

# The Maine Entomologist

A FORUM FOR STUDENTS, PROFESSIONALS & AMATEURS IN THE PINE TREE STATE

Volume 10, Number 4, November 2006



## From the President



Season's Greetings to all and Congratulations! - We are now successfully closing out our first decade as an organization thanks to your support. Through the years we have had a few challenges and many successes. We now have a fairly strong foundation of 135 interested members, a great newsletter and an increasingly popular calendar. Our outgoing Editors, Chuck and Laura Lubelczyk, have brought many new features to our newsletter. As we move forward through the next decade we need to give our new editor, Bob Nelson, increasing support in the form of more articles so that Bob can continue to bring a changing face to our newsletters. With your increasing participation we can expect even more exciting things to come.

As we end this season on a rather wet note, many of us have already begun plans for 2007. This issue contains a number of items from 2006 and things to watch for in 2007. To make it easier I urge you to send in an order for our very special 2007 MES calendar on which we have already posted many things for you. In addition to events which are already scheduled and which are listed in this issue there are others that are still in the planning phase from the possible 2007 launching of the Maine Butterfly Atlas Project to changes in Bug Maine-ia and participation in events of other groups such as Fields Pond Audubon. We will try and keep you posted as things progress but we urge members to stay in touch with other members to keep a dialog going.

While the majority of our members hold a special interest in insects, most find other arthropods such as spiders and millipedes almost equally as fascinating. Thus it now appears that as flies were the theme of several of our events in 2006, spiders will be the focus in 2007! The fun starts with our winter workshop on January 13th and builds up speed at Schoodic on July 21-22. Join us for an enlightening experience.

I would like to thank all of you who have helped to make MES a success. The richness of any group lies with the diversity of the membership and I look forward to meeting more of you in 2007 and in learning what your interests might be.

Dick Dearborn



## Patterns in the System: Cycles of Mosquito Borne Disease

When looking over numbers, I am always struck by patterns. Long series of numbers, by the very nature of probability, have seemingly intricate connections. Sometimes these are random links, but sometimes they are the results of nature. The more distinct the picture, the more likely that there is a non-random explanation for the connection. Noticing patterns seems to be characteristic of the human mind, and it's the easiest step when critically examining a complicated system. The second and more difficult task is to find the cause. Once found, however, we can use this source to our advantage and redirect the flow to create a new pattern.

The first recorded outbreak of West Nile Virus (WNV) in the United States occurred in the month of August, which is long after the first mosquitoes of the year begin to bite. The Centers for Disease Control and Prevention (CDC) reported that for 2001-2002 in the northeast, transmission of WNV to humans occurred between July and November despite the fact that WNV was detected in birds as early as April. In 2005, Massachusetts and New Hampshire found Eastern Equine Encephalitis (EEE) in humans from August into September, and two horses in Maine died from EEE in late September. These results are just examples of a vast amount of evidence that the risk of transmission of these mosquito borne diseases to mammals increases as the mosquito season progresses. This pattern is well documented, but its causes are less evident.

**Continued on Page 4**

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**Attack of the Seed Bugs**

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## Winter Workshop

Take a break from the winter blahs! You are again cordially invited to the Maine Forest Service Entomology Laboratory at 48 Hospital St. Augusta, Maine on Saturday, January 13, 2007 from 9:30 am to 2:30 pm. for a workshop on Spiders.

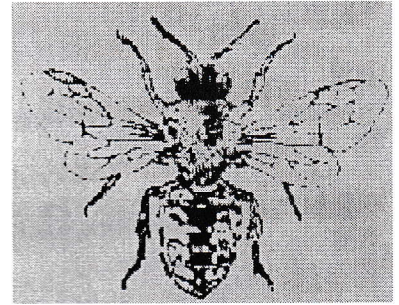
Spiders were selected as the focus for our 2007 winter workshop as a prelude to the summer Spider Bioblitz at Schoodic Point in Acadia National Park July 21-22. Jonathon Mays from the Maine Dept. of Inland Fisheries and Wildlife will lead a hands-on workshop covering the basics on collecting and identifying spiders in all their myriad forms. This workshop is open to anyone interested in spiders. There is a \$15 fee to cover expenses and pre-registration is required. Attendance at the workshop is limited to 24 so sign up early! Please bring a bag lunch.

To register please send your name, address, phone number and e-mail address to Charlene Donahue, Insect and Disease Laboratory, 48 Hospital St., Augusta, ME 04330 or (207) 287-3244. If the weather is threatening on the day of the workshop, contact Charlene Donahue at home at (207) 549-7241 or by e-mail at [charlene.donahue@maine.gov](mailto:charlene.donahue@maine.gov).

Directions: From I-95 take exit 113, go straight at the first light, cross the bridge over the Kennebec River, turn right at the second light (first after the bridge) onto Riverside Drive and continue south to the rotary. Take the third exit off the rotary following Route 9 uphill. Go straight at the first light, past the State Police building then the fire station on your right. The next, pale green, building on your right, approx. 1/4 mile from the light, is the Lab.

## Old World Bee Found In Maine

The European megachilid bee, *Anthidium manicatum* (the wool-carder bee), was introduced into New York before 1963 and has since spread through much of the northeastern US and Canada and recently into the upper midwest. Does



anyone have any records or reports of this bee in Maine? I had not seen the bee before and collected a mating pair in Falmouth on July 5. Since then I have seen it in Kittery, Dayton and collected two more males in Cumberland on July 17. The bee was difficult to capture because it would not hold still for long (it also hovers). I finally collected it when it pounced on a smaller bee, which turned out to be the female *Anthidium* (half the size of the male). The male *Anthidium manicatum* has highly aggressive territorial behavior, defending its floral resources from other bees, and harassing females by repeatedly attempting to mate. Females of this cavity nesting bee prefer plants with leaf pubescence (such as lamb's ear, dusty miller and various mints) which they utilize as nest lining material. The males may be found around various mint plants (two were collected on agastache). Native American *Anthidium* species occur in the west. Another European species, *A. oblongatum*, was first found in North America in Pennsylvania in 1995 and has since spread to neighboring states. Google *Anthidium manicatum* to see pictures and a write up with identification keys for the introduced species in *The Great Lakes Entomologist*.

Richard W. Folsom

## Bug Maine-ia 2006

Wednesday, September 27, was proof that "Bug Maine-ia" is spreading! The Maine State Museum in Augusta hosted students from as far away as Ashland, Maine, New Hampshire, and even a couple of homeschoolers from the state of Idaho. A lot of the visitors were from within an hour's drive of Augusta.

There were at least 1888 students of all grades and 570 adults registered at the door totaling 2458 people. But it is believed that a few hundred more that did not register passed by the 21 exhibits. Among those who made this event possible were 14 MES members. There were about 100 homeschool families represented and 50 public/private schools.

The young people got to hold woolly bear caterpillars, view a "hit and run" corpse in a jar at the forensic entomology display, touch a live foot long giant African black millipede slowly creeping across someone's shoulder, visit the "bug doctor" for a "bug" identification, to mention just a few of the exhibits.

By the end of the day the caterpillars, millipede and most exhibitors were exhausted.

Marj Dearborn

## Attack of the Seed Bugs

As a medical entomologist at the Maine Center for Disease Control and Prevention (Maine CDC), I regularly field public inquiries about insect related health concerns. In October, I received several calls from individuals who believed that they had found "kissing bugs" in or around their homes. Kissing bugs, *Triatoma* spp. (Hemiptera: Reduviidae), are blood-sucking insects that can carry Chagas disease, a parasitic infection that can be debilitating and even fatal. Although it is possible for this insect to be imported from endemic tropical areas in household furnishings, it is not known from Maine and outbreaks of Chagas disease do not occur in the northeastern United States.

Some of the callers had identified the insects of interest as kissing bugs after searching for images on the internet. They had then read accounts of kissing bug encounters and the association of these insects with Chagas disease in news articles and at a variety of web sites; some callers were worried enough to ask about what medical treatment they should be receiving. Frightened people stay tuned. . .

When I received specimens of the alleged disease vector from four different callers, they all turned out to be the Western Conifer Seed Bug *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae). Like some other Coreidae, the Western Conifer Seed Bug has greatly expanded hind legs, a feature that is not shared with *Triatoma* or other local reduviids.

There are several real reasons to worry about this western invader if you are a conifer lover (Hedlin et al 1981, Strong et al. 2001), but biting is not one of them. In fact, if you mess with a seed bug, all you tend to get is a bad smell, produced by scent glands on the side of the thorax. The long, slender beak is adapted for delicately probing plant tissue, and is totally unsuited for plunging into human flesh. Seed Bugs might also be confused with a reduviid that enters houses in the winter, the masked hunter *Reduvius personatus* (L.). This species can bite, so check for enlarged hind legs before teasing a large bug of this sort.

The Western Conifer Seed Bug is relatively new to Maine, and has spread across the state since its discovery in 1994 (Maine Forest Service 2002). Not surprisingly, considering their name, they feed on conifer seeds, inserting their long beak to spit a digestive chemical into the lipid-rich seeds. Once the interior of a seed is digested the bug slurps up the tasty coniferous shake (Bates et al. 2000). All this is done with the skill of a prestidigitator, and after they are done, there is no trace of feeding from the outside of the seed (Schowalter and Sexton 1990). There have been several studies on the damage that this insect can inflict on conifer seed production in British Columbia (e.g. Bates et al. 2002), but it is not yet known if it will be an agricultural pest in Maine (Maine Forest Service 2002).

The most striking characteristic of the Western Conifer Seed Bug that I have noted in Maine is their ability to sneak up on a person while he or she is sitting comfortably in their own home. While someone is watching a movie the bugs might creep up to the screen, getting the best view in the house, or crawl over a person's head or body. This may result in considerable panic for a brief period, and less commonly, in internet searches followed by an anxious phone call to the health department or doctor's office about kissing bugs and Chagas disease.

Unfortunately, there is little that one can do to discourage the seed bug from entering ones house except to try to seal off entrances from the outside. The movement into houses is a natural response, and these bugs have been recorded aggregating in numbers as high as 2000 individuals (Blatt 1994), although this seems to be unusual. When the bugs sense a drop in temperature, they rush to find an attractive warm place to hide. Once inside, they are warm and active enough to wander onto our laps.

Leif Deyrup

### References

- Bates, S.L., C.G. Lait, J.H. Borden, et al. 2000. Impact of feeding by the western conifer seed bug, *Leptoglossus occidentalis* (Hemiptera: Coreidae) on the major storage reserves of mature Douglas-fir seeds. *Canadian Entomologist* 132:19-102.
- Bates, S.L., C.G. Lait, J.H. Borden and A.R. Kermod. 2002. Measuring the impact of *Leptoglossus occidentalis* (Hemiptera: Coreidae) on seed production in lodgepole pine using an antibody-based assay. *Journal of Economic Entomology* 95:770-777.
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- Hedlin, A.F., H.O. Yates, D.C. Tovar, et al.. 1981. Cone and Seed Insects of North American Conifers. Canadian Forestry Service, USDA Forest Service and Secretaria de Agricultura y Recursos Hidraulicos, Mexico. 122pp.
- Maine Forest Service. 2002. Forest and Shade Tree Insects and Disease Conditions for Maine: A Summary of the 2001 Situation. Forest Health and Monitoring Division Summery Report 17. 74pp.
- Schowalter, T.D. and J.M. Sexton. 1990. The effect of *Leptoglossus occidentalis* (Heteroptera: Coreidae) on seed development of Douglas-fir at different times of the growing season in western Oregon. *Journal of Economic Entomology* 83:1485-1486
- Strong, W.B., S.L. Bates and M.U. Stoehr. 2001. Feeding by *Leptoglossus occidentalis* Heidemann (Hemiptera: Coreidae) reduces seed set in lodgepole pine. *Canadian Entomologist* 133:857-865.

## Continued from Page 1

There are several theories that have been posed for the late occurrence in transmission of WNV or EEEV to humans, of which two have accumulated substantial evidence. The first is simple: seasons affect the virus cycle. The second deals with the behavior of the mosquitoes as vectors. These two theories are not mutually exclusive.

Mosquito borne viruses appear as a cycle in the United States. Winter is the part of the cycle when the virus is found at low levels in nature. One reason is that mosquitoes don't like the cold. Some species huddle up as adults in tight tree holes, others pass the winter as larvae in the mud of frozen marshes, and still others sit by as eggs waiting for the spring sun to melt the snow. Only the adults can harbor the disease through the winter, but even they are not actively biting.

The second reason is for the birds. Birds, the principle vertebrate reservoirs of WNV and EEEV, are also seasonal. Some birds fly south, taking the viruses with them. They also have the opportunity to become infected from the bites of southern mosquitoes. Overwintering birds that are sick either die or recover. The result is that with the mosquitoes inactive and the birds recovered, the virus is almost absent from the north. Some people in the past have suggested that the winter would be the perfect time to get rid of the virus for good, but during the winter the disease reservoirs are unavailable for control.

The next part of the cycle begins when the north tilts back to the sun and the snow begins to melt. It is unclear how many infected mosquitoes survive a normal winter. Some mosquitoes die after being infected, but others probably survive. Even if all the mosquitoes who are infected happen to die, some birds bring the virus back as they return to herald the spring.

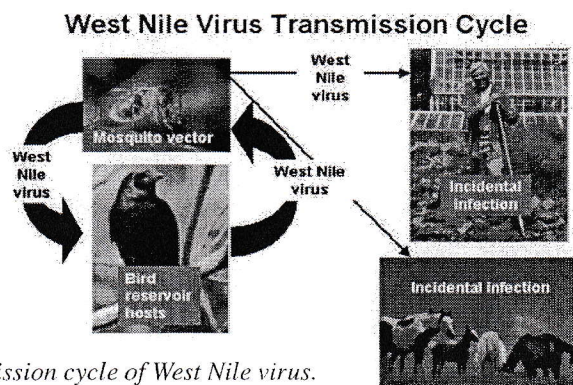
The buildup of disease in the spring and early summer is slow because the reservoir of infected insects and birds is low. Moreover, the diseases require time to incubate in both the birds and the mosquitoes. This causes a delay in transmission, so that the diseases spread slowly even under the most favorable conditions for mosquitoes. The relatively small numbers of infected birds and mosquitoes in spring and early summer has been frequently documented by sample tests for the diseases in the blood of birds and in ground-up batches of mosquitoes. It appears that transmission to humans or other mammals is a very rare occurrence, even when disease levels are high in the reservoir species. A few cases in the human population of an entire state with millions of people is likely to be called an "outbreak," but it is still an extremely rare event. This suggests that when disease levels are low, transmission is improbable.

The seasonality model does not seem to be a completely adequate explanation. For one thing, high infection rates in mosquitoes and birds are not always accompanied by any cases in humans or horses. It also appears that WNV in the U.S. has a somewhat different pattern than in Europe. What factors differ between Europe and the United States? For one thing, the two regions do not share all the same species of mosquitoes.

A new pattern of behavior was discovered when a group of researchers started looking at the behavior of a bird mosquito (*Culex pipiens*). This is the mosquito that many suspected to be the main mosquito responsible for the first U.S. WNV outbreak. They not only tested these mosquitoes for the virus, but they also tested the type of blood that they were holding in their engorged stomachs. They found that this "bird mosquito" started to bite mammals late in the season. Another mosquito, blamed for EEEV transmission, is starting to be tested as well.

In summary, seasonality and mosquito behavior may explain the pattern we see in late summer and fall human infection, both factors perhaps working in unison. There is still a great deal more to discover, but there is no reason why we can't start using the information that we have found. Seasonality is an important aspect to have in mind when looking at infection rates. The earlier that we start to see infection, the higher the risk of that virus having a high human infection rate by the end of the season. It is also something to consider when trying to control mosquito populations. We can also use the information on mosquito behavior to choose which mosquitoes to worry about, which allows us to focus our control efforts in the appropriate habitats. These factors go into making a risk assessment about a mosquito borne virus. There is undoubtedly more to learn, but with the information already available to us, we can begin to change the pattern.

Dr. Leif D. Deyrup and Heather Swanson

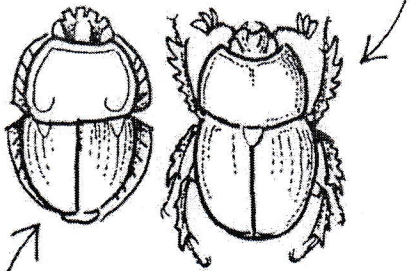


*Disease transmission cycle of West Nile virus.  
Courtesy of Centers of Disease Control and  
Prevention*

Scarab Beetle

Order: Coleoptera (the Beetles!)

Ko-lee-OP-ter-ah)

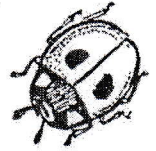


3,000 year-old scarab-shaped amulet (a charm) from ancient Egypt. It's carved from stone: blue Lapis Lazuli. Pharoah Tutankhamen had a big stone scarab as a bracelet!

Antennae (2)

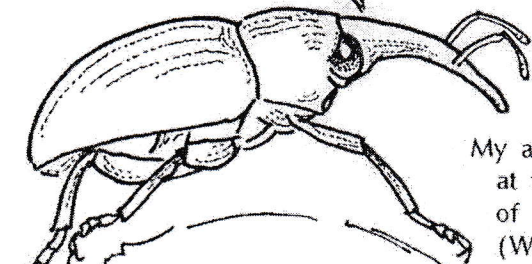
Head (Um, what else could it be??)

Thorax



Lady-Birds are beetles, too.

I'm a weevil!

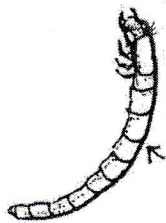
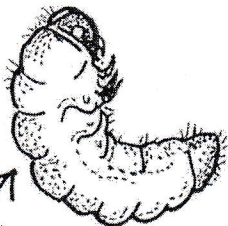


My antennae grow at the end of my snout. (Weird, huh?)

Elytra (2)

These are the hard, outer wings. They cover another set of wings underneath

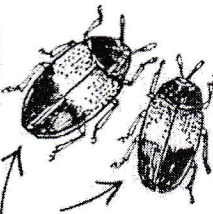
Beetle Larvae (LAR-vee) are sometimes called Grubs



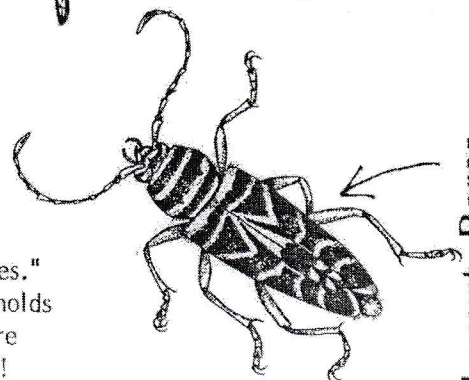
Color: brown

pale yellow

Some larvae live in rotten wood, others live in soil. Some scarab larvae develop in blobs of animal dung (Eeew!)

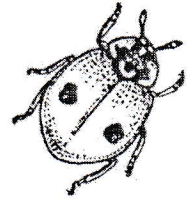


These dermestid beetles are sometimes called "rug bugs" or "larder beetles." They are common in households nearly worldwide -- they're probably in your house, too!



Locust Borer

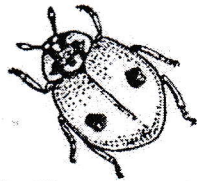
# Order: Coleoptera (Beetles)



## WORD-FINDER

Look for these words:

- Beetle
- Coleoptera
- Elytra (there's 2)
- Scarab (there's 2)
- Weevil
- Antennae (2)
- Species



A	N	T	E	N	N	A	E	O	B
S	E	E	W	O	S	Y	S	E	E
C	L	E	E	V	I	L	C	L	E
A	Y	R	E	N	E	E	A	Y	T
R	T	E	V	I	L	L	R	T	L
A	R	L	I	L	Y	T	R	R	E
B	A	A	L	S	C	A	R	A	B
S	P	E	C	I	E	S	A	L	O
C	O	L	E	O	P	T	E	R	A
N	A	N	T	E	N	N	A	E	O

## WORD SCRAMBLE:

Some beetles have very long

N E E T A N A N

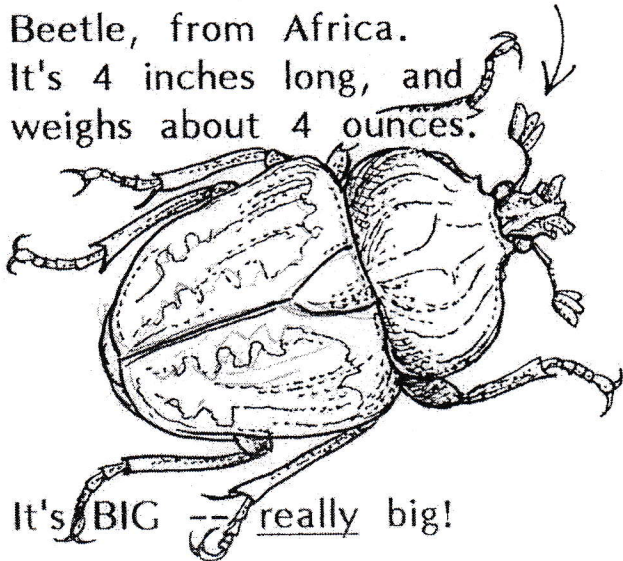
King Tutankhamen wore a bracelet with this beetle design:

C R A A B S

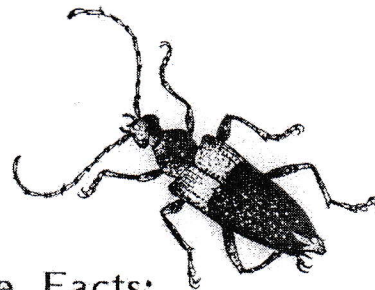
## Did You Know??

One of the largest beetles in the world is the Goliath Beetle, from Africa.

It's 4 inches long, and weighs about 4 ounces.



It's BIG -- really big!



## Beetle Facts:

There are over 300,000 species of beetles around the world.

20,000 are scarabs.

About 90 species (types) of scarabs live in the U.K., and over 1,000 in the U.S.



## Report on the Annual Meeting

Our Annual Meeting was held on September 16 at the home of Chuck and Ellen Peters in New Gloucester. Unlike the last two years, the weather cooperated providing the attendees with a sunny, warm day conducive to late-summer collecting and even allowed us to eat outdoors! Approximately 16 members were in attendance, and thanks to the great variety of entrees, no one left hungry.

The meeting began with the Treasurer's report and was followed by the election of Board Members for 2007. The Board for 2007 will be: President-Dick Dearborn; Vice President-Chuck Peters; Treasurer-Dana Michaud; Board Members-at-large-Charlene Donahue and Gail Everett. Bob Nelson was appointed to fill the vacancy left by outgoing editors Laura and Chuck Lubelczyk beginning in 2007. Bob will also continue in his role as Webmaster.

Other business included updates on the 2007 calendar (which, by the way, looks to be a truly outstanding edition...if you haven't ordered one you should!), 2006 Bug-Maine-ia, and discussion of both the 2006 Diptera Blitz and the upcoming 2007 Spider Blitz at Schoodic. Dates were set for many of next summer's field events and plans were made for a Winter Workshop on Spiders to be held at the Entomology Lab in Augusta on January 13, 2007. It seemed appropriate to have the topic of the Winter Workshop be spiders to help support the next Blitz. Jonathan Mays will be our specialist to lead the workshop. Check the note on this workshop in this issue for further details.

The meeting concluded with a discussion of a proposed MES scholarship for an entomology student, and reports of interesting field notes. Next year's annual meeting will again be held in New Gloucester on September 15. See you there!

Chuck Peters

## Spider Technician Wanted

Dr. Dan Jennings has worked for over thirty years studying the spiders of Maine. Tens of thousands of specimens have been identified by Dr. Jennings and 24,350 of those specimens representing 438 species along with their location, habitat, time of occurrence, etc. have been entered into the database program Biota. A backlog of 25,000 to 50,000 specimens still awaits entry in to the database. Dr. Jennings estimates that with the inclusion of these new specimen records, the total number of spiders documented in Maine will grow to more than 600 species.

The Maine Forest Service (MFS) and Department of Inland Fisheries & Wildlife (IF&W) have proposed supporting and facilitating the publication of the Spiders of Maine by Dr. Jennings so that this invaluable body of knowledge can be shared with the wider community and utilized to further our understanding of the environment in Maine and surrounding areas.

### Job Duties

The MFS and IF&W are seeking a qualified individual to assume the task of populating the database program Biota with spider specimen identification and location information. A working knowledge of computers is a must and experience with relational database software is preferred. If interested in this project, please contact:

Jonathan Mays, Reptile, Amphibian, & Invertebrate Group  
Dept. of Inland Fisheries & Wildlife  
Bangor, ME

Telephone: (207) 941-4475

Email: [jonathan.mays@maine.gov](mailto:jonathan.mays@maine.gov)

## 2007 Entomology Calendar

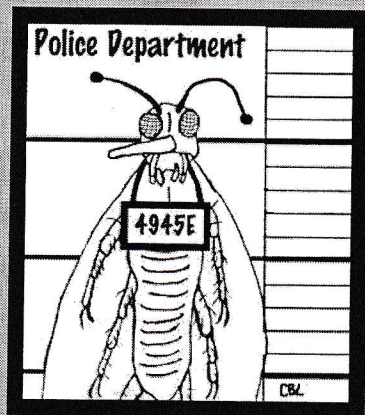
Don't forget to order your MES calendar(s) for 2007. These calendars include color photographs by members, items of interest, event dates, contact information and more. They make great Christmas gifts. To reserve your copy now send your check made out to MES and mailing information to: Richard Dearborn, 115 Spring Hill Rd, Mt. Vernon, ME 04352. Calendars are \$12 each if you pick them up or \$15 each if mailed. What a bargain for this unique item.



## REMINDER:

### DON'T FORGET TO RENEW!

Please check the year in the upper right hand corner of your mailing label. If it reads 2006, it's time to renew your membership. MES memberships run on a calendar year and if you don't renew soon, you may miss the next issue of *The Maine Entomologist*. Dues are \$10 per year, or \$18 for two years. Make checks payable to Maine Entomological Society and mail to: Mr. Dana Michaud, Treasurer, at 3 Halde Street, Waterville, ME 04901. Don't delay - renew your membership today!



## The Bug Mug Shot Common Scorpionflies or Panorpid

Order: Mecoptera. There are roughly 400 species of Mecoptera worldwide, 85 species in North America and probably 15 - 20 in Maine. Of the five North American families, four are found in Maine.

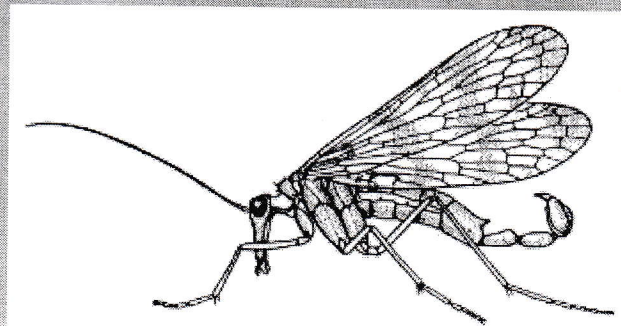
Family: Panorpidae (Common Scorpionflies or Panorpid).

These fascinating insects are neither flies nor scorpions nor do they have anything to do with these other arthropods. The name is derived solely from their somewhat fly-like appearance and the scorpion-like tail on the males. The Panorpidae is the largest family of Mecoptera in North America represented by roughly 45 species all in the genus *Panorpa*. There are 10 - 12 species of *Panorpa* in Maine.

Description: Panorpid adults are fairly easy to recognize. Most are less than 20 mm long with light reddish-brown bodies, four clear but often dark-spotted wings, and very long, almost beak-like, faces. Only the males have the characteristic scorpion-like tail containing the genitalia but having no capacity to sting. At maturity, larval panorpids are; caterpillar-like, roughly 20 mm long, greyish or yellowish white, with a brown head capsule with black eye spots and peg-like prolegs on nearly all abdominal segments. Larvae somewhat resemble small hepialid (Lepidoptera; Hepialidae) larvae which can occur in the same habitat.

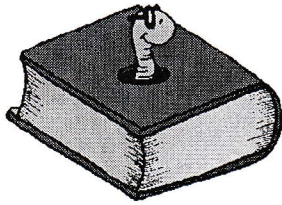
Primary Habitat: Panorpids are inhabitants of deciduous forests and brushy areas especially around bogs, streams and ponds. One of the easiest ways to collect adults is by sweeping vegetation in such areas as the adults often rest on foliage while waiting to feed or mate. Larvae occur in pit-fall traps.

Notes: Panorpid males can usually be found resting on foliage where they feed on dead or dying insects and wait for the females. Males apparently use food or saliva as bait to attract females! Once mating occurs the eggs are laid in rich organic soil or leaf litter. The caterpillars which somewhat resemble small hepialids, live in leaf litter where they feed on dead insects or other animal materials.



*A male scorpionfly (Panorpa sp.), courtesy of the USGS.*





## Book Review: The "Spider Bible"

Spider enthusiasts, professionals and amateurs, are applauding the appearance of a publication that treats identification of those non-insects on a continental scale. All that, while

updating such linked topics as phylogeny, morphology, natural history, and collecting, makes this a must addition to the spider bookshelf. My only complaint is that it wasn't on the scene 15 or so years ago, when Dan Jennings talked me into becoming a collector of his favorite critters.

Spiders of North America: An Identification Manual, spiral bound, 377 + v pages, is published by the American Arachnological Society. The front matter lists 33 authors, though only Darrell Ubick, Pierre Paquin, Paula E. Cushing, and the late Vincent D. Roth (who began work on this project over three decades ago) are listed on the cover. The book includes 1400 illustrations, many provided by the young Canadian illustrator, Nadine Duperre.

An obstacle to bringing more people into spider identification (sometimes tough enough as it is) has been the lack of up-to-date publications on keys and classification. The authors of the new manual could not have hoped to take researchers to each of the 3700-plus North American species, but they give us a good starting point. The manual covers more than 550 genera in 68 families, with a chapter devoted to each family, written by one or more authorities on the group. The authors supply diagnostic characters, natural history, taxonomic history, even a common name for the family if one exists. From there, an exhaustive bibliography points to species' IDs.

Unlike most such manuals, Spiders Of N.A. offers some good armchair browsing. H. Don Cameron of the University of Michigan writes wittily, sometimes acerbically, on the etymology of spider genus names. Of a prestigious French araneologist's attempts in this field, Cameron comments: "Simon in his youth, and when his command of Greek and Latin was particularly insecure, was the first to attempt an etymology." Cameron brusquely shows that what Simon says in this regard is way off base. I was laughing out loud, until I turned a few more pages to a pronunciation guide. There I discovered that for ten years I have been mispronouncing the genus name of an invasive sheet-web spider (*Linyphia triangularis*) for which I had collected the first North American records. (It's "lin-I-fee-uh.").

The manual is available for \$46.00 online at [www.americanarachnology.org](http://www.americanarachnology.org) or ordered for slightly more from Bioquip or V.F. Thomas Co. ((207) 266-5748, email [info@vfthomas.com](mailto:info@vfthomas.com)).

Frank Graham, Jr.

## Book Review: Spiders and Their Kin

This little gem is great for twice the price and four times the size! Small and full of drawings does not always mean amateurish. The Golden Guide (Golden Press/ Western Publ. Co.) series excels in securing top specialists to do their handy little references and the spider guide is no exception. Authors Herbert W. and Lorna R. Levi and illustrator Nicholas Strekalovsky have done a super job to provide the basics of spider identification for those who want to have some idea how arachnids relate without getting engulfed in the detail of higher end works. Don't be afraid to haul out this little 160 page pocket guide when confronting a friendly (or not so friendly) spider which you wish to know more about. You may be surprised to find it there! Many of us have this guide as our first line reference.

Dick Dearborn

## Woolly Bear Winter Weather Forecast

The fuzzy red and black-banded caterpillars of the Isabella Tiger Moth, *Pyrrharctia isabella* (Lepidoptera: Arctiidae) again provided a great deal of entertainment for school children at Bug Maine-ia at the Maine State Museum in Augusta in September and the resultant winter weather forecast continues to stimulate discussion especially in view of our rather bizarre winters. Woolly bears were locally plentiful statewide in September. As the caterpillars do not truly hibernate, they can activate at any time when conditions turn mild. Our tenth seasonal survey in Kennebec County suggests that our upcoming winter will be a little harsher than normal. We'll see! As the story goes when the red band makes up less than one third of the color when compared to the black (less than 4.33 segments on average out of the total of 13) the upcoming winter will be harsher. Our measurement for the winter of 2006 - 2007 was 4.28 red segments on average indicating a harsher winter than normal. Keep in mind however that this is based on folklore. It's fun though. The yellowish adult moths emerge in June and July.

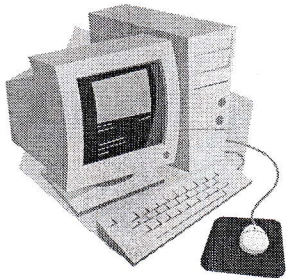
Dick Dearborn



## New Editor for 2007

Starting in February 2007, Laura and Chuck Lubelczyk will be passing the torch (and keyboard) to Bob Nelson, who will assume the position of newsletter editor for the MES.

Bob will need all the submissions he can get for his first issue, so please help him out! Send articles, artwork, and field notes to him by February 1st at [beetlebob2003@yahoo.com](mailto:beetlebob2003@yahoo.com) or by regular mail at Bob Nelson, Dept. of Geology, Colby College, 5804 Mayflower Hill, Waterville, ME. 04901.



## 2007 MES Events and Field Trips

January 13. Winter Workshop on Spiders. More information on this event can be found in this issue of the newsletter.

May 19. MES Workshop/Field Day, Delta Institute of Natural History, Bowdoin. Contact: Tom Vining (207) 266-5748.

June 9. MES Field Day, Deering Pond, Sanford. Contact: Chuck Lubelczyk (207) 324-2849 or Gail Everett (207) 745-2840.

June 23. MES Field Day. Steuben area. Contact: Richard Hildreth

July 21-22. Spider Bioblitz @ Schoodic Point. Contact: Jim McKenna (207) 288-1328

August 18. MES Field Day, Rock Ridge, Clinton. Contact: Bob Nelson (207) 859-5904

September 15. MES Annual Meeting, New Gloucester. Contact: Chuck Peters (207) 926-4806

September (Date to be announced). Bug Maine-ia, Maine State Museum, Augusta. Contact: Marion Smith (207) 287-2301



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**The Maine Entomologist is published quarterly by the Maine Entomological Society. Dues are \$10 per year or \$18 for two years. Checks should be made out to M.E.S. and sent to Mr. Dana Michaud, Treasurer, at 3 Halde Street, Waterville, ME 04901. Dues are paid through the year printed on the mailing label.**