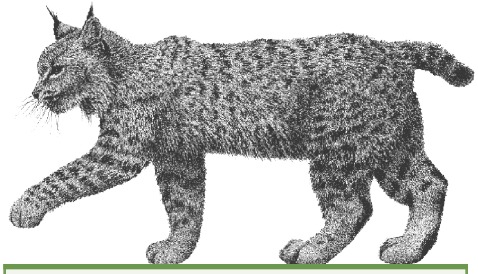
Welcome to the Spring 2014 issue of the Harris *Hearsay*, where you can read news about the Harris Center and the wonders of our work in the community.

Harris Hearsay

THE HARRIS CENTER FOR CONSERVATION EDUCATION
Hancock, New Hampshire



Our Mission

A member-supported nonprofit organization, the Harris Center for Conservation Education is dedicated to promoting understanding and respect for our natural environment through education of all ages, direct protection and exemplary stewardship of the region's natural resources, conservation research, and programs that encourage active participation in the great outdoors.

If you would like to join or donate to the Harris Center, please visit our website at www.harriscenter.org, call our office at (603) 525-3394, send an email to Diana Jacobs at jacobs@harriscenter.org, or visit us at 83 King's Highway in Hancock, New Hampshire.

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harriscenter.org

ConVal Biology Students Identify INVASIVE SPECIES AND MORE...

by Laurel Swope

Don't be alarmed if you see students bushwhacking through honeysuckle bushes and oriental bittersweet on the ConVal High School campus — they are just busy becoming invasive plant observers. The biology students at ConVal High School are thinking green this year, as they participate in a new, plant-themed collaboration between the Harris Center, ConVal, and Otter Brook Farm of Peterborough.

Students began their semester by conducting multiple plant studies with me at the Otter Brook Farm greenhouse. The greenhouse is able to have six plant "lab stations" set up and cared for by the farm's Agricultural Specialist, Matthew Roy. ConVal teacher Robin Croteau reflected, "The hoop house experience was enjoyed by so many of my students for a variety of reasons. Whether it was tasting a radish for the first time, or realizing that plant growth can be affected by a variety of factors, the students were appreciative of the opportunity to do hands-on science and see biology in action!"

To continue the plant theme, ConVal teachers have incorporated plants into other units of study, like lessons on the structure and function of living things, in which students analyze plant parts for various types of macromolecules. Biology teacher Carol Young is enthusiastic about these learning connections: "At Otter Brook Farm, the students analyze data from scientific experiments about plant growth and nutrients. This links directly to our studies of biological molecules, as well as the carbon and nitrogen cycles."

In the ecology unit, during the growing season, I lead the students outside to conduct surveys of invasive plant infestations on the school campus. The students document invasive plant species occurences, habitat details, and soil information, harkening back to their lab work at the greenhouse. Their data are then submitted to the Invasive Plant Atlas of New England (IPANE).

After their fieldwork, the students dig deeper by researching invasive plant natural history and management to create site-specific proposals for controlling the spread of their focus species. One student reflected that "the application of (classroom) content aids memory to connect an idea to a more tangible experience." Through this process students are being empowered to take action in their own school community.

Carol Young explains, "Our field work enables them to practice the same protocols used by environmental scientists, and they are challenged to develop their own, original plan for managing invasive species on our campus. As we examine our curriculum in light of the Common Core and Next Generation Science Standards, we see that these are the learning opportunities that hit right on the mark. They help our students grow into critical thinkers who are career and college ready."

Students from Carol Young's biology class use a soil corer to collect soil samples from beneath an invasive honeysuckle bush on the ConVal campus.

Using the Harris Center's iPad microscope, a student examines lettuce roots hairs at the Otter Brook Farm greenhouse.

Lettuce plant root hairs, as viewed through the iPad microscope.

A Plan for the Harris Center's Next Three Years

by Jack Calhoun, Board Chair; and Jeremy Wilson, Executive Director

For the past year, we have been engaged in a formal strategic planning process. As a result of this important planning, our Board and staff are pleased to announce that, over the next three years, we will focus on four crucial areas: **sustaining** core strengths, **strengthening** organizational support, **cultivating** emerging opportunities, and **fostering** greater integration across our program areas. The plan strikes a good balance between developing effective ways of sustaining our vibrant education and land programs, and exploring new conservation research possibilities. Here are some elements of our three-year plan:

Sustain Core Strengths

We're committed to developing and implementing sustainable financial, delivery, and staffing models for our land conservation and environmental education programs. Our environmental education work will focus on ensuring program quality while implementing approaches that improve our efficiency. In the land conservation program, we'll reevaluate priorities for land acquisitions and ensure that systems are in place for ongoing stewardship of conserved lands.

Strengthen Organizational Support

We will develop a plan to ensure that there is adequate financial and facilities support for the work of the organization. Our financial work will focus on ensuring that the development, membership, and communications programs are adequately organized and staffed. On the facilities side, we will determine ongoing maintenance requirements and propose improvements to and possible expansion of our building to meet future needs.

Cultivate Emerging Opportunities

We plan to pursue two new promising program directions. One, to develop and implement a plan for a conservation research arm of the Harris Center that builds upon our existing citizen science programs. In addition, this program area will facilitate continued collaborations with colleges and universities that foster ecological research, environmental monitoring, and landscape planning on Harris Center lands. Two, we'll investigate the publication of a teacher's manual and other media for making the Harris Center's approach to environmental education more widely available.

Foster Greater Integration Across Program Areas

We aim to develop and implement more effective ways of deepening the relationships between and integration across the various arms of the organization. For example, in our Otter Brook Farm project (education programs), ConVal students learn how to monitor climatic conditions, forest health, and water quality (conservation research) while exploring protected lands (land conservation). Promoting connections between program areas will enable us to take full advantage of our unique blend of land protection, education, outings, and conservation research.

Revised Mission

The Harris Center's core message continues to be both important and relevant. Our mission remains the same, except for a small addition which reflects the newly organized conservation research program area.

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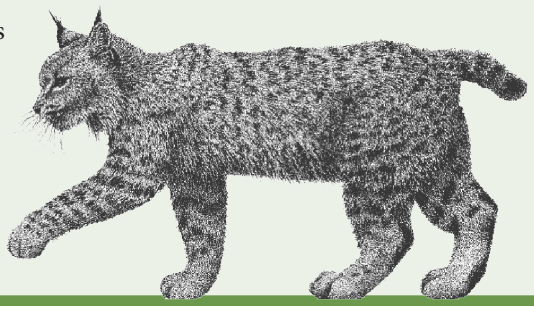
Progress Updates

We are very excited about the new directions that have emerged from the strategic planning process, and will provide updates on our progress. Copies of the detailed strategic planning report are available on our website at www.harriscenter.org, by calling (603) 525-3394, or at the Harris Center office. The Harris Center is sustained by generous and enduring constituent support. *Thank you*!

REVISED HARRIS CENTER PROGRAM AREAS & COMPONENTS

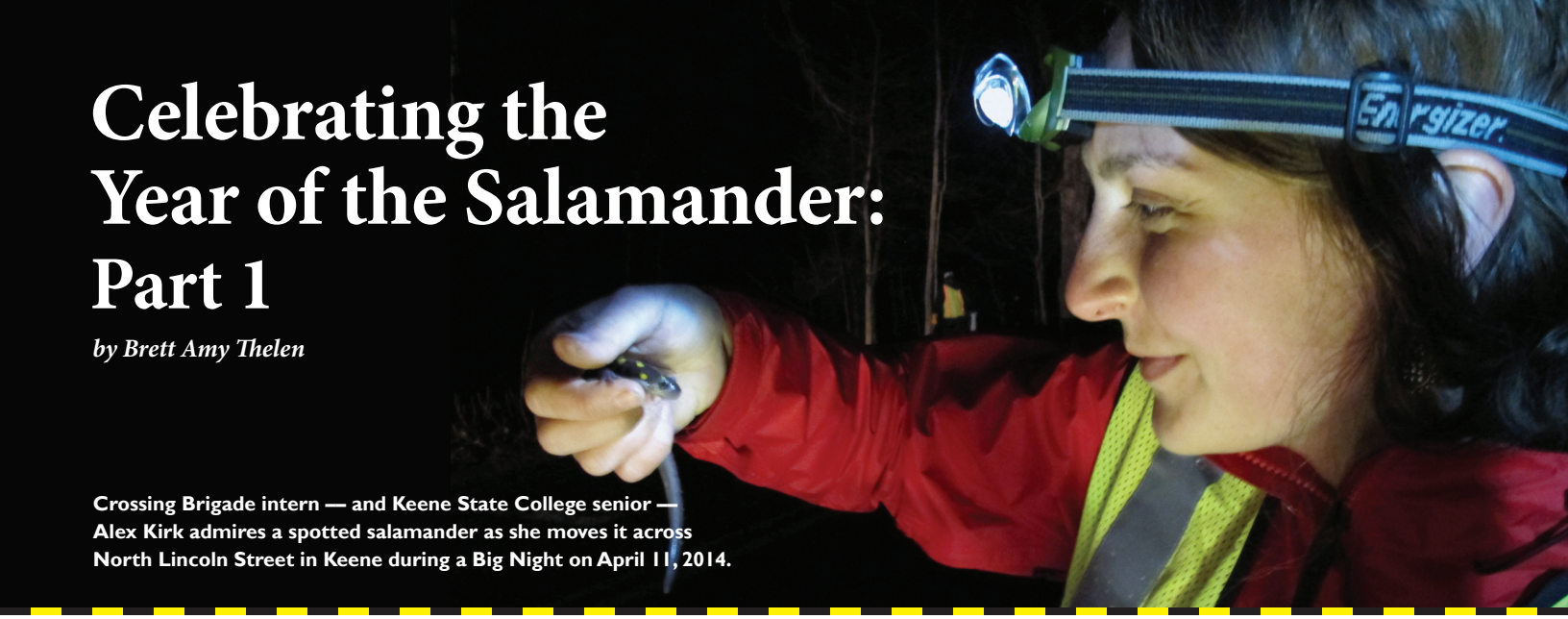
Our strategic planning made it clear that our program areas fit more cohesively into the following revised categories:

Education	Land Conservation	Conservation Research
School Programs	Protection	Citizen Science Projects
Community Programs	Monitoring	College/University Collaboration
Youth Activities/Camps	Management	Landscape Monitoring and Planning
Public Events		
Outings		
ESI (Environmental Studies Institute)		



Celebrating the Year of the Salamander: Part 1

by Brett Amy Thelen



Crossing Brigade intern — and Keene State College senior — Alex Kirk admires a spotted salamander as she moves it across North Lincoln Street in Keene during a Big Night on April 11, 2014.

photo: Brett Amy Thelen

Partners in Amphibian and Reptile Conservation (PARC) – a national coalition of biologists, land managers, and individuals dedicated to the conservation of amphibians, reptiles, and their habitats — has designated 2014 as the *Year of the Salamander*, a time to illuminate, educate, and celebrate all things salamander. In salute, here are a few stories from the Harris Center's salamander files:

Salamanders are EVERYWHERE

I once heard of a biologist with a memorable party trick: regardless of the party's location, he claimed that he could step outside and produce, within fifteen minutes, a wild salamander. I'm not sure that he'd have much success at a New Year's Eve party in Hancock, New Hampshire, but I suspect he knew this secret about the redbacked salamander: they're *everywhere*. Researchers at the Hubbard Brook Experimental Forest in northern New Hampshire discovered that the biomass — defined as the total mass of living organisms in a given place at a given time — of redbacked salamanders is *more than twice that of all birds* in that particular patch of woods, even during peak bird breeding season. That's a lot of salamanders, given the fact that these slender amphibians are only the size of your pinky finger. They spend their wild lives tucked away under logs, rocks, and leaf litter, where they dine on ants, termites, snails, and other forest invertebrates — up to 1.5 million prey items per hectare (2.471 acres) per year (!), according to one study from New York.

And what about *our* woods? Last fall, Environmental Studies students from Keene State College initiated a natural resource inventory of Harris Center lands. As part of their work, the students searched for salamanders in 1-m^2-quadrats along Harris Center trails. They found redbacked salamanders in 27 of their 34 study sites. Put another way: turn over five logs in the woods near us, and you're likely to find a redbacked salamander under four of them!

Salamanders Will Stop You in Your Tracks

Every spring, the Harris Center's citizen science program (www.aveo.org) trains volunteers to serve on Salamander Crossing Brigades at amphibian road crossings throughout the Monadnock Region. These heroic volunteers count migrating amphibians and safely usher the animals across roads during one or more "Big Nights" each spring.

At sites with a significant volunteer and amphibian presence, we put up temporary "Salamander Crossing" signs to warn approaching drivers of the extra activity on the roadway. One Big Night last spring, a young family was driving through our amphibian crossing at North Lincoln Street in Keene. Like many people, they saw our signs, slowed down, and wondered a bit about all the hoopla to protect what they assumed was the ubiquitous red eft. Midway through the site, I watched as the car quickly came to a halt and the father tumbled out of the driver's seat in a flurry of excitement. A spotted salamander — three times the size of a red eft and adorned with bright yellow polka dots — had crawled in front of his car, stopping the grown man in his tracks. He got down on his knees to take a closer look,

Seven intrepid volunteers, including Cathleen Calmer and Cynthia Nichols (pictured above), moved 349 amphibians safely across Summer Street in Peterborough before the snow started to fall on the Big Night of April 15, 2014. photo: Theresa Earle

photo: Brett Amy Thelen

exclaiming, "I've lived here for 28 years, and I've never seen anything like this before!!!"

Spotted salamanders are common inhabitants of Northeastern forests, but they spend 95% of their lives under the forest floor, only venturing aboveground a few rainy nights each year to migrate to and from their breeding pools. Unless they inadvertently find their way into your unfinished basement or you know where to look for them on rainy spring nights, you could easily spend 28 (or 48 or 68…) years living in New England and never lay eyes on one.

The excited father began unbuckling his toddler from her car seat — the car in the middle of the road, its doors wide open — so he could share his wonder with her. To keep things safe, I scooped up the salamander and convinced the family to pull over into a nearby cemetery, where we could examine the critter without worrying about oncoming traffic. Everyone piled out of the car, eyes wide. The five-year-old asked if she could touch the salamander. (Yes, gently and with wet hands.) The toddler peered intently at the creature's bright yellow spots. The mother answered an incoming call on her cell phone, and was so eager to share everything I'd just told her about the salamander that the caller couldn't get a word in edgewise. Efts are truly lovely, but spotted salamanders — with their impressive size, charming smiles, and traffic-sign-yellow spots — have stop-you-in-your-tracks-and-then-tell-everyone-you-know-all-about-it *charisma*.

Coming up in the Fall 2014 edition of the *Hearsay*: how salamanders can help you get into a good college!

IN REMEMBRANCE: GG Lilly

This winter, we were deeply saddened to learn of the passing of GG Lilly. GG and her husband Mike were frequent participants in the Harris Center's Environmental Studies Institute (ESI) courses, and longtime citizen scientists with our Salamander Crossing Brigades and Vernal Pool Projects. GG was spirited, curious, and brimming with love for the natural world. Cards from her dot our office walls — pictures of snapping turtles she helped across the road, notes about the newts in her backyard pond, a carefully-annotated timeline of frog calls by month — each one a reminder of her exuberant dedication to the nature of the Monadnock Region. She once wrote to us, "I think sometimes people feel hopeless about what we are doing to Planet Earth and choose to ignore both the wonder and the sadness. What the Harris Center does is give New Hampshire people a sense of unique place — we do make a difference; it is okay to be involved." Without question, GG made a difference, and we will miss her very much.

Ruth Ward: LAND PROTECTION VOLUNTEER *by Eric Masterson*

Ruth volunteered her services to the Harris Center earlier this year after completing a paralegal certification program. She is a perfect fit for the land conservation program for a number of reasons, not least of which is this recent legal accreditation. Ruth also understands conservation easements better than most because the Harris Center holds an easement on the land that she and her husband Fred own in Stoddard.

When she offered her time to us, we were in the process of joining Terrafirma, a program of the Land Trust Alliance that offers liability insurance for conservation easements. Terrafirma requires applicant land trusts to operate to set standards to minimize the risk to their insurance pool. The Harris Center met all the criteria but one — our conservation easement documents were not backed up in an offsite location.

We hold more than 130 conservation easements, and before Ruth offered to help, we anticipated the project would take about a year to complete. Not anymore! Ruth identified and organized both digital and hard copies of all our easements in just two months, and they are now scanned and stored electronically in the Cloud. The Harris Center will be applying for Terrafirma coverage beginning January 2014. We hope that we will never need to use the insurance, but thanks to Ruth, we now qualify.

PRESCHOOL REPORT

by Susie Spikol Faber

What's Cooking at the Harris Center?

HINT: You don't have to eat it!

We all know the rule of thumb for any baking success — start with a good recipe and gather the freshest ingredients. That's exactly what the Harris Center has been up to. But we haven't been baking cookies — we've been formulating a recipe to nurture future naturalists. For the last five years, we have started at the beginning with the best ingredients available. Our recipe calls for Harris Center naturalists, classes of very young children, time with their teachers and parents, and a curiosity about the great outdoors. We believe this is one of the ways to cook up a batch of future stewards, by starting early and mixing young childrens' experiences in the world with positive and playful times in nature.

Stepping, skipping, rolling, and roving outside with a young child is a reminder to us all that this is truly when the spark can ignite. Kids are our original naturalists, stopping to talk to a chipmunk, or spy on an ant, or sing the sound of the wind. Young children, when given the chance, are guided by their open curiosity. They touch, watch, smell, listen, and experiment all the time. Watch a young child at a puddle, splashing about. She will be playful, focused, and bound to get dirty — this is the important work of childhood. Without the opportunity to play, experience, and explore nature, how can little ones learn to love and care for the world around them? By providing ample opportunity for them to be outside, guided by curiosity and engagement, we're nurturing the best qualities in our future environmental stewards.

The young children involved in Harris Center programs, ages two through five years old, act like scientists. They construct meaning — both intellectual and emotional — through direct experiences in the world around them. Ultimately, these experiences influence and define who they become. Since we started working with this age group in 2009, more than six area preschools have monthly or seasonal programs that bring Harris Center naturalists into their school communities. By collaborating with teachers, connecting with parents, and most importantly, getting these children out into their natural surroundings, the Harris Center is helping our young children dig their feet into the earth, stretch their hands out to feel it, and open their hearts to love it.

This past winter, I sat on the edge of a circle of preschoolers, ages two through four. We were tucked in the shelter of some old rambling yews. It had just snowed, and in the cold crisp air, we were calling for birds. Little by little, some birds flew in — chickadees, titmice, nuthatches — landing on snow-laced branches. Each of us held our breath, so close the birds came. I felt a little mittened hand reach into mine, a soft squeeze, and then this little boy whispered, "When I grow up, I want to be Nature."

I think our recipe is turning out *just right*.

Preschools we currently work with:

- Dublin Consolidated Preschool
- First Friends Preschools (Antrim, Greenfield, and Peterborough)
- Harrisville Children's Center
- Robin's Nest Nature Preschool (Peterborough)