

VES NEWS

The Newsletter of the Vermont Entomological Society

Number 109 Fall 2020

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The Vermont Entomological Society (VES) 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 \$15 per year to:

Deb Kiel

147 Allen Irish Road Underhill, VT 05489

Cover Photo:

Common Blue (upper and lower wings) (*Polyommatus icarus*)
Photo: Laurie DiCesare

Back Cover Photo:

Notch-backed Cellophane-cuckoo Bee (*Epeolus scutellaris*)

Photo: Doug Burnham

For more information on the Vermont Entomological Society, visit www.VermontInsects.org

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Newsletter Schedule

Spring: Deadline April 7 - Publication May 1
 Summer: Deadline July 7 - Publication August 1
 Fall: Deadline October 7 - Publication November 1
 Winter: Deadline January 7 - Publication February 1

$Membership \sim \text{Check Your Mailing Label}$

The upper right corner of your mailing label will inform you of the month and year your VES membership expires.

Dues are \$15 and can be sent to our Treasurer:

Vermont Entomological Society

c/o Deb Kiel

147 Allen Irish Road

Underhill. VT 05489



President's Message



With summer gone and autumn practically over, one gets the feeling that the field season is finished. Yet "Stick Season" is an opportune time to look at things differently and try



different venues. It's a time of year to revisit collecting sites and look for new ones as you can see more and move faster when not being held up by the urge to capture something. It's also a time of year when you can look for different taxa or species in different ways, such as checking for aquatic insects; baiting; looking beneath rocks, logs, and leaf litter; and searching for leaf mines or cocoons. etc.

With the remaining time left to the field season, you may still see some dragonflies or butterflies flying, especially on warmer days and in the Champlain Valley.

Don't forget to participate in the Chittenden GMNF Telephone Gap Bioblitz which is going year-round. See https://www.fs.usda.gov/detail/gmfl/home/reid=FSEPRD742756.

The UVM Zadock Thompson Invertebrate Collection is still largely inaccessible as UVM is not allowing any unaffiliated visitors on campus this semester. "The university has temporarily suspended all academic visitors, both domestic and international, to campus for the fall 2020 semester. This includes all

levels and categories of academic visitors such as undergraduate students, graduate students, faculty, and other professionals. If a visit is perceived as essential, it will require pre-approval from the Provost."

In the meantime staff associated with the collection are doing what they can to convince UVM administration that their current quarters are not adequate.

Donations to the collection might be more difficult with visitors not being allowed. Still, if it was a small donation, Jim Talbot or one of the crew of volunteers (in the process of returning soon) could manage it. Jim's contact # is (802) 598-2055

Jim says that the collection is still looking for keys to Northeast/Canada insects.

Other contacts for the collection are Lisa Chamberlain, chamberlandlisa8@gmail.com, and Sonia

Deyoung, sonia.deyoung@uvm.edu.

One tidbit that Sonia Deyoung shared was that a moth collected by Vladimir Nabokov was found in the collection.

Get out and see Vermont! We hope to see you in the field soon.

Michal Sabourin VES President

Milbert's Tortoiseshell (*Nymphalis milberti*) Photo: Tom Estill, Rutland, VT



Un-Common Blue Discovery in St. Albans, VT (Sept. 11, 15 and 25, 2020) By Laurie DiCesare

St. Albans high school teacher, Molly Magnan, was preparing to teach a unit on Entomology for her two classes of science students, so she looked online for help, found the VES website and contacted Michael Sabourin who put us in touch. After considering several locations, we decided on a small, roadside field on Nason Street which was within easy walking distance from BFA.

At around noon on Friday, Sept. 11, with the temperature around 65° and a fortuitous opening in the cloud cover, I met Molly, her fellow teacher Paul Brown, and Molly's five students at the field. After a quick introduction to insects (comparing the differences between bugs and beetles, and demonstrating how to swing, circle and close a cone net then carefully extract their catch), the students eagerly started retrieving a wide variety of insects. Among their discoveries was a Chickweed Geometer (Haematopis grataria), a cream-colored moth with a distinctive pink center line on the upper wings and a pink wing fringe; a Crab Spider (*Philodromus rufus*?); and, although there was no visible water source nearby, a Familiar Bluet damselfly (Enallagma civile). I also netted a Dreamy Duskywing butterfly (Erynnis icelus).

At about the same time on Tuesday, Sept. 15, with the temperature around 70° and partly-sunny skies, Molly and I continued our explorations with seven new students and two aides: Polly Rico and Brenda Calano. Again, right after the intro demonstrations, the quiet students became animated as they searched the field and quickly returned to the display table with their finds which I helped them retrieve from their nets and document. Just before the students arrived, I had netted a small blue butterfly, so photographed that first. Just before it flew to freedom, a student standing next to me noticed that the underwings had a distinctly different pattern, so suggested I photograph that too.

Other interesting finds that afternoon included a Thread-waisted Wasp of Family Sphecidae, "the caterpillar hunters"; a Cabbage White butterfly (*Pieris rapae*); and a 7-Spotted Lady Beetle (*Coccinella septempunctata*). Lew Kirby, a student wearing a

Joker face mask, netted what I believed was the "catch of the day": a female Common Green Darner dragonfly (*Anax junius*) that had probably emerged from its larval exuvium ("skin") earlier that day as its yellow-bordered wings still showed some iridescence. After a quick photo op, I placed the dragonfly on my floral tee and asked Molly to take a photo before it flew away. The dragonfly lingered, so, with Lew's permission, I moved the Green Darner to his tee and took another photo. Amazingly, instead of flying off, it remained on his tee for the remainder of the class when he released it back into the field.

As promised, I posted our finds, including my little blue butterfly, on iNaturalist. To my surprise, the Common Blue (Polyommatus icarus) [see Newsletter cover photo] was only common in Europe. In Canada, the insect had been discovered and observed over several years (2005 - 2008) by Ara Sarafian, an amateur entomologist in Mirabel, Ouebec. It was also documented in British Colombia in 2016. In the Summer 2018 Newsletter, VES member Don Miller. described finding a Common Blue "while visiting family in Laval, Ouebec on Aug. 11, 2014." He also made a prediction. "I suspect the species is moving relatively rapidly along the verges of the trans-Canadian highway where several of its larval food plants, such as Birdsfoot Trefoil, are present. Rivers do not appear to be a barrier to its dispersal but forests may be. A recent check of iNaturalist showed no records for the Common Blue in the United States. The species will undoubtedly reach some New England states or northern New York sometime this year." Our Sept. 15 field trip to St. Albans yielded the first recorded for Vermont...and the U.S.

Wondering if the Common Blue I photographed and released might be the same one that another student, Maya Belanger, netted, froze and later posted on iNaturalist on Sept. 22, I returned to the field in late afternoon on Sept. 25 and photographed three more Common Blues. Dave Hoag, a naturalist from Grand Isle ("hobiecat" on iNaturalist), compared all five posted photos and determined that they all had distinctive spotting patterns, so were all unique specimens.

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Un-Common Blue Discovery in St. Albans, VT, (continued)

For me, this field trip was a special experience for many reasons. Our Website offered Molly a way to contact us and we were able to provide a fun,



Laurie with Common Green Darner (Anax junius) Photo: Molly Magnan

educational and productive field experience for everyone involved. Posting our finds on iNaturalist brought us in contact history in general. with other naturalists who helped us identify and realize the importance of our Common Blue sightings. (Some, including Bryan Pfeiffer and Steven Daniel, had been searching for the butterfly in northern VT and the Adirondacks for several years. My friend, Shirley Zundell, reminded me about Don Miller's article.) If a student hadn't urged

me to take a photo of the Common Blue's underwings, I would not have been able to identify it to species. The study of insects, and natural definitely benefits from collaboration.



Lew Kirby and Polly Rico with Green Darner Photo: Laurie DiCesare

See Vermont Atlas of Life / iNaturalist / iDragonflyLady

for more photos from our field trips and discussion around the un-Common Blue.

See VES Summer 2018 Newsletter for Don Miller's article: Common Blue (Polyommatus icarus): A Recent Species to No. America." See Wikipedia / Common Blue (*Polyommatus icarus*) for more general information on the butterfly, its range, food plants and life cycle.

Odds and Ends



While browsing through the Sept. 2-9, 2020 Seven Days, I saw an article entitled "Why Does the Electric Bill Have an Emerald Ash Borer Charge?"...with a quarter-page photo of a 6-Spotted Tiger Beetle (Cincindela sexguttata) instead of the anticipated Emerald Ash Borer (Agrilus planipennis) or EAB. Several people wrote to Seven Days and they printed a correction with a photo of the real EAB in their next issue.

I asked Kris Dulmer, the Milton Tree Steward and liaison to the Milton Conservation

Commission who has been mapping and tracking the EAB locally, for an update. He said that he has recently discovered a new site on Route 2 in North Hero that has yet to be added to the maps. The EAB has been noted in South Hero for several years and was documented in Alburg last year. The insect's fastest route to new territories is by transporting infected firewood. Please be cautious when sourcing your firewood and do not bring any with you to campgrounds.

For more information about the EAB see VtInvasives.org or EmeraldAshBorer / Vermont map. For information on protection and remediation strategies, email Kris Dulmer at Ash Tree Solutions: kdulmer@hotmail.com.



Emerald Ash Borer (Agrilus planipennis) Photo: VtInvasives.org



6-Spotted Tiger Beetle (Cincindella sexguttata) Photo: Laurie DiCesare



Emerald Ash Borer larvae Photo Kris Dulmer



EAB larvae and frass in trails Photo: Kris Dulmer

Damon's Crossing and Pipeline Trail, Victory, VT (August 8, 2020) By Laurie DiCesare et al.

Our field trip to Damon Crossing and the nearby Pipeline Trail in Victory, VT was well attended and elicited many interesting discoveries. Laura Tobin, of Northeast Kingdom Audubon, and Michael Sabourin, greeted the seven other participants in the Damon Crossing parking lot around 11 a.m. Matt Aeberhard's daughter, Pearl, netted a Great Black Digger Wasp (Sphex pennsylvanicus) before we even started walking the newly-installed crushed-gravel path. Other improvements, like puncheons and surrounded by fields of goldenrod, asters and bridges over the seepy areas, made our walk to other pollen-bearing plants that supported the pond easily accessible.

The sunny, 75° weather brought many bees, butterflies and other insects to the goldenrod, Joe Pye Weed and other trailside wildflowers. Mary Burnham identified a Vermont-threatened Yellow-banded Bumble Bee (Bombus terricola) and a Black Blister Beetle (Epicauta pennsylvanica). Doug Burnham photographed a Notched-back Cellophane-cuckoo Bee (*Epeolus scuttelaris*) [see our back cover] and a Hairy-banded Mining Bee (Andrena hirticincta). Michael



Matt and Pearl Aeberhard with Great Black Digger Wasp Photo: Laurie DiCesare

noted a Black Jacket Wasp (*Vespula* sobrina) and an Atlantis Fritillary (Speyeria atlantis). White Admiral butterflies (Limenitis *arthemis arthemis*) were out in abundance.

In the afternoon, we drove a few miles down River Road to the Pipeline Trail. The broad, gravel road was



Hairy Banded Mining Bee (Andrena hirticincta) Photo: Doug Burnham

many Lepidoptera species. An early find was a photogenic Gray Comma (Polygonia progne), with an L-shaped "comma" (white mark) on the underwing, that posed for us.*

While I was focused on photographing some common skimmer dragonflies that were

landing nearby; including the Chalk-fronted Corporal (Ladona julia), Dot-tailed Whiteface (Leucorrhinia intacta), Slaty Skimmer (Libellula



Gray Comma (*Polygonia progne*) Photo: Laurie DiCesare

incesta) and the 12-Spotted Skimmer (L. pulchella); several birders in the group were looking for the white eye ring on the Solitary Sandpiper (Tringa solitaria) that was walking along the far shore. Erika Mitchell helped me identify the Field / Purple Milkwort (Polygala sanguinea) with its distinctive pink, compacted flower head that we both photographed on the gravel road.

Damon's Crossing and Pipeline Trail, Victory, VT (August 8, 2020) (continued)

Our extensive bee, beetle and fly sightings added many new species to our site list. We hope to revisit these sites next Summer when a new viewing platform will be installed by the pond.

*The closely-related Green Comma (*P. faunus*) has a fishhook-shaped "comma" as shown on Peterson's "Eastern Butterflies" plate 31 "Brushfoots." The written description for the Gray Comma on pg. 176, however, is in error. The last line should read "the comma is shaped like an L." Thanks to Doug Hoag for the clarification.

Thanks to Mary and Doug Burnham and Erika Mitchell for providing species lists for these sites and help with identifications. Species lists for this field trip are available by emailing Laurie DiCesare: NatureHaven@MyFairPoint.net with VES Victory Species in the subject line.



Eastern Tailed Blue (*Cupido comyntas*) Photo: Erika Mitchell



Field / Purple Milkwort (*Polygala progne*) Photo: Erika Mitchell



Laura Tobin at Pipeline Trail Photo: Laurie DiCesare



It's a Cuckoo World By Doug Burnham

I have spent last summer in the grip of a bee obsession. Almost every day, I have ventured out to spend time searching for, observing and photographing bees and assisting the Vermont Center for Ecosystem Studies' native bee survey. Observations are posted to iNaturalist and identified to the extent possible by waiting experts. One bee expert has made more than 500,000 identifications. This expert has seen a few bees, and I am sure he has some major "gestalt" function to be able to make so many identifications from photos. Bee taxonomy is difficult at best, and photographs have their limits. Experts believe there are over 60 species of *Andrena*, a notoriously difficult taxonomic group, in Vermont, and more than 4,000 worldwide. One of the most fascinating things I have learned over the summer concerns the presence and influence of "cuckoo" bees within the wild bee community.

The term "cuckoo" derives from the avian world and refers to kleptoparasitism, the practice of stealing food or prey from other



Nomad Bee (Nomada sp.) Photo: Doug Burnham

animals. In the case of bees, this involves using the nest and the food stores of another species to propagate their own kind, usually to the detriment of optimistic name. the host species. The cuckoo lays an egg in the host

nest and, when the larva hatches, it kills the host larvae and feeds on the stored pollen and nectar.

My introduction to cuckoo bees came on a day I was making observations on a field covered with hundreds of nest holes, primarily of the solitary ground nesting species, the

Unequal Cellophane bee (Colletes *inequalis*) which lines its nest with a cellophanelike material. Patrolling the grounds along with the



Neighboring Cuckoo Bee (Nomada vicinia) Photo: Doug Burnham

cellophane bees were some small reddish bees that would occasionally go into a nest and emerge a short time later, presumably after laying eggs in the lining of the nest. These bees belong to the large and diverse family of nomad bees (Nomadinae) which are exclusively kleptoparasites of many solitary, ground-nesting species primarily of the Andrenidae and Colletidae. One species I observed was *Nomada vicina* with the

common name **Neighboring** Cuckoo Bee, certainly an appropriate but perhaps It is thought to be the primary kleptoparasite on the Hairy-Banded Mining Bee



Hairy-banded Mining Bee (Andrena hirticincta) Photo: Doug Burnham

It's a Cuckoo World (continued)

(*Andrena hirticincta*) which I observed quite frequently on goldenrod in late summer.

As I became more aware of these parasitic relationships within the bee community, I started seeing more and more cuckoos. It turns out that a significant proportion of bee species are parasitic, primarily kleptoparasitic, on other bee species. In addition to the parasitic activity among other Hymenoptera, predation by crab spiders and ambush bugs, both of which I observed in action with bees as prey, it is amazing that bees actually survive and thrive.

Many bees have their own associated cuckoo. For example, there is the *Epeolini* tribe collectively known as Cellophane-bee Cuckoos which parasitize *Colletes spp.* exclusively with some species-specific relationships between them. Two species that I observed quite frequently are examples of such a relationship. The Notch-backed Cellophane Cuckoo (*Epeolus scutellaris*) [see back cover for photo] is known to be kleptoparasitic on the Spine-shouldered Cellophane Bee (*Colletes simulans armatus*).

Similarly, the Leaf-cutter Bees (Family Megachilidae) have their own Leaf-cutter cuckoos (*Coelioxys spp.*) I frequently observed the Pugnacious Leaf Cutter Bee (*Megachile*



Spine-shouldered Cellophane Bee (*Colletes simulans armatus*) Photo: Doug Burnham

pugnata) in my backyard along with the Modest Leaf-cutter Cuckoo (*Coelioxys modestus*) a possible parasite of *M. pugnata*. All in all, I had a fascinating summer delving into these cuckoo bee interactions.



Modest Leafcutter Cuckoo Bee (*Coelioxys modestus*) Photo: Doug Burnham



Pugnacious Leafcutter Bee (
Megachile pugnata)
Photo: Doug Burnham

Montgomery Center, VT (Sept. 19, 2020)

By Laurie DiCesare, Michael Sabourin, et. al.

On Saturday, Sept. 19, Michael Sabourin, Erika Mitchell, Laura Ziegler, Barry Kade and Laurie DiCesare met at the home of Ruth and John Little on Rushford Valley Road in Montgomery Center for an insect walk in nearby fields. A morning frost led to some concern as to how viable the field trip was going to be, but by 2 p.m., with the temperature climbing to 52° F., there was some sun and warmth. Ruth started our species list by pointing out a Black Swallowtail (Papilio polyxenes) caterpillar on a parsley plant in her flower garden.

We carpooled down to the field and immediately started finding interesting insects, front of her feet on the grassy path. John including a Monarch (Danaus plexippus) soaking up some warmth in the sunlight. Small Milkweed Bugs (Lygaeus kalmii) were evident on the Common Milkweed. Like the Monarchs, their bright red-and-black pattern warns of a noxious taste, as some feed on Milkweed...but others that eat yarrow and ragworts are not bitter.1

in leaf miners (from associating with Charley Eiseman?), Erika noticed an Aspen Serpentine Moth (Phillocnistis populiella) larva in a leaf mine a few yards from the entry gate. As we entered the open field, we saw that butterflies were out in good numbers including adult Common Ringlet (Coenonympha tullia) and Clouded Sulphur (*Colias philodice*) butterflies and a Milkweed Tussock Moth (Euchaetes egle) caterpillar. Michael netted a Tachinid fly, a Melanoplus grasshopper, and a Spotted Spreadwing (Lestes congener) damselfly near the remnants of a beaver pond. He also named some of the many birds we heard including a Song Sparrow (*Melospiza melodia*), a Common Yellow-shafted Flicker (Colaptes auratus) and

Golden-crowned Kinglet (*Regulus satrapa*).

Several arachnids including an American Green Crab Spider (Misumessus oblongus), a Harvestman (Order Opiliones), and a gallforming Maple Bladdergall Mite (Vasates *quadripedes*) were noted. The Hymenopterans were also well represented: Yellow Jacket (Vespula sp.), Black Jacket (Vespula consobrina) and a Western Honey bee (Apis mellifera.)

Aside from the excitement of seeing a few darner fly-bys, Laurie's favorite discovery of the afternoon was a Garter Snakeling (Thamnophis sirtalis) that wriggled out in mentioned that he often sees Ring-necked Snakes (*Diadophis punctatus*) around his home. Erika also pointed out the Common Eyebright (*Euphrasia nemorosa*), a diminutive yet beautifully-detailed blue wildflower in the Figwort Family, that was abundant along the mowed trail.

We are very appreciative of the fine Having recently acquired an avid interest hospitality shown us by the Littles and their sharing of such a splendid site. We hope to return next summer...when it's warmer.

> Thanks to Erika Mitchell for her help identifying species and for supplying her photos and species list for this site. For those who would like to receive copies of Erika's and Laurie's species lists, please e-mail Laurie: Naturehaven@MvFairPoint.net with "VES Fall News Montgomery Species" in the subject line. John Little is a member of the Missisquoi River Basin Association which is dedicated to the restoration of the river, its tributaries and the Missisquoi Bay. For more information, see mrbavt.com.

References: 1 National Wildlife Foundation Field Guide to Insects and Spiders by Arthur V. Evans, Sterling Publishing, New York, NY pg. 123.



Ruth Little with her flower garden Photo: Laurie DiCesare

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Montgomery Center, VT (Sept. 19, 2020) (continued)



Black Swallowtail cat. (*Papilio polyxenes*)
Photo: Laurie DiCesare



Garter Snakeling (*Thamnophis sirtalis*)
Photo: Laurie DiCesare



Winter Firefly (*Ellychnia corrusca*) Photo: Erika Mitchel



American Green Crab Spider (*Misumessus oblongus*) Photo: Erika Mitchell



Common Eyebright (*Euphrasia nemorosa*) Photo: Laurie DiCesare



Erika Mitchell with field gear Photo: Michael Sabourin

Insect Poetry and Japanese Haiku By Laurie DiCesare and Laura Ziegler



At the end of our field trip to Montgomery Center, Laura and I started sharing some poetry. She later e-mailed me a reference to an interesting article entitled "Poetic Entomology: Insects in Japanese Haiku" by Robert R. Dunn. The following are some samples from the article:

Don't worry, spiders, I keep house casually.

 Kobayashi Issa (translated by Robert Hass) Crickets chirping in a scarecrow's belly.

- Kobayashi Issa (?) (translated by R. Hass)

Don't weep insects – lovers, stars themselves must part.

- Kobayaski Issa (translated by L. Stryk) References: **Poetic Entomology: Insects in Japanese Haiku** by Robert R. Dunn, American Entomologist, Vol. 46, issue 2, April 1, 2020, pp. 70-72. For further reading, you may want to try **Dragonfly Haiku** by Kobayashi Issa, Ken Tennessen and Scott King, Red Dragonfly Press, Northfield, MN, www.reddragonflypress.org.





Notch-backed Cellophane-cuckoo Bee (Epeolus scutellaris) Photo: Doug Burnham

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