for, a comprehensive insect list will be produced for that day, to be shared with the owner or organization related to the property. And if you're there to learn about insects, the MES members love the opportunity to teach. Whether you know a little about insects or a lot, there is never any sense of intimidation or ridicule. There's only the incentive to learn and to teach - even when one (me) asks about the same insect for the tenth time!

So, if you want to spend a day with the MES members, or an hour, or just a lunch, you will surely have some fun, and are always welcome. Join us and see for yourself!

* * * * *

Discovering *Gnamptotelpa* *or:* Ichneumons Don't (Ow!) Sting (Ow! D—n it! OW!)

by Monica Russo and Kevin Byron

On August 15, we were driving home to Arundel from Kennebunk, when Kevin notices a large Ichneumon wasp clinging tenaciously to his driver's side mirror. It had bright yellow antennae and dark iridescent wings. We stopped the car, and Kevin caught it in a container. At home, we put it into the refrigerator, so that the cold would slow it down for a chance at getting a few photos.

Gnamptotelpa obsidianator* in Kennebunkport. *Photo by Kevin Byron

About an hour later, Kevin was ready to take pictures of the Ichneumon, so we took the container outside, and I said I'd just put the insect on my hand and hold it up.

"Won't it sting you?" Kevin asked.

My famous last words: "It's an Ichneumon. She's not that kind of girl." I felt confident that Ichneumons were safe to handle.

I took the big insect out of the container, maneuvered it onto my hand, and immediately yelped "OW!" Followed by "Ow! D—n it! Owww!"

Yes, she gave me a solid, strong, burning sting. As in: *painful*. And then maybe itchy for a while. It did not raise a welt, or even cause redness, and the irritation (a euphemism) only lasted about a half-hour or so, but I sure wouldn't want to repeat it. I've been stung a few times by Pompilid wasps, and a few times by *Agapostemon* bees, and neither were as painful as this Ichneumon.

continued on next page

Discovering* Gnamptotelpa *(cont.)

So, beware of *Gnamptotelpa obsidianator*. The Ichneumon matches the picture in **Field Guide to Insects of North America** (Eaton and Kaufman, 2007), and correlated to a few photos online. After looking through several references, I did find one comment that "some" Ichneumons may sting, and one warning that some females are able to give a "weak" sting. (Ha!)

I did not see *Gnamptotelpa obsidianator* in the "Forest Insect Survey of Maine: Order Hymenoptera (Dearborn *et al.*, 1983). Has anyone else seen this large Ichneumon with the bright yellow antennae and dark wings? Be careful!

***References*:**

Dearborn, R. G., R. Bradbury and G. Russell, 1983. The Forest Insect Survey of Maine - Order Hymenoptera. Augusta, Maine: Maine Forest Service; 101 pp.

Eaton, E. R., and K. Kaufman, 2007: Kaufman Field Guide to Insects of North America; New York: Hillstar Editions, Houghton Mifflin; 391 pp.

* * * * *

Whatizzit?

by Fred Gralenski

Western Conifer Seed Bug, *Leptoglossus occidentalis*.
Photo by Fred Gralenski

I didn't know what this bug was either. I found it inside on the window of our garage and I thought it was an Assassin Bug, so I handled it pretty gingerly, but it didn't match up with anything in my Swan or Audubon insect references. I did send a picture to Bob Nelson and he identified the critter for me as a Western Conifer Seed Bug. I was a little disappointed. I wanted a Rambo-type assassin that would sneak up and puncture some wretched grub that was eating my string beans and suck the juice out of him. Ha! Ha! Instead I got a close relative of the squash bug. As I got to know more about my new bug, the more I would dislike him, but he still is an interesting critter.

The native range of the Western Conifer Seed Bug (WCSB) is a forested band near the West Coast, ranging from the Provinces of Saskatchewan, Alberta and British Columbia through the United States to northern Mexico. The bug was first described by Heidemann in 1910 as a pretty non-descript minor pest of the western conifers. The WCSB is a slow-flying, sort of clumsy bug that likes to feed on the emerging cones of (surprise!) western conifers.

No one cared much about him until after World War II, and then the bug figured out a better way to get around. All forest products made from western conifers like the Douglas firs, lodgepole pine, spruces and nursery stock of these and similar trees were discovered to be super places to hitch a ride to new territories. Along the way the bug determined that the cones of other conifers like red pine and white pine taste pretty good too, and by 1992 it was first detected in Pennsylvania, and by the early 2000s it had reached Maine. (I got here first!) It made its way to Europe by 1999, and in Britain it is called a 'spectacular' squash bug. The range of the WCSB is still expanding, and not only in new places in Europe and western Asia: it was also detected in Japan in 2008.

The Western Conifer Seed bug typically has one generation per year. This time of year they are searching for a place to hibernate and really like houses with lots of coniferous trees nearby, where they can be guests for the winter and get an early start on raising more WCSBs next spring. They may be found in considerable numbers in some buildings. Although these bugs don't have good biting equipment as far as people are concerned, WCSBs have defensive scent glands that produce an odor described as anything from bitter to a mildly pleasant combination of apples and pine pitch. My bug produced no smell, maybe because I didn't harass him enough.

In the spring the adults emerge from hibernation and, after mating, the female lays strings of eggs on the needles of host conifers. These hatch out in less than two weeks and the nymphs feed on the needles until the cones form. The damage to the seed-producing capacity of the tree is usually not substantial, but in heavy infestations of WSCBs the seed production may be reduced by as much as 90 per cent. This seems to be especially apparent in the Mediterranean area, where some plantations of pine nuts and even Pistachio trees are adversely impacted. Fortunately my addiction to pistachios seems to be satisfied by high-priced California products. I hope my addiction doesn't worsen.

Here in Maine the recommended control of the WCSB is all mechanical. If the little pests are getting into your house, seal up your house better, and vacuum up or stomp on the beasts that sneak by your defenses. In nature, the various insect-eating birds, bats, shrews and amphibians do prey upon the WSCBs, but in a new environment this balance often takes time. Even in plantations, the recommended control does not consist of chemicals, but a tiny wasp, *Gryon pennsylvanicum*, that sneaks up and parasitizes the eggs of the WCSBs. Not exactly a Rambo bug, but I'll take anything that helps the conifers in Maine and the pistachios anywhere.

* * *

This article first appeared, in slightly different form, in* Quoddy Nature Notes *on 2 November, 2012.

* * * * *

***Book review*:**

A Field Guide to the Ants of New England, by A. M. Ellison, N. J. Gotelli, E. J. Farnsworth, and G. D. Alpert; 2012. New Haven, Connecticut: Yale University Press; 398 pp.

Reviewed by Charlene Donahue

This is way more then just a field guide. *A Field Guide to the Ants of New England* pulls together information previously available only by digging through articles published in a wide array of journals, and presents it in an incredibly easy-to-use format. On top of that the authors' enthusiasm for the subject comes through in very readable prose.

The book begins with a pictorial matrix key to genera on the flyleaf that is divided up by the size of the ants. On the back flyleaf are drawings illustrating the characteristics used in identifying ants. The keys are usable by non-myrmecologists, with the major features in bold and additional helpful information in regular type. Elizabeth Farnsworth drawings complement the keys with arrows pointing out features used in the couplets. Not only is there

continued on next page

Field Guide to Ants (cont.)

the usual key to workers, but also queens and a key to genera for the males.

Each subfamily starts with a description of the group and a key to species. This is followed by species descriptions that are rich with maps, drawings, facts, and photos, that are fascinating to read. There is information on the origin of the name, habitat, geographic range, natural history, look-alikes and distinguishing features, plus photographs, for each.

Background information on ants is presented with the why, where, and how covered at the front of the guide. In the back is a biography of the ants of New England providing deeper insight into this important family of Hymenoptera. Following the biography is an annotated bibliography and further readings list. The annotations are helpful to anyone who wants to read further but wonders which of those references will actually provide the type information sought.

The page edges are color-coded to subfamily and genera, and there is a checklist in the back so you can begin your own life list of ants. *A Field Guide to the Ants of New England* is a wonderful addition to insect field guides and taxonomic resources.

* * * * *

Book review:

Biodiversity of the Schoodic Peninsula: Results of the Insect and Arachnid Bioblitzes at the Schoodic District of Acadia National Park, Maine, by Donald S. Chandler, David Manski, Charlene Donahue and Andrei Alyokhin; 2012. Maine Agricultural and Forest Experiment Station, Technical Bulletin 206; 210 pp.

Reviewed by Bob Nelson

Over the years there's been a constantly nagging question of what **was** the final result of each of the Entomological BioBlitzes we've run at the Schoodic Peninsula. Now, that question can be answered for every Blitz from 2004 through 2011. As a document of the total entomological biodiversity of the Schoodic Peninsula portion of Acadia National Park, this volume will stand for years as a landmark.

Rarely does any survey cover the full spectrum of the entomological realm (including spiders); they are most commonly efforts that have been intensely devoted to just one specific group. The team efforts involved in the Acadia National Park Entomology BioBlitzes are what have made such an encyclopedic compendium possible, and everyone who participated and contributed can know that she/he made a positive difference.

Hundreds of individual participants have joined in these Blitzes over the years, and a question that has always lingered has been, "What did we get?" Four key people involved in each of these events have pooled all the data from all the specimens collected, and compiled it into a single all-inclusive synthesis that will undoubtedly be a major reference for decades to come.

The volume begins with an introduction to the Schoodic Peninsula and its history, including the increased science focus of the National Park Service over the past two decades. The nature of these 24-hour Bioblitzes in general is thoroughly discussed, as are the many habitats on the Schoodic Peninsula that have been identified in previous surveys. Although much work was done in the 1990s on the vertebrate faunas, bryophytes. vascular plants, and the intertidal communities, virtually nothing was known of the arthropods until the Entomological BioBlitzes began on the Peninsula in 2004, following the successful 2003 Ant Blitz on Mount Desert Island.

This introduction is followed by a brief chapter that describes the many collecting techniques that have been used in documenting the arthropod fauna of the Peninsula over the years 2004-2011. Successive chapters, by the team leaders and taxonomic authorities responsible for each of the Blitzes, discuss the major discoveries of each event, for Lepidoptera (2004 and 2011), Coleoptera (2005), Diptera (2006), Spiders (2007), Hemiptera (2008), Minor Orders (2009), and Hymenoptera (2010).

These chapters are then followed by a brief Acknowledgments section, as well as recommendations for future Blitzes, and general advice for anyone planning a Blitz.

The bulk of the volume is the two Appendices. The first is a 10-page detailed description of all the many collecting sites. This is followed by 14 tables that list every specimen collected in every Blitz, by whom, where and by what method, with ancillary notes, all arranged taxonomically. For those who may have wondered if some specimen they collected was unique, or how many other people caught the same thing, this is where you can find out! It's also thorough documentation of all the data gathered through thousands of person-hours of collecting, augmented by countless hours of sorting, pinning, labeling and especially identification.

Those who participated in multiple Blitzes should have already received bound copies of the volume. Digitally, it's available free of charge, to anyone who wants one. I personally also donated a digital copy to the Colby College Library, and they were thrilled to have such a valuable contribution, without it taking up any precious shelf space!

Those who have participated in any of the BioBlitzes at Acadia will *definitely* want to have a copy of this publication, which can be downloaded at the M.E.S. web page (pdf format, 5.5 Megabytes). A limited number of bound, printed copies are also available from David Manski at Acadia National Park. Send an e-mail with your request, including your mailing address, to **david_manski@nps.gov** .

* * * * *

Book review:

Illustrated Identification Guide to Adults and Larvae of Northeastern North American Ground Beetles (Coleoptera: Carabidae), by Yves Bousquet [with photos by Henri Goulet]; 2010. Sofia, Bulgaria: Pensoft Publishers; 562 pp.

Reviewed by Bob Nelson

I'll confess, I've had this guide sitting on my desk for well over a year now – having hesitated before buying it when it came out due to the vagaries (and potential risks) of ordering on-line from an international publisher in a former East Bloc country. Did I really want to give the Bulgarians access to my credit card number? (I did eventually order it, but through the Colby College bookstore.) And besides, I had my trusty set of the Lindroth volumes on the Canada-Alaska Carabids, which (with all my handwritten marginal notes and inserts) had always been more than adequate for identifying nearly anything I ever found in Maine or any other northern-tier state.

THEN, after this past summer's Aquatic Insect BioBlitz at Acadia, I volunteered in my tiny way to help Don Chandler with any carabids that he needed identified. Considering the vast quantity of material he had in front of him, I realized this was a pretty trivial offer. But there's a number of ground beetle species that are strongly hygrophilous and thus would have been within the purview of our charge. I saw that among the hundreds of specimens before him waiting their turn, there were *at least* six or eight Carabids.

Eventually, Don sent me two specimens that he said "weren't among the usual suspects" for such environments. Wow, I thought, I can finally do at least something to help out. I pulled out Lindroth's key to *Bembidion* and promptly

continued on next page

ran into a solid wall. Neither specimen would key out easily. I must have made a mistake. Back up and try again – same result. Dang!

So with great trepidation, I pulled out my copy of Bousquet's volume. Hmm. Strange – the first key couplet was completely different from Lindroth's. But, why not give it a try? I started through, and in a few minutes I arrived at a definitive answer for the first specimen. I pulled out Lindroth's volume, looked this up, and read his detailed description of the species and its habitat. It was indeed what I had identified using Bousquet's volume. Wow! What a revelation! I picked up the second unknown and had the exact same result: a quick and easy determination!

So now, Lindroth is my backup, and Bousquet is the new standard. Why? Bousquet's volume covers only those species known from the Northeast, by which he means Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Labrador, Newfoundland, the islands of St. Pierre and Miquelon (the *only* French colony remaining in North America, for you trivia buffs!), as well as the states of Vermont, New Hampshire and Maine. So at the outset, the fauna covered is much smaller than the entire Canadian-Alaskan fauna. I also don't have to worry about a cryptic key couplet to separate those exclusively western groups that can be very difficult.

The volume starts out with some generalizations on Northeastern North American Carabidae, followed by a taxonomic hierarchy of subfamilies, tribes and subtribes, within which all genera are to be arranged. Next is a list of all 565 species known in the Northeast, arranged taxonomically, which is then followed by an alphabetical listing of all species in a table that documents the states and provinces in the Northeast in which each species may be found.

This is then followed by a marvelously thorough discussion of ecological habitat requirements, occurrence, seasonality, normal relative abundance within the correct habitat, and detailed definitions of all the terms used throughout the keys. Following this is a key to genera, and then the genera themselves, arranged taxonomically, with a key to all species known from each genus in our region.

What makes the keys particularly easy to use is that as far as I've experienced, each and every place where a key character could be difficult to interpret, there is a very sharp photo showing the specific examples of the two options provided in the key. This is absolutely fabulous, in my humble opinion. No more are we forced to try to figure out what is meant by the indefinite difference between "more or less rounded" and "generally angular to slightly rounded."

The information beneath each species is coded to the definitions given earlier (e.g., HR=Habitat Requirements, GD=General Distribution, etc.), but these become easy to remember with a little use. Key references for each species are given, resulting in an exhaustive bibliography of the literature on the ground beetle fauna of the region. The adult beetle section ends with 65 full-color plates, with four species shown per plate – not the entire fauna, but many, many species, all in spectacular clarity. (I still do, however, rely on Lindroth for more detailed descriptions of specific habitats for individual species, and of the variability of characters within an individual species.)

Section B then goes through the same structure for larvae and their characteristics. Given that larvae in general have only received systematic attention in the past few decades, this is likely the first thorough treatment for the family in any regional study on the continent. Larval characteristics have indeed proven to be very useful in elucidating familial relationships, and have resulted in significant taxonomic revisions of some groups that had been previously classified, sometimes tenuously, based solely on adult characteristics.

Overall, I'm quite thankful that the two little specimens that Don Chandler sent me have forced me to open up and finally use this volume. For anyone seriously interested in Carabids in our region, this is *definitely* a must-have resource!

* * * * *

WINTER WORKSHOP – BEETLES!

January 19, 2013 – Augusta

The 2013 MES Winter Workshop topic is Coleoptera – or beetles - a favorite order for many. It will take place at the Department of Agriculture Conservation and Forestry Bolton Hill Facility in Augusta at 14 Conservation Drive, off Route 3 (directions below). The workshop will run from 9:30 a.m. to 3:00 p.m. on Saturday, January 19, 2013. The workshop is open to people with any level of experience or none at all.

Coleoptera is one of the largest orders of insects with diverse life histories and habitats, dozens of families and thousands of species. Many are easy to collect, they don't sting (although some do bite), and you can focus on just one or a few families and have more then enough to keep you occupied. Dr. Don Chandler, from the University of New Hampshire, will be leading the workshop. If you have not attended one of Don's workshops you have missed an opportunity to learn a great deal from a superb teacher.

There is a $15 fee to cover expenses and **pre-registration is required by January 3rd**. Please bring your $15 with you to the workshop so I do not have to deal with reimbursing money if it cancelled. There is a limit of 25 people and we usually fill these workshops to capacity, so sign up early. Please bring a bag lunch. There are microscopes available but if you can bring one, please do so.

To register, contact charlene.donahue@maine.gov. If the weather is threatening on the day of the workshop, contact me at 549-7241 or by my cell phone at 485-0960. Also, if you can not make it for some reason, please call so that if there is a waiting list others could attend.

Directions:

From the north or south:

Take exit 113 from Interstate 95.

Merge onto Maine Route 3, going E toward Augusta/Belfast. You'll go 6.6 miles, aross the Kennebec River and straight through the lights at Route 201.

The road will go up a hill, and you'll see a Smokey Bear Fire Danger sign on the right; turn right onto Conservation Drive and park.

GET YOUR 2013 M.E.S. CALENDAR!

The 2013 M.E.S. Calendars are now available for ordering! The calendar features a host of spectacular photos of numerous orders, as shown above. Wasps, beetles, butterflies, stoneflies and a magnificent spider are included. The order form will to be found as a special insert in this newsletter, along with a form to facilitate your dues renewal for 2013! ***$12 each if you pick them up, $15 for one to be mailed, and $14 for each additional mailed copy to one address.***

MOTH DISSECTION WORKSHOP *DECEMBER 4th*!

Agriculture Conservation and Forestry entomologists are hosting a moth dissection workshop on **Tuesday, December 4, 2012** at the Maine Forest Service Entomology Laboratory. The primary focus will be determining moth species by genitalia, particularly Bruce spanworm and winter moth. But this technique will prove useful for other species as well. The workshop will run from 10:00 a.m. to noon, with more time available after lunch as needed. Please contact Charlene Donahue to sign up; pre-registration is required so that we have enough supplies for all participants.

To register, please e-mail me at
Charlene.donahue@maine.gov or call (207) 287-3244.

* * * * *

COMING M.E.S. EVENTS in 2013:

19 January	Winter Workshop, Augusta
23 March	M.E.S. Field Day – Maple Syruping, North Whitefield
1 June	M.E.S. Field Day, Winter Harbor
22 June	M.E.S. Field Day, Embden
12-15 July	Annual Entomological BioBlitz, Acadia National Park (focus on Beetles on M.D.I.)
3 August	M.E.S. Field Day, Norway
11 September	Bug Maine-ia, Maine State Museum, Augusta
14 September	M.E.S. Annual Meeting, Clinton

(See http://www.colby.edu/MES/ for more detailed information; new information on any event will be posted as it is received.)

* * * * *

PROPOSED CHANGES to M.E.S. BYLAWS

The following changes have been ***proposed*** to the M.E.S. Bylaws. There will be a **ballot** included in the February, 2013, issue of *The Maine Entomologist* for you to cast your vote. **As stated in the Bylaws**:

"a) Any proposed amendments must be circulated to the membership for thoughtful deliberation at least three (3) weeks prior to the meeting at which they will be considered. Normally, such circulation will take place via the Society Newsletter, to be mailed in sufficient time that it should be received by the entire membership in time to allow for at least three weeks of consideration prior to a voting deadline. Voting will be by paper ballot, to be mailed to a designated member of the Executive Committee, or a Society member appointed by the Executive Committee to oversee the election process.

b) The Bylaws may be amended by a 75% favorable vote of all members returning ballots prior to the set date."

The proposed changes are to DELETE the sections that are struck through in the text that follows, and to **add** those passages that are in **bold text**.

Section VII. Offices of the Organization

a) ~~For legal purposes, the offices of the Maine Entomological Society shall nominally be located in the offices of the Forest Entomology Laboratory of the Maine Forest Service.~~

~~b) For practical purposes, the~~ **The** offices of the Maine Entomological Society shall ~~pro tem~~ reside at the home or office of the current President of the Society.

Section VIII. Dues

a) Individual dues in the Maine Entomological Society shall be ~~$5~~ per calendar year, due ~~March~~ **January** 1st of each year. **The dues amount shall be set by the membership at the annual meeting.**

==========

Maine Entomological Society
c/o R. E. Nelson
Department of Geology
Colby College
5804 Mayflower Hill
Waterville, Maine 04901-8858 U.S.A.

Please visit our website at http://www.colby.edu/MES/

The Maine Entomologist **is published quarterly by the Maine Entomological Society. Dues are $10 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..***