

The Maine Entomologist

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

The Official Newsletter of the Maine Entomological Society

Vol. 14, No. 2

May, 2010



Spring came early this year, and so did emergence of insects. Besides being warm, there have been many sunny days that mean insects can fly. I hope all of you have been out for the past three months spying out what is active in your neck of the woods. Looking forward, there are some great field trips planned for the summer, as well as the Hymenoptera Blitz at Schoodic. Hope to see you out 'bugging' this summer.

We have been making maple syrup in Whitefield since 1987, and it is a wonderful way to observe insects early in the season. When the days begin to warm in late February, we eagerly pull out equipment and tromp through the snow hauling buckets, covers, taps and kids. Often our footprints acquire a dusting of snowfleas and sharp eyes find stoneflies or possibly a wingless snow scorpion. This year was no exception, although the warming came in mid-February and we have a new crop of kids to introduce to the sugaring-off rituals. My sons are grown, as our friends' sons who started sugaring off with us years ago, but our neighbors' kids are four and five and they bring their friends along, too.

You can tell how far the season has progressed by what insects are found in the buckets. First come the snowfleas; not all them are filtered out on the first round – they tend to jump right into the evaporator. As the weather warms a bit more, the flies and parasitic wasps begin to make their appearance. Close inspection of the bark around the tap hole can reveal sap beetles and lightening beetles. Tiny Salpingids (*Rhinosimus viridaeneus*) that are rarely collected (except in bark beetle traps) are scooped from the cold sap. Spiders become more common, sometime having drowned in the buckets but more often found as the sap is filtered and the spiders run up the side of the fabric.

Finally, as the sap season winds down and the air warms, the Noctuid moths require rescuing from the barely sweet liquid. Most are found alive as we empty buckets daily. I carefully scoop the moths up and gently deposit them in a child's hand. "Warm them up" I say. Most often they do, some shrink back in

fright, not wanting to touch a bug, but they usually come around as they watch others hold the tiny creatures. My sons used to have moth 'races'. They would each warm a moth and place it on a sun-warmed tree trunk. Then they would see whose moth crawled up the tree fastest. One afternoon I carefully placed two moths that I had rescued on the dark roof of the dog house. My one year old lab came over to see what was on her house and promptly ate them!

Our wood supply is whatever trees die in our woods - not very high-quality stuff, but it holds lots of insect life. Last year we cut an ash that was of course attacked by Eastern Ash Bark beetles (*Hylesinus aculeatus*). I showed the kids how to look for the rows of emergence holes on a stick and then peel back the bark to reveal the beautiful patterning of the galleries beneath. We pulled loose bark off pine logs and found buprestid larvae and white spotted sawyer pupae. My best find this year were two beautiful red and black Handsome Fungus beetles (*Aphorista vittata*) overwintering beneath the bark. A few years ago I collected a spider off the wood pile for Dan Jennings, and it turned out to be one of only two specimens of *Coras aerialis* found in Maine!

Of course my fellow boilers are not always pleased that I make them set logs aside for insect inspection or hold up the process while I save an insect (or pull out a collecting vial and do it in). But I do my share of the work so they humor me. Long hours of tending the fire go by quickly when there is so much to explore.

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Ready, Aim, SHOOT:

Time to think of the 2011 M.E.S. Calendars!

Don't forget that NOW is the time to be thinking seriously - if you haven't already been doing so - about getting that camera out to get the ultimate insect photos to submit for the 2011 M.E.S. calendar! Photographic excellence is one criterion, but something that tells an interesting story OR shows something unusual will also attract attention. We also try to use photos of taxa that have not been featured previously. Just remember the one key rule is that any photo has to be of a species that occurs in the Maine fauna, or of M.E.S.-related events.

Full instructions for photo submissions will be presented in the August issue of The Maine Entomologist.

Good luck, and happy shooting!

Don't Forget the Hymenoptera Blitz this Summer!

The National Park Service, U.S. Geological Survey, Maine Forest Service, Maine Entomological Society, University of Maine, and Acadia Partners for Science and Learning are pleased to sponsor the 8th annual BioBlitz at Acadia National Park on July 30 and 31, and August 1 and 2. This year, we will be targeting the Hymenoptera, one of the largest orders of insects – including sawflies, wasps, bees, and ants. The event is open to professional entomologists, amateur naturalists, and other interested persons.

As in the past, the event will be based at the park's Schoodic Education and Research Center and collecting will be focused in the Schoodic section of the park. Lodging at the Schoodic Education and Research Center will be provided to participants at no charge; however space is limited, and will be available on a first-registered, first-served basis. Participants will only need to pay a small registration fee and food costs - meals will be provided by Acadia Partners for Science and Learning.

The event will begin with dinner on Friday evening followed by presentations about ongoing research or emerging issues of interest to the entomological community. Saturday morning will feature a workshop on collecting and identifying the Hymenoptera. The official BioBlitz will commence around noon and continue for 24 hours until noon on Sunday. The remainder of Sunday and Monday morning will be focused on sorting, pinning, and identifying collected specimens.

Lead taxonomists for the event will be Sam Droege from the U.S. Geological Survey and Eleanor Groden and Frank Drummond from the University of Maine.

To register for the blitz, please complete a registration form, available from the Acadia web site (below) or the M.E.S. web site. The final date for registration is June 18, 2010. Return all registration forms to:

**June Devisfruto
Acadia National Park
Schoodic Education and Research Center
P. O. Box 570
Winter Harbor, ME 04693-0570.**

Additional information and the registration form are posted at the park's web site:

<http://www.nps.gov/acad/naturescience/bioblitz.htm>

For more information, please contact David Manski at Acadia National Park (david_manski@nps.gov or 207/288-8720).

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**Current Condition of the University of Maine
Insect Collection
By Andrei Alyokhin**

The University of Maine Insect Collection Day (see Vol. 13, No. 4 of *The Maine Entomologist* for background information and Vol. 14, No. 1, for the workshop announcement) took place as planned on Saturday, April 24. A dedicated group of volunteers (Andrei Alyokhin, David Borque, Jim Dill, Charlene Donahue, Gail Everett, Cassie Gibbs, and Karen Hopkins) forfeited the pleasures of an unseasonably warm and sunny day and spent hours in the dusty attic of Merrill Hall going over the UMaine Insect Collection. The collection's origins date back to the late 19th century, but it has not been curated for the last five years or so. It is separate from the teaching collection that is maintained in Deering Hall and is well taken care of.

Our findings were as follows.

1. The collection has considerable scientific value. Representation of the Maine insect fauna is extensive. Most specimens are identified and properly labeled. Mounting is very well done for most of them. There are bar codes accompanying some specimens, although current location of corresponding computer files is unknown.

2. Parts of the collection appear to have historic value. Some specimens date back to 1880s and were probably curated by Edith Patch at some point. There is a large number of butterflies and moths (all labeled, identified, and stored in paper envelopes) collected in the 1930s by Brower. There is one well-preserved specimen of *Nicrophorus americanus* (Coleoptera: Silphidae), which is currently extinct in Maine and is on the Federal Endangered Species List.

3. Although specimens are for most part in good shape, there are troubling signs of dermestid beetle and mold infestation in several boxes. Especially disconcerting was the finding that some of the specimens in Brower's collection have been completely destroyed. In an attempt to contain the problem, we set aside all the infested boxes that we could find. I will try running those of them that fit in my freezer through three freeze-thaw cycles. However, the infestation is likely to spread unless the same is done to ALL the boxes.

Our overall conclusion is that the collection definitely represents a valuable resource for the people of Maine and should be preserved. Because of the observed infestation, we estimate that we have about six months to act on this. After that, the collection will be lost in perpetuity.

There is a considerable interest at the University of Maine in continuing ownership of this collection. Its value is also well appreciated by the administrators at the School of Biology and Ecology and College of Natural Sciences, Food, and Agriculture. After being briefed on our aforementioned discoveries, Dr. Jody Jellison, the current director of the School, has indicated a willingness to spend \$500 on buying a freezer to treat the collection for dermestids and molds.

Even if we are able to treat the collection in the near future, it will not solve the problem of a lack of curation. None of the

(continued on p. 3)

U. Maine Insect Collection (cont.)

entomologists currently employed by the University have time or expertise to curate the collections. There are also no plans to hire anybody to do the job. The University is facing the task of eliminating 80 faculty positions in the coming years. Even if better times arrive, the School of Biology and Ecology has indicated to have different hiring priorities.

One possible solution to the problem facing the UMaine Insect Collection will be creation of a small natural history museum as an independent entity at the University. This can be done by merging insect, vertebrate, and plant collections and hiring at least a part-time curator to take care of them. Such a museum would be a great resource to have on campus. Unfortunately, this solution will cost considerable money, and, in my opinion, its implementation is questionable at this point.

Another solution is to move the collection to the Maine State Museum in Augusta. It has some space to house it, and has indicated willingness to do so. There are also several adjunct curators to specifically take care of insect specimens. Such a move will also cost some money, which will probably have to be found within the University (not an easy task) or through some kind of a museum-supporting grant from the Federal Government or the Maine Outdoor Heritage Fund. However, in my opinion, it is more feasible than trying to retain the Insect Collection at the University.

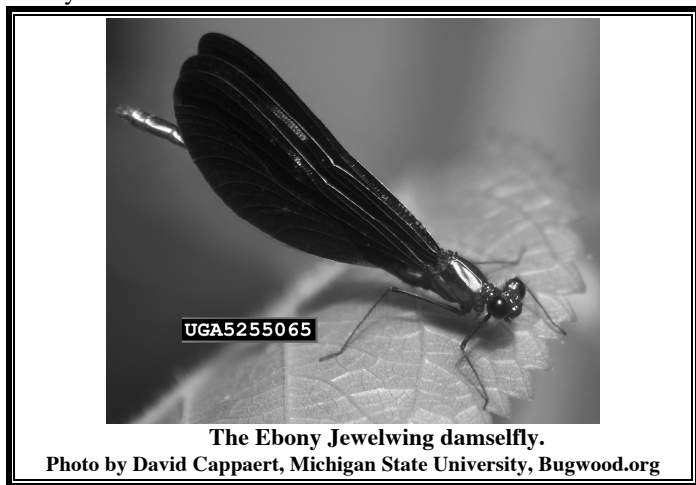
I would like to invite the members of the Maine Entomological Society to share their insights on the situation. Comments and suggestions can be e-mailed to me at andrei.alyokhin@umit.maine.edu (please include UMaine Insect Collection in the subject line). They can also be submitted for publication to *The Maine Entomologist*.

As a final note, the UMaine Insect Collection has survived two world wars and the Great Depression while remaining a valuable scientific and educational resource. It would be sad to see it disappearing by the next year.

* * * * *

Odonate Research Assistance Requested

Chris Hassall is a postdoctoral researcher at Carleton University in Ottawa, who's studying morphological variation in the Ebony Jewelwing Damselfly, *Calopteryx maculata*, across its range in North America. The species is known from every county in Maine.



The Ebony Jewelwing damselfly.

Photo by David Cappaert, Michigan State University, Bugwood.org

He is seeking 20-30 male specimens from at least as many

locations, and can provide all materials required for the collection, including postage and packaging for the specimens to be mailed back to Ottawa. The species should be most visible and abundant in July.

The collections would need to be made in the month of July and he can supply details of where the Ebony Jewelwing has been seen previously in our region. *C. maculata* is easy to identify, being the only species that is metallic green with entirely pigmented wings (see photo). It occurs (sometimes at high densities) on small, slow-moving canopy-covered streams or open streams where trees are close by.

Anybody assisting with the study will receive a report on the results and a copy of any resulting publications (in which their assistance will be gratefully acknowledged).

If you are able and willing to assist him in this, please contact him directly by email (chassall@connect.carleton.ca), or by phone or mail at the address below:

Dr. Christopher Hassall
Government of Canada Postdoctoral Fellow
Carleton University
Ottawa, ON K1S 5B6 Canada
Tel: (613) 520-2600 (ext. 3866)
Fax: (613) 520-3539

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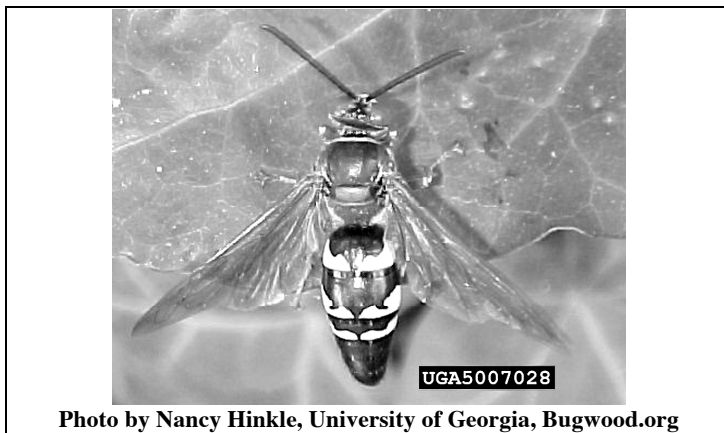


Photo by Nancy Hinkle, University of Georgia, Bugwood.org

Eastern Cicada Killer (Sand Wasp): *Sphecius speciosus* (Hymenoptera: Sphecidae) by Dick Dearborn

This large and colorful sand wasp occurs throughout most of the eastern US from Florida and Texas north to the Great Lakes States and southern New England. The species will very likely show up in southern Maine soon as it has already been found in Massachusetts and Connecticut.

With emphasis being placed on monitoring fossorial (ground-nesting) wasps this would be a good time to watch for *S. speciosus* which may compete for nesting space. This large (30 mm +) species provisions its nests in sandy soil with cicadas. The soil entrance hole would be one of the largest for a sand wasp in Maine.

The cicada killer somewhat resembles the European Hornet (*Vespa crabro*) which has been reported from SW Maine, but which makes colonial nests above ground. Although the Eastern Cicada Killer can sting, it is not as aggressive as other wasps. Any suspected activity should be reported. Many references on this species can be found on the internet.

KIDS' PAGES

by Monica Russo

Name: CICADA KILLER WASP

Scientific Name: *Sphecius speciosus*

Pronounced: SFEE-see-us spee-see-O-sus

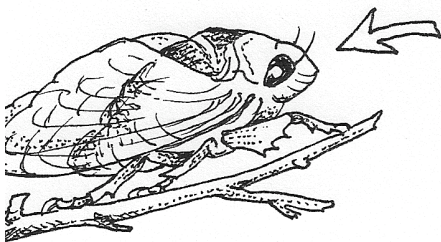
Size: About one and one-half inches long
(about 3.75 centimeters)

Food: The female hunts for a Cicada,
(si-KAY-da), and brings it down into
her burrow, for her larvae to eat.
Adult Cicada Killer Wasps eat flower
pollen. Some have been reported to
drink sap from a tree.



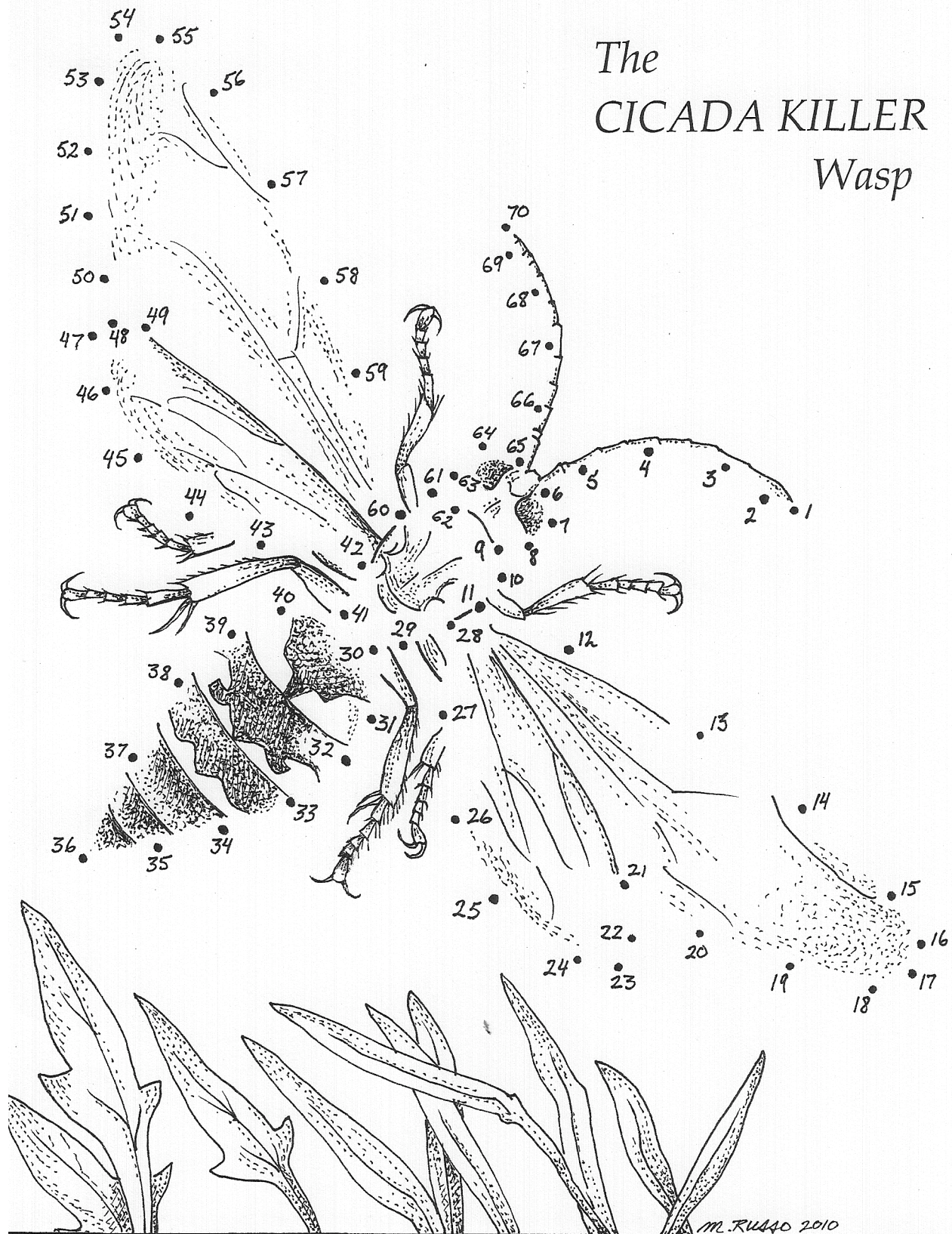
Colors: Black, dark brown, with yellow
markings on the abdomen.

Notes: Cicada Killers live in the U.S. and
Mexico. They only live during the
summer. Females work together to
dig underground nests -- always in
dry sandy sunny areas, and sometimes
on open sandy lawns! They hunt for
Cicadas, paralyze them by stinging,
and carry them back to the nest
burrow for the larvae to eat.



Connect the dots! Color me in! My head is black, my thorax is black and dark brown, my wings are amber, and my abdomen is black and pale, pale yellow!

The CICADA KILLER Wasp



Bagworms (Lepidoptera: Psychidae) of Maine by Dick Dearborn

Like most entomologists, over the years I became fascinated with a variety of unrelated groups of insects. The bagworms have been one of these groups. Unlike the carabids (Coleoptera: Carabidae) which I collected, the bagworms came through more of a nostalgic interest as I followed Dr. Auburn Brower around and listened to his running commentary. I was also fortunate to be a student at Cornell shortly after Donald Davis finished his excellent and exhaustive study of the group. [See Bagworm Moths of the Western Hemisphere by Donald R. Davis. US National Museum Bulletin 244 (1964). 233 pp.]

Although bagworm is the proper name for the larval stage of Psychidae, in the following discourse I will often refer to the bag in which the larva lives as its case to conform to similar larval abodes in other insect species. For the purpose of this article a case or bag refers to a protective shelter formed by and for a single larva. It should not be confused with larval nests which contain multiple larvae.

Nearly everyone has at one time or another come upon aquatic caddisfly (Trichoptera) larval cases. Case making in this group is well developed and diverse. Maine has roughly 220 species of caddisflies which can often be recognized by a distinctive case alone. Case making by other insect species is terrestrial and occurs most commonly in the Lepidoptera. Of these, bagworm (Psychidae) cases would be most similar in construction to caddisfly cases in that bagworms make their cases out of silk covered by a broad range of debris as well. One other species which could possibly be found in Maine, *Lacosoma chiridota* [Lepidoptera: Lacosomidae (=Mimallonidae)] makes a similar bag-like case. Aside from the psychids, case-making Lepidoptera are most commonly found in the family Coleophoridae and by a scattering of species in other families. Coleophorid cases are quite different and more refined. Most if not all coleophorids make their cases from fewer pieces of foliage of single host plant species.

Out of 55+ species of Psychidae recognized from the western hemisphere, only 6 have been reliably recorded for Maine. This number could easily change as the group receives more attention, but this may take some time and a special effort due to a number of limiting factors. First is a complicated life cycle involving wingless females, which may have parthenogenetic forms. Case construction is somewhat inconsistent and may vary in the debris content due to habitat. Lack of economic importance in all but a few cases (see list) may diminish the motivation for study. Many complexities of the group are very interesting and are discussed in Don Davis' monograph.

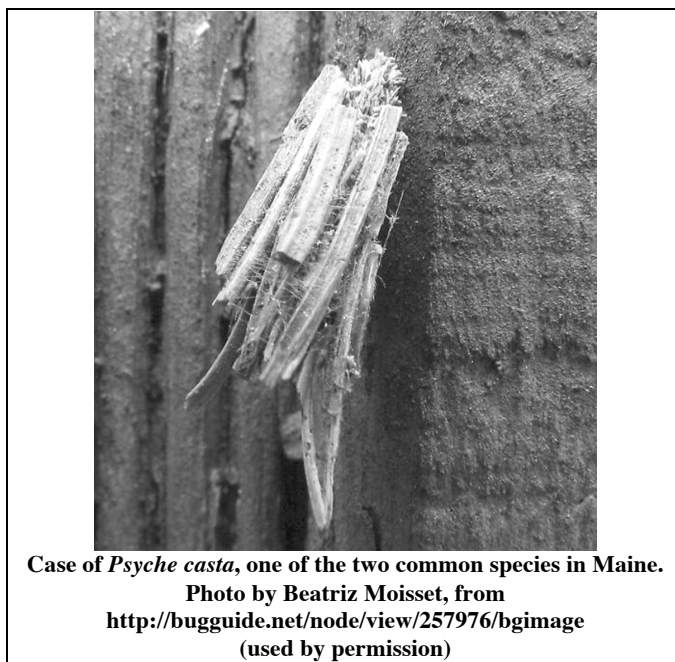
Life for psychids starts from eggs which were laid within or near the female case. Bag making starts soon after hatching by larvae using silk and debris. Two of our six species stick fine sand or soil particles to the silken bag while the remaining four use plant debris as well. As the larvae grow they simply enlarge the bag. As with the caddisfly larvae, bagworms move about carrying their house along with them. Just prior to pupation, the more cryptic species usually move to a more open surface such as a rock, lichen or wood siding. Parthenogenetic females such as those of *A. crenulella* form *helix* may remain in less exposed situations. As larvae get ready to pupate they chew a pit for

attachment to keep the bag in place. Following pupation winged males seek out bags containing wingless, larva-like females. Egg-laying follows within or near the bag containing a female. While this discourse on the psychid life cycle may sound simple there can be many twists to the process and consistency is not the case – pun intended!

Maine Bagworm Species

Solenobia walshella – B, D, M.* This tiny species (case 7-10 mm.) always constructs its case entirely of fine soil or sand particles and silk. The species can become a nuisance when pupating cases become firmly attached to siding or Christmas trees. This is a good opportunity to catch males. This and the following species are the two most common and widespread bagworms in Maine. Occurs statewide.

Psyche casta – B, M, N. One of the two most common bagworms in Maine. The tiny larvae cover their case (case 9-13 mm.) with plant debris, especially pieces of grass. The uncovered case would be roughly the same size as the preceding species. Occurs statewide.



Case of *Psyche casta*, one of the two common species in Maine.

Photo by Beatriz Moisset, from
<http://bugguide.net/node/view/257976/bgimage>
(used by permission)

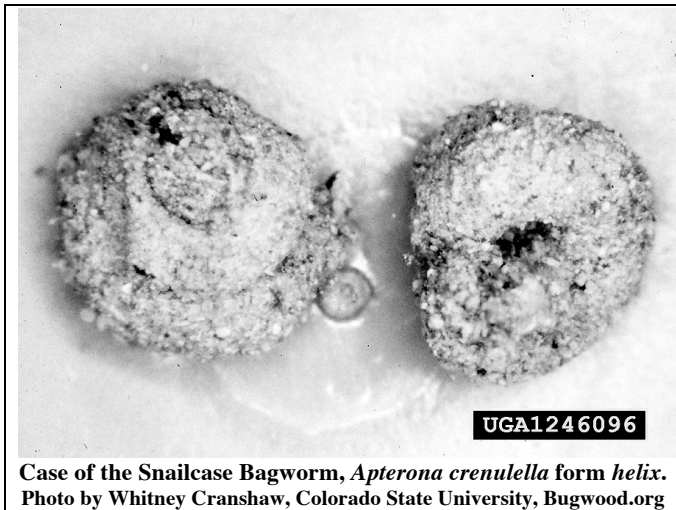
Astala confederata – M. This mid-sized (case 15-20 mm.) species is a feeder along the interface between grassy areas and woodland. Its cases are covered with grass and leaf fragments. The distribution of this species is not clear but the species could occur in southern Maine south of Augusta.

Hyaloscotes pithopoera – D, M. This is the largest species (case 21-27 mm.) which we could consider native. Larvae probably feed on grasses and lichens, fragments of which they attach to their case. Brower used to call this the “graveyard psychid” as he found it quite often in graveyard situations. What seems to be this species has been seen at scattered sites across the southern half of Maine.

Apterona crenulella form *helix* – M. Snailcase or Garden Bagworm. This unique species is a newcomer to Maine and the U.S. The larvae build a case resembling a helical snail shell with two to three coils. The case is silk lined and covered with fine soil debris and feces. This species could become a pest in flower
(cont. on p. 7)

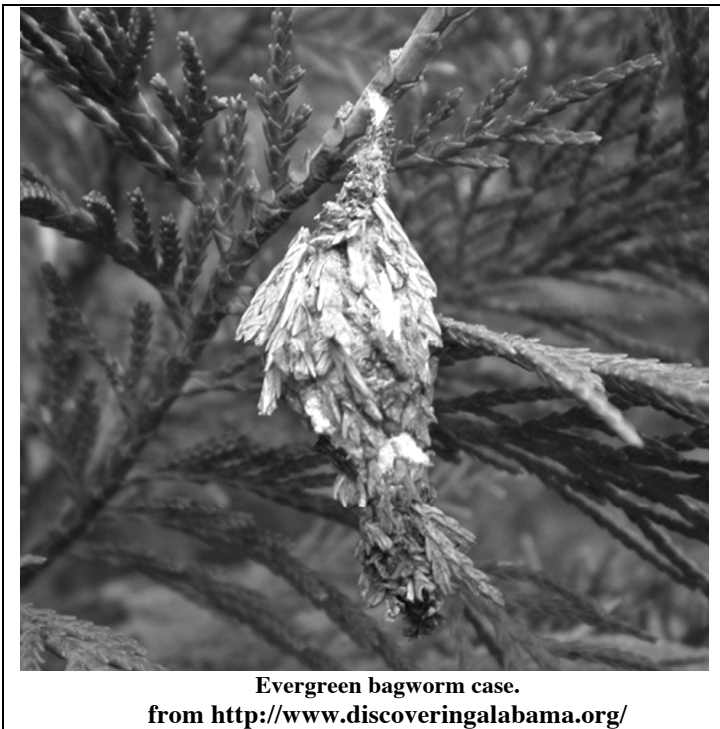
Maine bagworms (cont.)

gardens and Christmas tree plantations. It has so far only been recorded from York and Cumberland Counties, but could probably occur throughout the southern half of the state. It came to our attention first in the 1990s (see "New Bagworm in Maine" by Richard Folsom, MES Newsletter, vol. 2 # 3, 1998, p. 4).



Case of the Snailcase Bagworm, *Apterona crenulella form helix*. Photo by Whitney Cranshaw, Colorado State University, Bugwood.org

Thyridopteryx ephemeraeformis.- M. Evergreen Bagworm. This very large (case 30-50 mm.) bagworm has been introduced very locally numerous times over the years on cedar nursery stock but so far has seemingly not become established. Larvae feed on many hosts but especially evergreens such as cedars. Abundant host plant debris is used in case making. This species is a serious pest in some other states.



Evergreen bagworm case.
from <http://www.discoveringalabama.org/>

* Records from: D = Davis, B = Brower, M = Dearborn, N = New Hampshire list

Guide to Maine Landscapes Available From Maine Natural Areas Program

(from the April 2nd Maine Department of Conservation newsletter)

The Maine Natural Areas Program proudly announces the publication of its new book, "Natural Landscapes of Maine: A Guide to Natural Communities and Ecosystems," by Susan Gawler and Andrew Cutko.

This unique field guide, several years in preparation, is designed as an important tool for the identification and conservation of special places in Maine. It offers a classification of the state's complex landscape by dividing Maine's habitats into 104 distinct types, or "natural communities," and describing them in detail.

Readers will find a two-page description of each area, including photographs, maps and specifics on trees, shrubs, wildflowers and wildlife, and most importantly, where on conservation lands each type can be visited. Introductory material includes a diagnostic key and how each classification fits into a bigger picture for conservation; appendices include a crossreference to other classification types and a glossary.

Authors Gawler and Cutko have had the good fortune of spending many years investigating the woodlands and wetlands of Maine as ecologists for NatureServe and for MNAP, as well as their own pleasure.

The new guide is representative of the important scientific work being done by MNAP and yet another example of the quality work produced by the Maine Department of Conservation.

For more information, go to:

<http://tinyurl.com/yhnapkr>

Books are available from the Maine Natural Areas Program for \$20, which includes 5% Maine sales tax and media-rate shipping. Please send a check or money order payable to *Treasurer, State of Maine* to: Maine Natural Areas Program, 93 State House Station, Augusta, ME 04333-0093. You can also order through their web site (through the tinyurl link above).

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MFS Warns About Browntail Caterpillars

(from the April 2nd Maine Department of Conservation newsletter)

The Maine Forest Service Division of Forest Health and Monitoring is warning that browntail moth (BTM) populations in the Brunswick, Bath, West Bath, Topsham, Bowdoinham area are extremely high this year. Lower numbers were found in Freeport, Falmouth, Augusta and Kennebunkport.

Results from the MFS annual BTM over-wintering survey shows that the population has not expanded very much from 2009, but the population has increased dramatically. Browntail caterpillars feed on the leaves of oak, crab apple, apple, birch and other hardwood trees, causing defoliation, branch dieback and some tree mortality.

More importantly, the hairs from the caterpillars can cause a rash similar to poison ivy. People don't need to come in contact with a caterpillar to get the rash. The caterpillars shed their skins five times, and each time more hairs break off and blow around in the air.

For more information go to

<http://www.maine.gov/doc/mfs/btm08.htm>

Charlene Donahue and Colleen Teerling Facilitate & Address Forest Pest Conferences

(from the April 2nd Maine Department of Conservation newsletter)

M.E.S. President Charlene Donahue was the local host for the 49th Northeastern Forest Pest Council meeting held March 16-17 in York, Maine. Forest entomologists, pathologists, researchers and students met to exchange information on forest pests that threaten the forests from Pennsylvania to Quebec and go on local field trips. Maine Forest Service (MFS) entomologist Allison Kanoti and Charlene led a field trip on the first day to see insect and disease problems that meeting attendees might not have in their area.

MFS Entomologist Colleen Teerling was invited this winter to two conferences to speak about Maine's biosurveillance work regarding the dangerous emerald ash borer, which has gained international attention. The MFS scientist went to the Bureau of Indian Affairs Forestry and Fire Conference in Wisconsin to speak to tribal foresters from several Midwest states. A couple of weeks later, she went to the first Nova Scotia (Canada) Forest Health Conference to speak to foresters, scientists and industry representatives. Response from the conference attendees was very positive, both in a scientific and practical perspective. Tribal foresters indicated they would establish similar bio-surveillance programs.

The (Not So Great) Worcester Incident

By William Urquhart

[The following is an abridged excerpt from an article originally published as "The Enemy at Our Gate" in *Independent Sawmill and Woodlot Management* magazine, April 2010.]

As Donna Massie got out of her car in the driveway of her Worcester, Massachusetts, home one July evening in 2008, she noticed her husband and his friend looking at a large black and white beetle with long antennae. They found it to be quite interesting but dismissed it as an odd June bug. Two days later as they were hosting a backyard barbeque, their guests began noticing beetles crawling all over their maple trees. Donna noticed a sawdust-covered beetle with its head in a dime-sized hole. Donna got on the Internet and after searching decided the bug might actually be an Asian longhorned beetle, or ALB. She immediately began calling various agricultural authorities.

Patty Douglass took Massie's telephone call in her Wallingford, Connecticut, USDA office. Massie also sent a cell phone photograph she had taken. Though the picture was grainy, the image was clear enough for Douglass. Within 24 hours, Douglass and Jennifer Forman Orth, an invasive species ecologist with the Massachusetts Department of Agricultural Resources, were with Massie in her backyard. Douglass saw one of the beetles, "Oh God. They're really here," she said. With these few words Douglass verbalized one of her, and the USDA's, greatest fears: ALB was in Worcester Massachusetts, a city at the southern edge of the great northern hardwood forest.

Within days, federal and state officials descended on Worcester. An Incident Command Center was set up. On August 7, 2008, The Massachusetts Department of Conservation and Recreation (MDCR), the Massachusetts Department of Agricultural Resources (MDAR), and the City of Worcester, partnering with the U.S. Forest Service (USDA-FS) and the Animal and Plant Health Inspection Service – Plant Protection and Quarantine (USDA APHIS-PPQ), published a pest alert stating that ALB had been found in Worcester and their combined intent was to regulate, manage, and eradicate the beetle.

On August 18th, the Commonwealth of Massachusetts issued an "Order to Suppress and Control Nuisance Conditions and Regulated Articles." The next day, a 33-square-mile regulated area, including parts of Worcester, Holden, Boylston, West Boylston, and Shrewsbury, was declared. By September 28th, the regulated area had been expanded to 62 square miles. As of January 2010, the regulated area now encompasses 74 square miles and covers all of Worcester and West Boylston and parts of Shrewsbury, Boylston, and Holden; that's 47,360 acres.

According to Dr. Victor Mastro (USDA APHIS-PPQ), ALB had been in Worcester for 12 to 15 years before being recognized in 2008. Asian longhorned beetle is believed to have arrived from China in solid wood packaging materials (SWPM) sometime in the late 1990s. It soon began its insidious spread throughout the surrounding area.

(cont. on p. 9)

OF ALL THE GALL!

WANTED: Last year's goldenrod galls — i.e., with exit holes. Round or elliptical galls are acceptable.



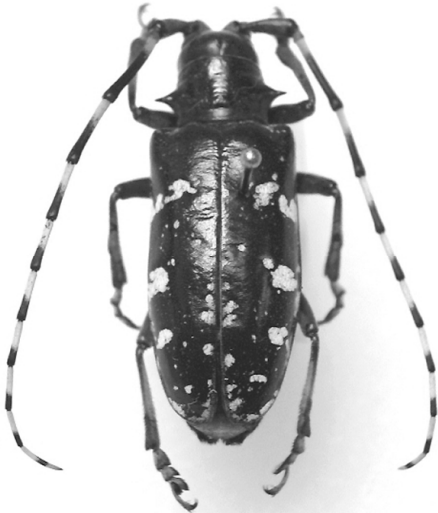
(Photo from <http://www.hiltonpond.org/ThisWeek051001.html>)

Please clip the gall from the goldenrod stem, and place the gall individually in a zip-lock bag with a pencilled collecting label. If you find multiple galls at one site, please bag each one individually, though the small bags may then be placed in a larger bag with a single collecting label for convenience.

Please include on each label: locality (town, township), date collected, goldenrod species (if known), and collector's name. Mail to:

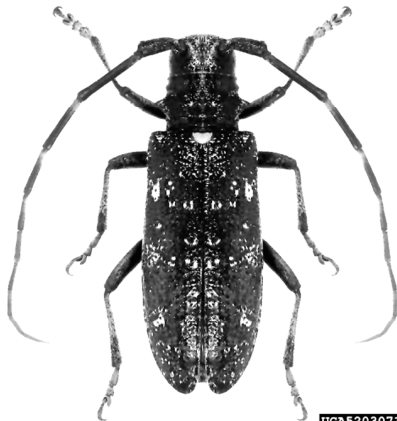
D. T. Jennings
P. O. Box 130
Garland, ME 04939

Jumping spiders (Family Salticidae) inhabit such galls after the gall-maker emerges via the exit hole. Please do not send galls without exit holes. Thanks.



UGA5023075

Asian Longhorned Beetle (ALB); actual body length is 1-1.5 inches.



UGA5203071

The native Whitespotted Sawyer beetle. Compared to ALB, it is generally shorter and more slender; the elytra are rough, not smooth and shiny; white markings are far less distinct; the scutellum is white, not black; the antennae aren't clearly banded black and white; and it feeds on conifers, not hardwoods.

Images from

<http://www.maine.gov/agriculture/pi/pestsurvey/pestinfo/ALB/ALBreport.htm>

From the beginning, it was realized that infested trees had to be removed. Trees deemed at high risk also needed treatment or removal. Under the August 18th "Order to Suppress," survey crews from MDCR, USDA-FS and USDA-APHIS began searching the regulated area looking for infested trees. It soon became apparent that thousands of trees were infested with ALB. This presented a serious problem: what to do with all those trees?

From the onset officials knew the infested trees would have to be dealt with as fast as possible, as the beetles continue to grow and emerge even after the tree is cut down. Knowing that spraying with insecticide would serve no purpose, and that stockpiling the downed trees would only exacerbate the problem, it was determined that chipping the trees on-site was the only viable solution. To that end, private contractors were vetted and assigned the task of cutting and chipping the selected trees.

A secure storage area for the chips was established and removal crews began sawing and grinding their way through the regulated zone. The amount of chips produced accumulated into small mountains. The chips are used for further research or transported to biomass incinerators and bark mulch producers. As of January, 2010, over 25,000 trees have ended in these piles. The denuded parks and once shady tree-lined neighborhoods of Worcester now stand as stark reminders of just how devastating are the consequences wrought by the introduction of just one invasive beetle species.

With the infestation of ALB in the Worcester area discovered and efforts being made to control it, we can all relax, right? Wrong. Remember ALB went undetected for 12-15 years. Think of this: how many of us have taken firewood from our homes or neighborhoods and brought it along on camping trips or to camp? How much of that wood contained larvae or pupae of unwanted insects? There is no way to know, but one thing is certain: most forestry experts agree that the transportation of firewood is a major factor in the spread of invasive species.

Every year tourists from all over flock to New England to view the colorful foliage; imagine the forest devoid of color. The tourist industry would not be the only industry to suffer. The paper and lumber industries also depend on forest resources to produce their products. Furniture producers and cabinet makers rely on hardwoods to create their beautiful products. Then there is the maple products industry - consider breakfast with no maple syrup! What can we do to prevent all this from happening? The answer is both complex and yet amazingly simple. We all need to pay more attention to our behavior and our surroundings.

The days of bringing firewood with you are over. Buy it where you burn it. Most importantly, we all need to be more observant and become familiar with ALB and the signs of ALB infestation.

If you see any "odd" looking insects on or around your trees or firewood, call your state forestry agency or the USDA Forest Service and report it immediately. If you notice perfectly round holes in host trees big enough to put a pencil into, report it. Likewise if you notice unusual amounts of sawdust-like material on or around any trees, report it. Even if you notice something as simple as crown dieback in an otherwise healthy-looking tree, call someone. It may not be ALB, but then again it could be. Don't hesitate for fear of looking foolish: remember Donna Massie's husband and friend, who thought she was being silly calling the authorities about a bug; she wasn't.

Now is not the time to let our guard down for even a moment. If you see something out of the ordinary, call your local forestry agency, cooperative extension service, or the USDA Forest Service right away. Regardless of whether it is ALB or any exotic pest, introduction is not a matter of if but when, and one of the best ways to stop these destructive insect invaders is through citizen involvement and early detection. Keep in mind that what happened in Worcester can happen practically anywhere at any time!

Sightings of ALB in Maine can be reported on-line at
<http://www.maine.gov/agriculture/pi/pestsurvey/pestinfo/ALB/ALBreport.htm>
or by phone at 207-287-3891.

Book Review: A WORLD WITHOUT BEES

by Dana Michaud

The 2009 release of *A World Without Bees*, by Allison Benjamin and Brian McCallum (published by Pegasus Books), echoes Rachel Carson's dire warnings of the harmful effects of manmade chemicals in our environment, only the "silence" is falling upon the hives of our honeybee.

Apis mellifera, and its 20-plus subspecies or races, evolved millions of years ago, conquering Europe, Africa and Asia, to become the most important insect pollinator that mankind has subsequently exploited. Its history with mankind goes back 15-20,000 years (based on African wall art); it's wrapped into our cultures (in Egyptian hieroglyphics), has become "domesticated" (the Chinese have been beekeeping for nearly 3000 years!), and finally arrived in North America, via settlers, on December 5, 1621 (the earliest record).

Benjamin and McCallum's book delves into not only how important the honeybee has become to our species (in excess of 60 billion dollars annually – pollinating some 90+ crops), but also the terrible costs inflicted upon the honeybee by the movement of various races and subspecies into once geographically isolated areas occupied by other races and subspecies.

The mixing of these has been devastating as various fungi, viruses and parasites that were once isolated on resistant populations and posed no threat, now have been moved into general populations that hadn't coevolved with them. Add to this the various pesticides, fungicides, miticides, and genetically modified crops, and the results have been devastating.

In the U.S. alone, an estimated population in the 2.4 million hives (colonies) totals more or less some 40 billion honeybees. In 2007, the loss of over 800,000 colonies, followed by the loss of nearly 1 million in 2008, has beekeepers alarmed. Opening their hives only to find a "normal" amount of honey, the queen and a few workers, and no trace of a thriving hive, earned this condition the label of CCD, Colony Collapse Disorder, among beekeepers. The wild populations are almost non-existent.



The authors take you through a maze of potential culprits, which are many. Suspicions, links and hypotheses are congealing, but the ongoing investigation into CCD, which is occurring (or has already occurred) worldwide, is most likely going to yield a multifaceted answer, linking parasitic mites, fungi, and viruses to the insecticides used, that compromise the honeybees' immunity and resistance.

Benjamin and McCallum's book is a "Silent Spring" for *Apis mellifera*. Mankind has a vested interest in solving CCD and the problems facing the honeybee in general. As noted, failure to do so is not an option, as there are no viable alternatives in the Hymenoptera that can fill the hives vacated by the honeybee. Although many are better pollinators, all are ground-nesters that are either solitary or have much smaller colonies.

Benjamin and McCallum's book is a gentle reminder that even mankind needs a lowly insect to make his journey on this planet easier and more interesting. The honeybee is in trouble, as are we.

For more information on CCD, check out these web sites:

The U. S. Dept. of Agriculture web page on CCD:

<http://tinyurl.com/533udq>

Wikipedia also has an extensive entry with numerous references on the topic at <http://tinyurl.com/dys8d3>

* * * * *

MAY Field Day: M.E.S. on the Plains!

Come join us for a fun-filled day of collecting, observing, and talking insects at the Kennebunk Plains in York County. This 135-acre preserve is a rare habitat for Maine. It consists of sand plain grasslands, pitch pine – scrub oak forest, and outwash seepage forest. Entomological treasures are sure to be found and recorded!

Bring your lunch and your gear and meet us on **May 22, 2010, at 9:30 a.m.** in the parking lot off Route 99. Snacks and drinks will be provided. Be aware, there are no restrooms at this site. For directions and information see

<http://tinyurl.com/yh56rwf>

and

<http://tinyurl.com/yk8z7a7>

(This latter will download a pdf of information to your usual download folder.)

For further information and RSVP (much appreciated) call Domenica or Sonny at (207) 967-6159. Hope to see you there!

JUNE Field Day: M.E.S. in Hope!

The June field trip is scheduled for **Saturday, June 19th, at 10 a.m.** in Hope. Eleanor Lacombe owns acres of property in the rolling hills of Hope. Her land connects to neighboring open space, creating a tract of hundreds of acres of field and forest.

The land is primarily hardwoods and fields with woods roads and streams running through it. The light trap that Eleanor runs consistently brings in interesting specimens so Hope-fully we will find some things to pique people's interest by 3 p.m. Bring collecting gear (or a camera or just your self), lunch, bug repellent and enthusiasm.

From the south: take Route 17, and turn left onto Alford Lake Road in Hope. At the stop sign, go straight across onto Notch Road (dirt) and follow the MES signs.

From the north: travel to Belfast on Route 1; turn right onto Route 52 South. Follow Route 52 for 10 miles to Lincolnville Center. Turn left, then right onto Route 235; go 3 miles and then turn right onto Route 235/105. Then go 1.3 miles until you turn left onto Route 235, and go 2.8 miles. Turn right at Notch Road (dirt) across from Alford Lake Road, and follow the MES signs.

(The Lacombe residence is under the red "H" in Hope in the Delorme Atlas and Gazetteer.) Please call Charlene Donahue 287-3244 (work) or 549-7241 (home) with questions.

JULY Field Day: M.E.S. at Saddleback!

A Saturday afternoon in Rangeley what could be a more inviting mid-summer setting for getting together, collecting, and enjoying the joys of being alive in one of the most beautiful settings in interior Maine?



Oblique aerial view of Saddleback, courtesy Google Earth

We'll be assembling at the Saddleback Ski Lodge at **10:00 a.m.** on Saturday, **July 10th**, and fanning out to all kinds of alpine environments, from conifer forest to open alpine meadows and rocky slopes, to ponds and babbling brooks.

The lodge will be open from 8:00 a.m. – 4:00 p.m., so restaurant and restroom facilities will both be available. You can bring lunch, or dine out! Directions to Saddleback may be downloaded at the M.E.S. web site, or at Saddleback's own web site (at <http://www.saddlebackmaine.com/winter/directions.php>).

For additional information and to **(please!)** let us know if you're planning to join us, please contact Bob Nelson (426-9629 or by e-mail at BeetleBob2003@yahoo.com).

* * * * *

Hymenoptera Reference

Back in 1983 Richard Bradbury, Gladys Russell and I pulled together species records for Maine Hymenoptera from the collection and written summaries at the Entomology Lab in Augusta. While this is far short of a complete list, it comprised the status of records up to that time. Although only 856 entries were presented, far short of an expected 3000, the list is anecdotal and includes a lot of historical and distributional information. Limited copies are still available.

Dearborn, R., R. Bradbury and Gladys Russell. 1983. *The Forest Insect Survey of Maine: Order Hymenoptera*. Maine Forest Service, Entomology Division Technical Report No. 22. 101 pp.

- Dick Dearborn

* * * * *



The Soap Box

From time to time, members take to the Soap Box to address issues of particular concern to them..... Dick Dearborn offers up the following reaction to a recent cinematic experience.

James Cameron's Avatar - the Movie Twentieth Century Fox

Why mention this here? Read on! It isn't often that I get excited by a movie, especially one that is digitally composed, as Avatar is. But I did and was fortunate enough to see it twice on the big screen before it closed there. I also thought it very appropriate that its release was promoted in association with Earth Day.

Part of my fixation probably goes back to the 1950s and my fascination with the movie **Green Mansions**, based on the book *Green Mansions* by W. H. Hudson (1904). Home Tree ... hmmm! Both Green Mansions and Avatar bring out what has been going on between humans and their environment for some time. You cannot exploit the environment without repercussions.

It's even more critical as resources become more stretched. After a dynamic clash between opposing forces in Avatar it becomes evident that two such opposing systems just won't work. Just turn on the news! The current oil-rig "blowout" in the Gulf should send a strong enough message. Avatar brings a similar message home and should point out what is happening. Avatar also suggests a subtle course of action. ★★★★★ stars for Avatar.

Oh, and you wonder why I thought that this note would be appropriate here? Check out the number of legs on all of the neat creatures in the movie - **SIX!** And those fan lizards, which look more like odonates than lizards, put on a spectacular show of luminescence. I felt very positive about the movie, especially if we take action.

- Dick Dearborn

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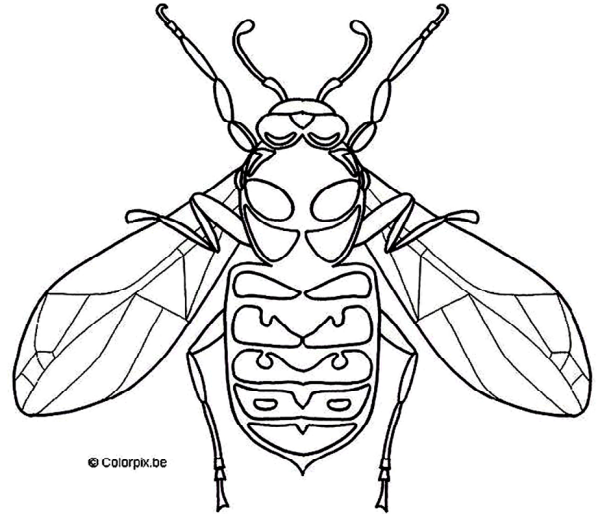
Hymenopteran WordSearch

A S D F G H B P Q I U Y V T Q W E R T Y S F O A
 P R E D A T O R Y M N O E Q R H F U N E M N X P
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 E R T H G A N H O N O E R T H H O R N T A I L E

In the letter matrix above, find each of the following entomological terms. Words may be forward or backwards, across or vertically in the matrix.

Vespidae	Chalcid	<i>Bombus</i>	sawfly
Apidae	Ichneumon	parasitoid	Braconid
forewing	vein	antennae	setae
gaster	<i>Vespa</i>	solitary	wasp
hornet	honeybee	predatory	<i>Cerceris</i>
<i>Formica</i>	hornet	<i>Vespula</i>	hive
sting	prey	ocelli	coxae
<i>Polistes</i>	drone	horntail	petiole
<i>Apis mellifera</i>			

For coloring folks... fine-tipped pens or colored pencils will work best!



Syrphid flies are often mistaken for wasps, because they are often colored very similarly. What colors do you think wasps should be? (But why is he standing on his own wings? They're not built this way!)

COMING M.E.S. EVENTS in 2010:

(See inside this newsletter for information on the field days.)

- 22 May M. E. S. Field Day, Kennebunk (York Co.)
- 19 June M. E. S. Field Day, Hope (Knox Co.)
- 10 July M. E. S. Field Day, Rangeley (Oxford Co.)
- 30 July – 2 Aug. Schoodic BioBlitz, Acadia National Park (Hymenoptera) (Hancock Co.)
- 11 September Annual Meeting, Clinton (Kennebec Co.)
- 15 September Bug Maine-ia, Maine State Museum, Augusta

(See <http://www.colby.edu/MES/> for more detailed information.)



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

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