The Maine Entomologist

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

Volume 9, Number 3, August 2005

From the President

It seems like only last week I was planting the garden and getting ready for our Beetle Blitz and now I'm planting fall crops and thinking about our Annual Meeting and Bug Maine-ia! Collecting this season has been relatively poor for many groups of insects with a cold and wet May, June and early July followed by hot, humid weather! Butterflies and bees emerged late and in much reduced numbers. Gail Everett had to cancel her annual butterfly count in June due to scarcity of butterflies. Our Beetle Blitz at Schoodic in July, however, was a rousing success not only in collection records but in terms of great weather and enthusiastic participants. Don Chandler and Chuck Peters have provided us with excellent accounts of these beetle-hunting efforts. And MES members turned out in force for what turned out to be our first event of the year. There were 26 MES individuals/couples turning out for this event! I ld like to extend my appreciation to all of you who showed up in support of MES. Our regular July event the weekend after the Blitz drew more than I expected since it had to be changed from Kennebunk Plains to New Gloucester due to a conflict. Chuck Peters was kind enough to host this event on relatively short notice. We even had a visitor from Indiana, Ron King, who was a very knowlegeable collector specializing in butterflies. Although collecting was generally poor, Ron got a few nice records for him including an Appalachian Brown (*Satyrodes appalachia*)!

We now have three events left for the year so mark these down on your calendars and try and join us in some fun-filled times. On Saturday August 20th, we have a great chance to help the newlyweds, Bob and Nettie Nelson, acquire species records for their new estate in Clinton. Lets see if we can find LOTS of new things that Bob hasn't found yet! Our Annual Meeting this year will again be at Chuck Peter's in New Gloucester on Saturday, September 17th. Join us for collecting, eating and the all important decision-making such as selecting times and places for our 2006 field events/workshops. I hope that Don Chandler and perhaps Dave Manski can join us to us an update on the Beetle Blitz. The last but certainly not the least of our remaining events is Bug Maine-ia to be held at the State Museum in Augusta on Wednesday, September 28th. This is a weekday as it attracts schoolchildren from across the State to hear and see a variety of individuals, clubs and state agencies present their views on insects. Last year 1267 visitors passed by the exhibits. At least 15 MES members have been asked to have presentations this year. It's free!

Thanks to all who submitted photos for our 2006 MES calendar. Yes, we are going to do it again but our success in this effort requires member support. We hope that all members order at least one of these unique calendars and think of giving copies to friends and families for Christmas. While they are a little more expensive than some, we are dealing with a small run (less than 100) and we keep the cost as low as we can. Lets see if we can break the 100 mark this year.

Guess that's it for now. Try and join us at one or more of our events, order a calendar and write an item for our newsletter. We all have some special incidents involving insects that other members would like to hear about. Remember – the MES is your club.

-Dick Dearborn

Inside This Issue:

Editors Wanted

The Maine Entomologist needs new editors for 2006. Anyone interested in participating is urged to contact Dick Dearborn at (207) 293-2288 or *modear@prexar.com* or current editors Chuck and Laura Lubelczyk at *naturbuf@gwi.net* for more information.

Schoodic Beetle Blitz 2005

The first Coleoptera Blitz for Acadia National Park was a rousing success thanks to the enthusiastic support of its participants. This joint project between the Maine Entomological Society, National Park Service and the Maine Forest Service formally started at 3 pm Saturday, July 16, and ended at 3 pm the following Sunday. However, those participants coming from out-of-state and many Maine participants arrived on Friday, and enjoyed the beautiful weather we had during the entire blitz. There were 51 "coleopterists" registered and an additional 6 participating children, plus a number of drop-ins and volunteers that did not formally register. The long-distance winner was Bob Davidson (Carnegie Museum, Pittsburgh, PA), with second places going to Henry and Anne Howden, and Francois Genier (Canadian Museum of Nature, Ottawa), plus Linda Sevier (New York), and honorable mentions going to Ross and Joyce Bell (University of Vermont, Burlington also representing the Vermont Entomological Society), and Jim McClarin (Nashua, NH).

The Blitz planning committee did an outstanding job of working to eliminate the problems of the preceding Lepidoptera Blitz, and largely did so. They are here recognized for their efforts: Andrei Alyokhin (UMO), Dick Dearborn (MES), Charlene Donahue (MFS, Augusta), Christy Finlayson (UMO), Cassie Gibbs (MES), Lynn Havsall (COA), David Manski (ANP), and Molly Schauffler (MES). Lynn Havsall coordinated logistics, and was instrumental in the production of the "Beetles for Beginners" handout. I would particularly like to recognize the efforts of Andrei Alyokhin (Andrei was right behind me, so I remember him well during our consultations) during the blitz, for recognizing the need for an insect mounter/labeler, a position well filled by Dana Michaud, Dave Bourque, Molly Schauffler, and Charlene Donahue. Dana also facilitated the process by grouping many species by morphotype. The mounter/labeler job was left off the "List of Beetle Blitz jobs (DRAFT)" and turned out to be absolutely critical to ensure the speedy delivery of beetles to the specialists so that they could focus on identifications.

Many different collecting techniques were utilized and the various habitats explored to maximize the species catch. Passive traps (relying on insect movement into the traps), such as flight-intercept traps, barrier pitfall traps, malaise traps, yellow pan traps, and Lindgren funnel traps were placed at several sites in the park. A crowd pleaser (when upwind) was Jim McClarin's "super pooper" trap, employing a battery powered fan to disperse the odors of the enclosed dung - very attractive to certain groups of beetles. Active collecting (the collector expends the energy in collecting the insects) focused on the traditional beating and sweeping techniques, together with the always effective technique of "just looking around and under things" in various delimited habitats. UV lights were run at several sites. Richard Hildreth's mercury vapor light combined with a fermented bait painted onto a line of trees attracted quite a number of collectors late into the night and also brought in some beetles and a lot of nice moths as well.

After 24 hours of collecting, the next 24 hours were devoted to identification. Unlike the situation for Lepidoptera, where there are a number of good field guides or books available that permit rapid identification of many species in most families, the only regional book for beetles is the two volume set by Downie and Arnett (1996, The Beetles of Northeastern North America). This set has few figures, is out-of-print, and ranges from OK (but out-of-date) to poor for particular families. Otherwise, you must consult all of the revisions that have accumulated for the genera in each family, visit an insect collection, or rely on the visual memories of the participating specialists. Despite these limitations, 121 species in 24 families were identified as the blitz ended, with an additional 160 now sorted to morphospecies in 13 different families - a projected blitz total of 280 species in 37 families. I am currently identifying these specimens, with members of some families being sent to specialists This is an outstanding total, considering that while the weather was beautiful, beetle activity was actually quite suppressed and populations seemed to be low for many groups.

A representative of each species will be housed with the Procter Collection at the William Otis Sawtelle Collections and Research Center at the Headquarters of Acadia National Park in Bar Harbor and the remainder stored at the Maine Forest Service Insect and Disease Lab in Augusta. Now that the reference collection is being established, future blitzes will be even more efficient as the participants can now rely on these identified specimens when pondering the mystery species that the next blitz will find. This blitz also spurred the production of the "Beetles in Maine" species list by Charlene Donahue (an unpublished update of an earlier list), which is based on all of the most current information available. A total of 2243 species, with 1143 known from Acadia National Park, are represented in this list. While premature to comment on the number of new records produced by the blitz, *Chrysolina quadrigemina* (Chrysomelidae, the St. Johnswort Beetle, initially introduced for control of this weed in the Pacific Northwest) and *Anthicus melancholicus* (Anthicidae) are both new records for Acadia National Park and for Maine. There will be more.

-Don Chandler

Join Us for a Collecting Trip

Saturday, August 20, 2005 - Clinton (Kennebec County). Collect, picnic, and enjoy the late summer air at the site for Bob Nettie Nelson's new home at Rock Ridge, on the Battle Ridge Road, in Clinton. An open tall-grass and wildflower meadow and hardwood forests dominate the site, though the forests are "wet" and include abundant elm, ash, red maple, and even tamarack and basswood - as well as grey, white and yellow birch, fir, beech, hophornbeam and rare bur oak. A couple of small "peeper ponds" were excavated this past summer and already are providing habitat for aquatics - Coleoptera, Diptera, Hemiptera and Odonata. Brush thickets (particularly of *Cornus stolonifera*) will have their own faunas as well. Piles of hardwood and pine logs should yield a variety of beetles, spiders and other critters, and Bob will drop a few fresh ones just before the weekend. Partial clearing of the forest should also produce an abundance of diverse faunas, and old massive stone walls yield their own peculiar faunas as well. From 10:00 am to 3:00 pm, but stay longer if you'd like. Bring a lunch and we'll supply drinks and watermelon for dessert! For directions or more information contact Bob at *beetlebob2003@yahoo.com* or 872-3247. Please let Bob know if you're coming so he can plan accordingly!

An Invitation to the 2005 MES Annual Meeting

Mark your calendar for the MES Annual meeting to be held on Saturday September 17, 2005 at Chuck and Ellen Peters' home in New Gloucester. (Now, if you had to actually mark your calendar, it must mean that you do not have an "official" MES calendar since they are printed with the dates of important MES events! Be sure to order one for next year...the Calendar Committee is currently in the process of producing another outstanding calendar for 2006 based on insect photos submitted by some of our members. Look for an order form in this issue of The Maine Entomologist - they make great gifts.

The meeting will begin with an informal get-together at 10:00 am and there will be time for those interested in doing some collecting, observing, or simply socializing. Lunch will be served at noon and we will be providing barbecued chicken (Dick Dearborn's famous Cornell recipe) and plates/utensils, please bring your own drinks and a side dish or dessert to share. The meeting will begin at 1:00 and will include election of officers for 2006, planning of field trips and workshops, discussion of this year's accomplishments including the Coleoptera Blitz at Schoodic, as well as any new business. An agenda will be provided. Please contact Chuck Peters at (207) 926-4806 or *chuckp@securespeed.net* with the number attending in your group, or for directions.

Young beetle blitz enthusiasts. Photo by Dave Mansky.

SAVE THE DATE!

Bug Maine-ia

Coming to the Maine State Museum
Augusta, Maine

Wednesday, September 28, 2005
9AM-3PM

Plan to join entomologists, forensic scientists, anglers, foresters, artists, sculptors and more on this exciting day to explore all aspects of insects' lives and our relationships with them.

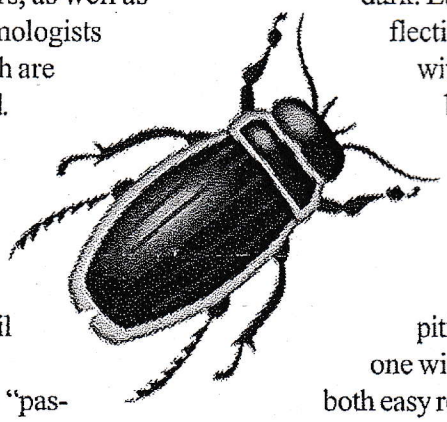
For more information call 207-287-2301

If you would like to be an exhibitor or help us make the day a success by volunteering please contact Jon Bailey or Joanna Torow at the above number

A Lesson in Insect Sampling at Beetle Blitz

Because insects' habits and habitats vary widely, different collecting techniques must be utilized to account for their great diversity. The Beetle Blitz at Schoodic this past July provided an excellent opportunity to observe a wide variety of insect-collecting equipment and techniques in action. In a 24-hour period at Schoodic, professional and amateur entomologists collected 121 species of Coleoptera that were identified on site, with perhaps another 150 plus species which are currently in the process of identification. In this article I will discuss some of the different collecting techniques used to capture this snapshot of Schoodic's insect diversity.

When one thinks of collecting insects, the first type of equipment that comes to mind is probably the insect net. Many different types of insect nets were in use; sweep nets made of a heavy, durable canvas to beat the bushes and other vegetation for unsuspecting bugs, aerial nets of a finer mesh material to lessen wind resistance for those fast fliers, as well as aquatic dip nets. I also noticed many entomologists using folding nets sold by Bioquip, which are perfect for tucking into a pocket until needed. Another related collection device that proved to be quite effective was the beating sheet, a rectangle of white canvas or nylon material supported by a folding frame that is held under vegetation while the collector "beats" the plant until insects drop to the sheet for collection.



Some of the nets employed were of the "passive" type, in which the net is set in a permanent position and for the insect to fly into. The flight intercept trap falls into this category. The flight intercept trap is a rectangular mesh net strung between two uprights (trees are perfect) into which insects fly and then are collected in a series of pans at the bottom of the net, thus collecting those that drop after encountering the barrier. The pans contain a saturated solution of salt water to preserve the bugs and a bit of detergent to break the surface tension and cause the insects to drown.

Lights were also employed to attract night-flying beetles at a variety of locations around Schoodic peninsular. Some were battery operated light traps with ultraviolet lights to attract bugs which drop into a funnel and then into a killing agent. Others were mercury vapor lamps against a white sheet requiring the collector to pick off the insects of interest. Actually, this type of light set-up allows for very careful sampling of the insects attracted. Only those species desired are collected while the rest are free to go, unlike an insect trap where any insect blundering in is killed. One such light was operated by Richard Hildreth at a remote location at Schoodic. Not only is Richard's van equipped as a mobile insect-collecting laboratory o[illegible] inside, but when parked the vehicle is transformed into a night-flying bug's worst nightmare! A white tarp is unfurled to drape over one side of the vehicle and a mercury vapor lamp is mounted on the rack near the top of the tarp. A small generator starts up, chairs are placed around to allow the collectors a comfortable place to watch for interesting beetles, a cooler of cold drinks emerges from the van, and a warm summer night of collecting and camaraderie ensues.

Another of Richard's interesting innovations happened to be one of the simplest I observed. He had made a "bait line" of trees painted with a fermenting concoction of beer and sugar to attract insects interested in such offerings. Since many of the insects attracted to these baits are nocturnal, it is important to be able to locate the painted trees in the dark. Each baited tree had a small rectangle of reflective tape (found in hardware stores) attached with a pushpin, allowing instant recognition of bait trees with a flashlight. An elegant solution.

Pitfall traps are often simple but effective designs for capturing ground-dwelling insects. Generally, a h[illegible]s dug in the ground into which is fit a plastic cup for insects to fall into. Often, pitfall traps include two nesting cups, the inner one with the lip on the top cut off. This allows for both easy removal of insects and quick replacement of the inner cup for more catches. A funnel can be fashioned out of the top of a plastic soda bottle and inverted in the inner cup, preventing insects from climbing out. The funnel allows use of the trap without a killing agent (usually alcohol or propylene glycol) so unwanted specimens can be released. If the traps cannot be checked frequently, a killing (and preserving) agent is necessary. Often a board elevated by stones or sticks at the corners is placed over the trap to keep out water and discourage mice and other small animals. The "yellow pan trap" is simply a shallow yellow bowl set into the ground to attract insects preferring the color yellow. A solution of salt water and detergent both kills and preserves the specimens. Other variations on the pitfall trap include the use of barriers to direct insect movement in the general direction of the trap, or the use of bait to lure insects that feed on specific foods. Jim McClarin of New Hampshire utilized two types of baited pitfall traps. His "carrion beetle trap" consisted of a pitfall [illegible] which was placed a small "raft" of sticks holding a variety of baits such as dead squirrels, mice, etc. On this occasion he

used a combination of store-bought liver, pork chops, and beef. To prevent non-insect scavengers from ravaging the bait, a rectangular wire storage container (sold at home improvement stores for the storage of household goods) was inverted over the bait and weighted with a large rock. Another of Jim's innovations was his dung beetle trap. An electronics fan powered by an external battery was mounted on the side of large Rubbermaid type storage bin that had a rubber gasket added to its tight-fitting top. The fan directs a steady stream of air over two trays inside the bin holding a large amount of "dung." At the bottom of the bin is a screened outlet hole to direct the concentrated dung aroma over a pitfall trap. When I asked Jim what type of dung he was using, he explained that omnivore dung is most effective in attracting a wide variety of dung-loving species. I will leave the omnivore in question for you to figure out!

I have included a summary of the approximate numbers of different species collected by different techniques in Table 1, based on data that was available at the end of the Blitz. Some of the collection data was not specific enough to accurately indicate exactly which method was used, for example "beating and sweeping" were often reported together. Keep in mind that the "number of different species" column represents only the different species collected for that particular method; many of the different methods collected the same species. If you would like further information on any of the collection methods please let me know.

-Chuck Peters

Collection Method	# of Different Spp. Collected
Sweep Net/Beating Sheet	65
Hand Collection	28
Light Sheet	21
Light Trap	14
Dip Net	13
Funnel Trap	10
Marsh Treading	10
Berlese Funnel	8
Yellow Pan Trap	8
Dung Beetle Trap	7
Pitfall Trap	6
Flight Intercept Trap	5
Carrion Beetle Trap	5
Moss Dehydrator	2
Aspirator	2
Ramp Trap	1
Aerial Net	1

Table 1. Numbers of different species collected by method, based on preliminary data available from Schoodic Coleoptera Blitz, July 16-17, 2005.

How are the Monarchs Doing?

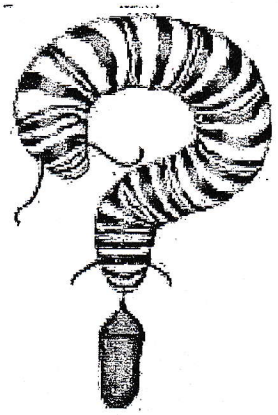


Illustration by DD Tyler.

We are hearing from members concerns about monarch populations heading into the season for their southward migration. This may be especially important in both numbers and timing due to projections for an active hurricane season! The folks at Monarch Watch (*www.monarchwatch.org*) predict much higher numbers on the migration than last year, though not quite up to average. I have found them to be very accurate in the past, and I have seen enough monarchs this year (a handful) to think they are probably correct again. I highly recommend their website, which provides a monthly "Status of the Population" newsletter and excellent filed reports and analysis. I would like to hear of your assessment of the 2005 Maine field season and of your sightings of southward migrations. You may reach me at (207) 743-2840 or *capriolee@yahoo.com*.

-Gail Everett

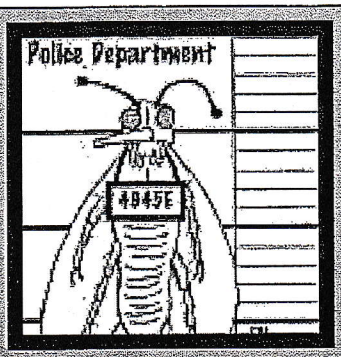
Woolly Bear Watch

For those of you who plan to check red-banded woolly bear caterpillars to see what they have to say about the weather for this upcoming winter, get ready! Although they are active year round, it is easier to find the ideal 20 caterpillars after they begin moving across roads and trails from mid-September to mid-October. I will again be doing my Mt. Vernon area survey for the 9th year!

Banded Woolly Bear caterpillars, *Pyrrharctia isabella*, have 13 segments with tufts of setae. Normal conditions, according to folklore, are for two thirds with black tufts and one third with red tufts. To get your forecast you simply count the number of red-tufted segments, including whole or half segments, on 20 caterpillars and take an average. An average winter is indicated if the average is 4.33. Higher than this indicates a milder winter while lower than 4.33 indicates a more severe winter. Don't forget - everything is relative and you might want to keep records of high and low temperature and snowfall/rainfall just as a check!

Have fun!

-Dick Dearborn



The Bug Mug Shot: The Great Black Wasp

Order: Hymenoptera. It's a big and very diverse order, the fourth largest with an estimated 115,000 plus species. Here you will find: ants, bees, gall wasps, yellow jackets, paper-wasps, parasitic and fossorial wasps of all kinds, sawflies, velvet ants, woodwasps and more.

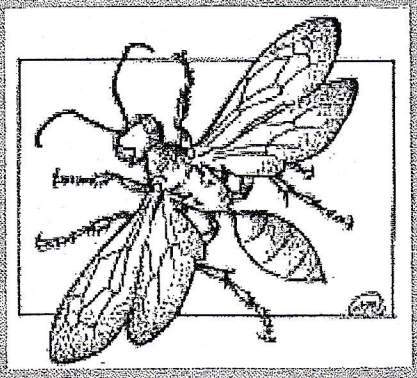
Family: Sphecidae. This family includes thread-waisted wasps such as the mud – daubers, *Ammophila*, the Great Golden Digger, *Sphex ichneumoneus*, and many others. The Great Black Wasp, *Sphex pensylvanicus*, is a prominent member of this family. The Sphecidae does not include *Polistes* paper-wasps, or the nasty hive-making yellow jackets.

Description: *Sphex pensylvanicus* is a big black wasp. Females are about one and one-eighth inches long, but look even larger because of their long legs, and large dark wings. In good light, the wings have a violet iridescence.

Life History: Adults of this fossorial (ground-digging) species emerge from their underground nurseries in the summer and can be seen feeding at wild carrot and goldenrod flowers in July and August. Females hunt for and paralyze grasshoppers and bush-katydids, which they bring to their nest burrow to store in a newly dug nursery, for the larvae to feed on. The larvae remain in the nursery over the winter. The moms never get to see their kids, since adults die at the end of the summer. Any specimens you catch on flowers at the end of the season may have wing edges that look worn. I've seen one nest in Arundel, only yards from a small pond. I watched the mom make 15 trips down the burrow to excavate and drag out dirt. She took a break of several seconds to preen (clean-up), and then went back in to drag out 11 more loads of dirt. The tumulus or volcano-like mound of excavated dirt was about 3 inches across.

Notes: I have females specimens caught on July 16, 1999, August 10, 1994, and August 26 2001, probably while they were out hunting. Around 1747, American naturalist John Bartram sent a report about the "Great Black Wasp of Pennsylvania" from the colonies to the Royal Society of London. Bartram also corresponded with Linnaeus. For a great book about the personal lives of wasps, read Wasp Farm, by Howard Evans, 1963, Comstock/Cornell Univ. Press.

-Monica Russo



Sphex pensylvanicus.
Illustration by Monica Russo.

Search for Mysterious Red-tipped Bumblebees

This is an undescribed bumblebee, possibly a color variant of *Bombus sandersoni*. Specimens exist that were reared in captivity, but there are no specimens from the wild. However, this or something like it has been reported from northern Maine and central Vermont. I hope that collectors will look for this bee. It would be new to the literature, and I would like to confirm its existence for my book on bees.

Recognition:

A bumblebee (fat, fuzzy).

First two segments of abdomen yellow.

Middle of abdomen black.

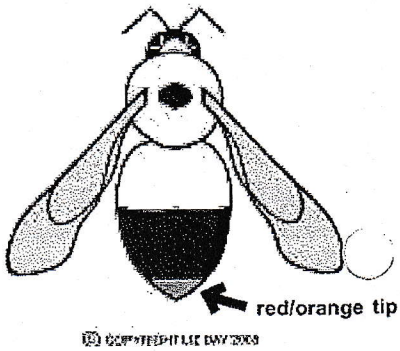
Last two segments red/orange. (There may be lighter-colored variants, pale orange.)

The only red is on the tip of the tail - nowhere else.

Workers ~ 8-12 mm long. Queens ~ 15-17 mm long.

If you see one, please collect it and contact me at (317) 924-0008 or *beebuzz@kiva.net*. (Fresh specimens can also be used for DNA analysis.) To collect bumblebees, keep their hair dry, because if it gets wet or matted, it's difficult to restore. Don't drop them in alcohol - use a killing jar or a freezer. Separate the dead bee from other specimens, and enclose it loosely in a tissue, so condensation doesn't dampen it while you're in the field. Thank you!

-Liz Day



Philanthus Wasps In Maine

Philanthus (Hymenoptera: Sphecidae; Philanthinae) wasps sometimes called bee-wolves because the adult wasps specialize in hunting bees. Envenomed and paralyzed bees are carried to subterranean nurseries as larder for the wasp's growing larvae. The domesticated honey-bee is not known to be the prey of any *Philanthus* species discussed in this article. Hymenoptera other than bees have also been recorded as prey. Although the *Philanthus* larvae are "carnivores", the adults feed at flowers; indeed the word *Philanthus* translated from the Greek would be equivalent to "flower-lover."

These interesting wasps are much smaller than the hymenoptera likely to be encountered near homes, such as paper-wasps (*Polistes* spp.) or white-faced hornets (*Dolichovespula maculata*), and are not aggressive as are the yellow-jackets (*Vespula* spp.). In fact, *Philanthus* wasps can be observed quite closely while they dig and provision their burrows – you can just sit near the entrance holes and watch! Entrance holes are initially surrounded by a mound or tumulus of excavated dirt. Some species nest in small groups or aggregations in open sandy areas. Nest burrows are dug and provisioned by the females; males live in nearby burrows, and may patrol the territory, and some are known to scent-mark the vegetation. *Philanthus* wasps have wide, flat faces with yellow or whitish-yellow markings, which are somewhat variable. Eyes are slightly notched, appearing somewhat kidney-shaped when the head is viewed directly face-on (see illustration).

In 1956, Sam Ristich recorded the activities of parasitic flies associated with *Philanthus solivagus* in Maine. Evans and O'Neill (1988) reported on the nests *of Philanthus bilunatus* observed at Togue Pond, Baxter State Park, in 1972. In 1994, I caught three *Philanthus* wasps at different sites in southern Maine, and all had differing facial and abdominal patterns. All were small, about 11mm in length. These three specimens were sent to Professor H. E. Evans at Colorado State University, a North American authority on this genus. Although the container of specimens was protected on all sides with inches of soft foam padding and appropriately labeled, the U.S. Postal Service did not miss the opportunity to crush in one side of the outer box; the wasps, however, survived intact! Professor Evans' determinations were as follows:

Philanthus lepidus, female: Collected at the Biddeford Municipal Airport on August 28, along the main runway. This is an open, sandy, sunny area. The runway is flanked by low-bush blueberry, clover, composites, milkweed, and even rose-pogonia orchids. This species is reported to nest in large aggregations (Krombein and Hurd, 1979).

Philanthus politus, female: Captured on August 6 at the Former Legro's Agway Garden Center in Arundel. The main building and greenhouses are surrounded with sandy, gravelly dirt, and there is sand and loose dirt elsewhere. There is an abundance of clover, goldenrod, wild carrot, asters, and brambles.

Philanthus ventilabris, female: Taken at the Arundel Town Dump on July 20. This was a landfill dump site at the time, and unfortunately, has seen significant environmental changes due to "landscaping." An abundance of clover and wild carrot was available. One wonders if it may be important to document large nesting sites of this genus in Maine, since the open sandy areas they choose for nesting may suffer from human interference such as parking lot construction, or the surfacing of "unimproved" roads.

Many thanks and sincere appreciation go to Professor Evans for his species determinations, to Sam Ristich for his contagious enthusiasm, and to Dick Dearborn and Don Ouellette at the Insect & Disease Lab in Augusta, for their encouragement in my observations.

-Monica Russo

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Krombein, K. and Hurd, P. Jr., 1979. Catalog of Hymenoptera in America North of Mexico, Vol. 2; Smithsonian Institution, Wash., D. C.

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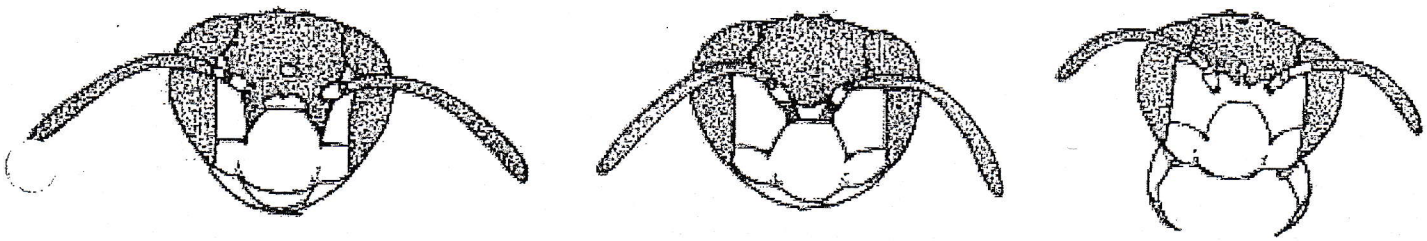

From left to right: *Philanthus lepidus, P. politus, and P. ventilabris.* Illustrations by Monica Russo.

Insects Will Soon Be Preparing for Winter

SEPTEMBER - The **Monarch butterflies** begin heading south this month, flying straight through to winter quarters. Meanwhile other insects start seeking winter quarters locally. Several of our fuzzy **tussock caterpillars** are striking out irritating, literally, as they ripple about seeking pupation sites. The more handler-friendly red and black-banded **woollybear caterpillars** can often be seen crossing roads where they can be caught (be careful now!) and observed to give out their winter weather forecast. **Preying mantids** and other late season orthopterans can still be found. By late September most wasp and bumblebee colonies have broken down and fertilized queens have entered the forest litter to hibernate. Vacant nests will not be reused but be careful when taking them down to see that they are indeed vacant! You will have to beat the skunks on low or ground nests as these provide a welcome treat as skunks clean out leftover, and often living, wasps and bees, and their brood and food stores. While most odonate activity has declined by now, look for abundant flight still by **spread-winged damselflies** (Lestidae) near slow waters, and by **darners** (Aeshnidae) in evening swarms.

OCTOBER- With the arrival of brilliant fall colors, black and white **buck moths** cruise fens and marshy glades on warm sunny afternoons, and an occasional fiery colored **American copper** and **clouded sulphurs** adorn purple fall asters. Look too for a final showing by the hardy **red meadowhawk (*Sympetrum* spp.) dragonflies** in fields on sunny days. By now many insects are heading for winter quarters, often buildings, in droves such as the infamous **Multicolored Asian Lady Beetles, boxelder bugs, smaller milkweed bugs and western conifer seed bugs.** Those that get in may reappear during the winter and again in the spring as they leave. Adult **deer ticks** will also peak around mid-month and may be active for several weeks afterward so check yourselves after ventures into the woods and brushy areas.

NOVEMBER - Those frail tan moths now active on warmer days and nights may be males of the **fall cankerworm** and **Bruce spanworm**. The wingless females wait patiently on tree trunks nearby often keeping company with **dusky firefly beetles!**

DECEMBER - The last of the hardy **cankerworm moths** take wing early in the month and are replaced by the hardier **sallows** and **pinions** (Noctuidae: Cuculliinae) which may be seen off and on until spring during warm spells.

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