

Wisconsin Entomological Society Newsletter

Volume 31, Number 3

October 2004



WHERE ARE THE BUGS?

by Phil Pellitteri

It has been a very quiet bug year in Wisconsin! Going into the year I was concerned about drought stress, wood borers on oaks, pines, and the potential invasion of the Emerald Ash borer from Michigan. And then everything changed in mid May with the heavy rains. Overall, it was great for the plants (aside from leaf diseases) but it stressed out the critters big time. As the summer progressed, I have received a number of calls from people asking where are the butterflies?

To me the big news of the year was what happened to the Gypsy Moth? This was a perfect year for an outbreak of the fungus disease *Entomophaga matralga*. When egg hatch started I received calls of worms crawling over buildings and tree trunks, but when the worms got to 3rd and 4th instars the calls stopped. Tree care people would reported dead worms on tree trunks, and areas that were not sprayed did not get the level of defoliation we would expect. There was also evidence of NPV virus killing larvae. We will have a better picture when the moth trap catches are all in, but the early numbers support a large population reduction.

I did receive a nice digital photo of a Black Witch Moth from Verona, Wisconsin. There were a number of reports in other states of this huge Central American migrant. It is a cutworm moth that can blow up here

from its home in Central America. To see the image go to http://www.entomology.wisc.edu/diaglab/04hllite/07_14.html

The new kid on the block is a type of Flea Weevil (*Rhynchaenus* sp.) Samples started coming in July from the southeast part of the state on hybrid or Siberian Elms. Leaves were riddled with small holes and a small jumping beetle was found on the twigs. It was not hard identifying the critter to genus, but the animal did not fit anything we had in our collection or in the ID keys. As of now, we have heard it is not a North American species and is most likely from Asia. This group of weevils overwinters as adults. It has larvae that are leaf miners and only goes through one generation per year. There have also been reports from the northern part of Illinois. I have seen samples from Racine, Waukesha and Kenosha counties.

It has been a bad year for ground nesting Yellow Jackets. The heavy rains prevented queens from starting nests and the cold weather has slowed colony development. Dr Jeanne, in our department, has had a devil of a time finding German Yellow Jacket nests to use in a research project. I did have a lot of calls on the large Cicada Killer Wasps being active in southern Wisconsin. They are the largest wasp I see in the state and seem to do well after mild winters. When I first started in the lab, I thought you had

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to go to Indiana to find them. We will be seeing our version of the 17-year Cicada (brood XIII) in 2007.

I have seen strange Eriophyid Mite Galls on *Viburnum*, and both
Please see, **BUGS**, page 9

The Wisconsin Entomological Society Newsletter is published three times a year, at irregular intervals. It is provided to encourage and facilitate the exchange of information by the membership, and to keep the members informed of the activities of the organization. Members are strongly encouraged to contribute items for inclusion in the newsletter. Please send all news items, notes, new or interesting insect records, season summaries, and research requests to the editor:

Janice Stiefel, 2125 Grove Road, Bailey's Harbor, WI 54202, (920) 839-9796, e-mail: jstiefel@itol.com

NOTE: Please report any address changes to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562, e-mail: ferge@chorus.net

LETTER TO THE EDITOR...

Ever since the dawn of civilization people have been hunting animals and gathering natural objects for purposes other than food—religious, aesthetical, scientific and others. Many of these activities survived for millennia and came to be known as hunting, fishing or collecting.

Every year millions of people in the United States exercise their undeniable right to hunt, and tens of millions go fishing. These activities are perfectly legal on most Federal, State and other public lands, subject to regulations, fees, bag limits etc. But if you're an insect collector and think you can enjoy your hobby like millions are enjoying theirs, you're up for a nasty surprise. Just try to unfold your net in a State Park and you're at the mercy of local park rangers. Times are gone when enthusiasts ventured into the forests and marshes and discovered and named hundreds of thousands of

invertebrate species. Numbering just a few thousand and lacking powerful lobby, insect fans are increasingly demonized by the public and viewed as a culprit for a declining diversity of species around the country. Yet the same public happily buys houses in new subdivisions, thus participating in activity that is a real reason behind the demise of many animals and plants—development. Having tons of money behind them, developers are turning the countryside and forests into parking lots and lawns, occasionally paying meager fines for "incidental take" of protected species when they wipe out entire ecosystems. But those looking for a villain responsible for the purge are looking in the wrong direction.

Most people aren't even realizing that the average collector keeps fewer specimens in a season than one bird eats in a week. There are no known occasions of local population decline due to over-collecting, except where commercial operations were involved. But illegal animal trade is a menace across the board, whether it involves shiny insects, tiger pelts or parrots wrapped in a cloth and stuffed in a suitcase. It's vastly different from a guy with a net running up and down the hill trying to catch that elusive skipper. Honest insect collectors should not be held responsible for misdeeds of few greedy traders and unconcerned buyers, just like law-abiding hunters aren't responsible for the near extinction of North American Bison or slaughter of the Passenger Pigeon and Dodo.

Most State and Federal park and land rules don't even mention insect collecting as being legal or illegal. Some have policies against removal of any natural objects, and that's the way insect possession is treated, even in the absence of clear written rules. Yet, as I mentioned, it doesn't apply to fishing or hunting, which is the clearest example of discrimination. I think it's time for insect collecting to become legal and regulated like any other "hunting-gathering" activity, with clear guidelines and easy to understand "dos" and "don'ts."

—Andrew Khitsun, Madison, Wisconsin

WES Annual Meeting

November 20, 2004

The Wisconsin Entomological Society's Annual Meeting will be held on Saturday, November 20th at Russell Labs on the UW-Madison campus (map and directions are on page 10).

AGENDA

General Meeting

1:00 to 4:00 P.M.

Presentations and Insect Identification

Annual Photo Salon

Bring five of your favorite slides for this popular event or send digital photos to Megan Hyslop at mjhyslop@students.wisc.edu

Dear WES Members,

I can't believe it's already that time of year again; soon the flurries will be upon us. I have one question; where are all the butterflies? I have raised around twenty Monarchs, but seldom saw a Black Swallowtail. Overall it has been disappointing, at least in Dane county, for butterfly numbers and diversity.

Aside from raising caterpillars this summer, I also worked on my capstone experience in order to graduate. I have been sweeping alfalfa fields at a local dairy operation looking for the edge effect. Hopefully, I'll be able to give an impromptu presentation on my project at our fall meeting. Speaking of our upcoming meeting, this year we will be accepting digital photos as well as slides and prints for our photo salon. Please feel free to submit your pictures of any insects. Don't be shy!

Just like last year, we will have snacks and drinks for all to enjoy. I'll do my best to make some cut out cookies. I hope I see everyone there this November. If you can't stay for the whole thing, feel free to stop by to snag a few cookies or a drink. Hope to see you there!

—Megan Hyslop, President

MYSTERY INSECT

Can you identify it?

A migratory species. Forewing orange with 4 bands of yellow spots outlined in black, wingspan $\frac{7}{8}$ in. Send order, family and scientific name to the editor. Individuals with the correct answer will be announced in the next issue of *The Wisconsin Entomological Society Newsletter*.



Photo: Carroll Rudy, 9/14/04
Town of Brothertown, Calumet County

Water Veneer Moth (*Acentria ephemerella*), of Lepidoptera Pyralidae, is almost entirely a submersed aquatic moth. Under one centimeter long, the male adults have small white wings and briefly fly during mating, lasting usually only one day. The females have rudimentary wings, but never fly. Instead, they float to the surface of the lake or pond for the one day, where they bob on the waves, until they attract a mate and are fertilized. Then each female wiggle-swims down to an aquatic plant bed and lays a few hundred eggs in neat rows along the stems of submersed plants.

The newly hatched larvae eat their way into the plant stem and



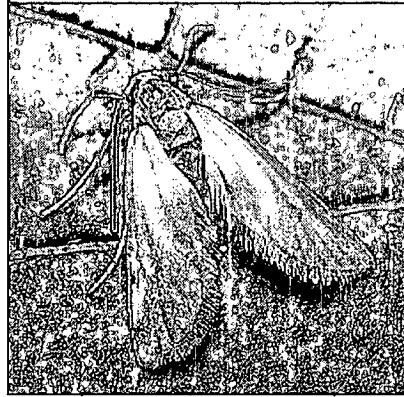
Water Veneer Moth eggs
Photo Robert L. Johnson
Cornell University Website

then head upward, continuing to munch their way with strong mandibles to the apical meristem. They stay inside their watery stem tubes or build a shelter of leaflets which they bind onto the plant stems. Each larva is greenish translucent, and has a green-filled intestine visible as an interior streak. The head has two eye regions with simple ocelli. Larvae pass through four or five instar stages and become about a centimeter long.

These underwater caterpillars spin a cocoon to pupate, just as many terrestrial moth caterpillars do. Some larvae cut off the plant's stem tip and place it lower along the stem so they can anchor their cocoon between the two. The larvae spin heavy cocoons, enclosing air

The Water Veneer Moth, An Aquatic Caterpillar

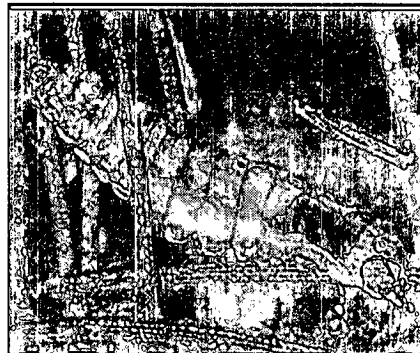
by Linda Curtis



Adult Water Veneer Moth
(*Acentria ephemerella*)
Photo: Charles Baker
UK Website

within. Then, the transformation begins. Shed of caterpillar skin, the cream-colored pupae shows marks of future wings and adult eyes. The first brood emerges in June. After mating, the eggs are laid near the end of summer, and it is that generation that overwinter in diapause, to become the next years first generation.

Of evolutionary interest is that a small number of the caterpillars are winged females with functional eggs. Of environmental interest is that the preferred food of the Water Veneer Moth is the "superweed" Eurasian Milfoil, a nuisance weed in our Midwest lakes. The Water Veneer larvae also eat our native submersed plants such as Coontail (*Ceratophyllum demersum*), the



Water Veneer Moth larva
Photo Robert L. Johnson
Cornell University Website

Elodeas (*Elodea canadensis*) and presumably *E. nutallii*, as well, and Richardson's Pondweed (*Potamogeton richardsonii*).

The Water Veneer Moth is not native, and was noticed first in Montreal in 1927.

Populations of this species are now in lakes and canals in the Midwest, and currently on their way to a lake near you. The spread from Canada and New York across the Midwest will likely occur from "hitch-hiking" on boat trailers within the stems of clinging water milfoil cuttings. Researchers hope this moth may become a safe biological control method for reducing Eurasian Water-Milfoil (*Myriophyllum spicatum*) infestations, although they are not yet known to be commercially available, as is the Milfoil Weevil.

Linda is a retired biology instructor and aquatic botanist from the College of Lake County in Gray's Lake, IL. She received her undergraduate degree in 1962 from Wisconsin State College, Stevens Point, and Masters in Botany from UW-Milwaukee in 1974. She is the author of *Aquatic Plants of Northeastern Illinois*, 1998.



Eurasian Water-Milfoil

<http://www.ecy.wa.gov/programs/wq/plants/wcws/milfoil.html>

ATTENTION!

Wisconsin
Entomological Society
dues notices for 2005
will be mailed to
members in December.

Imagine yourself no bigger than a grain of rice, small and helpless, surrounded by hungry birds, spiders, ants, predatory wasps, and other fearsome creatures, and you are on the menu. You have a hundred brothers and sisters, and if luck prevails, maybe one or two of you will live long enough to grow up. Either you are in a bad horror movie, or you are a caterpillar.

Caterpillars are soft-bodied helpless creatures that appear to have no defenses and are mouth-watering morsels on the critter food chain. What's a poor caterpillar to do? There are several approaches to self-defense if you are a caterpillar. You can look unappetizing. Maybe no one is interested in eating a dead stick, green leaf, or a bird dropping. What self-respecting bird would go for those? Many caterpillars wear elaborate disguises. A stink-bomb approach works for some. Swallowtail butterfly larvae protrude bright orange "horns" with a vile odor in the enemy's face. Yuck! Poisonous spines are especially effective. Several species of caterpillars can deliver painful stings. And who wants to eat a mouthful of hair? Big fuzzy caterpillars such as Woolly Bears are not relished by birds. You could even build a tent to live in. Tent caterpillars and webworms find this is effective protection, except from birds who are willing to rip the tent open to get the goodies inside.

Being solitary is useful for some. The mother insect deposits each egg on a different plant so when a bird finds one tasty caterpillar, there won't be another nearby. Another useful defense is to taste terrible. Some caterpillars are even poisonous. While eating plants that contain toxins, they concentrate the toxins in their bodies. A bird that eats one will either spit it out or get sick, and won't eat that kind of caterpillar again. The drawback is that each bird has to eat one of your

BEATING THE ODDS

Text and Photos
by Carroll Rudy



siblings to learn its lesson. Although that is costly to the unlucky individuals, some members of the species will survive.

Signaling a bird that you are poisonous is an excellent ploy to protect yourself from being tasted. Wearing bright colors to make yourself conspicuous will teach birds not to eat any brightly-colored larva. Whenever you see a conspicuous caterpillar, it's probably not good to eat. Monarch Butterfly larvae are the famous examples of this. Effective as poisonous and conspicuous may be, unfortunately very few Monarch caterpillars get past the first few days of life. Diseases, parasites, and predatory insects with strong stomachs get nearly all of them.

Last summer, Jane Mingari and I were poking around the Ledge View Nature Center prairie looking for interesting critters when we spied some Sawtooth Sunflower plants encased in nasty-looking webbing, and inside were a hundred or more tiny black caterpillars. No camouflage here—they were very conspicuous. We wondered what they were, and what advantage there might be to living in communes. It seemed to us that if a bird found this group, it could chow down until its stomach was full.

We decided to raise the caterpillars in captivity to find out what they would become as adults. As they grew, they abandoned the web and became bright orange with black stripes and were covered with sharp spines. They not only

looked poisonous, but too prickly to eat as well. In time, they pupated and the helpless chrysalides resembled unappetizing dead leaves.

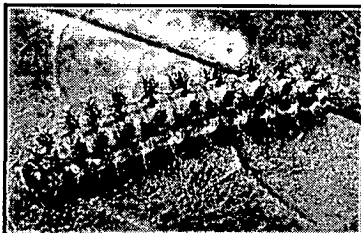
I did some research and found that sunflowers contain some toxic substances (glycosides) that the caterpillars store to make themselves toxic. As the toxins accumulate the larvae become brightly colored. Living in large groups is protective. If a bird eats one, it will leave the others alone.

A surprise came when the butterflies eclosed. They were Gorgone Checkerspots! These tiny bright orange and black butterflies



Gorgone Checkerspot Butterfly
(*Chlosyne gorgone*)
7/14/04, Calumet County

are not common, and are listed as a species of special concern by the DNR. Many seasoned butterfly-watchers have never encountered one. They live in endangered habitats—prairies with lots of wild sunflowers. Ledge View's prairie restorations have attracted a sizeable population of these charming little butterflies. Their presence at Ledge View indicates that Gorgone Checkerspots will establish viable populations in relatively small human-planted prairies miles from other prairie restorations, if there are abundant wild sunflowers in the plant mixture. To protect them, it is essential not to burn all the prairies in one year, and not burn the prairies every year. The checkerspots spend the winter as hibernating caterpillars among the dead prairie foliage and are incinerated by fire. It would be wise to curb the zeal to kill invasives somewhat, and not burn certain sections of prairie each year that have good colonies of wild sunflowers so these small butterflies can thrive. 🌱



Gorgone Checkerspot Larva
7/10/04, Calumet County

Carroll is a member of WES, former biology teacher and editor of *Calumet Nature Studies Newsletter*, published by Ledge View Nature Center, Chilton, WI.



MILKWEED...MAN'S DISDAIN, INSECTS' DELIGHT

by Jane Mingari

WEED: 1a. A herbaceous plant not valued for use or beauty, growing wild and rank, and regarded as cumbering the ground or hindering the growth of superior vegetation. (OED)

I was refreshing my memory for a prairie wildflower hike, and I came upon an incredible piece of information from Porcher, describing the things Common Milkweed (*Asclepias syriaca*) was being used for in the 1800s.

The "Asclepias," of course, tips us off that this native American plant has been used medicinally—its name refers to the mythological Roman and Greek gods of medicine and healing—but I'm referring to things aside from the medicinal uses. I have a hard time visualizing the kind of abundance implied by some of these uses. For example, once upon a time there used to be so much milkweed (called Silkweed in those days) that:

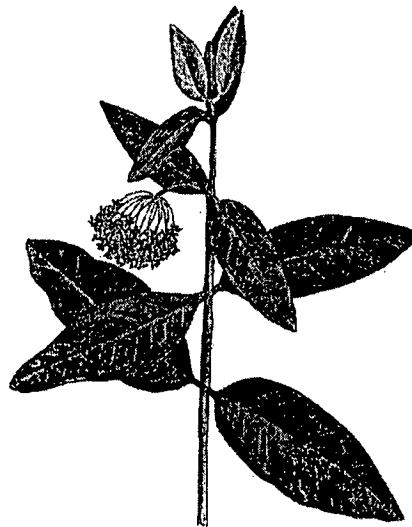
—If one gathered the dewy flowers early in the morning and pressed them, and cooked down the liquid obtained, an appreciable quantity of sugar could be made.

—If one gathered the stalks and separated the fibers from the bark (as they did at Salem, Massachusetts), one could manufacture "thread, netting, bags and purses, tapes, socks, knotting for fringes, etc."

—If one gathered the silky floss from the seed pods, one could stuff cushions, pillows, and mattresses.

Can you imagine that much milkweed? I scan the roadsides and fields on my way to work, appraising the number and size of milkweed colonies I see. I don't see much. Gosh, how times must have changed. I wish I could see colonies so vast.

I can imagine the perfume cast by the dull pink flowers—there are few more wonderful fragrances; I can imagine how busy the plants must have been with insects—milkweed



Common Milkweed (*Asclepias syriaca*)

Sketch: Marilyn Mahlberg

Co-author of *Wildflowers of Door County*

can be pretty exciting to wade through, there's usually so much going on upon the leaves and flowers. Seems odd for a plant with toxins. Although that insect busyness is not what I've noticed here. Most of the milkweeds I've investigated this year were strangely deserted. Where are those insects? The milkweed seems less, too. Did the heavy May/June rains make conditions too wet for the milkweed? Did the rain and cool temperatures set back the insects? Or is this scarcity and disappearance the result of people's handiwork? I've seen how people treat weeds.

My friend, Bob, ties himself in knots over these disappearances. Each letter I get from him itemizes another missing life. I try not to think about them because they're painful thoughts, and I don't know what I can do to stop them. And yet, here we both are, environmental educators, both possibly equally passionate about instilling a respect for—and joy in—the diversity of life in the young people we reach.

A discussion at the park this summer involved an article about young adults' attitudes toward nature: value surveys suggest that nature centers have been failing in their mission. People with a strong

environmental orientation were asked to describe what influenced them, and it turns out that (evidently) care for living diversity cannot be "taught;" it has to be personally experienced, probably also modeled. "Modeled" means a family member or other individual in relationship to a youth demonstrates, in many different situations, that respect and joy for nature. A single visit to a nature center doesn't do the trick.

"Personal experience" means self-guided experimentation and discovery out in the natural world: climbing trees, getting scratches and cuts, bruises and stings, getting dirty, among other things. We've queried our young visitors. Most of them don't do that. Personal experience for human beings in the natural world tends to be destructive, not always in a deliberate way. An example: Inquisitive kids would find out that a snail lives on a ledge by bending down to see what just crunched underfoot. Most of our young visitors don't notice a crunch or care about it, they are so intent on the experience of climbing the rocks. But if they continued to climb, eventually they might notice the snail and learn, themselves, that some snails live on ledges.

To take this example further: There are artificial climbing walls in recreation centers. This protects the snails, but people who use the artificial walls get farther away from personal experiences in the natural world, farther away from a potential knowledge, respect, and joy in nature that could protect future rock-dwelling snails. Ironically, it seems that some snails may have to be crushed in order to engender an awareness that might ensure the future of other snails.

The writer of that article proposed that nature centers set aside reasonably large areas where kids could just run wild, playing, experimenting, destroying, and learning. However, nature centers are usually created to protect a

Please see, **MILKWEED**, page 6

MILKEED, from page 5

remnant natural area. Destruction would defeat the purpose.

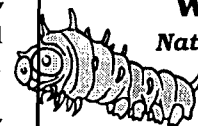
So I'm thinking about the milkweed, wondering if we could afford to let visiting students each rip off a leaf to discover the milky sap...tear out a plant to test the strength of its roots...pull open the few green pods to feel their sponginess and network of veins, or discover the beautiful geometry of the seeds packed within, arranged as neatly as scales on a fish's shoulder...take home a little Monarch caterpillar to see if they can keep it alive long enough to rear the butterfly (or a tachinid fly), etc. I have not seen a lot of milkweed here. It would take a beating, and so would its uniquely evolved (remnant?) insect community. If we encouraged personal experimentation, though, would it mean that someday—in a ditch or behind a shed, in an empty lot, maybe on a cul de sac—someone would remember and recognize the plant, and let the colony (and its insects) grow?

A number of the insects found on milkweed have evolved in relationship with it. Their bodies accumulate the plant's toxic cardiac glycosides, and they wear orange or red warning colors that birds learn to avoid. Other insects are just visitors. Even after milkweeds have finished blooming in September and the faded flowers are no longer visited by bumblebees, fuzzy gray stiletto flies, blue and black Ctenucha Moths, gaudy swallowtails, or Monarchs, milkweed

is still a busy "inn" for insects.

The leaves may be populated by hungry Monarch Caterpillars and Milkweed Tussock Caterpillars. Their frass piles up in leaf crotches. A miniscule late Monarch egg may even be found on the underside of a leaf. Hungry caterpillars will eat it right along with the leaf as they work their way down the edge. Black and orange or red milkweed bugs mine the seed pods for the developing seeds, and might suck some sap, too. Occasionally flocks of golden aphids with little black legs may be found on the milkweed. The aphids stick themselves snout-first into the stem to suck the plant juices. Ants patrol and tend these aphid flocks for their honeydew. Black and orange Milkweed Leaf Beetles and "long-horned" Red Milkweed Beetles march all over the plant as if they own the place, and I guess they do—it is their home and their lunch. Banded Leafhoppers continually reorient themselves, trying to evade notice, though the plant is probably only a take-off point for their next leap. Harvestmen (Daddy longlegs) extend their long legs in deceptively seductive poses in leaf axils—are they resting or lying in dangerous wait for tiny prey?

Meanwhile, parasitic flies and wasps drop in, looking for caterpillars to carry their eggs and larvae. Those caterpillars are



WILD ONES

Natural Landscapers Presents:

Masters of Display, Deception and Intrigue...

A colorful slide program of butterflies, moths and caterpillars by Janice Stiefel

Saturday, November 13, 2004

Schlitz Audubon Nature Center
1111 E. Brown Deer Rd.
Bayside, Wisconsin
9:30 A.M.

Wehr Nature Center
9701 W. College Ave.
Franklin, Wisconsin
1:30 P.M.

Open to the Public



doomed. After the stalk has dried out and turned brown, wonderfully patterned, large, brown araneus spiders might hang out in a curl, perfectly camouflaged; and breezes gradually tug the parachuted seeds loose from their drying, splitting, silvery pods. ❀

Jane is a member of WES and an assistant naturalist at Ledge View Nature Center, Chilton, WI.

**WES
Membership Dues**

Individual Membership
\$5.00 per year

Family Membership
\$10.00 per year

Sustaining Membership
\$15.00 per year

Patron Membership
\$25.00 per year

Please make check payable to WES and send to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562-3231.

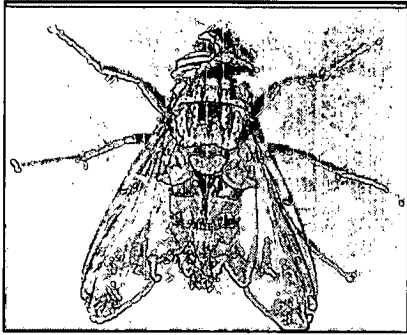


Rachel Carson

"Tonight I stepped out into the garden at dusk, and walked down the path where the blackened flowers of the wood asters told of the hard frost of last night. I stood under the old oak and listened. There was only silence in the garden. Silence in the tall hedge that separates my place from my neighbors, silence in the forsythias by the porch, silence in the woodpile by the fence and in the maples overhead. My mind has warned me that the frost last night had surely stilled all the little voices that used to greet me there—the insect music of wing rubbed over wing or of legs, like chiton fiddle bows, drawn across the wing—but my heart did not want to believe it.

"But tonight there is only silence, a chill that is not wholly of temperature, a queer emptiness. And so I have come back into the house and closed the door on summer. And I have put a fresh log on the fire and sat down to remember the little world into which I stepped last August, my passport a flashlight and my visa a suddenly awakened curiosity about those insect voices which I had heard—and yet not heard—all my life."

— *The House of Life...Rachel Carson at Work* by Paul Brooks



Compsilura concinnata

Photo: M. W. Storey

University of Minnesota.

<http://www.vegedge.umn.edu/vegpest/beneficials/Comps.htm>

In this year of 2004, everyone is asking, *Where are the butterflies; where are the big silkmoths, what is happening?* Several people think it's the weather, others think it's pollution but, as a whole, most people are extremely concerned. Some of those questions were addressed in the Spring 2004 issue of *Wings*, published by the Xerces Society, in an article by May Berenbaum entitled, *Friendly Fire*. The problem was also brought to my attention by Bobbie Larson, a resident of Sister Bay when she sent an article from a newsletter published in Illinois.

Giant Silkmoths Decline

Ms. Berenbaum, Entomology Chair at the University of Illinois and on the board of The Xerces Society, questions the impact that biological control of unwanted species like the Gypsy Moth have on our native butterflies and moths. One of her concerns were the European parasitic fly, *Compsilura concinnata* which was introduced in 1906 (and repeatedly thereafter) to control the Gypsy Moth in the east. The problem is that this parasitic fly attacks immature stages of many Lepidoptera besides the Gypsy Moth. Ms. Berenbaum states, "Among those consistently hard-hit were the giant silkworm moths in the family Saturniidae...that include some of the showiest N.A. Lepidoptera."

Since the giant silkworm moths are eye-catching, colorful, and closely charted by experts, their decline has been noticed since the early 50s. Many species in north-eastern states are on the endangered

ARE PARASITIC FLIES KILLING OUR SILKMOTHS AND ARE ASIAN LADY BEETLES EATING MONARCH LARVAE?

Article, Moth and Larva Photos by Janice Stiefel

species list. Ms. Berenbaum states, "Entomologists recorded 81% parasitism of caterpillars of the Cecropia Moths (*Hyalophora cecropia*) and over 65% parasitism of the Prometheus Moth (*Callosamia promethea*), and in 2003 entomologists recorded up to 78% parasitism of the Luna Moth (*Actias luna*) at a site in Virginia.

Because of this article by Ms Berenbaum, I made a special effort to rear 25 Cecropia and 23 Prometheus larva this past summer—to rescue them from parasitic flies. The cocoons will overwinter in our fruit cellar.



Cecropia Silkworm Larva



Promethea Silkworm Larva



Luna Silkworm Larva

Asian Lady Beetles and the Monarch Butterfly

Ms. Berenbaum goes on to discuss a species intended to be a friend in the battle against pests—the Multicolored Asian Lady Beetle (*Harmontia axyridis*). This beetle



Cecropia Silkworm male

(*Hyalophora cecropia*)

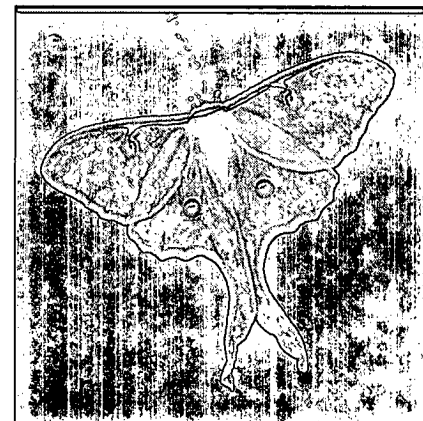
5/29/03, wingspan 6 in.



Promethea Silkworm female

(*Callosamia promethea*)

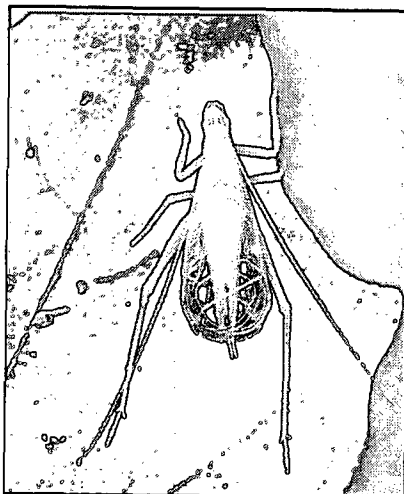
7/5/03, wingspan 4 1/4 in.



Luna Silkworm male (*Actias luna*)

6/21/04, wingspan 4 1/2 in.

was introduced repeatedly more than twenty years ago to control tree-dwelling aphids. In recent years, populations of this Asian import have mushroomed and Ms. Berenbaum states, "It is glaringly apparent that it does not restrict its feeding to aphids. The beetle appears capable of consuming virtually any slow-moving, soft-bodied insect, including the caterpillars of Monarchs and other Lepidoptera." 🌿



Answers to June Mystery Insect

WES member, Ron Huber, Bloomington, MN requested that readers' comments be included with the answers to the Mystery Insect. What a great idea, Ron! Answers are below. To refresh your memory, see photo at left.

**Carroll Rudy
Chilton, WI**

"It's a male Snowy Tree Cricket (*Oecanthus fultoni*). Tree Crickets are among my favorite insects. I learned how to keep three different species in captivity, and found that they can live a remarkably long time. One Snowy Tree Cricket lived until mid-January, but most die in November. I collect a few just after the first frost so I can listen to them after the outside ones are dead. I found that the younger they were when I captured them, the longer they lived. I assume they avoided diseases and parasites that eventually claim most insects lives."

**Robert Dana
Minneapolis, MN**

"It looks like a male *Oecanthus fultoni*. It also resembles a male *O. niveus*, which we had in large numbers in Minneapolis last summer—lots more common than *O. fultoni*. Definitive ID requires being able to see the tiny markings near the base of the antennae. Can't make those out in the reproduction in the newsletter."

**Ron Huber
Bloomington, MN**

"The latest WES Newsletter just arrived. Thanks for another good job! The Mystery Insect appears to be the Snowy Tree Cricket (*Oecanthus fultoni*), often shown in popular literature. I would suspect, however, that a specialist might want to examine a voucher specimen under a microscope to see if it could

be one of the other fourteen species in the genus. Sometimes a photograph isn't enough.

"Including readers' comments would be a nice touch (we readers like to feel recognized?). Also enjoyed your note on the robber flies. You mentioned that they have long bodies that taper to a point posteriorly. That actually only applies to the "classic" asilids. A large and taxonomically confused genus, *Laphria*, consists mostly of bee-mimics, with broadly rounded posteriors that are often covered with long black and yellow hairs. Some are quite large and look just like our large *Bombus*, while others are smaller and have orange hairs posteriorly, thus mimicking one of the other smaller, early-Spring bees (*Bombus ternarius*). They are a fascinating group (in Kansas, we had the huge *Microstylum morosum*, one of the "classic" group with long pointed bodies, that looked like small, green-eyed hummingbirds in flight). The world of arthropods seems to be without limits! Thanks again."

**Richard D. Breen
Wisconsin Rapids, WI**

"It's a Snowy Tree Cricket.

Order: Orthoptera
Family: Gryllidae
Genus: *Oecanthus*
Species: *fultoni*

"The long legs finally redirected my search. Neat insect. Male sings until a mate nudges him to make him stop. (I should try that!). Thanks for all the great work on the newsletter. Getting it in the mail is one of my most favorite things!"

**Charles Behnke
Milwaukee, WI**

"From your description, I might have suggested Green Lacewing (chrysopidae), but with the poorly-reproduced photo I have to go with Snowy Tree Cricket (gryllidae, oecanthinae)."

**Pam Kahler
Madison, WI**

"The mystery insect looks like a Snowy Tree Cricket (*Oecanthus fultoni*) to me. They're so sweet. I didn't realize that they eat aphids, too."

**Gene Drecktrah
Oshkosh, WI**

"The Mystery Insect in the June 2004 newsletter is a male Snowy Tree Cricket, probably *Oecanthus sp.*, that I have collected several times around here. What really surprised me was your "hint" that adults feed on aphids and caterpillars. I had never heard of this before. I think that their primary food is plant material. However, Froeschner (1954. *The Grasshoppers and Other Orthoptera of Iowa*. Ia. State College Journal of Science, p. 319) states, "The injury they do while feeding on plant tissue may in part be offset by their feeding on easily captured soft bodied insects such as plant lice (=aphids) and scale insects." This leads me to suspect that caterpillars serving as food is maybe questionable since they typically are not really slow moving and soft-bodied compared to aphids and scale insects. So, I learned something new about the Snowy Tree Cricket: that they do feed on some soft-bodied insects and are not entirely phytophagous.

"I assume that you've heard that a person can get a very good estimation of the ambient air temperature by listening to the chirping of the Snowy Tree Cricket. Count the number of chirps/15 seconds and add 40 and you'll be very close to the ambient temperature. This was always one of my favorite questions when I taught entomology." 🌿

Editor's Note: Reference to adult Snowy Tree Crickets feeding on caterpillars came from *The Audubon Society Field Guide to North American Insects & Spiders*, page 441. JS

BUGS, from Page 1

Purple Coneflower and *Rudbeckia*. Dark red color, deformed leaves and a velvety growth (like the red galls on Silver Maple) are the symptoms on the *Viburnum*. We received a sample of deformed green flowers from Brown county. When I opened them up they were crawling with the tiny worm-like mites. I sent then off to Dr Jim Amrine at West Virginia and he has no records of these mites on Black-eyed Susan's and suspects they are a new species. We have since found odd green growths from the center of Purple Coneflower and these also appear to be a new species of Eriophyid.

Not much was seen in aphid populations in the trees or in our agriculture crops in 2004. Because of this, it's looking like this might be a big down year for Asian Lady Beetles. Before the Soybean Aphid showed up, we knew that most of the breeding of this insect was on aphids found in various tree species. Since the Soybean Aphid arrived in 2000, we could get a handle on numbers by how many beetles were in the bean fields in early August. There are none there now, so I suspect we may see one of those rare falls with few lady beetles trying to get indoors. I wish I could take credit for this, as I would be a real hero...but as we know with insects...THEY WILL BE BACK! 🌿

Phil is the District Outreach Specialist at the College of Agriculture & Life Sciences, Dept. of Entomology, UW-Madison. He is often heard answering insect questions on the radio.

USGS Online Access to Nationwide Invertebrate Community Data

Invertebrate community data from 1,700 stream sites in more than 50 major river basins across the nation can be downloaded from the NAWQA Data Warehouse at <http://water.usgs.gov/nawqa/data>. Data are from more than 5,000 invertebrate community samples that were collected from 1993 through 2002 by the USGS National Water-Quality Assessment (NAWQA) Program. Invertebrate community samples document the presence of invertebrate taxa and their relative abundances within designated stream reaches. Data are added after quality-assurance reviews are completed, so if your geographic areas of interest are not represented, revisit the Data Warehouse periodically. The NAWQA Data Warehouse also provides online access to data on fish communities from more than 1,000 stream locations, as well as data from thousands of water-quality samples from about 6,400 stream sites and 7,000 wells, and from streambed sediment and aquatic animal tissue. Water-quality samples are analyzed for pesticides, trace elements, volatile organic compounds, and nutrients; sediment and tissue samples are analyzed for organic compounds, such as DDT, and trace elements, such as mercury. For information on biological sampling protocols, refer to "Revised protocols for sampling algal, invertebrate, and fish communities as part of the National Water-Quality Assessment Program" at <http://water.usgs.gov/nawqa/protocols/OFR02-150/index.html>. For questions regarding biological collection methods and taxonomy, contact Dr. Steve

Moulton, smoulto@usgs.gov, 703-648-6874. Additional information about NAWQA ecological studies is available at <http://water.usgs.gov/nawqa/ecology>. For questions regarding online data retrievals from the NAWQA Data Warehouse, contact gs.nawqa.data@usgs.gov or Mr. Sandy Williamson, 253-428-3600, ext. 2683. We encourage you to share this information with your staff, colleagues, and memberships. Feel free to notify local, State, and regional stakeholders who may be interested in biological information. 🌿

—Submitted by WES member, Dreux Watermolen

The Insect ID Web Project

by Richard Breen

It doesn't take much time exploring existing insect data and imagebases to realize that most, if not all, were designed for someone other than the amateur or student. It's really nice that people are sharing thousands and thousands of images of insects with IDs and other information, but it's still awfully hard to find the ID when you haven't a clue where to start. Even if you know enough to realize the insect is in the Buprestidae family, for example, it's still difficult to pin it down with a list of those found in Wisconsin and an image search for every species until you find something close. I've done it and it's not fun.

OK, you say, so what's the answer? Well, I have this crazy idea that its possible for a dedicated group of amateurs and professionals to build an annotated imagebase specifically for those who have limited knowledge or training about insects and are trying to learn more. For this to work, all of the following have to be true:

1. It's really easy to use. This is a tall order and requires great effort to assure success. More details on this in a separate design document (I'll need help with this to make sure it really works. If anyone has seen a model system that comes close to being easy to use for ID purposes, please share the reference.)
2. It has to have sufficient content. This will come with time, if the next two factors work.
3. It recognizes the simple fact that people like to be acknowledged for their contributions (without losing copyrights).
4. It is built on a thoroughly distributed construction model with redundancy and automated load-sharing for every important task—initial entry filtering, image preparation, initial classification, expert review, etc.

The closest thing I've seen to what I think such a site would look like is: <http://bugguide.net/>. Maybe we can find a way to collaborate with Tony Bartlett to expand and improve his site.

If all this works the way I envision it, people and organizations with existing imagebases will want to add their content to the base because they know it will be useful to kids of all ages who love insects. 🌿

Richard calls himself a starving butterfly artist and science presenter. He is working with the Wisconsin Rapids School District on a permanent traveling insect collection. Richard can be reached at breen@tznnet.com

Wisconsin Entomological Society

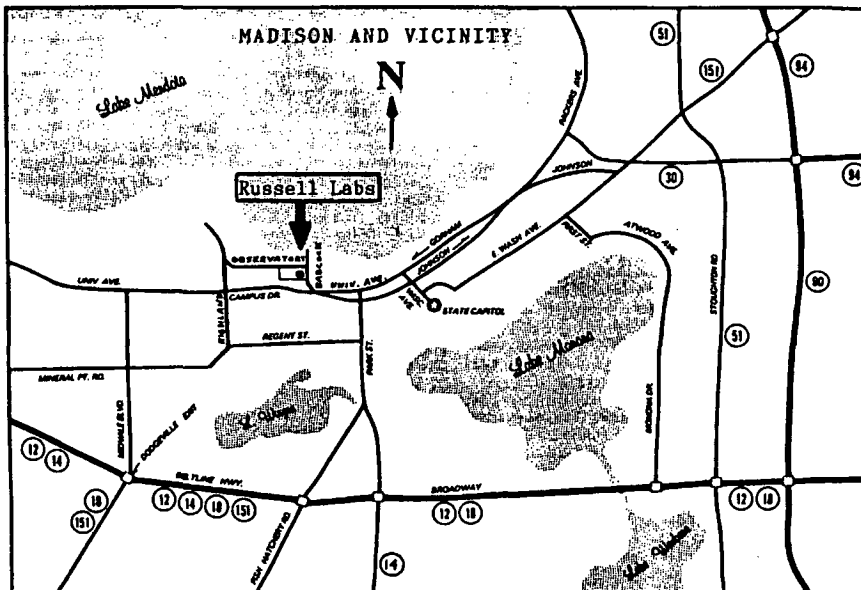


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DIRECTIONS TO RUSSELL LABS MADISON, WISCONSIN



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