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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Spring is here and everything is on fast forward with warm, dry days pushing the season. I have spent the past ten days monitoring the emerging invasive winter moth (Operophtera brumata) population along the coast. The eggs were laid on host trees last December and began hatching when the red maples bloomed. So I am doing the real biology, real science, real natural history thing and looking closely at tree trunks and swelling tree buds to see what the winter moth is doing in Maine. I wear 'geekers' - a headband with 10x binocular lens on them that allow me to look, hands-free.

The eggs are amazing. Last December they were bright green when the females laid them. Soon after that the eggs turned reddish orange and stayed that color over the winter. Then a few days before hatching they turn sapphire blue. The only way you see this color show is by sticking your face up close to the trunk of the tree in December and then again in

Once the eggs hatch, the winter moth larvae need to get from the trunk or branch to the buds and they seem to prefer terminal buds - way out at the end of the branches. Some may crawl but most put out a silken thread and float up into the canopy. You can tell where you are going find larvae by looking first for silk looped between the buds. People have a hard time believing that freshly hatched larvae make silk but

I have never spent much time pulling buds apart to see what was hiding inside, but I am doing it now to evaluate the winter moth population levels. So far, Norway maples have the most variety of insects hiding in them. There are the winter moth larvae, thrips, scales, aphids and collembola.

Over the next month I will follow the larval development and defoliation as well as release parasitic flies in an effort to establish a biocontrol agent. But that is a tale for another time.

These two websites have many insect projects to take part in this summer.

http://scistarter.com/topic/13-Insects http://pollinatorlive.pwnet.org/teacher/citizen.php

Register Now for the 2013 Acadia National Park Beetle Blitz

Registration is now available for the 11th annual BioBlitz at Acadia National Park on July 12-15, 2013. This year, we will be targeting beetles. The event is open to professional entomologists, amateur naturalists, and other interested persons. Registration for the BioBlitz ends on June 28, 2013.

As in the past, the event will be based at the park's Schoodic Education and Research Center. This year, we will be collecting beetles from diverse habitats in Acadia on Mount Desert Island and the Schoodic Peninsula. The lead taxonomist for the event will be Dr. Don Chandler from the University of New Hampshire.

The event will begin with dinner on Friday evening followed by a workshop on collecting and identifying beetles. The official BioBlitz will commence Saturday morning and continue for 24 hours. On Saturday, we will head over to the Mount Desert Island section of Acadia National Park to collect. On Sunday, we will be collecting in the Schoodic section of the park. The remainder of Sunday afternoon and Monday morning, we will be sorting, pinning, and identifying collected specimens.

As in past years, lodging at The Schoodic Education & Research Center (SERC) is provided at no charge by the National Park Service and the SERC Institute. Space is limited and available on a first-registered, first-served basis. Please note that most accommodations are in 2, 3 and 4 bedroom apartment-style housing. A hostel style bunkhouse is also available with bunk-beds (2 bunk sets to a room). Limited camping is available on-site.

We've been able keep your costs to participate in the blitz the same as last year - a \$35 registration fee and meals (there are a couple of different meal plans available and are described when you register online).

To participate, you must pre-register. Please use this link to sign up: http://tinyurl.com/aaul4g4

If you have questions don't hesitate to contact me at 207/288-8720 or david manski@nps.gov.

Thank you for your interest and support.

David

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March Maple Syrup Field Day – Whitefield, Maine by Charlene Donahue

You never know how a field day is going to turn out, other than that it will be good to get together with others who love bugs. Thirteen people came out on a cold March 23rd in hopes of doing some collecting, observing, learning and maple syrup boiling. We did a little of the first two, more of the third and none of the last. It had been too cold the previous week for the sap to run so there was none to boil on Saturday, but people did get a tour of my backyard operation and a maple syrup sundae.

We took a walk in the woods down to the Sheepscot River, faster then usual – it was pretty chill for the usual snail's pace of an insect walk, and found a few early spring insects such as springtails and stoneflies. We also discussed signs of other insects, pest problems as well as other animals and plants. Then we headed back to the house to warm up. Everyone crammed into my kitchen for lunch and an amazing slide show provided by Brandon Woo.

Brandon had recently returned from Belize where he had attended a week-long insect photography class. Not only were the tropical insects fascinating to see, but Brandon's discussion of his evolving photo techniques was interesting as well. Of course he and Domenica (his mother went with him) also regaled us with tales of their experiences in Belize.

Overall it was a great way to stave off cabin fever during mud season.

Notes on the Habitat and Behavior of the Dusted Skipper, *Atrytonopsis hianna*, in York County, Maine

By Robert E. Gobeil and Rose Marie F. Gobeil

The Dusted Skipper, *Atrytonopsis hianna* (Scudder), belongs to the family Hesperiidae (Fig. 1). Most members of this family tend to be small in size with rapid flight and are a challenge to identify in the field.

The range of the Dusted Skipper extends along the coastal plains from central Florida to New Hampshire, west across central and Gulf States to the Great Lakes and western Great Plains (Cech and Tudor, 2007). Its occurrence in the state of Maine, however, is fairly new. The first specimens for the State of Maine were recorded by Phillip deMaynadier on June 6, 2006 at two different sites in Kennebunk. During the 2007-2009 seasons, there were seven additional Maine records at various sites in the following townships: Wells, Kennebunk and Lebanon (deMaynadier *et al.*, 2013). All of the Maine records are from York County.

On June 2, 2010, while sampling for butterflies as part of the Maine Butterfly Survey, we found single individuals of the Dusted Skipper at two different sites approximately three miles apart on a power line right of way which extends south into New Hampshire. Both of these sites were in the township of Lebanon, ME.

During the 2011 sampling season, we revisited both of these sites in Lebanon on June 8 to see if the species was still present. The Dusted Skipper was found at only one of the sites but in larger numbers. We were able to count at least five different individual Dusted Skippers. On June 1, 2012, we returned to the same site during early afternoon with temps in the low 70s and again found that the colony was still active with at least six individuals observed during our visit.

The area where the colony was located is rocky and slightly elevated (mounded) from the surrounding ground (Fig. 2). Compared to the rest of the adjacent habitat, the



Fig. 1. Dusted Skipper (*Atrytonopsis hianna*), Lebanon, ME (York County), June 1, 2012. *Photo by Robert E. Gobeil*

elevated area is much drier with poor growth of shrubby plants which allows shorter grasses to grow. The entire colony appeared to be localized to a fairly small area (roughly 150 feet by 50 feet in size). We noticed that the Dusted Skippers did not wander far from the elevated portion of the power line right of way even though we did extensive searching away from the colony center to find more skippers. This is one of the few areas on this section of the right of way which is dry. At the bottom of the mounded area where the skipper colony was located (about 150 feet away), the habitat is very wet (boggy) with cranberry plants and later in the season, supports a small population of Bog Coppers (*Lycaena epixanthe*).



Fig. 2. View of the Dusted Skipper habitat at the Lebanon, ME site on June 1, 2012.

Photo by Robert E. Gobeil

We spent some time observing the behavior of the Dusted Skippers and noted that they tended to stay very low to the ground, flying about knee high. During most of the time, however, males were seen perched at the top of the grass stems and were actively chasing other skippers, probably looking for females. On one occasion, we observed a Dusted Skipper chase an Arctic Skipper (*Carterocephalus palaemon*) that happened to be flying by. Heitzman and Heitzman (1974) indicated that both sexes of the Dusted Skippers are wary. Our experience was quite different since we could easily

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approach and photograph the skippers at close range (within inches).

Both wild blackberry and strawberry plants were growing on the edges of the elevated mound and we observed the skippers nectaring on the flowers of both of these plants. We couldn't identify the type of grass growing at the colony site but it was probably a species of bluestem grasses since this is a common larval food plant for this species (Brock and Kaufman 2003). In Maine, the Dusted Skipper has only one brood and appears to have a short flight period with the height of the season around the first two weeks of June. All records of the Dusted Skipper in Maine fall between May 30 and June 20 (deMaynadier et al. 2013).

In the center of the mound where the skipper colony was located, there is a dirt road which appears to be used by the owners for hauling wood from adjacent land that they own. This section of the power line right of way is partially gated and we did not observe any active ATV activity near the skipper colony although there were a few ruts in the dirt road which may have been caused by ATVs. Any extensive ATV activity would probably disturb this colony since it is located in a dry area which could be used by ATV riders to turn or spin their vehicles.

Even though the range of this species has shifted northward, it is still highly localized due to habitat requirements. Since 2007, we have done extensive surveying for butterflies on power line right of ways throughout York County and we haven't seen any other colonies on power lines in other townships. Most power lines in York County tend to be overgrown with woody plants (shrubs) which are not suitable habitat for this species.

In Maine, the Dusted Skipper is considered a species of Special Concern (deMaynadier et al., 2013). In Massachusetts, there has been an increase in the number of sightings of this species since 1995 and the distribution of the Dusted Skipper in that State is now statewide (Stichter, 2012). There is also some evidence in Massachusetts that climate warming may be a factor in the northward shift of range of this species (Breed *et al.*, 2012). This may partially explain the northern expansion of the range into Maine and it is probable that the range of this species will continue to shift northward in the future.

References:

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Lepidoptera 13(4):239-245.

Stichter, S., 2012. The Butterflies of Massachusetts. [Online] http://www.butterfliesofmassachusetts.net/dusted.htm [Accessed January 11, 2013].

Watch the M.E.S. Web Page for Information on the August 3rd Field Day in Norway!

Art Exhibit Review:

Pollination: Evolving Miracles

Now – June 7, 2013 Atrium Art Gallery University of Southern Maine Lewiston-Auburn College

By Charlene Donahue

I attended the opening of the new art exhibit "Pollination: evolving miracles" at the Atrium Art Gallery in Lewiston and highly recommend that others visit the show. It is a fantastic display of different facets of pollination as expressed in a wide variety of mediums. The show includes paintings in many media, photos, sculptures and jewelry. Many pieces include insects as subjects and the focus ranges from microscopic to landscape. There is a tall, pollen-inspired sculpture that made my mostly UN-artistic fingers itch to try my hand at something similar. Another personal favorite was a painting by Alison Dibble of a beekeeper with a truck full of hives stopped on a country road to chat with a farmer.

Robyn Holman, gallery curator and MES member, connects the visual arts with the natural world in informative placards telling not only about the artists and media used but also the connection to pollination. One artist I spoke with was concerned that I might not like the show, and especially her work, because it was interpretive rather then strictly representational. I assured her that I too could see the beauty in nature and appreciate the inspiration it provided an artist.

It is worth taking the time this spring to visit the exhibit and revel in the beauty inspired by this so-important part of nature.

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SOPHIE

by Fred Gralenski

(This first appeared in Quoddy Nature Notes on 19 March, 2013)

Sophie lives at the foot of the stairs by the doorway into the office. She doesn't seem to mind the normal traffic, but she will hide in a beveled crack behind the door trim if I noisily drop something going upstairs. She has pretty poor eyesight for a spider, and doesn't mind me shining a light on her as I watch her daily routine. Sophie's daily routine is pretty boring: she hangs upside down inside her web. Now Sophie's web is not a beautiful two dimensional work of art like Charlotte's web, but a three dimensional creation with silk strands that go in all directions, with no recognizable pattern. It looks like a pretty tangled up shoddy job, but Sophie seems proud of her handiwork and is capable of running through her messy nest with remarkable speed.

From what I can gather, Sophie seems to be a Common House Spider, Parasteatoda tepidariorum. There is a little disagreement among the spider scientists if the genus name is as noted or Achaearanea. Maybe by the time you read this they will have come up with a worse tongue twister. There is also a question if Sophie is a native here or from away, like South America, where most of her similar relatives reside. Because of the ease that these spiders can hitch a ride on almost anything, P. tepidariorum is found worldwide, and internationally is known as the American House spider. Although Sophie belongs to the spider family Theridiidae, as does the notorious Black Widow, Sophie does not possess the same degree of neurotoxin as her cousin. Nevertheless, all spiders are poisonous, and Sophie's bite can raise a welt like a bee sting, and can be dangerous if the unfortunate victim is allergic to Sophie's venom. Sometimes it's better to behave like Little Miss Muffet.

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Sophie (above) and Sam (at left) at home in the web.

Photo by Fred Gralenski

After a week or so of noticing Sophie do nothing and no sign that she had eaten anything, I caught a cluster fly, calmed it down in the freezer for a few minutes, then dropped it into her web. That didn't work. House spiders are timid, and by the time Sophie came out to see what she had caught, the fly had warmed up, got his engines going, scared Sophie away to her hiding spot, freed himself from the web and buzzed off somewhere. The next day I tried a little different tactic and snipped the wings off the cluster fly. That worked, and Sophie proceeded to wrap up the fly in silk, move it to a spot more to her liking, then, Dracula-like, suck the juices out of poor Mr. Fly. I could tell when Sophie was finished, as she would snip off the holding silk strands and drop the carcass on the floor. It took her less than a day to finish one fly. Periodically I brought Sophie a fly, as we still have plenty in the garage, and then one day I noticed she had a visitor. I don't know if Sam was attracted to the well rounded Sophie or to the fly I had fed to Sophie a little while before. I didn't see any aggressiveness and even at one point they seemed to tenderly hold hands (legs). I wondered if I had bungled into a web based dating service.

Sam was around for one day. The literature says that males may come into a female's web for a while, but doesn't mention if they end up on the menu. I'm not sure when the females lay their eggs, but there may be up to 400 offspring. Indoors, House spiders may live up to 2 years if they are first noticed by a nosy naturalist and protected from a dedicated housewife. In the outside world House spiders are harvested by other spiders, birds, wasps, and many other different predators. An interesting predator /prey relationship is with the assassin bug *Stenolemus lanipes*. Supposedly this bug eats young house spiders exclusively, but if it isn't careful can also be caught and eaten by an adult house spider (1). I hope I can find a careful assassin bug pretty soon.

Reference:

(1) Hodge, M., 1984. Anti-predator Behavior of Achaeraranea tepidariorum (Theridiidae) Towards Stenolemus lanipes (Reduviidae): Preliminary Observations. Journal of Arachnology, v. 12, p. 369-370. A CORRECTION: When the story and photos were run by him for an accuracy check, Dan Jennings suggested that Fred's spider is most likely Steatoda bipunctata (Linnaeus, 1758), the "Rabbit Hutch Spider," an invasive European species that has displaced the native S. borealis (Hentz, 1850) in some parts of the Atlantic coast of New England and southeastern Canada; microscopic examination of an adult spider would be necessary to differentiate between the species. He also pointed out that we actually do have species of one family of spiders in Maine, the Uloboridae, which do not have venom and rely instead on other tactics for subduing prey.

June 1st Field Day: Winter Harbor

The leadoff field day of the 2013 M.E.S. collecting season will be Saturday, June 1st, in Winter Harbor, in the Schoodic Peninsula portion of Acadia National Park (ANP). Since this <u>is</u> part of the Park, the trip will be more formally structured than is the norm for most MES field days. Those who've been to any Blitz in the past should already be familiar with this portion of the Park and its environments, as well as the fact that the access road beyond Fraser Point is one-way!



We'll meet at 10:00 a.m. sharp in the Fraser Point parking lot (shown in the Google Earth image above). David Manski will meet the group and advise us as to the ground rules and appropriate Park etiquette, and to hand out the essential collecting permits. We'll need to keep accurate records of what is collected, and where, and at least one specimen of every species collected will go into the ANP permanent reference collection. Duplicate specimens will be considered expendable.

The goal from ANP's perspective is to enhance the Park staff's knowledge of insects that are early-season adults in the Schoodic Peninsula part of the park. What M.E.S. members will get is the opportunity to survey the insects of an area that otherwise is closed to such activities.

Bob Nelson will coordinate the data gathering, assembly of the collection of identified and labeled specimens and its transmittal to the Park, and will write up a final report on the day for submission to the Park.

To get to Schoodic, take the Route 186 exit south from Highway 1, between Sullivan and Gouldsboro. It's about 6.4 miles to Winter Harbor, where the route comes to a "T" at the harbor. Turn left, go about ½ mile, and then turn right onto Moore Road. The Fraser Point parking lot is to the right just after you cross a low bridge and the road rises up slightly.

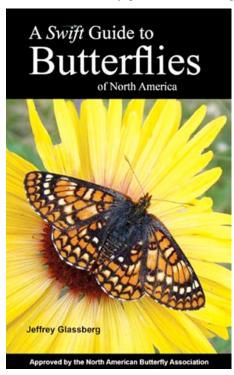
Richard Hildreth has graciously indicated a willingness to host visitors at his summer research station in Steuben at the end of the day, for an evening of collecting at his mercury vapor lamps. Should be a grand evening!

Contact Bob Nelson (**BeetleBob2003@yahoo.com** or at 207-426-9629) for information or if you're planning to join us.

* * * * *

Book Review:

A Swift Guide to Butterflies of North America, by Jeffrey Glassberg. Sunstreak Books, 2012, ISBN 978-0-578-10634-2; \$24.95, obtainable only from Sunstreak Books. (www.sunstreakbooks.com) 5½" x 8½" x ~1" thick; 415 pages. Printed on good quality glossy paper with a flex cover and a very good sewed binding.



Reviewed by Richard Hildreth

This guide covers all the known butterflies of North America (north of the Mexican border). The butterflies are illustrated with (mostly) very good quality color photographs. Photographs of similar species, which appear together for easy comparison, are selected to be in identical positions and always are at the same scale. The photographs are selected to show the key field marks. Some of the key field marks are pointed to by red lines, annotated as to what to look for. All the text is imbedded in the plates so all information is in one place on the plate.

The layout is for one or two species per page. Shown for each species is: Name, English and scientific; a scale bar is provided which shows the actual forewing length; a range map; the caterpillar food plant; flight season(s); abundance; habitat; and sometimes various special comments. The names, English and scientific, are from the NABA (North American Butterfly association) Checklist and English Names of North American Butterflies, second edition (2001). About 25 butterflies included in the guide are not on the NABA checklist; they are mostly recently discovered strays from Mexico and a few are Canadian Arctic species. [In the past, NABA pretended that Canada didn't exist.] A third edition NABA Checklist is scheduled for 2013, which should include all the butterflies of North America. The NABA Checklist uses a few English names not used by the official Maine Butterfly Checklist.

If you plan to study butterflies just in New England and already have one of the modern butterfly field guides, you will not find in the Swift Guide anything new. If you don't have a modern butterfly field guide, the Swift Guide is the one to get. It is a very handsome and useful book. The western USA has many more butterflies than are found in

New England and many of them are difficult to identify. The Swift Guide will be very useful if you are planning a trip west, especially to the lower Rio Grande Valley of Texas and to southern Arizona.

Key to Genera Included in Canadian Paper on Introduced Tingid (Heteroptera: Tingidae)



Monosteira unicostata (M. & R.)
Photographed in Istanbul, Turkey, by "heteropteran."
from http://www.flickr.com/photos/heteropteran/6022100316/

The latest issue (Vol. 118, No. 1-4) of Entomologica Americana (formerly the Journal of the New York Entomological Society) is devoted entirely to the Hemiptera. Although most papers deal with Asian and tropical taxa, one that might be of special interest to M.E.S. members is the final paper: "Monosteira unicostata (Mulsant and Rey) (Hemiptera: Tingidae) Established In North America, With A Key to the Genera of Tingidae in Canada" by G.G.E. Scudder, pp. 295-297.

Three of five introduced genera of Tingids in Canada are known from the eastern and maritime provinces and potentially could be encountered in Maine. The generic key in the paper is thus a valuable tool for identification of Maine Tingids, whether native species or not.

First Knox County NABA Butterfly Count Scheduled for June 30th

Pat Durkin and I are pleased to announce the first (hopefully annual) Knox County/NABA butterfly count. The count will take place on June 30, starting at 8:30 a.m. at the Camden Snow Bowl, which is the first location that we will visit. It will likely last until about 3 p.m., although one need not stay for the entire count. The cost is \$3 per person, which goes to NABA (North American Butterfly Association).

If you are interested in participating (no experience necessary), please contact either Pat (Plusultra@aol.com) or me (contact information below). Pre-registration is important so that we can notify you of any additional information or last-minute changes. Please note that this activity is not appropriate for young children.

Roger Rittmaster 42 William Glen Drive Camden, Maine 04843 919-491-5440 (mobile) 207-470-0445 (home)

* * * * *

June 22nd Field Day Coming to Embden

The second field day of the 2013 M.E.S. collecting season will be held on Saturday, June 22nd, in Embden. We'll meet at 10:00 a.m. at the entrance to a farm access road off the Kennebec River Road (Maine Routes 8 and 16; U.S. Route 201A) at 44°54'27"N, 69°51'58"W. This is just over 2 miles south of the Solon bridge over the Kennebec River, and just over 4.5 miles north of where Route 16 heads west to Sugarloaf and Kingfield along the Carrabassett River from North Anson. M.E.S. signs WILL be out at the site!

Available habitats here will include large agricultural fields with sandy soils, which will be in either corn or hay or both. The forest on the grounds has a typical dry-ground flora, with red oaks and white pines dominating. The property slopes down in the rear to the rocky shores of the Kennebec River. There also are two abandoned sand pits in the rear, one of which has been "reclaimed" and planted with grasses, while the other is more naturally returning to a wild state, resulting in greater diversity of vegetation and microhabitats.

Bob and Nettie Nelson are coordinating this, which is on family property, and will have a large cooler full of drinks for any and all. And maybe after the collecting is all done, we can drop into Thompson's Restaurant in Bingham for a late lunch – a local standby for generations!

Contact Bob Nelson (**BeetleBob2003@yahoo.com** or at 207-426-9629) for information or if you're planning to join us.

M.E.S. Logo Featured on Web Page

The M.E.S. logo (shown below and on *our* web page) has actually been featured in a web page devoted to insects, arachnids, and other arthropods in art, at

http://endless-swarm.com/

The logo itself will be found on the page devoted to insects in seals, logos and emblems, at

http://endless-swarm.com/?p=923

YES, there WILL be 2013 M.E.S. T-Shirts!

Yes, we know that you've waited for them, and they WILL be reappearing this summer! Genuine full-color M.E.S. T-shirts and sweatshirts are going to be available in a choice of colors, featuring a reconstruction of the original design based on the artistry from Monica Russo's own pen and brush. (The original compilation has, alas, apparently been lost.)

Watch the M.E.S. web page for details on the exact design, prices, and availability. All this will be posted as soon as is possible!

FACT SHEETS on Maine insects and plant diseases, from Aphids to Yellowheaded Spruce Sawfly, can be either read on-line or downloaded at will at the MFS web page, at

http://www.maine.gov/doc/mfs/FactSheets new.htm

Colleen Teerling forwarded on a link to a cute animated Canadian video on the dubious joys of working in northern Ontario, surrounded by clouds of blackflies! You can check it out for yourself at:

http://tinyurl.com/3mebsgk

COMING M.E.S. EVENTS in 2013:

1 June M.E.S. Field Day, Winter Harbor (see p. 4)
22 June M.E.S. Field Day, Embden (see above)

12-15 July Annual Entomological BioBlitz, Acadia National Park (focus on Beetles, including

M.D.I.) (see p. 1)

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.)



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

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