

The Maine Entomologist

A FORUM FOR STUDENTS, PROFESSIONALS & AMATEURS IN THE PINE

Volume 8, Number 3, September 2004



From the President

Humid characterizes the summer so far but most of us generally agree that it has not been hot and certainly not very sunny. Then again, it's Maine don't forget! But this has been the first summer in the last ten or so with no beetle nights (hot-80s plus and muggy with no wind)! In spite of the weather MES members managed to snag some very unusual insect species and new state records this season. I hope to see notes of some of these findings in future issues.

A great schedule was planned for 2004 and it is now winding down. Thanks so much to all of you who helped to make it a success from the alternate May trip to Tomah Stream to the Schoodic Lepidoptera blitz in June and our joint meeting with the Vermont Entomological Society in July. By the time you read this we will have completed our next to the last field event by travelling along the famed Narraguagus River in eastern Maine in search of more unusual hexapods.

One important event should be on your schedules for 2004. The event is the second annual "Bug Maine-ia" for school children at the Maine State Museum in Augusta on September 23. For more information see the announcement in this issue.

I have been trying to touch base with members when and where I can but for those of you whom I have not talked to I would urge you to step out in support of your club, the MES! These are busy times and as always there are a few members who carry a disproportionate amount of the load. I would like to thank all of our officers, our webmaster, committee members, and those who led or participated in field events for their support. We would have neither a club nor a newsletter without them. However, we would like to see or hear from even more of you. Something as simple as a note for our newsletter would show much appreciated support. And don't forget that all of our events are suitable for all ages and levels of expertise. They are a learning experience as well as fun. We would love to see you at our winter workshop. And don't forget to think of ordering several copies of our 2005 MES Calendar as Christmas gifts for those who have just about everything.

Hope to see or hear from you real soon.

-Dick Dearborn

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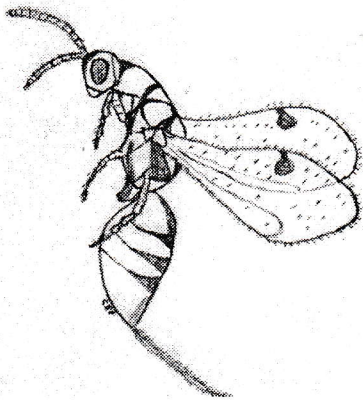
Lepidoptera Bioblitz in Acadia National Park

As I climbed and then stood on top of Schoodic Head several things became obvious to me. First, my son Michael's eyes for spotting insects certainly are now better than mine. He quickly picked out three or four different day-flying inch-worm moths as we made the climb. Having him along on a beautiful June day was a wonderful addition to our effort to document the butterfly and moth species of the Schoodic District of Acadia National Park. Second, this was a gorgeous view of the rocky Maine coast. Places like Acadia National Park renew my motivation as a field biologist and remind me of the reasons I love learning about the living world. Finally, I was reminded how gratifying it is to work with such an enthusiastic group of volunteers. Efforts such as this survey are not possible without many dedicated and knowledgeable people. Our two-day effort on June 12-14, 2004 definitely had plenty of both.

Acadia National Park is unique in having an excellent baseline of information about its biological diversity. The Proctor collection* housed at the park documents over 1400 species of Lepidoptera from the park. These records are largely from the 1930s and 1940s and focus on the diversity of Mt. Desert

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Megastigmus aculeatus in Maine



Megastigmus aculeatus.
Drawing by Chuck Peters.

As a high school Biology teacher I occasionally have an opportunity to share my students' enthusiasm and excitement in learning something new about the natural world. In early February I was sitting at my desk during my free period when one of my students came excitedly into my room. "Mr. Peters, look at these bugs!" She had a zip-lock bag of small rose hips, which she had picked in November to use for art projects, that was now full of small insects about the size of fruit flies. We took them to a microscope and were treated to a view of tiny brown and yellow wasps with long upwardly curved ovipositors and what we both agreed were very "cute" faces. They had all emerged ahead of their normal schedule when the rose hips were brought indoors and had chewed small, neat holes in the individual hips that had nourished them.

Had we found something new? A quick look at the references I have brought me to the Family Torymidae, some members of which happen to be seedeaters. The real answer came though when I investigated the rose hips themselves, which turned out to be from *Rosa multiflora* Thunbergh. Brought to the U.S. from Japan in the early 1900's to be used as erosion control, natural fencing, and as rootstock for ornamental roses, the multiflora rose has become an important invasive species in most areas of the country. It is extremely prolific and grows in dense thickets that exclude other native plants. I did an Internet search for "*Rosa multiflora*" and "Torymidae" and got many hits describing the relationship between the rose and the rose seed chalcid, *Megastigmus aculeatus*. All the descriptions, diagrams, and photos of *M. aculeatus* matched the insect we had found. This identification was also confirmed by Mike Mazurkiewicz and Dick Folsom. In fact we may have found something new, as there is no record of *M. aculeatus* in the state collection, although it has been recorded in New Hampshire.

M. aculeatus has been reported to be an important biological control of the multiflora rose. Female wasps oviposit in the flowers and the larvae develop inside the seed, which they eat from the inside out, thus reducing the reproductive capacity of the rose. The larvae overwinter in the seeds and pupation and emergence is timed to coincide with petal fall in early summer.

Dispersal studies have indicated that the wasp has poor abilities to fly to newly established rose plantings and that the primary means for dispersal of infested seeds is via birds (Shaffer 1987). Based on subsequent collection of rose hips by my students in about 20 areas of the town of Gorham, Maine the wasp seems to be firmly established in that town. In addition, Dick Dearborn reported them emerging from rose hips he collected this winter in Mt. Vernon while Monica Russo found them in Wells.

The discovery of this wasp has been an incredible learning experience for my students. They now know that they can contribute to the body of scientific knowledge and even find species new to Maine. Through this wasp they have researched the impact of invasive species in Maine and the complex relationships involved with biological controls. They also raised many unanswered questions such as what is the range of this wasp in Maine? Why did we find only a very few males? What is the percentage of emergence from various rose bushes? What affect has temperature on emergence, and when do they naturally emerge in Gorham? Now they are designing and carrying out experiments to try to answer some of these questions. When you get right down to it, that's as real as Science gets!

-Chuck Peters

Shaffer, D.F. 1987. A study of the biocontrol of *Rosa multiflora* Thunb. utilizing the rose-seed chalcid wasp *Megastigmus aculeatus* var. *nigroflavus* Hoffmeyer (Hymenoptera: Torymidae) in West Virginia. M.S. Thesis, West Virginia Univ., Morgantown. 72pp.

A Plea from Your Editors

This year, the August issue of the Maine Entomologist was markedly late and a bit shorter than normal. In fact, it almost did not appear at all. But for the last minute contribution of a couple of members, this issue of the newsletter had very few submissions to run on. Luckily, we were able to beg and wheedle these precious pieces out of some dedicated members.

Contributions from any members of the MES are always (Did we stress always?) welcome and we heartily appreciate anything from artwork to anecdotes that folks would like to send in for publication. It helps to spice the pot when we have different pieces from different authors and we feel this gives the newsletter a more rounded feel.

So please, if you have a spare afternoon or a break from work and you want to purge the urge to write, think of us. If your doodle becomes a neo-Rembrandt, think of us. As our President Dick Dearborn is fond of saying, "The MES is your club." This newsletter is only as interesting as you make it.

Thanks! Chuck and Laura

Beetle Encounters of the Forest-Clearing Kind

My fiancée Nettie and I purchased some 40 acres of Maine woods this past spring, a plot of land in Clinton with a 2.5-acre open meadow between the roadside stone wall and another parallel stone wall some 250 feet in. But behind this second stone wall, all is forest. Of course, that's the area where we want to build our new home next year!

Since we are trying to clear ground for the house, a barn, and at least the beginnings of a large pasture, we're cutting a lot of trees and my collecting has been virtually nonexistent this year. But I've seen a lot of things I hadn't seen before as far as beetles are concerned, and thought I'd share some of the experience. To begin with, the meadow used to be a heavily cultivated corn field, according to Nettie's 87-year-old Uncle Jim, who dropped by one day to tell us as well that he used to have cows grazing in a pasture where we are now facing 50-foot-tall hardwood forest! (Ironically, we're only ½ mile up the road from her grandparents' family farm, where Nettie's Uncle Jim and mother grew up.) As I was clearing out some of the dense 15-foot-tall thickets of red ozier dogwood that have overgrown the stone wall, the rich odor of well-rotted cow manure wafted up from the wet, black earth beneath. Within hours, the ground surface was swarming with dozens of the carrion beetle *Oiceoptoma novaboracensis*, though there was no dead animal matter that I could determine, even after digging down at the site. This flattish, wide beetle is about ½ inch long, and is a dusky dark gray to black, with pink to orange margins to the thorax, and is found mainly in forested areas. I've found it on occasion in my compost pile as well.

I've also run into a surprising number of the introduced European ground beetle *Carabus nemoralis* in the woods, which are quite damp (the soils are very clayey, and hold water well). This is the big, black ground beetle, an inch or so long and with violet or, less commonly, greenish margins to the thorax and elytra, that's common in many gardens in the spring as we're cleaning up. In Europe, the native habitat for this earth-worm predator is precisely the setting where we've been finding it - moist to wet forests (there, most commonly along streams). From what I've gathered, the species is far more common here in the U. S., than it is back in Europe, probably due to lack of competition here.

The smaller ground beetle *Platynus decentis*, a shiny black species typically 1/2" to 5/8" long, is one of our most common Maine forest carabids, known from at least 119 Maine townships (and probably found in every township in which there are any trees). In the spring, it is very common beneath loose bark on fallen logs, which may be where it overwinters. I've also taken it in late fall and early spring in leaf litter samples in

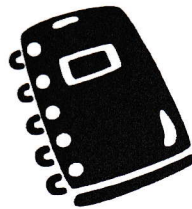
a Berlese funnel. But as we've been felling a lot of yellow birch this summer, I've seen scores of this same species swiftly running up and down the trunks of the logs, checking in all the little cracks and crevices in the bark. According to Dick Dearborn, Andre Larochelle (one of the Grand Old Carabidologists) has noted that this species goes from ground-dweller to tree-climber around mid- to late June.

The cutting of the trees has also produced a plethora of very interesting beetles, though mainly earlier in the season. Poplar (popple) logs in particular brought in enormous numbers of buprestids of multiple species, and the many half-dead ash trees we felled also were crawling with scores of red-headed ash borers, a 5/8"-long long-legged beautiful Cerambycid that ran very quickly over their surfaces. The influx of tiny beetles (scolytids and others) has also been phenomenal. And some of the fungi on rotting logs I've moved from the forest floor have had scores of medium-sized (8-10 mm long) multicolored staphylinids in them, probably of the genus *Lordithon*; members of this fungus-associated genus can be identified to species by the color pattern on the elytra.

Evening work has also been done surrounded by scores of dragonflies of at least 4 to 5 different species, whose efforts in keeping our work area mosquito-free are very much appreciated!

I don't know quite what to expect as we continue working into the fall, particularly on those warm, balmy days, but it'll be fun to see what does turn up! And in a year or two, we're hoping to be able to host an MES collecting day at our new home on Rock Ridge!

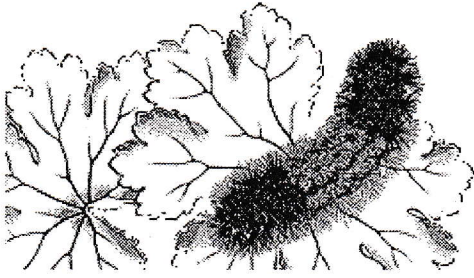
-Bob Nelson



Field Notes

I have been working since spring clearing a piece of land in Clinton to build a home next year, and on the afternoon of September 1st, as the sun was dropping lower in the sky, the mosquitos were coming out. I'd been swatting the ones that occasionally landed on me, but as I raised my hand to swat one on the side of my neck, I felt and heard a low-pitched buzzing and stopped. One of the many dragonflies that were zipping around had taken care of the problem for me! This isn't the first time this has happened, but it's always nice to be "protected" by our predatory guardians like this!

-Bob Nelson



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 8th 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 precipitation just as a check!

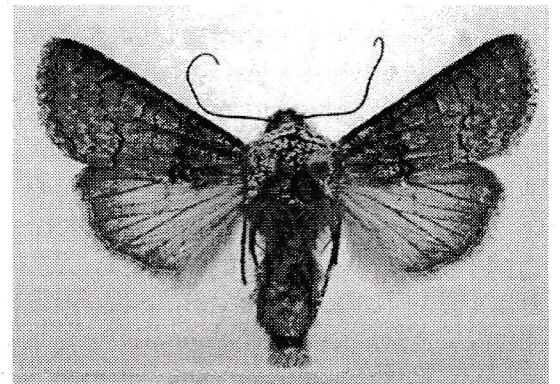
Have fun!

-Dick Dearborn



Island. For both of those reasons, our current survey provided valuable information for the park. It was the beginning of an effort to reexamine the diversity of Lepidoptera in the park, several decades after the initial survey. It also provided a snapshot (albeit at only one time of year) of the diversity of the more recently established Schoodic District in the park.

A survey such as this one is an intensive effort and always results in interesting findings. Several teams spent the first afternoon and most of the next day searching for butterflies and day-flying moths in the various habitats on the peninsula. Multiple traps and light sheets were put out at night with samples from these traps coming into the sorting room the next morning. An army of volunteers cataloged, sorted and recorded the data from these samples. Cool weather kept the volume of the samples down, but with many teams looking and many habitats sampled a respectable 146 species were identified, with several others awaiting identification. Of these species 128 were moths (mostly Geometridae and Noctuidae) and 18 butterflies and skippers. One particularly interesting find was the noctuid moth *Lepipolys perscripta* (see photo). We recorded what may be the most northerly records for this species, with the rest of its distribution stretching down the east coast, across the gulf coast and into the plains states. The occurrence of this species in the Acadia area may be an indication of its spread northward as it was not recorded by the Proctor survey.



Lepipolys perscripta.
Photo by Brian Scholtens.

Our survey originated with the Maine Entomological Society, inspired partly by similar efforts in Great Smoky Mountains National Park. The Society had previously done an ant survey at Acadia and was interested in continuing work in the park. After participating in my microlepidoptera class at Humboldt Field Research Institute in Steuben, Maine the previous summer, Charlene Donahue suggested that Lepidoptera be the focus of this year's trip, and asked if I would be willing to help out with the effort. Dick Dearborn ably organized the effort and recruited volunteers. Reggie Webster headed up the efforts of the butterfly survey and provided invaluable help with moths. The Maine Forest Service provided equipment for the effort, and Dave Manski and the staff at Acadia National Park provided support, encouragement, and excellent food and facilities. Obviously, such an effort takes many people, not the least of whom are all the volunteers. All who participated made this a great success, and set the stage for similar efforts at other times of the year or with other groups of insects.

-Brian Scholtens

* The William Procter collection is housed in the William Otis Sawtelle Collections and Research Center at the Headquarters of Acadia National Park in Bar Harbor, ME. For more information on this collection, contact Brooke Childrey at (207) 288-5463.

Field Trip to Tomah Stream

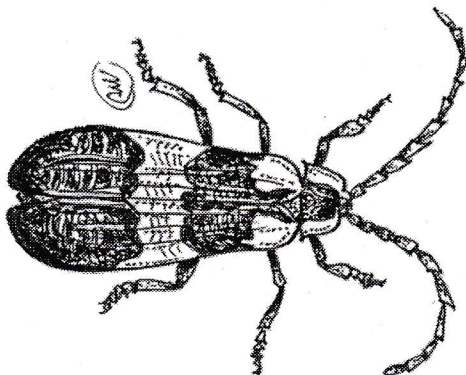
On May 22, ten people visited Tomah Stream and enjoyed seeing the sedge meadow environment of the stream and a chance to watch larvae of the predaceous mayfly, *Siphonisca aerodromia*, in action. *S. aerodromia*, known as the Tomah Mayfly, is on Maine's Endangered Species List as Threatened and, in spite of intensive surveys, is known from only sixteen sites in northern areas of Maine. Outside of Maine, it has been collected from one site in New York and it probably occurs in Quebec and Newfoundland. Larvae of this mayfly are agile swimmers and capture and feed on other species of mayfly larvae. The weather was pleasant, the black flies restrained and the site interesting. The mayflies were abundant and put on a lively exhibition of swimming skills. We were even checked out by the local game warden and found harmless.

-Cassie Gibbs

Net-Winged Beetles in Maine

On July 22, 2004, during a stretch of that hot and humid weather which I loathe, I took a stroll around the cabin and saw a black and orange new-tinged beetle on a tree trunk. My partner Kevin took several photos of it because it was interesting and because the newspaper he works for would probably run a shot. I looked up the beetle in my set of Dillon and Dillon (*A Manual of Common Beetles of Eastern North America*) and found it was probably *Calopteron reticulatum*, a member of the Family Lycidae.

Unfortunately, when I looked on the Forest Insect Survey of Maine list for the Order Coleoptera, this species wasn't listed! But a very similar orange and black species, *Calopteron terminale*, collected in 1950 was listed instead. Over the



Calopteron reticulatum.
Drawing by Monica Russo.

course of the next few days, I noticed there was a second beetle near the cabin, on an eastern arborvitae shrub *Thuja occidentalis*. And then another. By July 27, there were five specimens all on a row of three arborvitae shrubs, and all clearly visible at eye level. They seemed to just rest on the evergreen foliage, and moved only several inches over the course of the days. They did not seem to eat. When I went out at night with a flashlight, they were still there. However, there was always one that was perched at the tiptop of the smallest shrub, just above the level of my head. I wondered if that individual was releasing pheromones that kept the others in the immediate area. Could this be similar to a lek that some male birds create: where a single male performs over the course of several days while some females hang around to see if he is worth the wait?

We sent Kevin's photo to Dick Dearborn, who confirmed the identification, and I was able to collect two specimens. I saw the last beetle on July 30th. Dick thinks this may be a first record of this species for Maine. Has anyone else seen these attractive beetles? They are soft-bodied, with rather flamboyant antennae, so you might mistake them for moths. Please let Dick know.

-Monica Russo

SAVE THE DATE!

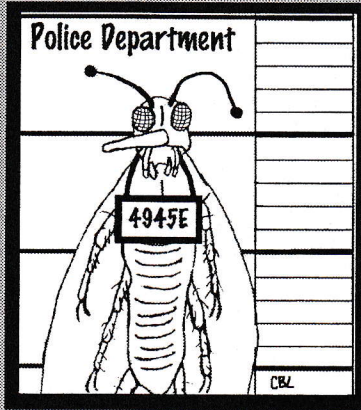
Bug Maine-ia

**Coming to the Maine State Museum
Augusta, Maine**

**Thursday, September 23, 2004
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



The Bug Mug Shot: Eastern Subterranean Termite

Order: Isoptera (Termites). This very ancient group of cellulose-eating social insects is primarily tropical and in some areas of the tropics colonies are huge and their mounds often bizarre. In some areas termites and termite mounds are so abundant that they become the basis of complex ecosystems. Colonies are made up of a caste system with each caste having a distinct role. Termites are sometimes erroneously called "white ants" but they are actually closest in evolution to cockroaches.

There are roughly 2000 species of termites worldwide of which around 40 occur in North America.

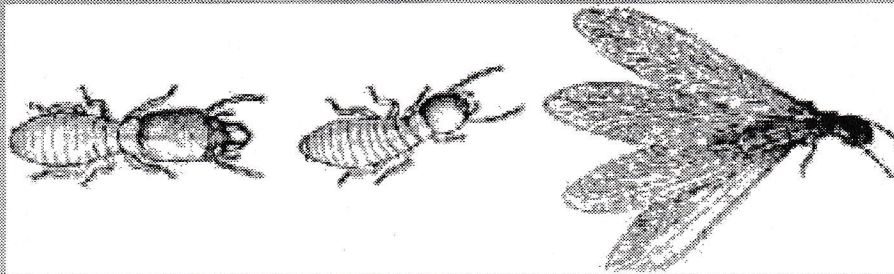
Family: Rhinotermitidae (Subterranean or Damp-wood Termites). These termites build their colonies in wood that is on or under the ground. Some such as our featured species can feed in wooden structures above ground so long as they can reach the ground without becoming exposed to dry air. There are nine species in this family in North America including the only termite species found in the northeast.

Species: *Reticulitermes flavipes* (Kollar). The Eastern Subterranean Termite. This species occurs throughout eastern North America west to the Great Plains and from the Gulf of Mexico to southern Ontario and Maine. In Maine infestations have been found very locally as far north as Bethel and east to Augusta. Most infestations occur in Cumberland and York counties.

Description and Life History: Each colony is perennial and is made up of thousands of individuals and up to seven castes depending on which classification system is used and which time of year. Eggs are laid by the primary or supplemental reproductives (queens). Once these eggs hatch all of the larvae or nymphs look like miniature workers. Development to maturity takes from four months to a year. All stages within the nest, from larvae to mature workers, are similar in appearance, white and soft-bodied. Unlike ants, with which they are sometimes confused, termites do not have a constricted waist and only leave the protection of the colony when the brownish-black winged (four wings) adults swarm out to breed and establish new colonies. Swarming may occur at any time throughout the summer and even more than once. New colonies do not seem to become commonly established in Maine in spite of large swarms. The most distinctive individuals in the colony are the primary and supplementary reproductives and the soldiers.

Food: All species of wood from dead and decaying trees and tree parts to lumber.

Notes: Infested wood must be kept moist and in contact with the ground although workers do construct earthen tubes from the colony in the soil to moist wood to extend their feeding range. Termites engage in a unique exchange called trophallaxis where anal liquids are passed from one individual to another to insure that all have the necessary intestinal microorganisms to digest cellulose.



Research Notes

F. Johansson & F. Suhling. (2004). Behaviour and growth of dragonfly larvae along a permanent to temporary water habitat gradient. *Ecological Entomology* 29 (2), 196-202.

Freshwaters form a gradient from small temporary waters to large permanent waters. Identifying and examining traits that restrict the distribution of species along this gradient are crucial to the understanding of community structure in these habitats. Using dragonfly larvae species, differences in traits important for growth and survival were studied. One species pair was from the most temporary part of the water permanence gradient and the other species pair from an intermediate part of the gradient. As predicted, activity, capture rate, and growth rate were significantly greater in the two temporary water species. Contrary to the prediction made in the work reported here, species differences in microhabitat selection were not related to the species' habitat origin. Cannibalism did not differ between species. The results lend support to the hypothesis that selection has favoured certain combinations of trait values and that these traits are important for a successful life in temporary and permanent waters.

R. L. Koch, M. A. Carrillo, R. C. Venette, C. A. Cannon, and W. D. Hutchison. (2004). Cold Hardiness of the Multicolored Asian Lady Beetle (Coleoptera: Coccinellidae). *Environmental Entomology* 33(4), 815–822.

A classical biological control agent, *Harmonia axyridis* (Pallas), is having both beneficial and detrimental impacts in North America. The objective of this study was to evaluate the cold hardiness of *H. axyridis* in North America. Supercooling points and survival at subzero temperatures of field-collected and insectary-reared *H. axyridis* were examined. Mean supercooling points of *H. axyridis* adults from Minnesota and Georgia were significantly lower during winter months than summer months. The mortality of *H. axyridis* increased significantly after individuals were exposed to temperatures below the mean supercooling point of the population. Supercooling point was a good predictor of cold hardiness. However, the cold hardiness of *H. axyridis* appears to be a poor predictor of its northern distribution.

Note: The Soap Box is designed to allow MES members to express their opinions and viewpoints on topics related to entomology. The views expressed in this column are those of the author and do not necessarily reflect those of the Maine Entomological Society. Publication of submitted entries is at the discretion of the editors and MES board.



Is Natural Science Verboten?

On July 25, 2004, the *New York Times* ran a five-column article about naturalist Harry Zirlin, a co-author of Audubon Field Guides. He was collecting beetles at a woodlot in Scarsdale, N. Y., grubbing around in the leaves while using a knife to pry up bark.

A concerned citizen, perhaps thinking heroically, called the police to report Zirlin's 'suspicious' activity. Squad cars (note the plural!) soon arrived. The police made Zirlin lie on the ground while they held a gun to his head, and then handcuffed him. Its amazing that the man did not have a heart attack! I've also read recently about a bird watcher being reported to the police because he was using a spotting scope, but this beetle collecting incident takes the cake. Fortunately, Zirlin is also a lawyer. But most of us aren't.

On August 10th, the *Portland Press Herald* reported a similar overreaction. Someone saw a box lying in the woods in Standish. It had either wires or strings on it, and someone called the police. They, in turn, brought in the Maine State Bomb Squad, who detonated it. The box was a spent weather monitor, a radiosonde that relays data about wind, temperature, and air pressure. Science data that you and I hear about every single day. Of course the upshot is, if the box had contained something hazardous, the explosion would have aerosolized the contents and spread them around. The public seems not to have much common sense, and the police seem to be overreacting.

So here we are, any of us, on our hands and knees in the woods and fields, carrying little vials with chemicals, and strange books with Latin in them. Maybe we've even left a field bag with our supplies in it unattended while we go retrieve something from our car. Are we dangerous? Will this lead to reporting to the local police, so that we know what we are doing?

The demonic authoritative controls in Europe of the 1930's and 1940's should not be allowed to take root here. The public needs to know that insect collecting or birdwatching are normal outdoor activities. We need some extroverted outreach, public education, publicity, visibility, and press coverage of this issue. How can we do this most effectively? And I wonder if we could provide a flag of solidarity for Mr. Zirlin, so his community, and all others, will recognize that natural history studies are desirable and necessary for a healthy future on this planet.

-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 but 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.

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 fallow and pinions (Noctuidae: Cuculliinae) which may be seen off and on until spring during warm spells.

The Maine Entomologist is published quarterly by the Maine Entomological Society. Dues are \$10 per year or \$15 for two years. Checks should be made out to M.E.S. and sent to Mrs. Edie King, Treasurer, at 7 Salem Street, Waterville, ME 04901. Dues are paid through the year printed on the mailing label.



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