VES Treasurer’s Report by Deb Kiel

VES remains strong with positive assets. Our membership dues again covered the cost of printing our quarterly newsletter which remains our biggest expense. Member donations were also gratefully received. A large royalty check from Ross Bell’s *Carabids of Vermont and New Hampshire* helped round out our income.

Our assets also allowed us to provide cash rebates to VES members who were registrants or presenters at the Northeast Natural History Conference this year. We had one registrant and one presenter.

VES dues for 2019 are due now. They are $15 for an individual or a family per year. Thank you to several folks who have already paid for the year.

Checks may be made out to VES and mailed to Debra Kiel, 147 Allen Irish Road, Underhill, VT 05489. I will also be sending out a general email for all our members receiving our newsletter electronically regarding membership status. If you have any questions contact me at dkiel1@hotmail.com.

VES Financial Statement 2018

**Assets at Start** $4,346.78

**Income:**
- Membership Dues $960.00
- Donations $20.00
- Book Royalties $224.00
- Refund of Publisher $200.00
- Newsletter Purchases $12.00

**Total Income:** $1,416.00

**Expenses:**
- Newsletter Printing $928.60
- Publisher Purchase $117.69
- Conference Rebates $200.00
- Memorial $149.99
- Paper Statement Fees $24.00
- Misc. Supplies $18.25

**Total Expenses:** $1,567.96

**Net Difference:** $-151.96

**Assets at End of Year** $4,192.84
Thanks to Janine Gydus for her editorial expertise and her skill with transforming our VES articles from Word to Publisher format for the past year. She will continue to be an avid VES member... but with more time to spend with her family. As of Jan. 1, 2019, she has passed the editorial baton to Laurie DiCesare, our new VES Newsletter editor. Laurie and Treasurer Deb Kiel are both learning to use the Publisher program with technical assistance from Westford Librarian Bree Drapa and Janet Foster at Kimball Office Services, in Bristol. Thanks, Bree and Janet!

VES Calendar:
March 24, 2019 (11 a.m.-2 p.m.): VES Pot-luck / Planning Meeting: Please bring show-and-tell items and stories from your 2018 adventures to share. If you have a favorite site you’d like us to visit in 2019, please let us know... especially if you’d like to lead or host a trip. Our gracious hosts for the pot-luck will be Doug and Mary Burnham, 11 Summer Street, Montpelier, VT. E-mail burnham.doug@gmail.com or phone 802-229-9578. R.S.V.P.s appreciated but not required.

Field Notes

By Laurie DiCesare

On a warm (72° F.), sunny afternoon in late August of 2017, naturalists Bill Boccio, Shirley Zundell and I first explored Preston Pond in West Bolton, VT. From Route 2 in Jonesville, we travelled up Stage Road and turned right into an unpaved, two-car parking lot (at #3638.) As soon as we started walking up the logging road, we saw damselflies flitting around in the roadside vegetation with a Spotted Spreadwing (Lestes congener) damselfly alighting long enough for a photo op. Along the half-mile wooded trail to the pond, we saw a good diversity of fern and fungal species, and occasional hand-painted signs (Wood Frog, bobcat, Destroying Angel mushrooms...) depicting the unseen wildlife that were known to inhabit the area.

On the rocky shoreline of the pond, we watched as a Common Eastern Bumble Bee (Bombus impatiens) pushed its way into several bright-blue Closed Gentian (Gentiana clausa) blossoms. We also photographed Eastern Forktails (Ischnura verticalis), Slaty Skimmers (Libellula incesta) and Autumn Meadowhawks (Sympetrum vicinum.) We all agreed that this would be a great site to revisit in 2018.

Spotted Spreadwing (Lestes congener)
Photo: Laurie DiCesare

Common Eastern Bumble Bee (Bombus impatiens)
Photo: Laurie DiCesare

Bill Boccio and Shirley Zundell
Photo: Laurie DiCesare
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

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

On August 19 of 2018, Shirley and I retraced our steps to the Pond with naturalist Don Miller who, according to Michael Sabourin, has a “keen interest in grasshoppers, dragonflies and ground beetles.” Don helped Shirley and me identify many “new” fern species, including the Lady Fern (Athyrium felix-femina), Hay-scented Fern (Dennstaedtia punctilobula), and New York Fern (Thelypteris noveboracensis).

Upon arriving at the pond, we were disappointed to find that although the temperature was warm (75˚ F.) the sky was overcast and very few insects were visible. As we started identifying the local vegetation, like Common Pipewort (Eriocaulon aquaticum) and Water Shield (Brasenia schreberi), the sun emerged from the cloud cover and the Odonates (dragonflies and damselflies) appeared. A few minutes later, we were snapping photos of the abundant darters and skimmers patrolling past us on the shoreline, flying a few feet above the water surface and occasionally landing on nearby rocks and logs.

We identified a Slender Spreadwing damselfly and several species of dragonflies (including Slaty Skimmers, Autumn Meadowhawks) that we had previously encountered. We also saw Blue Dashers (Pachydiplax longipennis); a possible Lake Darner (Aeshna eremita); and several other dragonflies that were flying too fast for us to identify. I’ve already added Preston Pond to my “Favorite Sites” list and hope to visit again this summer.

Programs of Interest:

Biodiversity University Summer 2019 programs:
June 29 Caterpillars of New England: The Whole Story

For more information about these and other programs e-mail: info@northbranchnaturecenter.org; phone 802-229-6206; or write: North Branch Nature Center, 713 Elm Street, Montpelier, VT 05602. North Branch Nature Center is open from 9 a.m. to 4 p.m. Monday through Friday. Trails are open 24 hrs. per day / 7 days a week.

Eagle Hill Institute Week-long Summer 2019 Seminars:
June 9 – 15 Chironimids (Midges): Classification, Morphology, Identification and Life cycles.
June 23 – 29 Insect and Spider Biology “Through the Lens.”
July 7 – 13 Marine Benthic Invertebrates
July 14 – 20 Trichoptera (Caddisflies) of the Northeast
July 28 – Aug. 3 Leaf and Stem Mining Insects
Aug. 4 – 10 Microlepidoptera (small butterflies): Collection, Preparation, Dissection…
Aug. 11 – 17 EPT Taxa: Ephemeroptera, Plecoptera (Stoneflies) and Trichoptera (Caddisflies)

For more information on these and other programs at Eagle Hill Institute (edible plants, fungi, lichens, natural history drawing…), please see https://www.Eaglehill.us or email office@eaglehill.us; phone 207-546-2821 ext. 1; or write Eagle Hill Institute, P.O. Box 9, 59 Eagle Hill Road, Steuben, Maine 04680-0009.
On September 24 at 1:30 p.m., naturalist Shirley Zundell and I made an impromptu field trip to Shelburne Bay Boat Launch. It was late in the season, so we did not have great expectations of finding many insects. On our arrival, Shirley, who is an avid birder, pointed out the Great Blue Heron (Ardea herodias); a Green Heron (Butorides striatus) wading along the shore; and a male Belted Kingfisher (Megaceryle alcyon) perched on a distant duck blind.

We also noted a few Sulphur and Cabbage butterflies (Family Pieridae) and a Marsh Meadow Grasshopper (Pseudochorthippus curtipennis) in the low vegetation; and saw a slow-moving Monarch (Danaus plexippus) clutching the exposed bedrock. As we turned off the parking lot onto a short side trail, we were both surprised and pleased to see some dragonfly activity as several darners were patrolling back and forth along the mowed path.

It was about 70° F, partly sunny with only a light breeze. The dragons were mostly flying eight to ten feet above our heads and repeatedly evading capture on closer fly-bys. When one finally landed nearby, we pancaked a net over the top of the bush it landed in and, with a group effort, captured it. (Ardea herodias); a Green Heron (Butorides striatus) wading along the shore; and a male Belted Kingfisher (Megaceryle alcyon) perched on a distant duck blind.

Photographing the Lance-tipped Darner (Aeshna constricta) was a real treat. Moments later, we were off and running again as another, light yellow dragonfly began patrolling past us. We had both photographed Wandering Gliders (Pantala flavescens) on other recent field trips, so believed that was (Pseudochorthippus curtipennis) in the low vegetation; and saw a slow-moving Monarch able to snap an identifiable photo. About a week later, though, Josh Lincoln added credence to our sighting when he reported that he had photographed a Wandering Glider at the same site on Sept. 19 with his cell phone.

We were both surprised and pleased to see some dragonfly activity as at the same site on Sept. 19 with his cell phone.
Bruce Spanworm (*Operophtera bruceata*) (Figure 1) and Winter Moth (*O. brumata*) are congeneric “winter” moths that fly late autumn through early winter when temperatures are just above freezing. The former is native to North America (and fairly common in Vermont), while the latter is a destructive, invasive species originating in the western Palearctic. In North America, *O. brumata* was accidentally introduced to Nova Scotia in the 1930s, to Oregon in the 1950s and to the Vancouver area of British Columbia around 1970 (Elkinton et al. 2015). (Elkinton et al. 2015). In the northeastern United States, winter moth defoliation was noted in Massachusetts in the late 1990s (Elkinton et al. 2015). In a 2010 survey, Elkinton et al. (2015) showed *O. brumata* presence from Long Island, New York, through eastern Connecticut, most of Rhode Island, eastern Massachusetts to coastal areas of New Hampshire and Maine. The larva feeds on a wide range of host trees, and is an apple orchard pest (Elkinton et al. 2015). Many Massachusetts blueberry growers have lost entire crops to Winter Moths (Elkinton et al. 2015).

Joe Elkinton’s lab at the University of Massachusetts has been studying *O. brumata* in the Northeast. Ongoing survey work in Massachusetts had failed to find it west of the Connecticut River until December 2018 when two were found in Charlemont (personal communication, Jeremy Andersen, 2019). From 2005 to 2007, Elkinton’s crew deployed traps in various locations in Vermont and failed to find *O. brumata* (Elkinton et al. 2015). Massachusetts State Wildlife Biologist Jeff Boettner reported to me that no further trapping has been undertaken in Vermont since then. Since Elkinton’s surveys were done over ten years ago, I decided to survey the southern tier of Massachusetts to coastal areas of New Hampshire and Maine. The larva feeds on a wide range of host trees, and is an apple orchard pest (Elkinton et al. 2015). Many Massachusetts blueberry growers have lost entire crops to Winter Moths (Elkinton et al. 2015).

Ongoing survey work in Massachusetts has been studying *O. brumata* in the Northeast. Ongoing survey work in Massachusetts had failed to find it west of the Connecticut River.
The green, “milk carton” traps, pheromone bait (PB WM winter moth lure) and Hercon Vaportape II kill strips were provided by the lab at the University of Massachusetts. The traps remained in situ until the end of December.

When I retrieved the traps on December 30, seven contained moths. No moths were present in two traps at the highest elevations in Bennington County, nor in the trap I put in Rockingham near the old apple orchard. The traps with the highest numbers of moths were near the Connecticut River and at lower elevations. Many of the traps farther west contained only one moth. In total, I recovered 29 individual male *Operophtera* moths from the traps.

*O. brumata* is very similar to our native species *O. bruceata*. Males of both are visually identical. Female *O. bruceata* are wingless, however female *O. brumata*, while flightless, have vestigial (small remnant) wings, and so can be distinguished by sight (see bugguide.com).

Males of the two species can be determined by brushing the scales from the tip of the abdomen or by dissection. The diagnostic character is the size and shape of the uncus, a finger-like projection directed downward from the dorsal-posterior end of the male genital capsule. In *O. bruceata* the uncus is long, narrow and nearly evenly sided; in *O. brumata* the uncus is shorter, wider and slightly spatulate (Figures 3 and 4). I brushed scales off all the moths and dissected two, in which the uncus was hard to view. All 29 moths collected were Bruce Spanworm (*O. bruceata*).

The result of my survey is that *O. brumata* remains unknown in Vermont despite its presence in nearby Massachusetts. I plan to continue to put out traps in selected areas in late autumn/early winter to monitor for the invasive *O. brumata*.

![Figure 3: Bruce Spanworm (*Operophtera bruceata*) and Winter Moth (*O. brumata*) showing the uncus. Brushed scales from terminal end of abdomen and photo credit: JoAnne Russo](image)

For more information on the efforts to control Winter Moth, its occurrence, life cycle and potential for causing economic damage, download the USDA report cited in references.

**References/Sources/Literature**


*Operophtera bruceata* - [https://bugguide.net/node/view/9745](https://bugguide.net/node/view/9745).

*Operophtera brumata* - [https://bugguide.net/node/view/247161](https://bugguide.net/node/view/247161).

![Figure 4: Bruce Spanworm (*O. bruceata*) and Winter Moth (*O. brumata*) dissection showing uncus (top center in each photo). Dissections and photo credit: JoAnne Russo](image)
On September 29, Micki Colbeck snapped a photograph of a beautiful patch of Delicate Fern Moss (*Thuidium delicatulum*) in Hyde Park, Vermont and submitted it to the Vermont Atlas of Life on iNaturalist (VAL) immortalizing it as the 250,000th observation for the project. And observations kept coming. In 2018 alone, we had almost 2,400 naturalists contribute nearly 72,000 observations representing more than 3,100 species verified. Over 1,940 naturalists helped to identify and verify data. And we joined the more than 336,000 iNaturalists worldwide that submitted over 7.6 million observations in 2018! Check out the 2018 year in review statistics dashboard, and if you're an iNaturalist you can see your year in review too at [https://www.inaturalist.org/stats/2018](https://www.inaturalist.org/stats/2018).

Begun as a Master’s project in 2008, iNaturalist is now based at the California Academy of Science. The website’s primary purpose is to inspire people to observe and learn about the natural world around them, but it also serves science. VAL joined iNaturalist in 2013 to allow anyone in Vermont to learn about our natural heritage and contribute biodiversity data to the atlas. Over half of the observations made on the site to date have been deemed “research grade,” supplying scientists worldwide with big data to better understand the distributions of species, especially as human impacts such as climate change and habitat destruction change them.

**Research Grade Observations**

An observation submitted to iNaturalist becomes what is called ‘research grade’ when it has: a date, latitude and longitude coordinates, photos or sounds, and the community agrees on the identification to species level. We have nearly 175,000 research grade observations comprising over 4,000 species in the iNaturalist Vermont database. These data are shared continually with the Global Biodiversity Information Facility (GBIF), an international open data infrastructure that allows anyone, anywhere to access data about all types of life on Earth, shared across national boundaries via the Internet.

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**Some New and Amazing Discoveries in 2018**

**Dragonflies and Damselflies:**

By most any measure, the 2018 field season of the Vermont Dragonfly and Damselfly Atlas was amazing. Volunteers added 1,438 records to our growing dataset, which now stands at 11,994 records. That includes the addition of a new species to the Vermont fauna in 2018. Nick Block found a Scarlet Bluet (*Enallagma pictum*) at a pond in southern Vermont on July 4, 2018 (a happy Independence Day, indeed). It became Vermont’s 46th known damselfly species (along with 104 known dragonfly species).
**Moths:**
Volunteer naturalists from across Vermont uploaded over 1,200 images of moths comprising more than 370 species during National Moth Week. This year’s count was bolstered by the Montpelier Bioblitz 2018, which kicked off the week. Moth experts Hugh McGuinness, Michael Sabourin, JoAnne Russo, and others on the bioblitz team recorded nearly 320 moth species in Montpelier during the first two days. Nearly 130 volunteers added moth observations during the week.

National Moth Week celebrates the beauty, life cycles, and habitats of moths. Held worldwide during the last full week of July, National Moth Week offers everyone, everywhere a unique opportunity to become a citizen scientist and contribute information about moths. Through partnerships with major online biological data depositories, like the Vermont Atlas of Life on iNaturalist, participants help map moth distribution and provide needed information on other life history aspects around the globe.

The fun doesn’t begin and end with National Moth Week. Here at VCE, with the aid of many volunteers across Vermont, we map moth distribution throughout the year. Since 2013, professional biologists and volunteer naturalists have contributed moth observations to the Vermont Atlas of Life through our iNaturalist project. Many of us turn on special lights in our backyards on summer nights to find hundreds of moths and other insects gathering on white sheets, hunt fields and forests for day-flying moths, and place rotten fruit bait out to attract other moths. Many of these moths can be identified from good photographs (although some are impossible without dissection and examination under a microscope). With today’s amazing digital photography technology, coupled with the newer *Peterson’s Field Guide to Northeastern Moths* and web sites like iNaturalist, BugGuide, Moth Photographers Group, or Moths of Eastern North America Facebook Group, moth watching (a.k.a. “mothing”) has become increasingly popular.

Moth watchers here in Vermont have added nearly 100 new species to the Vermont checklist via the Vermont Atlas of Life on iNaturalist and have documented 1,248 species across the state so far. What’s even more amazing is that we’ve recorded over 32,000 observations, which helps us understand their phenology, habitat use, and range in Vermont like never before.

Since the 1995 landmark publication *Moths and Butterflies of Vermont: A Faunal Checklist*, nearly 400 new moth species have been found in Vermont thanks to the tireless efforts of both professional and amateur lepidopterists. Preliminary results show that there are now over 2,200 species of moths known in Vermont. And, there are likely many more awaiting our discovery.

We encourage you to add your photographs of moths, too. Finding moths can be as simple as looking for them flying about during the day, or leaving a porch light on and checking it after dark. Serious moth aficionados use special lights and baits to attract them.

**Bumble Bees:**
Fernald’s Cuckoo Bumble Bee (*Bombus fernaldae*) hadn’t been seen in Vermont since 1963, but was rediscovered this year in two places. VCE research associate, Leif Richardson, found it during a bumblebee survey in the Missisquoi National Wildlife Refuge in Swanton. Spencer Hardy, a member of the VCE Vermont Bumble Bee Atlas team, found five drones just a few days later in Franklin County. There are just two historic records for this bee in Vermont—a specimen from 1936 in Whittingham and a second from Island Pond in 1963. Fernald’s bumblebee is fairly common elsewhere in the region—it’s been spotted in Quebec, New York, and Maine—but confirming the bee is still found in Vermont was key.

Observers added 16 records across Vermont for the State Threatened Yellow-banded Bumble Bee (*Bombus terricola*). Populations of this species appear to be rebounding somewhat. Once common and found throughout the Northeast and south into Georgia, *B. terricola* populations have experienced a dramatic decline over the past 15 years. Overall, 95 observers added 376 bumble bee observations for 12 species across the state.
We published a new study examining 100 years of Vermont bumble bee records revealing that almost half of Vermont’s species, which are vital pollinators, have either vanished or are in serious decline. After conducting the state’s most extensive search for bumble bees, and combing through historical records from museum collections, our team has concluded that four of Vermont’s 17 bumble bee species appear to have gone extinct. The study, led by researchers from the Vermont Center for Ecostudies and the University of Vermont, was published in the *Journal of Insect Conservation*.

**Lady Beetles:**

Since at least the 1980s, native lady beetles that were once very common have become rare or have even been lost. Meanwhile, introduced lady beetles from other parts of the world have been spreading. In agricultural habitats, lady beetles prey on many pests, including aphids and other insects. We know that 15 native lady beetle species have not been found in the state since at least 1976. But little has been done to help us understand and monitor their status across the state.

We have begun to assemble occurrence data for lady beetles of Vermont derived from an historical publication from 1976 (see [val.vtecostudies.org/wp-content/uploads/2018/10/Lady-Beetles-VT-Checklist-1976.pdf](http://val.vtecostudies.org/wp-content/uploads/2018/10/Lady-Beetles-VT-Checklist-1976.pdf)) that contained some dates and counties where they were collected, records from the Lost Ladybug Project (see [http://www.lostladybug.org](http://www.lostladybug.org)), and observations shared at the Vermont Atlas of Life on iNaturalist. All of these records have been uploaded to the Global Biodiversity Information Facility (GBIF). We now have nearly 1,000 records representing 45 lady beetle species (six introduced) from collections across the continent, including the Archbold Biological Station Arthropod Collection in FL, University of Alberta E. H. Strickland Entomological Museum, University of Michigan Museum of Zoology, BugGuide.net, Vermont Atlas of Life on iNaturalist, Lost Ladybug Project, and University of Vermont. Uniting Vermont data from far and wide shows the power of a data gathering infrastructure like VAL and GBIF. Most records come from iNaturalist users like you contributing photographs of these beetles. We have 484 observations comprising 20 verified species. In 2018 alone, 13 verified species were documented from 128 observations. Observers like you have contributed some unique records:

- **Undoubtable Lady Beetle** (*Brachiacantha indubitabilis*) – the first and only state record was found in 2014 and reported to BugGuide.net (see [https://bugguide.net/node/view/958302](https://bugguide.net/node/view/958302)).

Hieroglyphic Lady Beetle (*Coccinella hieroglyphica kirbyi*) – the last record in Vermont was reported in 1969 until one was reported to VAL on iNaturalist in 2017 (see [https://www.inaturalist.org/observations/7705180](https://www.inaturalist.org/observations/7705180)).

Mountain Lady Beetle (*Coccinella monticola*) – the first and only state record was reported to VAL on iNaturalist in 2017 (see [https://www.inaturalist.org/observations/7231105](https://www.inaturalist.org/observations/7231105)).

We hope you will join the Vermont Atlas of Life at iNaturalist and help us make this biodiversity database grow in 2019!
In Memoriam: Richard G. Dearborn
By Bob Nelson

Richard G. "Dick" Dearborn, past-president and one of the founders of the Maine Entomological Society, passed away peacefully at home on Thursday, December 27, 2018, at the age of 79.

Growing up in Bangor, Maine, Dick had a life-long love of insects. After graduating from Bangor High School he went on to study at the University of Maine where he received both a B.S and M.S. in entomology. He continued his studies at Cornell University in Ithaca, New York, before starting work for the Maine Forest Service (MFS) as a survey entomologist. Dick spent the next 37 with the MFS before retiring in 2003.

During his tenure at the MFS, Dick promoted the importance of entomology in the State of Maine. He firmly believed that information should be shared as widely as possible. He convinced the Maine Forest Service to publish a newsletter providing timely information about forest pests based on MFS projects and surveys. These newsletters were published for decades and continue today, providing Mainers with up-to-date information and projections of forest pest problems. Dick encouraged other forms of publication as well, including a series of forest entomology technical reports that he oversaw. Dick curated the MFS insect collection in Augusta, Maine and used it as a basis for preliminary lists of Coleoptera, Diptera and Hymenoptera found in Maine. He also co-authored a paper on Tabanids (deer, horse and moose flies), a series of reports on mosquitoes and was the lead author on the lengthy authoritative paper on Carabids (ground beetles) in Maine; this latter was recognized as the outstanding paper of the year by the Coleopterist Society in 2014.

Pointing out that organisms don't recognize political boundaries, Dick gently but persistently fostered regional collaborative approaches to problem-solving with colleagues both in-state and across the continent. These included entomologists at the University of Maine, the U.S. Forest Service, USDA-APHIS-PPQ, their Canadian counterparts and many at other institutions. Dick was a member, and served for a time as Chair, of the Northeast Forest Insect Working Group, before it merged with the Northeastern Pest Council. He was a member of the latter group until his retirement. He also belonged to a number of other professional societies. This was a man who enjoyed the outdoors and at one time or another, hiked all the trails in Baxter State Park, where for years he served on the park’s scientific advisory board. He also served as an Adjunct Curator with the Maine State Museum.

Dick was concerned that there was no one in the State tracking insects of medical importance and took responsibility for medical entomology oversight. He initiated the ongoing Maine tick survey in the 1980s and ran it for close to twenty years. This data has been used to document the spread of ticks across the State. When West Nile Virus reared its ugly head in the Northeast in 1999, he initiated a study to identify and document the state mosquito fauna, which had previously been undocumented - though everyone knew Maine had mosquitoes. He was proponent for the multi-agency Maine Vector-borne Disease Working Group that now oversees the medical entomology issues.

Dearborn’s entomology influence went well beyond his work at the Maine Forest Service. One of his most important legacies was the formation of the Maine Entomological Society. In 1997, Dick convened a group of interested entomologists, both professional and amateur, to create a “Maine Bug Club.” This group became the Maine Entomological Society, where he served ably as President from its early formative years through 2008. The Society continues to fulfill Dick’s vision of promoting the importance of insects through field trips, workshops, outreach events, school programs, assisting in research projects and curating the Maine State Museum insect collection.

In his dual roles at the Maine Forest Service and Maine Entomological Society, Dick was instrumental in beginning two wildly popular programs. He helped initiate Bug Maine-ia at the Maine State Museum, where for years he was known as the "woollybear man" by kids and adults alike. Bug Maine-ia, now in its 16th year, brings an average of some 2000 visitors to the Museum each September; and was the inspiration for the museum’s Maine Earth-Science Day. Dick was also one of the principal driving forces that led to some 13 years of entomological bio-blitzes at Acadia National Park. These blitzes were designed to increase the Park’s knowledge of park fauna and to promote interest in and understanding of insects by visitors. The blitzes resulted in hundreds of new species being added to the known fauna of Acadia, including numerous new Maine state records. Public sessions, news coverage, a couple of documentaries and a study of citizen science in action all attest to the success of this project.

Above all else, Dick was a teacher and mentor. He made a difference to many by conducting workshops on forest entomology at Eagle Hill Institute in Steuben, having summer interns at the MFS and guiding numerous formal and informal students in multiple contexts through problems both simple and complex.

Beyond these many professional and entomological accomplishments, however, Dick was first and foremost dedicated to his family. He is survived by his wonderful wife of 56 years, Marjorie Dearborn of Mount Vernon, as well as three sons: Jeffery Allen Dearborn and his wife Tina, of Walls, Mississippi; Thomas Lamb Dearborn and his wife Jill, of Ponte Vedra, Florida; and John Jacob Dearborn and his wife Diana, of Mount Vernon. He is also survived by four daughters: Ruthann Gavett and her husband Richard, of Mount Vernon; Linda Louise Sevier and her husband Terry, of Erieville, New York; Nora Sue Bush and her husband Robert, of New London, Connecticut; and Laurel Orlene MacFarland and her husband Michael, of Mount Vernon.

He also leaves behind three sisters: Barbara Henry of Philadelphia, Pennsylvania; Cynthia Yachanin of Augusta, Maine; and Valerie House and her husband Wade, of Yuma, Arizona, as well as 12 grandchildren, three great-grandchildren, and several nieces, nephews, and cousins. Dick was a member of the First Church of Christ Scientist, and owned and operated a small farm in Mount Vernon for many years.

Those wishing to make memorial contributions may send them to: Maine State Museum, Insect Collection 83 State House Station Augusta, Maine 04333-0083 or Crystal Lake Camps, a summer camp for children 1676 Crystal Lake Road Hughesville, PA 17737 (visit their website at www.crystallakecamps.org)

A celebration of Dick’s life will be held at the Dunn’s Corner Baptist Church in Mount Vernon on Saturday, April 6, 2019, at 3:00 p.m.
Potter’s Wasp Nest (Vespidae: Eumenes), Milton, VT
Photo by Laurie DiCesare