# 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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This fall I was asked to teach an entomology session for a Senior College forestry course. I prepared my presentation, but ended up not getting through very much of the material. This is unusual for me, as I am usually pretty good at staying on task. But the students did not have a basic understanding of insects, not any at all really. So I had to 'beep, beep, back the bus up' and go over insect development, overwintering (no, all Maine insects do not go to Mexico for the winter with the monarchs), and what roles insects play in ecosystems.

These were people who truly thought that all insects are bad and the only good insect is a dead insect. They were shocked that there was another way of looking at insect life. These were intelligent people in their 50s - 70s. They had never given insects a thought except how to kill them. Luckily they were open-minded and excited by what they learned. They also thought I should present insect programs to everyone – stand on the street corner and shout to the world that insects are good. Sometimes I feel that is what I do. Everywhere I go, I let people know that insects are good, that we need them, that the earth needs them. (Except at work, where the message is – invasive insects: BAD!)

But I feel too many people have never taken the time to lie on their bellies and watch ants or a spider catch its prey or see an adult dragonfly emerge. Most people are astounded by the diversity of insects, where and how they live their lives, how they mate. I told a woman how some male Collembola leave sperm packets on stalks for the females to find. She said, 'That sounds quite advanced to me.' and wanted to know more.

I think we can all advance the understanding of insects by finding 'teachable moments' and sharing our passion with others. Not everyone will hear, but some will. The Senior College class members were going to go out and tell their family and friends

what they had learned – they would pass on the knowledge. I do not have to stand on the street corner by myself.

On another topic: it is time to renew your MES membership, and we ask that you please pay your dues in a timely fashion. Membership is on a calendar year basis, so you can pay now for 2011. In the past, we continued sending newsletters even though people had not paid. With increases in printing and mailing costs, that will no longer happen. Also, if you have high-speed Internet access, please consider getting your newsletter by e-mail and either reading it online or printing it off yourself, to help us keep dues as low as possible.

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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 2011; you'll find a clip-out form at the back of this newsletter, and Treasurer Dana Michaud's name and mailing address are 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 "2010", please contact Dana to renew for 2011 or correct the record.

#### Sorry - No 2011 M. E. S. Calendars ... ⊗

Unfortunately, due to unforeseen difficulties, there will be no M.E.S. calendars for 2011. Hopefully, we'll have them up and running for 2012.

## The Fire-House Diggers by Monica Russo and Kevin Byron

It's not a new Australian rock group. It's a colony of Great Golden Diggers, *Sphex ichneumoneus*, which are large huntingwasps, near the fire station in Arundel. Great Golden Diggers (GGDs for short) are fossorial, meaning they dig in the ground to make nests. Only the females work at constructing burrows, and only the females go off hunting. Males, after mating, are out drinking nectar. Both genders are good pollinators, visiting a variety of garden flowers and herbs.



A female Great Golden Digger wasp works at excavating a burrow in Arundel. *Kevin Byron photo*.

The biology and life history of GGDs has been well-documented, and was further defined in a 1953 paper in *The Canadian Entomologist* by Sam Ristich, a founding member of the M.E.S. At the time he wrote that monograph, he was studying two colonies of GGDs at Cornell University, consisting of about 50 wasps. At the small colony here in Arundel, there were six working females seen, and about 15 open burrows.

In southern Maine, we have seen GGDs at the Kennebunk Plains, at gardens in Arundel and Wells, and in-town Kennebunk, but only one or two wasps at a time. The odd thing about the fire-house Diggers is that they are not nesting in an open sandy area, but in the mowed grassy lawn near the station. (They had nested there in 2009, according to the station chief.)

There are burrows right at the side of a parking lot, by an asphalt walkway, and by cement culverts. Females were observed digging, back-hauling, and filling-in burrows, on at least twelve different days. Photos include one incident of a female back-dragging a stone bigger than her head. On at least four occasions, females were seen, and photographed, carrying back prey, or dragging them to a burrow. Large green "conehead" grasshoppers, probably *Conocephalus*, were observed as prey, along with a brown Orthopteran, which Dick Dearborn suggested could be a wingless tree cricket (confirmed by Don Mairs). As per Sam Ristich's documentation, prey was pulled into the burrows by the base of the long antennae.

A fascinating observation is that individual females could be identified by design vagaries in the abdominal terga. One female had a few dark spots in the orange area, one had a squarish spot, while another had an uneven black band. Another was so worn and abraded from burrowing that her wings were obviously worn, the golden fuzz on the dorsal surface of her thorax was gone (she was bald), and she even had half of her right hind leg missing! But she continued to work.

Our observations and photography began on July 18, 2010, and continued through August. Correspondence from Sam in 1994 indicated that a colony he studied in Falmouth at Maine Audubon "did not do well this year." Has anyone ever followed up on that?

Many thanks go to our friends Laura, who alerted us to this group, and also to Donna, who suggested that the colony was present around July 11th. Our thanks also to Chief Tardif at the station, who provided some historical data. It is a very interesting and exciting opportunity to study these huntingwasps.



A Great Golden Digger wasp drags prey to her burrow. The prey species is the European introduced species, Roesel's Bush Cricket (Metrioptera roeselii), according to Don Mairs. Don wrote an article on this species for an early issue of our newsletter, which can be found in v. 3, no. 4, p. 5-6 (1999). Richard Hildreth also had a nice piece on a mass flight event of this species (as Roesel's Katydid) DownEast in the May, 2008 issue (v. 12, no. 2), p. 11-12. [The difference between bush crickets and katydids is simply one of common names - bush cricket being used in the U.K., katydid in North America.] Kevin Byron photo.

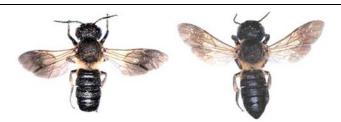
True locusts, or swarming grasshoppers (family Acrididae), breed rapidly and many fly together in search of food. They are not common in the United States any more; however in Africa, Europe and Asia, a large swarm may eat up to 80,000 tons of grain and other vegetation in a day.

"Albert's Swarm" of Rocky Mountain locusts (*Melanopus spretus*) in the upper Midwest in 1875 was estimated to have covered nearly 200,000 square miles, weighed 27.5 million tons, and consisted of some 12.5 trillion insects. By some accounts, this was the largest documented locust swarm ever known. The species apparently went extinct in 1902, and its demise remains enigmatic.

## The Giant Resin Bee, Megachile sculpturalis, in Maine: a New State Record by Mike Mazurkiewicz

The giant resin bee, *Megachile sculpturalis* (family Megachilidae), is a solitary (non-social) species accidentally introduced from eastern Asia to North America, where it was first recorded from North Carolina in 1994. It has since spread north to southern Ontario and Nova Scotia, south to Texas and Florida, and west to Kansas and South Dakota (Hinojosa-Diaz, 2008). In New England the species has been reported from Vermont (Richardson, 2005) and Massachusetts (Rykken, 2007). Herein I provide the first record of M. sculpturalis from Maine, specifically in the city of Portland.

My first encounter with *M. sculpturalis* was on July 24, 2008, when I found 30 individuals (24 males, 6 females) visiting the flowers of Russian Sage bushes on the University of Southern Maine campus. I was thrilled to see these bees, the largest of which approach the size of queen bumblebees, though more slender and less hairy. Furthermore, while the wings of bumblebees in our region are free of pigmentation, those of *M. sculpturalis* have diffuse black patches as can be seen on the accompanying figures; and in contrast to bumblebees, the head is proportionally larger, bearing more robust mandibles.



Male (left) and female (right) giant resin bees.

Photos by T'ai Roulston, University of Virginia, from

http://people.virginia.edu/~thr8z/Bee\_Diversity/Blandy\_Bee\_Diversity.php

(used by permission)

Females are larger than males and the sexes are further distinguished by their abdominal extremities, pointed in the female but truncated in the male. Additionally, the male sports a pale yellow "moustache" on the clypeal region of the head, while the female lacks such adornment. Both sexes have the sides of the thorax clothed with golden hairs and in the case of the female, the lower abdominal surface has a thick investiture of black hairs. Elsewhere the body is black.

The giant resin bees continued visiting the Russian Sage bushes beyond the 24th of July, gradually declining in abundance until disappearing by the end of August. During their stay, several to a dozen males were often found sleeping at night with mandibles firmly clamped onto branches. Both sexes were non-aggressive and easily approached to within an arm's length.

During the following summer of 2009, I hoped to make further observations on these bees but they were nowhere to be found. This summer they reappeared in Portland but as isolated individuals, two males and a female, each seen on separate dates between July 18 and August 10. One male was found on the Russian Sage previously occupied in 2008. The other male and the female were discovered half a mile removed from the University campus. The male was perched on a Hydrangea bush and the female was resting on a sidewalk where several days later, I encountered a dead carpenter bee, *Xylocopa virginica*.

The presence of the latter species is noteworthy since giant resin bee females are known to nest in abandoned carpenter bee tunnels as well as hollow wood stems, which they line with resin collected from trees, rather than with leaves as is commonly the case for other species of *Megachile*.

The occurrence of *M. sculpturalis* in Maine is in agreement with a niche model predicting the eventual distribution of the species in North America (Hinojosa-Diaz, *et al.*, 2005). Please let me know if you see this bee for further documentation of its presence in our State and keep in mind that the natural history of the species is largely unknown.

#### **Literature Cited**

Hinojosa-Diaz, I. A., Yanez-Ordonez, O., Chen, G., Peterson, A. T. and M. S. Engel. 2005. The North American invasion of the giant resin bee (Hymenoptera: Megachilidae). *Journal of Hymenoptera Research* 14 (1): 69-77.

Hinojosa-Diaz, I. A. 2008. The giant resin bee making its way west: First record in Kansas (Hymenoptera: Megachilidae). *ZooKeys* 1: 67-71.

Richardson, L. 2005. Vermont's newest bee species. *The Newsletter of the Vermont Entomological Society* 49: 11.

Rykken, J. 2007. All-taxa inspiration in Boston. The Newsletter of the Vermont Entomological Society 55: 11.

FIELD
NOTES

Reny's: A Strange Place to Search for Insects by Brandon Woo

As many of you might know, amazing insects are sometimes found in the strangest of places. The following is proof to that statement.

Around our house in Kennebunk, Maine, we don't get many insects when the lights are turned on. Pyralids, small noctuids, and small geometrid moths, along with grey fishflies, Asiatic garden beetles, crane flies, small caddisflies, and an occasional *Polyphylla variolosa*, *Noctua pronuba*, or Green Lacewing are what makes up most of the night insects. But in two other places in Wells, Maine, the next town over, I have discovered many species that I have not seen in Kennebunk.

The first, and most productive place, is a strip of stores near a large Reny's. Since this strip is heavily lighted, much more then the surrounding buildings, and behind the stores are woods, I assume that this is why so many insects gather here. The strip is made up of clothes stores, a pizza store, a pet store, and a few others. I just refer to it as "Reny's".

I have found many insects here over about two years, some by accident, and others by an actual trip to search for them. These insects include a Luna Moth (Actias luna), a Polyphemus Moth (Antheraea polyphemus), an Apple Sphinx Moth (Sphinx gordius), a Hummingbird Moth (Hemaris thysbe), a Banded Tussock Moth (Halysidota tessellaris), three Leopard Moths (Zeuzera pyrina), a very large Grey Fishfly (Chauliodes (cont. on next page)

#### Field Notes: Collecting at Reny's (cont.)

pectinicornis), a large caddisfly (Nemotaulis hostilis), a Fiery Searcher (Calosoma scrutator), a Backroad Tiger Beetle (Cicindela punctulata), and a Net-winged Beetle (Family Lycidae).

The second place is a strip of stores near the Wells Food Market. As with Reny's, the strip is heavily lighted, though less than at Reny's. I have not seen many insects here, but on August 22, 2010, I coaxed my mom and dad to bring me to Reny's around 9:30 p.m. There, nothing was found, so we decided to try our luck at the Wells Food Market.

My persistence paid off. I captured a White Underwing Moth (*Catocala relicta*)! The only other interesting find there, in the past, were some Polyphemus Moths (*A. polyphemus*) wings.

This was my proof that amazing insects are sometimes found in strange places. I have other proof, but those stories will be left for another day. Until then, remember: You don't always have to go to a "pristine" natural habitat to find insects!

#### **Annual Meeting Report**

The Annual meeting was held at Bob & Nettie Nelson's home at Rock Ridge in Clinton on September 11th. Once again, attendees brought a bountiful and sumptuous repast to the tables. The weather cooperated and collecting was good for those who chose to be out in the warmth of the sun.

Since no one currently serving indicated a desire to step down, and no one else stepped forth with a challenge, the current roster of officers was re-elected for 2011.

Numerous items of Society business were discussed, including the scholarship fund, a potential new T-shirt order, summer field events (see p. 8), the Winter Workshop (see below) and 2011 BioBlitz on Moths at Acadia (more to come in the spring newsletter), and the 2011 M.E.S. calendar.

Bob Nelson said he would check Black Dog Graphics of Clinton to get a price estimate on printing new M.E.S. T-shirts. [Black Dog is an established firm (since 1993) that has done a lot of local work for schools, groups and individuals.] Summer field events will take place in York, Oxford, Kennebec and Hancock Counties; additional details will appear in the newsletter as the events approach, and will be posted as well on the M.E.S. web site.

#### Mainly Moths Winter Workshop 2011 Saturday, January 15th

The MES Winter Workshop topic is Mainly Moths this year to complement the July Lepidoptera Blitz at Schoodic. It will take place at the Maine Department of Agriculture, in the Deering Building, Room 319, on the old AMHI (now Eastside) Campus; directions will be found below. The workshop will run from 9:30 a.m. to 3:00 p.m. on Saturday, January 15, 2011.

The Lepidoptera – moths and butterflies - is an important order of insects from many perspectives. It is the largest order of insects with thousands of species in Maine. They fill many niches in the environment and some of them have significant economic impacts. And yet most people do not recognize the diversity and stunningly beautiful moth side of the order. Part of

the reason may be that many of the adults are active only at night and so we miss there presence during our waking hours.

Come learn about these small wonders, what resources are available for identifying moths, and take a look through the microscope at their beauty, while learning more about our world on a cold January day.

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 has to be cancelled. There is a limit of 24 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: send your name, address, phone number and e-mail address to:

Charlene Donahue
Insect & Disease Laboratory
168 State House Station
Augusta, ME 04333
or call (207) 287-3244
or e-mail charlene.donahue@maine.gov.

If weather is threatening on the day of the workshop, contact Charlene at 549-7241. 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: Take I-95 to exit 113. Cross the Kennebec River and bear right after the bridge. Stay in the left-hand lane at the Cony traffic circle and take the third exit onto Rte 9. Turn right at the third set of traffic lights onto the Eastside Campus (big brick buildings). Follow directions below.

From the South: Take I-95 exit 102 or I-295 exit 51. Take Rte. 126 towards Gardiner. Turn Left at light in downtown Gardiner, go straight across bridge, turn Left after bridge onto Rte 9. Turn left at the first set of lights onto the Eastside Campus (big brick buildings). Follow directions below.

**Both**: Take your first right onto Blossom Lane, and park anywhere convenient to the Deering Building at 90 Blossom Lane. Enter the building from the north end. Either someone will let you in, or you can call the Agriculture number on the phone provided and security will buzz you into the building. Go up two flights, turn left and Room 319 is in the middle of the building.

## Bug Maine-ia Wows Them Again by Joanna Turow

On September 14, the Maine State Museum education staff and volunteers were unsure what the next day would bring. Bug Maine-ia 2010 was scheduled for September 15 and the museum galleries had been transformed with tables ready for presenters, directional signs, large inflatable insects, and our famous ant trail was ready to guide the students throughout the museum. But would they come?

(cont. on next page)

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

Come they did, a total of 1419 teachers, chaperones, students, parents, and homeschoolers interacted with 19 different stations spread throughout the Cultural Building atrium, Maine State Museum lobby, and exhibit galleries.

Once again, Bug Maine-ia proved to be one of the most popular events at the Maine State Museum. It was wonderful to watch crowds of students looking through microscopes, tearing apart galls, 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.



Marj and Dick Dearborn had plenty of company at their woolly bear caterpillar exhibit at Bug Maine-ia, next to Dana Michaud who had part of his extensive collection on display.

Photo by Jean Dane.

Every year we try to keep the event fresh by inviting new presenters and encouraging new ideas from our dedicated repeat participants. Anne Bills and Karen Coluzzi from the Department of Agriculture boldly took up this challenge. On top of sharing a table with the USDA Animal and Plant Health Inspection Service, the two women also appeared in costume as an Emerald Ash Borer and Asian Longhorned Beetle and proceeded to greet students as they stepped off the bus.



Jim Nutting entertained and educated old and young with his live specimens at Bug Maine-ia 2010.

Photo by Jean Dane.

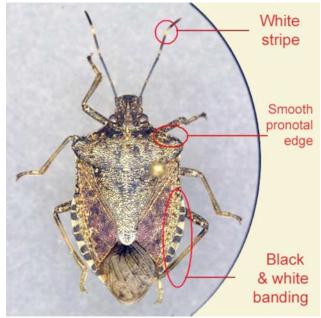
We also welcomed Sean McCormick, Master Maine Fishing Guide, who patiently demonstrated fly tying and occasionally made an ant for a child to take home. Maine Entomological Society member and long-time Bug Maine-ia volunteer, Edie King, presented her private collection of specimens for everyone to ooh and awe over. Ruth Perry, the Maine Science Lady, returned to Bug Maine-ia after a break of several years, and the Western Maine Beekeepers Association made sure honeybees were represented. There was truly something for everyone and every age level.

The Maine State Museum thanks all the presenters and volunteers who help to make this a wonderful event. Next year's event is planned for Wednesday, September 14th, so mark your calendars now and pass on your ideas and comments to Joanna Torow, Chief Educator at the Maine State Museum 207-287-6608 or joanna.torow@maine.gov.

### The Brown Marmorated Stink Bug, Part Deux by Karen Coluzzi

The last time I wrote about the brown marmorated stink bug (BMSB), *Halyomorpha halys*, it had only been discovered in six states. Not that that made it any less significant. It was, at the time, causing significant damage to crops, fruit especially, in Pennsylvania, New Jersey and Maryland. And, what prompted me to write the article in 2006, was BMSB's discovery in imported recreational vehicles that had arrived in Maine from Maryland.

We weren't sure whether it had become established; careful monitoring of nearby areas seemed to suggest not. And it was unclear at the time whether this bug would harm our plant resources. But after the media frenzy surrounding BMSB this year, and its discovery in 16 additional states, I thought I would put out another plea to the best insect finders in the state – "Has anyone seen this bug?". As the old invasive species mantra goes – "the earlier you find it, the easier it is to do something about it", or something like that.



(cont. on next page)

#### Brown Marmorated Stink Bug II (cont.)

The species is approximately 5/8" long with the features highlighted in the picture on the previous page. States are finding that when BMSB moves into a new area, it will be noticed first in homes and buildings as it seeks warm shelter to overwinter as an adult. It becomes an agricultural pest in as little as two years.

The current host list contains over 100 different plants. Of fruits, it prefers apple, apricot, black cherry, peach, pear, raspberry, and sweet cherry. It enjoys green beans, soybeans, and peas; and its favorite ornamentals include crabapple, honeysuckle, lilac, Norway maple, and rugosa rose.

If you suspect you've seen the brown marmorated stink bug, please contact the Department of Agriculture, at 287-7551.

#### A Woolly Bear Winter by Dick Dearborn

My fuzzy little friends the Banded Woolly Bears have now donned their winter coats and curled up in soil debris for the winter. Most will remain there until spring although a few may venture forth on milder winter days. Their rambling across roads and trails on sunny days, which makes them easy to catch, was spread out more than usual this year but has now all but ceased. Since 1997 these familiar larvae of the less familiar Isabella Tiger Moth, Pyrrharctia isabella, have been a source of fun and criticism as I have used them to predict upcoming winter weather according to folklore!

The prediction uses the middle red-band width as an indicator of winter severity. The woolly bear that is the focus of attention here has distinct color bands. The middle band has rusty-red hairs and black hairs on each end. The hairs arise from 13 body segments. A normal winter is based on a ratio of black hairs on two-thirds or 8.66 segments and red hairs on one-third or 4.33 segments. More red indicates a milder winter and less red indicates a harsher winter.

As I readied for Bug Maine-ia I contacted MES members and scoured the country-side for these favorites of this annual event but I was only able to come up with four of the little creatures and they indicated a harsher than normal winter. I was given four more by the end of September indicating a fairly normal winter and another in mid October brought the forecast to 4.44 red-bands indicating a milder than normal winter. Let's hope!! It has been fun, and I should thank my champion woolly bear hunter for 2010, Diana Dearborn. I did not come up with a single caterpillar this year!

## Mothing: Notes from a Newbie by Jean Dane

In August 2009, I wrote to a known moth expert:

"...May I give you context and ask you to look at a picture? I've been mothing for only two years, mostly in Maine, though Marie Winn started me off with a few evenings in Central Park (after one of which you identified a handsome little *Henricus contrastanus* for us). My Maine property is 87 acres of mixed woods, and includes many apple trees and stands of sweetfern and berries (black-, blue- and rasp-). House is fairly isolated, surrounded by trees but with some mowed bits close to, and is old white clapboard with farmyard light (mercury-

vapor) high up on SE corner: it's Moth City out there at night, and Moth Motel on south wall most mornings...."

He replied almost immediately, identifying the moth in my attached photos and inviting me to send more questions. I mostly do my own work trying to identify the moths I find, but I've continued to send pictures when well-and-truly stuck, or when it's something I know he'll love. Unfailingly helpful and supportive, he has several times also made my day by saying he doesn't know which species it is either but I'd better collect it.

My mothing technique must be the most wimpish of all—I'm not out slogging through swamp and briar patch, I don't come home in dead of night with wet boots and eaten alive by mosquitoes (I've done plenty of that, tracking owls). My m.v. light stays on all night, attracting moths, so it's necessary to be up before the birds have them for breakfast: I rise before dawn, log in side-of-house visitors while tea is brewing, and any moth I don't know I bring inside for further study. Easy. Wimpish.



Acleris nivisellana, no larger than your small fingernail.
Washington, Maine; Jean Dane photo.

I do sometimes walk out the back door before locking up for the night, but I've noted that almost all moths who have arrived are still there in the morning, snoring away on the clapboards, so I often skip observations/collections at night.



Schinia spinosae (24 mm wide), a moth unrecorded from Maine prior to this past summer.

(Washington, Maine: Jean Dane photo)

I've got four seasons of records now, over 250 species of moths entered on a chart with their arrival dates for each year, and at some point I will add departure dates too (they're all in a daily log) showing length of stay. Though four years is not a long enough period from which to draw conclusions, I've found the differences fascinating. Some moths arrive every year within (cont. on next page)

#### Mothing: Notes from a Newbie (cont.)

a day or two of the first date I recorded them, while others come weeks earlier or later. And some have appeared only on alternate years: sphinxes, for instance, were frequent visitors in 2007 and 2009, but entirely absent in 2008, and almost so in 2010 (one lone *Paonias myops* showed up this past summer). If the pattern continues it would show only a localized phenomenon, as my friendly expert told me they had all the usual sphinxes at Steuben (Humboldt Institute) in June this year.

Anyone even minimally curious about the natural world will be richly rewarded by even casual observation of Maine's moths—many of them are spectacularly beautiful! But I have found that a more active study can take over a significant portion of one's life, and gratifyingly so. Now I spend roughly five months of the year hunched over field guides, lists, moth websites (one can lose hours with their thousands of photos); pinning and preserving the specimens I keep; and then more weeks trying to track down each season's inevitable UFOs.

A word on sources and reference materials for the more than 10,000 moth species in this country:

- The usual first go-to reference is A Field Guide to Moths of Eastern North America, by Charles V. Covell, Jr. It is an invaluable resource, however limited—he couldn't possibly include all those species in one book, and not all the plates are reproduced in color (many appallingly handsome moths are reduced to blurry and unrecognizable b&w images). Also, Covell generally gives only one example of moths whose colors and markings may be wildly variable. But he covers many of the usual suspects, and his descriptions are good, including range, expected dates, and preferred food-plants.
- For the northeast, Louis Handfield's *Les Papillons du Quebec* offers many species omitted by Covell, and all pictures are in color. Descriptions, etc., are in French, but clear and simple enough for non-French-readers with a French-English dictionary at hand.

- I've found *Lepidoptera of New York and Neighboring States*, by William T. M. Forbes, immensely helpful. Almost no pictures, but he gives intricately detailed descriptions (usually of caterpillars too) in addition to ranges/dates/food-plants (pub. 1923-1950s).
- Even closer to home, there's Auburn Brower's *Lepidoptera of Maine*: list only, no photos, no descriptions—but he tells you specifically when and where each moth has been recorded in our state. I couldn't live without Brower, even though it stops in the 1970s and things have changed since then.
- Other books you might want to have are W. J. Holland's 1903 *The Moth Book*, David Wagner's beautiful *Caterpillars of Eastern North America*, and John Himmelman's *Discovering Moths*. All supply more information, more pictures, and some common names (and, in the case of Holland, old classifications that have since been changed).
- There's also the collection at State Entomology Lab in Augusta where, during my first mothing summer, I found matching specimens (= IDs) for many of my moths.
- On the web, *Moth Photographers Group* is where you go to find a moth that's not readily identifiable from any of these sources. In order to use this site, you must have at least some idea of your UFO's family: that will take you to the pertinent area of taxonomic order, and you can spend huge amount of time looking at photos of moths (not a bad thing if you like moths, and I've sometimes picked up an ID for one I wasn't looking for).

Mothing, for me, has become a splendid use for time and energy and brain-cells. I also have the hope that my little collection, and the data I record, might actually be useful at some point—whether to entomologists or environmentalists—beyond their role as an ongoing record of discovery and pleasure in my own life. There are great little critters out there in the dark, or sleeping on your house next morning: keep your eyes peeled!

- J. R. Dane; Washington, ME, November 2010

20	011 M. E. S. Membership R	enewal Form	<b>*****</b>
YES! Please renew my membership in enclosed.	M.E.S. for 1 year @ \$10 or	2 years @ \$	20 (please check your choice) is
Name		Phone	
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City	State/Prov	v Zip.	/Postal Code
Please check HERE if you Checks should be made out payab		er (as a pdf) elect	ronically via e-mail!
Mr. Dana Michaud M. E. S. Treasurer			
3 Halde Street			
Waterville, ME 04901-6317	***********	^^^^	***********

#### COMING M.E.S. EVENTS in 2011:

15 January	Winter Workshop [Moths], Augusta (see story
	on p. 4)
21 May	Field Day in York County (location to be
	determined); contact person: Domenica Woo
	[207-967-6159]
25 June	Field Day, Mount Vernon (Kennebec Co.);
	contact person: Dick Dearborn [207-293-2288]

22-25 July Schoodic Blitz on Lepidoptera. Contact person:

David Manski [207-288-8720]
20 August Field Day on Saddleback Mountain, Oxford

County; contact person: Bob Nelson [207-426-

9629] or BeetleBob2003@yahoo.com

10 September Annual Meeting, Clinton (Kennebec Co.);

contact person: Bob Nelson [207-426-9629] 14 September Bug Maine-ia, Maine State Museum, Augusta;

contact person: Joanna Turow [207-287-6608]

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

#### **NEWSLETTER CHANGES!**

As Charlene noted in her President's Report on p. 1, we're no longer going to be sending newsletters out to those with dues in arrears, so PLEASE update promptly (i.e., before February 1st)! It's more than just a minor click of the mouse to take someone OFF the list, then put them back on, especially if you've opted for electronic newsletters via e-mail.

ALSO, starting with this issue, those receiving their newsletters electronically will be getting them with the *photos in color!* Print newsletters will remain black-and-white; printing costs with color photos would mandate a significant dues increase. If you'd like getting your newsletters in color via e-mail, please let me know (BeetleBob2003@yahoo.com). I can forward the change notice to Dick Dearborn and Charlene.

Do be aware, however, that the digital e-mail newsletters are NOT the same resolution as the print versions, so they will look fine on your monitor but the text and particularly images will be less than beautiful if you try to print them out. This is in order to keep the file sizes as small as possible.

The largest moth in the world is the Owlet moth of tropical America, with a wingspan of 18 inches.

#### Ode to a Summer Field Day:

A spontaneous Vacca-Nelson creation from the Annual Meeting:

There once was a bug in Limerick,
That made even Brandon say "Ick"!
It made a horrid sound,
And smelled like a mound,
So he ran out and pinned it REAL quick!

#### An apology

My apologies this issue of the Maine Entomologist is so late in arriving. The fault is entirely mine. The February issue should be more on-time.

— Bob Nelson

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

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