



# *VES NEWS*

The Newsletter of the Vermont Entomological Society

Number 56  
Summer 2007



On the web at [www.VermontInsects.org](http://www.VermontInsects.org)



# VES NEWS

The Newsletter of the  
Vermont Entomological Society

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|                |  |
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The **Vermont Entomological Society** is devoted to the study, conservation, and appreciation of invertebrates. Founded in 1993, VES sponsors selected research, workshops and field trips for the public, including children. Our quarterly newsletter features developments in entomology, accounts of insect events and field trips, as well as general contributions from members or other entomologists.

VES is open to anyone interested in arthropods. Our members range from casual insect watchers to amateur and professional entomologists. We welcome members of all ages, abilities and interests.

You can join VES by sending dues of \$10 per year to:

Scott Griggs  
 VES Treasurer  
 49 Lover's Lane  
 Grand Isle, Vermont 05458

### Cover Photo:

Bryan Pfeiffer photographed this *Cicindela scutellaris lecontei* (Smooth Tiger Beetle) in the town of Lewis on May 24, 2007

### Back Page Photo:

VES members gathered for a group photo before heading out at Camp Johnson during the annual spring picnic.

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## Check Your Mailing Label!

The upper right corner of your mailing label will inform you of the month and year your VES membership expires. So if it's time to renew, please send your \$10 to:

Scott Griggs  
 VES Treasurer  
 49 Lover's Lane  
 Grand Isle, Vermont 05458

**Thanks!**

## Didymosphenia and Us

By Bryan Pfeiffer

**Y**ou know it's going to be a good day when the first dragonfly in your net is *Somatochlora albicincta* (Ringed Emerald). This is among Vermont's rarest dragonflies, reported previously from only one other site in the state.

My colleague Mike Blust and I had climbed over the summit of Mt. Mansfield and down to Lake of the Clouds, which until that moment had received very little attention from the likes of us. Before I could even strap my field bag to my waist, a female dragonfly drifted by and I reflexively swung the net. In that instant Mike and I learned a bit more about the distribution of this northern dragonfly, ranked as a Species of Greatest Conservation Concern in Vermont's Wildlife Action Plan. It probably doesn't get much farther south in latitude here in Vermont.

Our discovery came on July 3 — a crystalline day on the mountain. Around us on top of Vermont, Bicknell's Thrushes called from the krummholtz below, Blackpoll Warblers worked the shoreline for Lepidoptera larvae, and Yellow-rumped Warblers would hover over the pond before dropping to snatch adult Trichoptera from the surface. New England's invasion of Red Admiral butterflies (*Vanessa atalanta*) this year was evident in the mountains of Vermont as well that day.

If this wasn't paradise, Mike and I don't know what is.

Only a few days later came trouble in paradise.

The Rutland Herald newspaper reported on the discovery in the Connecticut River of the invasive *Didymosphenia geminata*, a freshwater diatom capable of producing massive algal blooms that can have a range of adverse effects on freshwater ecosystems. Biologists at the Agency of Natural Resources later confirmed its presence in two locations — six miles apart on the White River in the towns of Royalton, Bethel and Stockbridge.



*Somatochlora albicincta* (Ringed Emerald)

© Bryan Pfeiffer

As VES members well know, dragonflies are your president's passion. (Goodness knows, I subject you to them each and every issue of *VES News*; I guess it's president's prerogative.) And with my particular emphasis on river odonates these days, the Didymo (sort of rhymes with Gitmo) discovery is devastating.

Having an affinity river insects makes it even more devastating. When we know and care about something flying out there, the threats become more real, more pressing. And, I hope, we respond to them accordingly.

Now any of us who ventures into a river with an insect net has an obligation: we must work to prevent the spread of this invasive pest (see article on page 11). I've cleaned each and every inch of my field gear that may have come into contact with the Connecticut and White rivers. And I now carry cleaning supplies in the car for when I visit more than one river site in a day.

Get used to it. Didymo is here to stay. Let's work to make sure it doesn't spread.

**P.S.** A few of you haven't renewed your memberships yet. We don't ask for much — only \$10 — so see the gray box there on the left page and send your check today. Thanks!

## Arthropod Cakes

The VES annual spring picnic featured the usual barbeque feast and field outing. But this year's event also featured what can safely be assumed to be the largest Collembola ever festooned upon a cake.

The spry springtail appeared on a going-away cake for the dynamic entomological duo of Felipe Soto-Adames and Rosanna Giordano, who are leaving Vermont in August for greener pastures at the Illinois Natural History Survey.

After our picnic feast, which attracted about 20 entomologists, young and old alike, we spend a few hours of field time at Camp Johnson in Colchester. The large military base has a natural community mix, including sandplains, that most certainly warrant further investigation. We barely scratched the surface. But moths, butterflies, tiger beetles, grasshoppers and many other insect taxa kept us busy during our visit.

Felipe and Rosanna's cake might be part of a trend. We also report the news of a giant dragonfly cake for the fifth birthday celebration for Jackson McGuinness, the son of lepidopterist Hugh McGuinness and educator Michele Claeys (who made the cake) of Sag Harbor, NY (and who are friends to VES President Bryan Pfeiffer). Those legs are licorice whips!



## Farewell to Felipe and Rosanna

As we mentioned above, VES member Felipe Soto-Adames is taking a position as the Assistant Curator of Entomology at the Illinois Natural History Survey (INHS) in Champaign.

The INHS has one of the largest research insect collections in the country with more than 6 million pinned specimens. One of the important aspects of this collection is that it includes material collected during the mid 19th century. It also has the largest collection of Collembola in North America, with many primary types.

Felipe will be in "Collembola heaven," doing what taxonomists do: taxonomic revisions, collection curation, service work (insect identification for farmers and citizens), and probably some outreach.

Rosanna's Giordano's title has not been determined yet, but she will be able to apply for grant money to develop her own research program. Rosanna has been working on molecular population genetics at the University of Vermont and she will be able to continue her work at the INHS's molecular biology laboratory.

The VES extends fond wishes to Felipe and Rosanna and many thanks for their contributions to Vermont.

## The “Eyes” Have It!

VES Secretary Trish Hanson, the forest entomologist for the Vermont Department of Forests, Parks and Recreation, had a spate of Eyed Elater Click Beetle (*Alaus oculatus*) reports this year – three from between May 24 to July 7. The last time she heard about this species was back in June of 2002.

Below is a summary from Mike Dunkerley and David Page off a clever web site from Clemson University (<http://entweb.clemson.edu/museum/beetles/local/index.htm>):

The eyed click beetle has two large black eyespots surrounded by a dense ring of white scales on the pronotum. The elytra have thin, lengthwise ridges separated by speckled depressions. The true eyes are on the head anterior to the false eyes. These false eyes have no use but are thought to frighten would-be predators.

When adult click beetles are placed or fall onto their backs, they have the ability to flip themselves over, sometimes going several inches into the air. This is done when the beetle arches its body, then suddenly snaps a pointed projection on the bottom of its prothorax into a small groove on the mesothorax. This causes a clicking noise from which they get their name. Click beetles, also known as skip-jacks, snapping beetles, or spring beetles, come from the family Elateridae.

The eyed click beetle, is a North American species that reaches a length of 4.5 cm (1 ¾"). The slender larvae of the click beetle are commonly called wireworms, and some species can be pests of farm crops, vegetables, and flowers. Most wireworms live entirely in the soil where they feed on seeds, plant roots, and underground stems. Larvae typically live in the soil for 2 to 6 years.



Chip Darmstadt, director of Montpelier's North Branch Nature Center, displayed one of his many talents once it started raining during a butterfly outing on July 13

(Whatever Chip does for an encore, we hope it doesn't involve Ethyl Acetate. )



© Bryan Pfeiffer

## Calendar

### Annual Audubon Kid's Bug Walk August 18 / 10:30am / Huntington, VT

All insect orders are fair game during this general insect walk, which is great for the entire family. We'll meet in the Sugar House Parking lot on Huntington Road.



© Bryan Pfeiffer

*A probable Polydrusus sericeus*  
on Julia Rolnicks hand during a VES field outing

# A Morning in a Month for Moths

By Davie Rolnick

I had never hunted moths in June before. I had also thought erroneously that my occupation as a lepidopterist with a black light was to watch near the light until past midnight, then shut it off and go to bed. I had hung my black light inside my house, letting moths come to the windows, and had felt my sallies outside brought in relatively little game.

On June 9, I tried a different method at the start of a promising new month of mothing. I shone my black light through the window through the night and slept meanwhile and waited. I thought that most of the nocturnal moths that came would go with the light of morning. Therefore, I resolved to wake at dawn, before the moths had left, and survey the results. My alarm failed, however; and I woke at 7:30am, to my surprise and annoyance. I wondered what moths would remain: perhaps a sphinx or two.

Two hundred macromoths astonished me when I arrived outside my window. The panes were covered. At night, the moths dance around the windows. Everything is noisy, in a close, enveloped fashion, hushed by the darkness: “Pat, pat, bong” -- the gentle-winged geometrids flutter against the panes and the heavy-bodied noctuids circle round and strike the glass. The activity of the moths is such that my flashlight will draw in several geometrids. They spiral towards me – and, if I am not careful, spin off into the night. On this sunny morning, the moths rested motionless. Everything was silent, except for a Scarlet Tanager singing nearby. I had time to survey everything, make notes of it, glance through a moth guide, and enjoy. My eyes roved over the window.

The first moths I focused on were the Waved Sphinxes (*Ceratomia undulosa*). The second week of June, this year, was, on my mountain, it seemed, a peak of the Waved Sphinx season. These moths have a wingspan of up to 11 cm. (4.25 inches) and are frenetic in flight. I watch them from inside my house at night; they swoop up and down, towards and away from the lighted windows to which they seem leashed by an attractive impulse. On this morning, six rested calmly on the window, absolutely immobile.

From the top of the indentation in the wall that houses the window, a fresh Luna Moth (*Actias luna*) hung upside down, the streamers from its misty green wings dangling limply, its body like a mass of bright white foam or sodden wool, its stubby reddish chocolate legs gripping the window, its antennae like tan-colored ferns.

Moving from one side to another, I picked targets from among the numerous moths. I had fresh, clear sandwich



Harnessed Moth (*Apantesis phalerata*)

© Davie Rolnick

bags in my pocket. Snapping one through the air to expand it, I enclosed a moth carefully in the mouth. The moth was a lichen mimic -- the Green Leuconycta (*Leuconycta diphteroides*), as I later found. Bright green, the moth had tiny gray blotches all over it and exactly matched the encrusting lichen found on trees and rocks. I moved the bag; the moth awakened, crawled upward rapidly. Its wings burst open, and it flicked into the deepest part of the bag, where it ran around in circles. I inflated the bag with a sharp puff and zipped it up. Uninflated bags cause moths to wriggle between layers of plastic and lose their scales.

Twenty-two Hickory Tussock Moths (*Lophocampa caryae*) were sprinkled over the surface of the window. Every one pointed upwards rigidly – all aligned, they looked like sentries. Their forewings, held tent-like over the back, were tan or gold, and covered in semi-transparent windows that looked like round, silvered spots. I didn't capture them; I had seen the species before.

I wanted to photograph the Waved Sphinx moths, so I plucked them from the window. It really felt like plucking. Sphinx moths that have become inactive are endearingly cooperative – not flying off immediately, but moving in a sleepy, docile fashion. I slid my finger under the dry thorax of a huge individual. The sphinx's wings rustled slightly against each other, and it slowly moved a few legs onto my finger. Its tarsal claws prickled. I gently pulled the moth towards me. It disengaged its other legs from the wall, one by one.

(Continued on page 7)

On the window ledge sat an Oval-based Prominent (*Peridea basitriens*). I had wanted for a year or more to find this moth. Resembling one of the bizarre and unlikely animal pictures I would draw when I was young, it had an exact oval like a knot in wood at the base of each brown-mottled forewing. It was a large moth, and its long, heavy abdomen protruded from the edge of the tent it made with its wings - as is characteristic of a large number of the prominents.

It was a day for prominents (Notodontidae). I found seven more species, including the White-dotted (*Nadata gibbosa*), Chocolate (*Peridea ferruginea*), Black-rimmed (*Pheosia rimosa*), and White Furcula (*Furcula borealis*). I found four *Schizura* sp. prominents - twig mimics. Rolling up its forewings into a tapering tube around its thin body, each clasped the wall beside the window and pointed the tube outward into the air at a slight angle to the wall. Scattered over the stonework, they stuck out in odd directions - up or sideways. The *Schizura* forewings were bicolored. The lower half of each had a tint of reddish brown. Along an imaginary line parallel to the costal (front) margin, the color changed to a darker gray-brown. When the moths rolled their wings, the imaginary lines seemed to match the overlap lines and only the gray-brown was visible.

The stones of the wall surrounding the window hid about thirty beautifully camouflaged moths. The sharp black and white patches of the small carpets served as disruptive patterning, separating the moths into contrasting pieces and making them harder to discern in their entirety. A Peppered Moth (*Biston betularia*) had spread its thin, mottled gray wings in a crack and merged with the mortar. *B. betularia* is a famous species; in the 1800's, it rapidly evolved darker camouflage when coal dust blackened the



*Habrosyne* sp.

© Davie Rolnick

trees near industrial English towns. The Lobelia Dagger Moth (*Acronicta lobeliae*), the Eastern Panthea (*Panthea furcilla*), The Brother (*Raphia frater*), The Laugher (*Charadra deridens*), and a multitude of drab, gray prominents had stacked themselves in piles and nooks and higgledy-piggledy, and had vanished. I continually found moths right in front of me, pressed flat against the stones or under overhangs -- all motionless.

Another creature rested on the stones near the window. It was not camouflaged; and yet its transparent wings; tiny, slim body; and threadlike legs made it practically invisible. A little mental jolt passed through me. It looked like an ichneumon, but slightly wrong. I view clearwings (Sesiidae) as hymenopterans that a technicality has made moths. This was the Maple Callus Borer Moth (*Synanthedon acerni*), a delicate wasp mimic. It had a narrow black abdomen, at the tip of which was a relatively massive tuft of bright orange hairlike scales. Its wings were clear, with veins marked out in fine, dark scales (a dead giveaway of its astonishing deception), and the fringe of each wing was slightly furry, like the tasseled edge of a rug. The underside of the moth, fairly visible from above, was bright yellow and orange, and reminded me of sunset. Unfortunately, the name of "Sunset Moth" has already been given to a Madagascan uraniid. I enclosed the insect in a bag, and it flitted inside it with quick flicks of its wings.

About forty species of moths came to one light that night. June is a month of moths.

*Davie Rolnick is a 16-year-old entomologist with a particular fondness for Lepidoptera and Odonata. His work has appeared in publications of the Young Entomologists' Society (YES), the newsletters of the Rutland County Audubon and New Hampshire Coastal Audubon Societies and the Vermont Institute of Natural Science.*



Maple Callus Borer Moth (*Synanthedon acerni*)

© Davie Rolnick

# The Case of the Red-shanked Grasshopper

Knowledge of insects can solve crimes, stop diseases, grow better crops. But what happens if no one has the knowledge?

By Lynn Kimsey

Two FBI agents and a Bakersfield police officer walked into the Bohart Museum of Entomology at the University of California at Davis four years ago carrying a car radiator and air filter splattered with insects.

I'm the museum director, and they asked me and my entomologist colleagues whether we could tell where the car had been just by examining the dead bugs.

What the lawmen knew, but I wouldn't learn for some time, was that the car had been rented in Ohio by someone they suspected in a murder. They theorized that the suspect drove to California, killed his family and then drove back to Ohio.

If, as the defendant claimed, he had never left Ohio, there would be no insects on the radiator from outside that region, reasoned one of the FBI agents. They knew the history of the rental car, that the prior drivers had never left Ohio. So if we found any insects from west of the Rockies, that would discredit the suspect's alibi.

I wasn't sure if we could answer the lawmen's question. There are more than 100,000 kinds of insects just in the U.S., and to our knowledge, no one had ever used insect identification to prove where a car had or hadn't been.

Like any other animal, most insects have distinctive features and specific habitat requirements. Only a few species, like houseflies, occur everywhere. But would the insects from the car be intact enough to identify? Enough to rule out all the others?

We found 30 individual insects, but mostly we just had pieces of them to work with — a couple of wings and part of a body, or a body and head but no legs. But it is quite possible to make identifications from such fragments if you're practiced at it and have a collection for comparison.

Six insects told the story. Two were beetles that are known to live only in the eastern U.S. But then we found the large back leg of a grasshopper. Its markings revealed it to be a red-shanked grasshopper (*Xanthippus corallipes pantherinus*), found no farther east than Kansas and central Texas.

On the radiator was the unmistakable large golden paper wasp (*Polistes aurifer*), minus a few wings and legs. It can



Red-shanked grasshopper (*Xanthippus corallipes pantherinus*)

live as far east as Kansas, but it is most abundant in California. And then on the air filter we found two true bugs (*Neocoryphus rubicollis* and *Piesma brachiale* or *ceramicum*), their brightly colored, distinctively sculpted bodies largely intact. These species are found only in Arizona, Utah and Southern California.

The rental car must have passed through states west of Colorado, consistent with the idea that the suspect had driven west on either Interstate 70 or 40. (That also explained the 4,500 or so unaccounted-for miles on the odometer.) The insect analysis was entered into evidence, I testified and, on May 15 in the Bakersfield Superior Court, the jury convicted Vincent Brothers of the murder of his wife, three children and mother-in-law.

It seems like case closed. But there is a problem. The U.S. is losing the taxonomy expertise that makes it possible to identify insect bits on a car radiator, or the exotic mosquito hitchhiking in a container of lucky bamboo, or a stealthy caterpillar sheltered inside a flat of strawberries. I've been studying, teaching about and identifying insects for 30 years, but there are few specialists in the wings.

We as a culture have become overly enamored with technology. We've lost sight of the fact that it is still much cheaper and faster to have a specialist identify an insect by sight than to have a technician analyze its DNA. No DNA has been sequenced for 99% of insect species, so even if you get a usable sample from a car radiator, there's nothing on file to match it against.

(Continued on page 9)

# Getting Wet for Butterflies

By Kevin Hemeon

The first step toward finding some of Vermont's rarest butterflies is usually a wet one.

In other words, a lepidopterist must get wet feet to find Mulberrywing (*Poanes massasoit*), Dion Skipper (*Euphyes dion*), Black Dash (*Euphyes conspicua*) and Broad-winged Skipper (*Poanes viator*). These are four of Vermont's "Sweet 16" – butterflies identified as having high conservation value. So on July 14, 2007, five volunteers of the Vermont Butterfly Survey took to the wetlands. With me as the instructor, the goal was to learn how to locate and identify these wetland species.

Our first stop was a sedge wetland to the north and east of Lake Paran in Bennington County. Here, three of the species (Mulberry Wing, Dion Skipper and Black Dash) had been previously documented. We viewed the sedges, located swamp milkweed and in short order had found all three.

The next stop was a sedge wetland with a large patch of *Phragmites*, a host plant for Broad-winged Skipper. We were not disappointed. We had just started to walk down the railroad tracks cutting through the wetland when we spotted our first of at least a dozen. This wetland also hosted Mulberry Wings and Dion Skippers.

Next was a bog across from Lake Shaftsbury where cranberry had been found. We entertained notions of a fifth Sweet 16 species – Bog Copper (*Lycaena epixanthe*). This

turned out to be our first strike – none was flying. But we noticed that the cranberries were just beginning to bloom (Bog Coppers nectar on their host plant) and that the water was very cold at this site. We speculated that a later visit might produce better luck.

By mid-afternoon, with feet appropriately wet, we wrapped it up. All in all it was a valuable day. In addition to the four skippers, we amassed the following list of butterflies: Tiger Swallowtail species (*Papilio sp.*), Black Swallowtail (*P. polyxenes*), Cabbage White (*Pieris rapae*), Clouded Sulphur (*Colias philodice*), Stripped Hairstreak (*Satyrrium liparops*), Acadian Hairstreak (*S. acadica*), Atlantis Fritillary (*Speyeria atlantis*), Aprodite Fritillary (*S. aphrodite*), Crescent species (*Phyciodes sp.*), Baltimore Checkerspot (*Euphydryas phaeton*), Eyed Brown (*Satyrodes eurydice*), Common Wood Nymph (*Cercyonis pegala*), Bronze Copper (*Lycaena hyllus*), Mourning Cloak (*Nymphalis antiopa*), American Lady (*Vanessa virginiensis*), Red Admiral (*V. atalanta*), Monarch (*Danaus plexippus*), European Skipper (*Thymelicus lineola*), Dun Skipper (*Euphyes vestris*) and Tawny-edged Skipper (*Polites themistocles*).

The participants on the walk were Terri Armata, Betsy Elderedge, Ruth Stewart, Larry Haugh and me. We shared a great deal of information and came away with a greater willingness to get wet.

*Kevin Hemeon is a champion volunteer for VBS.*

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## Red-shanked Grasshopper (continued)

*(Continued from page 8)*

But accurate insect identification can catch any number of killers — human, pathogen or infestation. Insects feed on us, our crops and our livestock. They give us diseases, such as West Nile virus. New pests are coming into California all the time.

Every state needs insect expertise, but most rely on the Systematic Entomology Laboratory in Maryland, part of the research branch of the U.S. Department of Agriculture, or the goodwill of the few research taxonomists working at universities and museums. The FBI has no insect taxonomic expertise at all.

We need a West Coast diagnostics center like the USDA's, staffed with specialists who can identify insects by sight as well as DNA. UC Davis and the California Department of Food and Agriculture have proposed creating a world-class biodiversity center at the university that could identify not just pests but also medically important insects and beneficial plants and animals. It could also train the next generation of entomologists. But to build it, we need money —

government funds and private donations. Both are hard to come by.

In the meantime, we're lucky to catch the pests that slip into California. Take the case of the light brown apple moth (*Epiphyas postvittana*), a pest from Australia that feeds on more than 200 fruit trees and other plants. Retired UC Berkeley professor Jerry Powell, a taxonomic specialist, trapped one in his Berkeley backyard March 22. Since then, it has been detected in nine counties. The state is taking urgent measures to determine how far it has spread and to rein it in before it damages millions of dollars' worth of apples, avocados and other fruit.

From criminal trials to medicine to food protection, insects demand our attention. Insects have stories to tell — but only if someone's there to listen.

*Lynn Kimsey is a professor of entomology and the director of the Bohart Museum of Entomology at the University of California at Davis. This article, reprinted with Dr. Kimsey's permission, appeared in the Los Angeles Times on July 4*

# A Tale of Two Very Long Walks

By Kent McFarland

Admit it. You have done this. You have set out with just a slight hunch that there may be some nifty new insect at some far off spot on the map. And, you have taken that simple hunch and magnified it into an insect paradise. A sure thing. A first state record. Glory among your friends.

Just the other day, with the sun shining through fog, I headed out to finish some work for the Vermont Butterfly Survey. On the opposite side of a river were some large sedge wetlands. How to get there? Wade of course. I put my gear on my head and made the plunge. It was hot so it felt good. But, I didn't realize I would be chest deep and in muck a foot deep! The wetlands were a bust.



© Bryan Pfeiffer

Kent McFarland finding absolutely nothing in Maquam Bog

So I waded back and took a look at the map at the truck. If I hiked up the Appalachian Trail a half mile, then bushwacked a bit, I could get to a power line right-of-way. Or, at least that was the plan. It is here were I must digress a bit ...

I call these adventures "Walks of Ignorance." You know, those hikes you take that end up being well off course, way longer than planned, with the destination, well, a bit of a let down. They usually involve: 1) a map in which you ignore the scale or is of poor quality, 2) a place that you dream is far better than reality will eventually show, 3) an itinerary that appears quite doable on paper, but turns out to be very arduous and 4) is memorable for unexpected reasons.

I first named them walks of ignorance when I first identified my predisposition for them on travels in my early twenties in Chile. It was a raw, cold day in southern Chile and I picked out a small dot on the map that said hot springs. The map had no scale and was of poor quality. I convinced my travel partner that we should walk there. Who cares how many miles and rivers we'd have to cross, there are hot springs on a raw day! To make a long story short, we arrived after hours of walking on and on and crossing a river and a dale or two to find ... um ... tepid, dark waters. But dinner that night, never tasted so good! Walks of ignorance always end with a smile for some reason.

My Butterfly Walk of Ignorance was no different. I headed up a steep hill on the Appalachian Trail. Soon, my Walk of Ignorance attitude took over. The map says the trail crosses a right of way in a few miles at the top of this hill. All I had to do was go there and then butterfly down the right-of-way to the valley bottom. So, I climbed. I sweated. The thought of the right-of-way as a butterfly Nirvana kept me going. They must be flying like crazy in there. Hike harder! So I did, because that is what one does on a Walk of Ignorance.

Forty-five minutes later, I burst out into the right-of-way. And I nearly cried. First, my shorts were wet from that wade earlier in the day; and you know what happens when you hike for a while in wet shorts. Second, after climbing some 1,000 feet elevation, the right-of-way turned out to be no Nirvana – just a long ribbon of Hay-scented Fern and a few brambles mixed in. Two butterflies flew by fast as if using this wasteland as a butterfly interstate – Clouded Sulphur (*Colias philodice*) and Atlantis Fritillary (*Speyeria atlantis*). There was nothing else in sight. And worse, what happened to the sun? Oh, is that thunder? You bet. I had planned to hike down the power line, but a look down it showed only miles of ferns and rocks stretching below.

So I cut my losses, stowed my gear in my daypack, and began to run. I ran the trail for three miles back to the car, just beating the rain. And like all good Walks of Ignorance, I had a smile on my face as I slugged down the warm water from the bottle on the back seat. I didn't find much – but I guess that's the point of a Walk of Ignorance.

Which brings me to my first "Bog Walk of Ignorance." OK, it was my fourth or fifth, but this one was the best to date. A few days after my trail run, I met up with some butterfly-watching pals, including VES President Bryan Pfeiffer, to check on a 25-year-old record of Bog Copper (*Lycaena epixanthe*). The record simply read – Missisquoi Delta. The only place it could be was Maquam Bog, which is a huge area. We looked at aerial photos and talked to a few people, but really our plan was to just hike into the middle of the bog and find them. Simple enough.

After a mile walk down an old railroad we could see that the bog was deep with water (it had just rained several inches the day before and flooded Barre and lots of other towns) and the shrub swamp was a wall of green. As usual for me, I said, "So what," and we plunged in. The water was

*(Continued on page 11)*

# It Runs Through A River

By Bryan Pfeiffer

Just when we thought it was safe to go in the water, a mere diatom is Vermont's latest invasive horror story.

News that *Didymosphenia geminata* ("Rock Snot") has infested the Connecticut River and White River (and perhaps others) should break the hearts of anyone who's dipped a net for aquatic insects.

Soon after a fishing guide discovered the invasive algae in the Connecticut River in Bloomfield, biologists at the Agency of Natural Resources confirmed its presence in two locations – six miles apart on the White River in the towns of Royalton, Bethel and Stockbridge.

So it's a new world for those of us who work in rivers. The agency urges anglers, entomologists and water recreationists to institute New Zealand's recommended procedures for preventing the introduction and spread of *Didymosphenia*, which goes by the shorthand "Didymo." The mantra now is: Check, Clean and Dry.

- ◆ **Check:** Before leaving a river or stream, remove all obvious clumps of algae and look for hidden clumps. Leave them at the affected site. If you find any later, do not wash them down drains; dispose all material in the trash.
- ◆ **Clean:** Soak and scrub all items that come into contact with the river for at least one minute in either hot (140 degrees F) water, a 2% solution of household bleach or a 5% solution of salt, antiseptic hand cleaner or dishwashing detergent.

- ◆ **Dry:** If cleaning is not practical, after the item is completely dry to touch, wait an additional 48 hours before you contact or use it in any other waterway.

This means that anyone going from one river site to another should also carry a wash tub, brush and cleaning supplies for decontaminating gear between stops.

*Didymosphenia* is serious stuff. It has historically been found in the cool, oligotrophic waters of northern Europe and northern North America. It forms massive algal blooms that can devastate freshwater ecosystems. That includes EPTO (Ephemeroptera, Plecoptera, Trichoptera and Odonata).

Believed to be native to northern regions of Europe and Asia, *Didymo* has been expanding its range and tolerance for warmer, nutrient-rich water conditions during recent years in Europe and North America. Accompanying this expansion have been increasing reports of massive blooms that reach nuisance levels, forming thick mats of cottony material on the bottoms of rivers and streams that can potentially smother aquatic plants, harm invertebrates and destroy fish habitat.

"We know that eradicating this algae, once it shows up, is close to impossible," said ANR Secretary George Crombie, "but we can minimize its spread to other waterways through a concerted regional effort."

For more information on *Didymosphenia* visit:

- ◆ [www.des.state.nh.us/wmb/exoticspecies/didymo/index.html](http://www.des.state.nh.us/wmb/exoticspecies/didymo/index.html)
- ◆ [www.anr.state.vt.us/dec/dg/DidymoPoster.htm](http://www.anr.state.vt.us/dec/dg/DidymoPoster.htm)

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## Two Long Walks (continued)

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anywhere from knee- to waist-deep between the hummocks. We pushed and crashed through the brush deeper and deeper into the bog, but it didn't seem to be opening up. So, I volunteered to climb an old tamarack tree to get a bird's eye view.

I put down my binoculars and other gear to climb. The view didn't help us much. But it was just enough to enable me to convince Bryan to just go a bit farther – a sure warning sign of a Walk of Ignorance. I climbed down the tree to the last available branch, which was about 10 feet above the ground. Hanging from it, I looked down to find below me a pit of dark water. Bryan was laughing too hard to check the depth and my arms were getting tired. So, I dropped. I sank up to my chest in water and muck and now I was laughing so hard that tears ran down my cheeks. By now, Bryan's laughter had left him completely incapacitated and gasping for air.

We pushed on into the bog and found a bit of open area; but we found no Bog Coppers. And when it was time to retreat, I realized that my binoculars were no longer around my neck. I had left them at the tree I climbed. Incredibly, I was able to find that tree and my binoculars and thrash my way back to the railroad bed 30 minutes later.

I had seen some poison sumac in the swamp. The next day, Bryan's forehead made him look like a Klingon from Star Trek, all puffy and red. My arms had lines of oozing wounds from the branches hitting them.

I know those Bog Coppers are out there someplace. If we'd only gone a bit farther...

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VES members at Camp Johnson



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