



**Vernal Pool #HC1-17 in spring (left) and fall (right). Spotted salamanders laid eggs at this site in late April, but by October the young salamanders had developed lungs and legs and crawled away, leaving only a dry depression behind. Would you have known this was a vernal pool, if you had stumbled across it in autumn?**

# SPRINGTIME SCIENCE

## for Year-Round Stewardship

By Brett Amy Thelen and Jeremy Wilson

Every spring, small hollows in the northern forest floor come alive, filling with rain, melting snow, and, eventually, salamander and frog eggs. These vernal pools serve as critical breeding and feeding habitat for a suite of amphibian and reptile species, who exert a powerful influence on the ecology of the surrounding forest as they mature and migrate away from the pools. By summer's end, many of these ephemeral pools will have dried out, revealing little trace of the teeming life they supported in April.

This past spring and summer, four undergraduate students completed a seven-week conservation internship with the Harris Center, as part of a new partnership with the Keene State College Environmental Studies Department. Under the guidance of

KSC professors and Harris Center staff, the interns collected information for a natural resource inventory on lands surrounding the Harris Center. As part of this work, the students documented nearly 20 vernal pools, including two pools in an area that was slated for a timber harvest later this winter. When we sent the GPS coordinates for the pools to our forester this fall, he found one but thought the other location must be an error—in October, there were simply no signs of standing water or vegetation that might indicate the presence of a pool. Only after comparing fall photos of the site to the students' springtime photos could we confirm the pool's location—a strong argument for the importance of on-the-ground vernal pool documentation in spring!

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Now that both vernal pools have been located and well documented, we'll be implementing forestry practices designed to protect the pools from any potential negative impacts associated with the harvest. The Harris Center is proud to conduct science in service of stewardship, and we look forward to continuing our regional vernal pool inventory with Keene State College and our fantastic citizen science volunteers in the spring of 2014!

# “Hope that flies on silent wings...”

Quotation taken from Jane Yolen's *Owl Moon*, 1988 Caldecott Medal Book Award

By Susie Spikol Faber

I AM WALKING UP A SNOW-COVERED TRAIL at the Otter Brook Farm land in Peterborough, a string of families behind me. We are heading to the meadow, wandering our way in darkness lit only by the cold glitter of winter constellations. I hear the snow crunching as the group crests into the field. We are hoping to hear owl voices echoing through the night air.

I can feel the group being so quiet, holding their breath, barely moving, patient to hear just a slight sound, a faraway deep hoot. We try calling, a plaintive “who-cooks-for-you.” I see their faces full of anticipation, straining to hear a response. Children nestled tight against parent and grandparent, eyes wide, bright like those stars up above.

But there is no owl, just the bark of a faraway dog.

We are resilient this late winter night, even joyful. We are out in the cold, under brilliant stars, sharing the hope of an adventure. Our walk back is playful.

I know these families won't give up. Many of them have been here before. They will try again, at another time, in their own wild places. They will lift up their ears and open their hearts to hear whatever is out there to be heard. These parents, grandparents, and children are standouts. To come out on a cold winter night, bundled up, to breathe frigid air and walk through deep snow, just in hopes of hearing an owl.

Hope. That is what I have to have. Hope that these families will keep connecting to each other and to nature. Hope that

families who have never gone out into the natural world will venture out together someday soon. Hope that children will spread their roots down into the ground, taste the wildness of this earth, and grow into adults who carry compassion for the natural world somewhere big within their hearts.

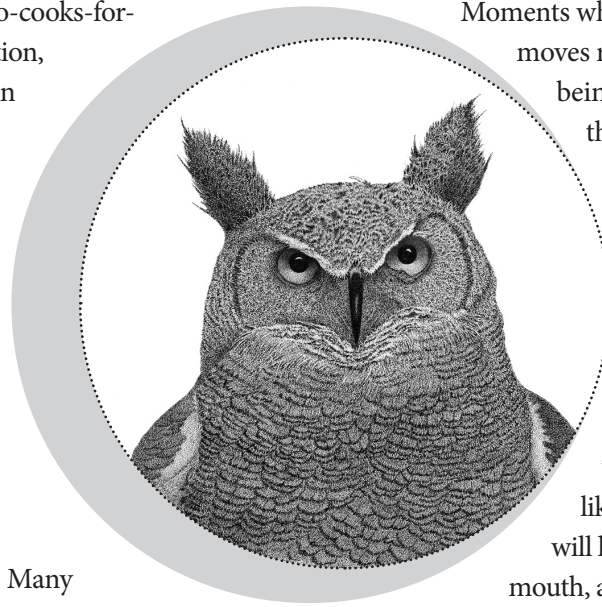
How do we cultivate this hope? This is the question that resonates with me, like the deep low grumble of a Great Horned Owl. I am a believer in transcendent experiences in the natural world, moments when you are stilled completely.

Moments when a piece of you is claimed and it moves right into the core of your heart, your being. But I'm beginning to believe that these moments don't need to be big. How often are we struck by lightning, after all?

How about cultivating this hope in small, quiet moments? Slowing down, and paying attention to all of our senses. Remembering how the smell of wild grapes in the fall can fill you up, so aromatic that each breath is like a drink. Or how every child I know will lay back their head, open wide their mouth, and taste the first floating snowflakes of the season. Or how it feels to slide into the silky, cool waters of Nubanusit Lake on a hot summer day.

Or how about the silent hope that comes when just the thought of an owl's call drifting through a winter night can fill your very soul?

**The Harris Center leads walks throughout all seasons of the year. Join us! For more info, call us at (603) 525-3394 or visit [www.harriscenter.org](http://www.harriscenter.org).**



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*Illustration by Barbara Smullen*



# Laura White and Antioch University New England Lauded at our Annual Meeting

By Jeremy Wilson

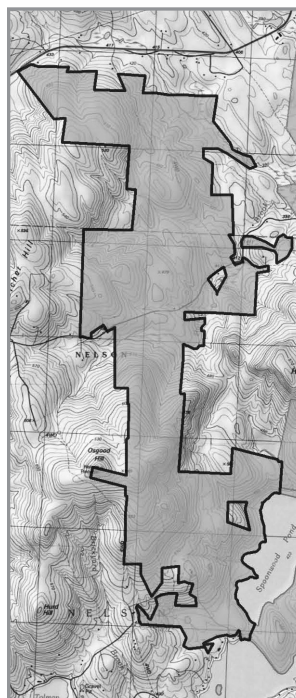
The Harris Center for Conservation Education held its 43rd annual meeting on Sunday, October 20, 2013. **Antioch University New England (AUNE)** was honored with the **Laurie Bryan Partnership Award**, which recognizes past Executive Director Laurie Bryan's commitment to forming partnerships with organizations, groups, and individuals to further the Harris Center's mission. The relationship between the Harris Center and AUNE began in 1974, when AUNE was looking for a field station for its Environmental Studies Department and a home for its "experiential learning" summer day camp (now the Harris Center's beloved Wol's Nest). AUNE president Dr. Stephen Jones received the award and eloquently described the organizations' parallel missions, the value of developing a "sense of place," and the importance of promoting ecological literacy.

The **2013 Harris Center Teacher of the Year** award was presented to **Laura White**, fourth and fifth grade teacher at James M. Faulkner Elementary School in Stoddard. This award is given annually to educators who demonstrate exemplary collaboration with Harris Center naturalists.

Last year, Laura worked with Harris Center naturalist Dori Drachman to teach New Hampshire history by investigating the land behind the elementary school. Students studied the cellar hole in their woods, read clues in stone walls to determine if the land was once pastured or farmed for crops, measured tree diameter to estimate the age of the forest, used historical maps to match modern places with older Stoddard landmarks, and examined the town's 19th-century agricultural census reports. They then came up with their own hypotheses about historical land use, and documented their work in a large display that was exhibited at the Stoddard Historical Society in the summer.



**Harris Center Teacher of the Year recipient Laura White (left), fourth/fifth grade teacher at the James M. Faulkner Elementary School, and Dori Drachman, Harris Center teacher/naturalist.**



**Conserved land in and around the Bailey Brook Conservation Corridor in Nelson and Stoddard.**

Executive Director Jeremy Wilson presented some Harris Center highlights from the year. In 2012-2013, the land program completed nine projects, protecting an additional 665 acres in Peterborough, Nelson, and Stoddard. The majority of new acreage was added to the Bailey Brook Conservation Corridor in Nelson and Stoddard, which has grown to almost 1,200 contiguous acres. Thanks to extraordinary donations from friends of the Supersanctuary, a corridor of conserved lands now extends all the way from Spoonwood Pond in Nelson to Route 9 in Stoddard.

The Harris Center school program has embarked on new adventures with all sixth, ninth, and tenth graders in the ConVal School District for the 2012-13 school year. These programs result from an expansion of the innovative partnership between Otter Brook Farm, ConVal, and the Harris Center. Sixth graders from both South Meadow and Great Brook Schools have traveled to a sophisticated high tunnel greenhouse at Otter Brook Farm, where they designed and carried out experiments to learn how different environmental variables affect plant growth and survival. Ninth graders are learning about heat transfer while they conduct an energy audit in an old farmhouse, and tenth graders will identify and develop management plans for invasive plant problems at the school and Otter Brook Farm. Many thanks to Otter Brook Farm, whose generosity has made it possible for us to provide such extraordinary opportunities for local students!

*In the business meeting, board officers for the year were announced:* Jack Calhoun of Harrisville, Chair; Hunt Dowse of Hancock, Vice Chair; Paul Faber of Hancock, Treasurer; and Alison Rossiter of Hancock, Secretary. Retiring trustees Ted Leach, Marcia Kayser, and Charlie Levesque were recognized and thanked for their valued service.

**For a more detailed review of the year's accomplishments, please download the 2012-2013 Annual Report at [www.harriscenter.org](http://www.harriscenter.org) or contact the Harris Center at (603) 525-3394 to request a hard copy.**



**Left top:** Fourth grader Remy looks for animal signs under the leaf litter. **Left bottom:** Research comes to life as Mary shows off her field guide. **Above:** Harris Center teacher/naturalist Jenn Sutton helps students paint a winter scene for the school mural.

## ANTRIM ELEMENTARY SCHOOL'S

# Field Guide & Mural Project

*By Jenn Sutton, with photos by Laurel Swope and Jenn Sutton*

If you've visited Antrim Elementary School (AES) in the past few months, you might have found fourth graders studying the natural world along Great Brook, analyzing field guides, researching wildlife species, learning about plant and animal relationships, and painting a four-panel mural. This fall, the students have been busy working with educators from the Harris Center, the ConVal Arts Integration Program, and AES fourth grade teachers and staff on a field guide and mural project that integrates science, literacy, technology, and the arts.

The project began when naturalists at the Harris Center adapted their teaching to the newly adopted National Common Core Standards, one of which focuses on comprehension of informational text. Teaching children how to use field guides was the perfect fit!

After a meeting with Harris Center teacher/naturalist Jenn Sutton, AES fourth grade teachers Brianne Bastarache and Fabiola Woods, Arts Integration Coordinator Jeannie Connolly, and principal Ann Allwarden, the field guide project developed into a rich and comprehensive experience.

"I had fun researching and coloring. I had the Red-breasted Nuthatch, and it's mostly seen in the winter."

— Lizzy, fourth grader, Antrim Elementary School

Not only would students make their own three-dimensional field guides, based on classroom research and outdoor explorations, they would also paint a four-season mural for the school to enjoy for many years to come. The mural features trees of the nearby forest, the animals that rely on them, and a seasonal progression of each species: a chipmunk snoozing in winter; spring fiddleheads unfurling, turtles basking on logs in summer, and squirrels busily gathering food in fall, to name just a few.

Once the research, observations, field guides, and mural were complete, the children and educators presented their work to both the ConVal School Board and the parents of the AES students. At the mural unveiling, each family was able to ask the children questions regarding their research, review the field guides, and view an audio slideshow featuring field guide entries narrated by students.





**Left: Fourth grader Dante displays his field guide to the wildlife of the Great Brook Woods. Right: Oren chose the Redback Salamander to study, draw, and paint on the mural, which was unveiled the evening of November 20, 2013.**

“ THE STUDENTS AND TEACHERS HAVE BEEN BUSY COLLABORATING ON A PROJECT THAT INTEGRATES SCIENCE, LITERACY, TECHNOLOGY, AND THE ARTS. ”

## 40TH ANNUAL CHRISTMAS BIRD COUNT

*By Eric Masterson*

The mercury is falling, the daylight fading—it must be time for the Christmas Bird Count. Run by Audubon, and dating back to 1900 (though the Peterborough count did not begin until 1973), the **Christmas Bird Count (CBC)** is the world's oldest and largest biological survey and citizen science endeavor. It was founded by ornithologist Frank Chapman as an alternative to the “side hunt,” a very different tradition that prevailed at the time, in which the objective was to shoot as many birds as possible. The CBC was an early manifestation of a nascent environmental movement that was taking hold in the country. In the inaugural year, 27 dedicated birders gathered in 25 locations across Canada and the U.S., including Keene. The project now attracts more than 50,000 observers from 17 countries, providing scientists with a wealth of data on changing bird populations, including several species right here in New Hampshire. CBC data has documented the

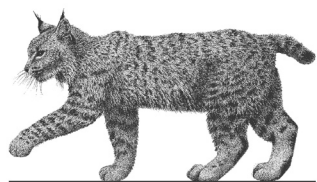


**DID YOU KNOW?** Run by Audubon and dating back to 1900, the Christmas Bird Count is the world's oldest and largest biological survey and citizen science endeavor.

appearance in the Granite State of several southern species, including Red-bellied Woodpecker, Carolina Wren, and Tufted Titmouse. If you are a longtime resident of New Hampshire, you may remember a time when these species were quite rare. Although range expansion and contraction are a normal part of population dynamics, scientists suspect that climate change will play an increasingly important role in shifting wildlife populations, and they will be turning to CBC data to help track the changes.

► **You don't need to be an expert! For details and to sign up for next year, contact Dave Rowell at (603) 924-8790.**

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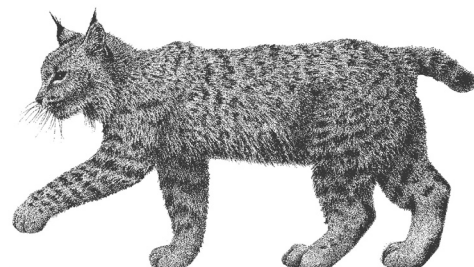
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# Harris Hearsay

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, 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](http://www.harriscenter.org), call our office at (603) 525-3394, send an email to Diana Jacobs at [jacobs@harriscenter.org](mailto:jacobs@harriscenter.org), or visit us at 83 King's Highway in Hancock, NH.

**MANY THANKS to our generous Annual Appeal donors!**

## ***In this issue:***

Harris Center Annual Meeting

Antrim Elementary School  
Field Guide & Mural Project

40th Annual Christmas  
Bird Count (CBC)

Springtime Science for  
Year-Round Stewardship

"Hope that flies on silent wings..."