

Migratory Snapshots: Blitzing for Blackbirds

A female Rusty Blackbird huddles on a Minnesota rooftop during a blizzard, fluffing herself into a ball to keep warm. A male flips leaves in a roadside ditch in Maryland, navigating partially frozen mud to hunt for spring's first invertebrates. A noisy, mixed flock of Red-winged Blackbirds, Brown-headed Cowbirds, and the occasional Rusty lifts off from an Ohio cornfield, seeking safety in nearby trees.



Rusty Blackbirds migrate northwards from their southeastern U.S. breeding grounds to the boreal forests of Canada and Alaska, arriving from the end of April to the beginning of June.

to the boreal forests of Canada, Alaska, and far northern New England. Rusty Blackbirds pose both a conservation challenge and an environmental mystery. This species has experienced one of the most precipitous declines of any once-common landbird, losing up to 95% of its population over a 40-year span. Until the late 1990s, no one noticed this decline, much less understood it. Today, although some of the bird's habits remain unstudied, our new understanding of Rusty

These snapshots highlight the adventures and challenges of Rusty Blackbird spring migration, a journey that takes this species from its flooded forest wintering grounds in the southeastern U.S. northward

Blackbird breeding and wintering ecology enables scientists to formulate conservation strategies for this species on both ends of its migratory range. However, we know little about

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VCE: Growing “A New Kind of People”

Back in the 1930s, Aldo Leopold, one of the country's greatest and earliest ecological masterminds, lamented that in order to conserve our natural resources we needed to grow “a new kind of people.” We think of Leopold today as the architect of The Land Ethic, author of *A Sand County Almanac*, as the wildlife ecologist who urged us to “think like a mountain.” But back in the '30s, the Dust Bowl years, he was obsessed with soil loss. In the Desert Southwest where Leopold worked, fragile watersheds had gullied out and washed away, thanks to several generations of European farmers who had no idea how to farm sustainably in arid environments. The “new people” Leopold called for would understand ecological relationships and instinctively know that how they behaved on the land had broad ecological and social consequences. Leopold constantly reminded the foresters who worked for him that their most important job was not growing trees, but growing that new type of person.



The transformative power of community-based participatory research helps cultivate compassionate, well-informed citizen scientists.

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Field Notes

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The Vermont Center for Ecostudies (VCE) is a nonprofit organization whose mission is to advance the conservation of wildlife across the Americas through research, monitoring, and citizen engagement. With a reach extending from Canada and northern New England through the Caribbean and South America, our work unites people and science for conservation.



Field Notes is VCE's biannual newsletter and is free to our constituents.

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VCE View

How does VCE's work lead to on-the-ground conservation? That is a question we regularly demand of ourselves, and which many of you, our constituents, have posed over the years. It's a fair and crucially important query. As much as all of us here are driven by scientific curiosity and inspired by ecological intrigue, our mission is driven by conservation outcomes. In an increasingly uncertain world, the metrics for gauging our impact can be elusive, but linking science and conservation is what propels us at VCE.



Simply put, VCE delivers the science needed to make good decisions for wildlife and their habitats. From loons to salamanders, Bobolinks to bumblebees, our research and monitoring detect early warning signs, identify threats, and translate findings into science-based actions. Citizen engagement and professional collaborations across the hemisphere are our primary tools. The former creates advocates for sound policy, while the latter puts good policy into practice. It's a winning formula.

What we don't do at VCE is conservation advocacy. We don't take positions on regulatory issues, and you won't see VCE advocating for one side or the other in a policy

debate. Our approach uses rigorous, objective science to inform and guide conservation policy. We apply ecological facts and principles to conservation problems. To us biologists, there couldn't be a clearer mandate. To our partners—federal and state agencies, natural resource managers, other non-profits, and you, our citizen scientists—it's a mandate on which VCE reliably delivers.

What have been the tangible conservation outcomes of our research and monitoring over the past seven years? These pages and our forthcoming 2013 annual report (available soon on our website) offer a few highlights. Ultimately, I believe that VCE's enduring measure of impact and success is the community of people—fellow conservationists, Aldo Leopold's "New Kind of People"—whom we've managed to engage and inspire. That number continues to gain strength, telling me we're on the right track.

—Chris Rimmer

Susan Hindinger Joins VCE Staff



© Todd Hindinger

We couldn't be more pleased to welcome Susan Hindinger as our Associate Director. Many of us have known Susan for years, through her past work at the Vermont Institute of Natural Science and more recently at the Riverledge Foundation. She brings a passion for natural history (in particular, a fascination with spiders), a strong grounding in conservation biology, a broad network of partnerships, and a keen aptitude for management. Susan will wear many hats at VCE, but foremost among them is helping to steer the institutional ship via oversight of our scientific programs, communications, and operations. It's a tall order, but Susan is clearly up to the task.

A Vermont eBird Decade

Each spring, millions of birds embark on an epic journey north from their wintering grounds to Vermont's thawing and greening landscape. And each year, hundreds of birders throughout the state and beyond observe this spectacular phenomenon, carefully noting which species they saw, when and where, and in what numbers.

Beginning in 1974 and continuing for more than 30 years, Vermont birdwatchers summarized and submitted their seasonal tallies to the Records of Vermont Birds project, sponsored by the Vermont Institute of Natural Science. With the help of a corps of dedicated volunteers, quarterly reports were assembled into a statewide summary that was printed and mailed to birders. Paper forms were archived in boxes, making retrieval of these data for science and conservation laborious. This all changed in 2002 with the launch of eBird, a real-time online checklist program that was about to revolutionize how the birding community reports and accesses information about birds.

Vermont was quick to seize on this opportunity. Working closely with the Cornell Lab of Ornithology, architects of the fledgling eBird, Kent McFarland helped to develop the first state-specific eBird portal. In 2003, Vermont eBird was hatched, and Vermont birders, with years of experience recording data on paper, were primed for electronic action.

Fast-forward a decade later. From a first-ever Band-rumped Storm-Petrel tossed into the state by tropical storm Irene to the ubiquitous Black-capped Chickadee, with over 62,000 records reported, Vermont eBirders have risen to the chal-

lenge and then some. To date, we've documented 380 bird species and tallied nearly 123,000 checklists across the state, representing over 10.6 million individual birds (that's two birds counted every minute for ten years!). Together, we've amassed what is arguably Vermont's single largest biodiversity database ever.

From the cacophony of 44,000 migrating Snow Geese resting on an Alburgh field along Lake Champlain, to the dawn chorus of Bicknell's Thrush

just before sunrise in the Green Mountains, or simply the pair of Northern Cardinals nesting in a backyard, each birdwatcher's observations constitute a piece of the puzzle. And just like puzzle pieces, these observations are far less valuable alone than fully interconnected. The sightings tucked away in your memory, scribbled in a notebook, crammed into an old shoebox, or even dutifully recorded on a spreadsheet, leave gaps in the grand puzzle of avian knowledge. For bird records—both current and archived—to most effectively advance our understanding of nature, they must be assembled and organized into a central database. Now, a full decade and nearly 11 million records after Vermont eBird's launch, we're fitting together a remarkable puzzle whose interlocking pieces are providing more

clarity, checklist by checklist, on our state's avifauna. Across Vermont and the entire globe, eBird provides a powerhouse of information for science and bird conservation.

—Kent McFarland



© Allen Gahman

Since 2003, dedicated birders have submitted over 10 million records to Vermont eBird.



Drink Coffee for the Birds!

Support sustainability and help VCE at the same time. VCE is partnering with Birds and Beans® to promote consumption of triple-certified, organic, shade grown, Fair Trade coffee. You can find this tasty brew in several Upper Valley and other regional food co-ops. Help us maintain bird-friendly environments while supporting farm families who grow their coffee sustainably. Make sure your java is Bird Friendly®.

Big Data Comes to Butterflies

From meadows to mountaintops, bogs to backyards, North America now begins the season of flash and flight: butterfly season. Across the continent the light show will feature the glitter of azures, hairstreaks, fritillaries, checkerspots, and skippers.

© Bryan Pfeiffer



Early Hairstreak (*Erora laeta*) is one of the many species whose populations we hope to track through crowdsourcing on eButterfly.

In hot pursuit of these insects each spring and summer are legions of dedicated butterfly watchers carrying nets, cameras, field guides, and binoculars. But now their tools will include powerful computers.

With guidance from VCE, crowdsourcing, big data, and the wave of social media have reached the tranquil realm of butterflies in a new web portal called e-butterfly.org. The site allows users to store, share, and organize their butterfly observations and photos online, and to view real-

time checklists and maps of butterfly distribution across Canada and the U.S. In short, eButterfly will probably do for butterflies what eBird has already done for birds.

“We believe eButterfly is the best thing to happen to butterflies since flowers and nectar,” said Kent McFarland, a conservation biologist at VCE and leading partner in the development of the site.

VCE was a natural partner for eButterfly. Having already completed Vermont’s first butterfly atlas project, the 2002-2007 Vermont Butterfly Survey (www.vtecostudies.org/VBS), VCE will add its data to the eButterfly database.

As environmental indicators, butterflies are sensitive to habitat degradation, invasive plants, changes in climate, and other ecological forces. Over time, as its database grows, eButterfly will become a foundation for understanding butterfly distribution and population trends across North America. It will also be a resource for citizens, educators, lepidopterists, conservationists, land managers, and policy makers.

“This will be a wonderful opportunity for people to get involved in science, appreciate nature and our changing world, and interact with and enjoy biodiversity,” said Kathleen Prudic, a research scientist at Oregon State University and collaborator on eButterfly.

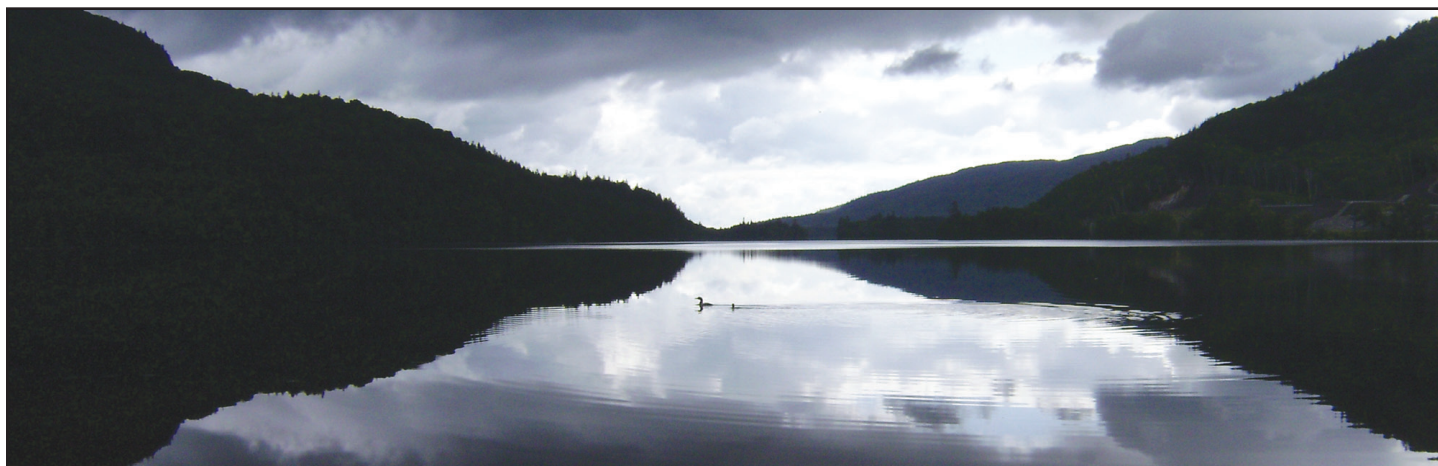
—Bryan Pfeiffer

If you enjoy watching wildlife and wish to contribute to protecting our natural heritage, then join the VCE team! Consider becoming a citizen scientist. Visit www.vtecostudies.org/citsci.html to find the citizen science project that’s right for you.

Citizen Science Opportunities

Project	Website/email	Leader	Season	Ability
Vermont Atlas of Life Report and explore sightings of all taxa with this innovative online tool.	www.vtecostudies.org/atlas/kmcfarland@vtecostudies.org	Kent McFarland	Year-round	Beginner to expert
Mountain Birdwatch Adopt a mountain and survey Bicknell’s Thrush and other mountain songbirds.	www.vtecostudies.org/MBW/jscarl@vtecostudies.org	Judith Scarl	June	Beginner to expert Hiking required
LoonWatch Participate in the annual one-day census of Vermont’s breeding loons.	www.vtecostudies.org/loons/chanson@vtecostudies.org	Eric Hanson	Mid-July	Beginner to expert
Vermont Loon Recovery Program Help monitor nests and lakes.	www.vtecostudies.org/loons/chanson@vtecostudies.org	Eric Hanson	Spring-Summer	Beginner to expert
Forest Bird Monitoring Program Help track long-term changes in populations of interior forest songbirds.	www.vtecostudies.org/FBMP/sfaccio@vtecostudies.org	Steve Faccio	June	Able to identify forest birds by sight and sound Hiking required

Beyond Loons - Lakeshore Conservation Efforts



With loon populations on the rise in Vermont, VLRP has broadened its conservation efforts to include protection of shoreline habitat.

Vermont loons continued to prosper in 2013, with record numbers of nests (81) and surviving chicks (71). VCE and the Vermont Loon Recovery Project (VLRP) are now building on these successes by helping the rest of the lake's food chain. Last year, we unveiled a new brochure that outlines broader lake conservation efforts, and we distributed these to more than 700 lakeshore residents.

EPA studies have determined that only 17% of Vermont lakeshores are categorized as being in good condition, as measured by the extent of development and lawns along the shore, compared to 42% regionally and 35% nationally. Vermont is the only northeastern state without legal standards for shoreline development. This may change in 2014, as H.526 has progressed through the Vermont House and Senate and is now in a conference committee. This bill would establish a permitting process for development, vegetation management, and the creation of impervious and cleared areas within a shoreline protection zone around lakes. The goals of the legislation are to increase natural vegetation within 100 feet of shorelines and to limit developed, impervious, and cleared areas within a 250-foot lakeshore buffer.

Poor biological health is three times more likely in lakes with extensive shoreline disturbance.

VLRP hopes that our ongoing education and outreach efforts will help people understand why this law would protect important ecological functions. For example, woody debris from forested shorelines is extremely important for small organisms that anchor the aquatic food chain (e.g. zooplankton, dragonfly and mayfly larvae). Woody debris also provides shelter and shade for small fish. In a Wisconsin study, bass and crappie fish nests were nearly absent

along developed shorelines. Another study on an undeveloped Wisconsin lake found that perch catch rates declined 3-4 times after 70% of the woody debris (small sticks to logs) was removed from underwater shoreline areas.

It may be difficult to generate excitement among landowners about “woody debris,” but by linking the value of woody debris to loon populations and overall lake health, we hope that people will adopt the few extra measures needed to adequately conserve our lakeshores.

And if ecological values per se don't provide enough reasons to promote tree and understory retention along shorelines, a dense shrub zone helps keep geese (and their droppings) off lakeshore properties!

—Eric Hanson

Help Us Reduce Our Footprint!

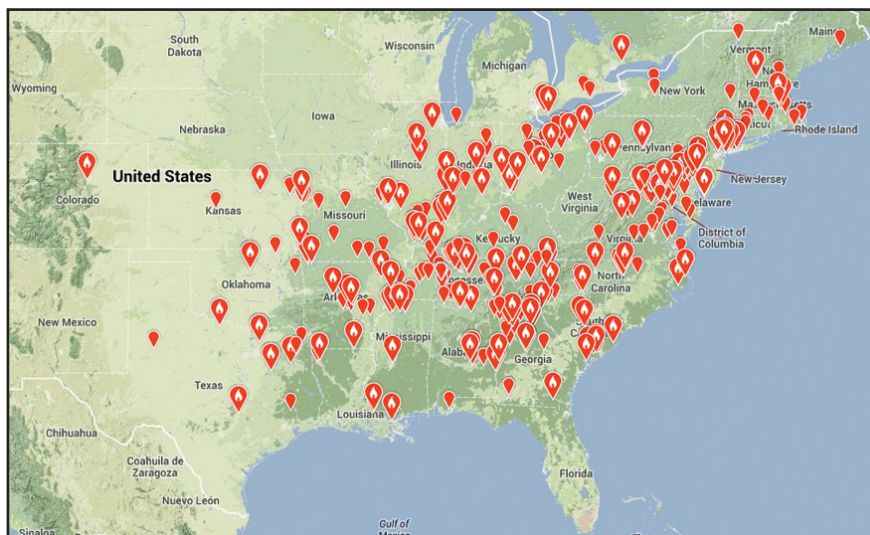
If you are interested in receiving Field Notes but would like to do so electronically, please contact Melissa at: mmackenzie@vtecostudies.org.

Blitzing for Blackbirds - continued from page 1

Rusty Blackbird migratory ecology, a critical element to ensure that the species is protected throughout its full annual cycle.

To identify migratory hotspots, understand migration timing, and inspire the public to support Rusty Blackbird conservation, the International Rusty Blackbird Working Group, in partnership with VCE, the U.S. Fish and Wildlife Service, the Cornell Lab of Ornithology, and dozens of state and local partners, developed and launched a three-year Rusty Blackbird Spring Migration Blitz. This Blitz challenges birders across 38 states, 9 provinces, and 3 Canadian territories to search for Rusty Blackbirds during the species' northward migratory journey. While rangewide Blitz dates span the beginning of March through mid-June, each state and province focuses efforts during peak Rusty migratory activity for its region. Southern states blitzed throughout March before bidding farewell to the blackbirds, whereas Nunavut and the Yukon in northern Canada will search until mid-June. To participate, birders scour the landscape for Rusties and report their data to eBird under the "Rusty Blackbird Spring Migration Blitz" observation type, allowing the Blitz to tap into an existing network of citizen scientists and to encourage new supporters to use a broad-based conservation tool. These data will be used to identify Rusty Blackbird hotspots across the landscape and assess whether critical stopover areas are adequately protected. The ultimate goal is to ensure that Rusty Blackbirds have access to high-quality habitat throughout a journey that is energetically costly and already fraught with peril.

Since the Blitz's launch on March 1, 2014, Rusty Blackbird observations have poured in to eBird. During this past March alone, eBird received 3,613 checklists reporting Rusty Blackbirds, compared with 2,376 Rusty observations submitted during the same month in 2013. Virginia birders submitted the most eBird checklists with Rusty Blackbird detections (303), with New York following close behind at 294. To encourage data collection and volunteer engagement, state coordinators and partners are getting creative about recruiting citizen scientists. Minnesota and Wisconsin are holding a friendly competition to determine which state will observe



After only a single week of blitzing, birders across 27 states had already mapped hundreds of Rusty Blackbird observations. Data from eBird, March 1-8, 2014.

the most Rusties. Iowa Public Radio hosted a feature on Rusty Blackbirds, and newspapers from Louisiana through New Jersey are tuned in to local Blitz efforts. Michigan Audubon will host a "Rusty Blackbird Weekend," and the Delaware state Blitz coordinator holds Rusty birding trips to search for stop-over areas. For those who prefer birding to basketball, the Rusty Blackbird was featured as one of 16

"competitors" in the Cornell Lab of Ornithology's March Migration Madness; the species garnered a respectable 1,347 votes against the showier Yellow Warbler, demonstrating that bird enthusiasts are beginning to take notice of this often-overlooked blackbird.

The Rusty Blackbird Spring Migration Blitz represents VCE's broadest geographic collaboration to date. In addition to providing important data to guide conservation efforts, this three-year initiative both builds and strengthens partnerships between federal, state, and non-profit organizations across much of North America.

By the time Field Notes reaches your mailbox, some Rusties will be nesting in the boreal forests of northern New England, while others will be nearing their final destinations on Canadian or Alaskan breeding grounds. However, after raising families this summer and spending next winter back in the southeastern U.S., Rusty Blackbirds will prepare for another northward migration in early 2015. Here at VCE, we'll be ready for their return—will you join us to answer the Blitz call?

—Judith Scarl

VCE Monthly eNews

If you would like to receive our monthly eNews, email Melissa at mmackenzie@vtecostudies.org.

"A New Kind of People" - continued from page 1

I think of VCE's critically important work as part of a worldwide movement to grow Leopold's new type of person. I believe the health of our natural world rests on the success of this movement. That is to say, it rests on us. The VCE staff is a team of professional conservation biologists who use sophisticated field and data management protocols and tools that are beyond the ken of the everyday person.

Yet the majority of their projects are positioned around involving us non-scientists in their conservation work. Scratch the surface just a little of what VCE describes as Citizen Science (in environmental justice circles and urban environments often referred to as "community-based participatory research") and you begin to see its remarkable transformative potential.

As a problem-solving strategy, Citizen Science is a no-brainer. Many, if not all, of our most vexing conservation dilemmas span large landscapes and occur across long periods of time. The single study site simply isn't enough to get a picture of what's happening to an entire species throughout its migratory corridor. To detect phenological shifts caused by climate change you need thousands if not millions of data points. There is no better tool than the curious human mind for gathering certain types of descriptive data. Scientists need us as much as we need them.

But Citizen Science today goes beyond crowdsourcing. Caren Cooper, a Cornell Lab of Ornithology bird population researcher, writes that Citizen Science "relocates science in the heart of society." Many describe Citizen Science as democratizing science today. There are no barriers to participating. Even nonliterate societies such as the Kalahari Bushmen can use mobile devices, satellite imagery, and icons to monitor their local resources. At a time when some in our divided American public express disbelief and outright disdain for science while others put great stock in it, Citizen Science builds personal connections that have the power to transform communities and knit us together.

Citizen Science also transforms people, hearts, and minds. To use a personal example, growing up in coastal southern New



The advancement of conservation biology would not be possible without citizen scientists and the millions of invaluable data points they provide.

England, I fell in love with grasslands and their surprising suite of plants and animals. Unfortunately, urbanization was rapidly converting saltwater farms and the last remnants of sand plain communities in this region. Just as I was getting to know these remarkable places, they were fading away. I helped band the last Barn Owls on Aquidneck Island, and I'm pretty sure I listened to the last Eastern Meadowlarks sing one evening in old pastures now covered by condo-

miniums. We knew bad stuff was going down, and we did what we could with what we had. But today's Citizen Science landscape changes everything. And it's not just the cool digital tools that are so appealing. It's the new relationships inside us, the scientist-of-us joining with the heart's deepest passions and concerns. Citizen Science can help in personal transformation, which lies at the heart of social change.

Aldo Leopold envisioned the massive social transformation needed to drive an ecological shift. He said society needed a new type of people. VCE has stepped up to this challenge. What each of us must do today is take a first step and sign on. We are, after all, the people Leopold was waiting for.

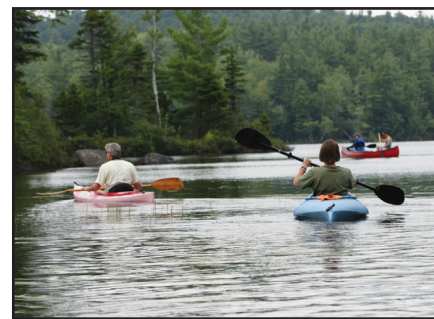
—Tim Traver is a writer, conservationist, natural history buff, fisherman, and member of VCE's Advisory Council.



Loon biologist Eric Hanson and former VCE Board member David Key take a break from their work on a loon nest raft.

VCE News and Events

© Jane Ackerman



© Jane Ackerman

VCE Birdathon 2014

The snow has melted, warm(ish) weather has arrived, and team VCE is ready for serious birding! On Tuesday, May 20, the Green Mountain Goatsuckers will celebrate the return of Vermont's migratory birds via our annual low-carbon Birdathon.

We'll launch a flotilla of kayaks and canoes on the Connecticut River, then "paddle with a purpose" for the day, seeking to identify as many species as possible. Please join us as a Birdathon sponsor, or form your own team and count birds on any day in May. Ask your friends, family, neighbors, and favorite businesses to pledge generously for each species you find. Teams can earn a limited edition 2014 VCE Birdathon T-shirt. The funds you raise while birding will support VCE's important wildlife conservation research projects. For more information visit www.vtbirdathon.org. Thank you, and good birding!

Suds & Science

© Melissa MacKenzie



Join VCE scientists and colleagues at the Norwich Inn each month for a cold brew and lively conversation on a selected natural history topic. We're calling it "Suds & Science," with each session held on the first Tuesday of the month from 7-8 pm.



© Melissa MacKenzie

Mountain Birdwatch Training Sessions

Have you signed up to adopt a Mountain Birdwatch route yet? We encourage all volunteers to attend a training workshop. Learn the protocols, meet other MBW volunteers, and brush up on your identification skills!

© Laura Tobin



Saturday, May 10, 10 a.m. to 1 p.m.
Fairbanks Museum and Planetarium
St. Johnsbury, VT

Saturday, May 17, 10 a.m. to 1 p.m.
Five Rivers Environmental Education Center
Delmar, NY

Saturday, May 31, 11 a.m. to 2 p.m.
Gilsland Farm Audubon Center
Falmouth, ME



© Judith Scarl

Please RSVP to Mountain Birdwatch director Judith Scarl (jscarl@vtecostudies.org) if you plan to attend one of these workshops. Still looking to adopt a route? Visit the "Available Routes" page of the Mountain Birdwatch project on our website to see what's available.

Volunteer Highlight: Sarah Carline

Volunteers are integral to the success of many VCE projects. From the Vermont Breeding Bird Atlas and the Vermont Butterfly Survey, to long-term monitoring projects such as Mountain Birdwatch and the Forest Bird Monitoring Project, the countless hours contributed by these dedicated individuals allow us to achieve conservation in a cost-effective manner. Moreover, these citizen scientists often share their enthusiasm and knowledge of the natural world with friends and neighbors, helping to nurture a community of informed ecological stewards. In an ongoing effort to thank and acknowledge their contributions, we regularly profile a volunteer in Field Notes.

Data entry is anything but glamorous. It pales in comparison to even the most nightmarish day of fieldwork, and while fundamental to advance modern-day conservation, entering data on a computer is a task most of us avoid at all costs. Not so Sarah Carline, VCE's volunteer extraordinaire.

Sarah first contacted our office in 2011. After volunteering for Loonwatch the previous two summers, she was eager to find more diverse ways to participate. Fortunately for VCE, she didn't flinch at the mention of data entry.

Two and a half years later, Sarah still drives from Rutland to our office in Norwich once a week to help us with whatever we throw her way. Her contribution to VCE's productivity—not to mention her quiet, good-natured diligence—has been phenomenal, and enumerating Sarah's accomplishments over the past two and a half years required input from every VCE staff member.

For starters, Sarah has painstakingly mapped ~8,000 beetle specimens for the Vermont Atlas of Life. She has entered and error-checked reams of Forest Bird Monitoring Program (FBMP) data, stuffed envelopes for annual mailings, entered eBird data, sorted butterfly specimens, and digitized countless historic bird records and reports. She has error-checked data for Mountain Birdwatch (MBW) and updated innumerable volunteer information resources on the web. Sarah has single-handedly entered over 4,000 survey points for the Vermont Bumblebee Survey, and has identified, pinned, organized, and tagged more bumblebees than she would want us to count.

Sarah's dedication to VCE is hardly limited to the office. In addition to being a Loonwatch volunteer, she has surveyed two MBW routes, submitted multiple observations and specimens to the Vermont Bumblebee Survey, and is primed to take on an FBMP survey route in 2014. As if all that isn't enough, she has contributed nearly 500 observations of ~300 species to the Vermont Atlas of Life!

Like many devoted naturalists, Sarah's interest in nature began as a child. Growing up in Louisiana, she was always outside—fishing with her grandparents, searching ditches for crayfish, and building small ponds to house her newfound critters. Sarah has fond memories of afternoons at her grandparents' home, raptly watching the feeder as her grandmother named each arriving bird. She even recalls carrying a small, hand-carved bow and arrow as she trailed after her father on his hunting excursions.



Sarah Carline, VCE's volunteer extraordinaire, poses for a quick photo on her way to the summit of Mt. Mansfield.

© C.J. Carline
After many years in the south, Sarah and her husband C.J. settled in Vermont. "It took me a bit to warm up to it here," says Sarah, "But now, it would be tough to pull me away. Aside from the four seasons, mountains, swamps, and scenic rivers, I think it's great how Vermont supports local farmers and businesses."

Not surprisingly, Sarah takes full advantage of all Vermont has to offer in the way of outdoor activities. She hikes and camps, flatwater kayaks and canoes, and every now and again, she braves the slopes. But mostly, Sarah likes to bird, naturalize, and photograph slow-moving creatures for the Vermont Atlas of Life—VCE couldn't be happier that she does!

Sarah's contributions to VCE cannot be overstated. She tackles the most imposing mounds of data with grace and calm, applying a focused dedication that inspires both admiration and gratitude in the rest of us. Her quiet capability and sense of humor have made Sarah an indispensable team member and an enduring part of our extended family. Thank you, Sarah!

—Sara Zahendra

Tributes

Dave Evancich - VCE Friend, Valued Advisor, Staunch Conservation Ally

© Courtesy of Kathryn Kirkland



No one treasured the northern woodlands and waterways more than Dave Evancich, who paddled and fly fished from his camp on Maine's Kennebago Lake at every opportunity. Dave's love of wild places was evident in his passion for conservation, of which VCE became a fortunate recipient when he joined our Board in 2010. Sadly, he lost his battle with cancer this past January, leaving behind a legacy of thoughtful and enduring contributions.

Dave's conservation roots took hold during his youth in Tacoma, Washington and were reinforced during his undergraduate years at Dartmouth College. After receiving a Master's from the Tuck School of Business, Dave moved to Boston and then to Washington, DC, where he cut his conservation teeth with the World Wildlife Fund over several years. He returned to the Upper Valley in 2001, where he worked first in Marketing and Public Affairs for the Dartmouth-Hitchcock Medical Center, and then as Senior VP for Advancement at the Student Conservation Association. As a VCE Board member, Dave brought advice and keen insights that were aspirational but always grounded in reality.

Conservation was never far from Dave's mind and heart. He was a calm, creative, caring person who never hesitated to think outside the box and give generously of his time. While equally at home in a board room or casting a 6-weight fly rod from his kayak, there was never a question where Dave's spirit truly resided.

—Chris Rimmer

Alex Dickey - Ardent Pupil of Life, Passionate Naturalist, VCE Friend

Alexander Dickey had a spark and an energy that were quietly captivating. From the moment he entered VCE's office in 2010, eager to immerse himself in whatever volunteer tasks we could muster, we sensed his special qualities. Over the next two-plus years, Alex enriched and charmed all of us with his infectious enthusiasm, probing mind, and unbridled curiosity about the natural world. We were deeply saddened when he passed away last fall at age 28, far too soon.

Alex's wide array of interests and passions were instilled in no small part through his large, close-knit family, which has deep Upper Valley roots. His paternal grandparents, Whit and Closey Dickey, gathered the family every summer at their home on Mt. Desert Island in ME, where Alex's love of nature and the outdoors blossomed. Despite Alex's keen intellectual curiosity, formal schooling didn't provide adequate allure to hold his concentration for long—life had too much else to offer! Two years at Skidmore College were followed by a year in Spain to learn Spanish and see Europe's sights, a stint at the University of British Columbia, then studies at Colby-Sawyer College, where he majored in English.

At VCE, Alex tackled a multitude of tasks and projects with unabashed energy. Always, he looked beyond the job at hand, asking questions about the biology and conservation underlying our work. An astute birder and well-rounded naturalist, Alex couldn't help but examine every life form that crossed his path. Little known to his VCE friends, however, was Alex's remarkable breadth of other talents and passions; these included poetry and classical guitar. Above all, Alex was a gentle, compassionate soul who cared deeply about both people and nature. He left a lasting mark on us.

—Chris Rimmer



© Courtesy of Landon Hall

Peer-reviewed Papers

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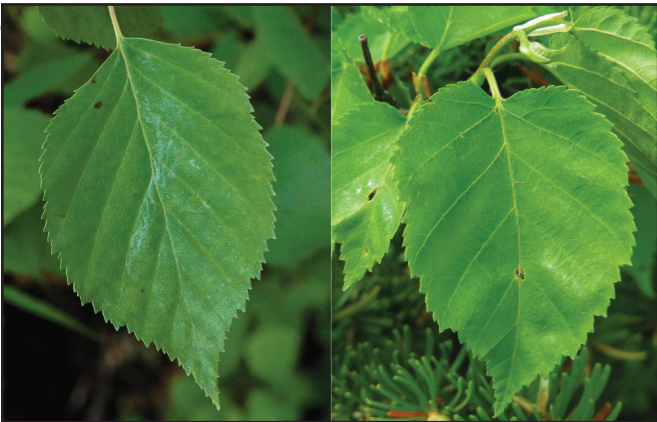
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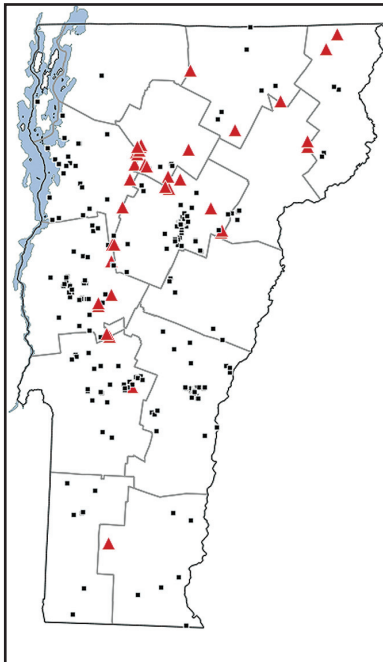
Paper Birches (*Betula*)

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Although Paper or White Birch and Heart-leaved Paper Birch look very much alike, they are separate species. Can you tell which is which?



Locations of birch records from iNaturalist Vermont. Red triangles are Heart-leaved Paper Birch. Black squares are Paper or White Birch.

Many people don't realize that two types of paper birch trees grow in Vermont: Paper or White Birch (*Betula papyrifera*) and Heart-leaved Paper Birch (*B. cordifolia*), once considered a variety of Paper Birch. As its name suggests, the latter species has distinctive heart-shaped, many-veined leaves, and it is restricted to high-elevation Appalachian and northern forests.

The primary means of distinguishing Heart-leaved Paper Birch from Paper Birch include:

- The leaf base is heart-shaped (cordate)
- Its leaves are dotted with resin glands
- Young shoots are not hairy
- A bronze or pinkish inner bark shows when the outer bark peels
- It is genetically diploid (28 chromosomes), making it unlikely that these two species will readily hybridize

We know surprisingly little about the exact range of these two species in Vermont, or beyond. How low in elevation does Heart-leaved Paper Birch grow? How high does Paper Birch climb into the mountains? Do they overlap in some areas? And how will these species respond to climate change, or have they already? Observers adding records to iNaturalist Vermont, a project of the Vermont Atlas of Life, are helping to map these and many other species. We hope you will add your observations too! Visit www.inaturalist.org/projects/vermont-atlas-of-life.

—Kent McFarland