STEEP ROCK ASSOCIATION

The Steep Rock VISTA

Winter 2016-2017

Alien Invaders: Invasive Plants at Home and Thriving in Steep Rock Preserve

By Louise van Tartwijk

Steep Rock Association is a land trust whose mission is to conserve ecologically and historically significant landscapes in and around Washington, CT and the Shepaug River Valley and to enhance the community's connection with nature.

In pursuing its mission, Steep Rock Association will:

- Use best management practices to maintain and manage the lands and improvements entrusted to it for passive recreation, the protection of native flora and fauna, and to support sustainable agriculture.
- Strive to raise environmental consciousness by enhancing the community's knowledge and appreciation of nature and its awareness of Steep Rock's on-going contributions to the culture and history of the Town of Washington.
- Pursue land-based non-commercial activities that benefit both Steep Rock and the community.

INSIDE THIS ISSUE:

This past summer, as part of Steep Rock Associations's 4th year of educational programming, Donna Ellis, a Senior Extension Educator in the Department of Plant Science and Landscape Architecture at the University of Connecticut, led a guided walk along Tunnel Road in Steep Rock Preserve. Ms. Ellis explained the reasons why invasive plants are a growing problem in the preserve. On the early summer morning, after meeting at the riding ring parking lot, Ellis led over a dozen participants the short distance to the intersection with Spring Hill Road, and already the UConn educator easily identified over 20 specifies of invasive plants. There are 97 plants on the official Connecticut Invasive Plant list.

Contributed Photo

Invasive multiflora rose growing in the preserve.

An invasive plant is defined as a plant species not native to the region in which it is growing, and has a tendency to spread to a degree believed to cause damage to the environment. Thus, in the case of Steep Rock Preserve, these are plants not indigenous to western Connecticut, and for the most part, the plants Ellis discussed were not even native to the United States. However, as a number of these invasive plants have become a familiar and beautiful part of our landscape for over 100 years, it is important to understand that they form a real threat. *"Invasive plants are a problem,"* Ellis explained, *"because they establish easily, grow aggressively, and disperse over wide areas displacing native species and reducing bio-diversity."*

The first invasive plant species that Ellis discussed was the delightfully named Tree-of-Heaven, made noteworthy in the novel "A Tree Grows in Brooklyn", written in 1934 by Betty Smith. Native to China, the roots and bark of the Tree-of-Heaven were used in traditional Chinese medicine. The plant was originally introduced for ornamental gardening purposes, first in England in the 1740's and then the United States in 1784. A rapidly growing plant, the Tree-of-Heaven tolerates difficult growing conditions and is a favored street tree in America's cities. Closely resembling the native sumac tree, the Tree-of-Heaven is easily identified by its distinct leaves and unusual smell. The tree is able to spread rapidly as its seeds are carried by the wind.

Among the other invasive plants that Ellis identified during the walk was Virginia creeper, a climbing vine that gives beautiful dark red color to the woodland in the fall; the rapidly growing vine of the Oriental bittersweet plant, twisting up fences and trees, eventually smothering the trees and shrubs on which it grows; the difficult to eradicate Japanese knotweed, and the lovely named but highly invasive multiflora rose

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...in the arena* *By Lori Paradis Brant*

What is happening behind the scenes, or in the arena – as Teddy Roosevelt once expressed – that brings our mission alive? People caring about conservation and making choices to act for conservation in the community. Looking back at 2016, I am both amazed and grateful for the partners, volunteers, and supporters who have shared their time, resources, expertise and vision with us.

Judy Black was one of those extraordinary people. As a hardworking volunteer in our Judea Garden, Judy generously provided for the important garden work through a bequest for this project which provides organic produce for those in our community with limited resources. We are exploring how to make the wisest use of this gift to be sure we thoughtfully honor Judy's love for the garden. Judy also left a bequest for the overall work of the Association. We had shared with her our plans to better understand what types of wildlife are living in our preserves. Not long before her passing, the staff discussed an exciting project in which we were striving to have a biological scientific study of the herps (turtles & snakes, frogs, toads, & salamanders) on our land and in our waterways. Judy's gift has ensured that this work would occur; thanks to her caring, we have since hired an expert herpetologist who has combed the woods, dove in the brooks, waded across rivers, and bushwacked through our fields to find, identify, & record the animals as well as their well-hidden nesting sites. We are looking forward to the final report in 2017, which will also include recommendations for improving our wildlife habitats based on the findings.

Another improvement that we dedicated this year was our new Thoreau Bridge, suspended over the Shepaug River in Hidden Valley Preserve. As it gently

Photo: Hugh Frater

Pilobolus dancers on the bridge.

sways, the bridge seems to be in one rhythm with the water below. At summer's beginning, we were honored to have some very caring individuals and organizations help us celebrate the beauty of the Bridge and showcase the connection between nature and the arts. The Pilobolus Dance Company created a breathtaking performance on (and off!) the Bridge in which the only sounds were the rippling water below and a small sparrow chirping in the trees. Actor Peter Gallagher captivated the audience with his reading from Thoreau; it was as if we were listening to the famed writer himself. A moving instrumental piece written and performed by saxophonist Paul Winter wrapped up the beautiful celebration.

The end of this autumn season saw with it another beauty added to our preserves. When one walks the main trail at Macricostas Preserve, one will

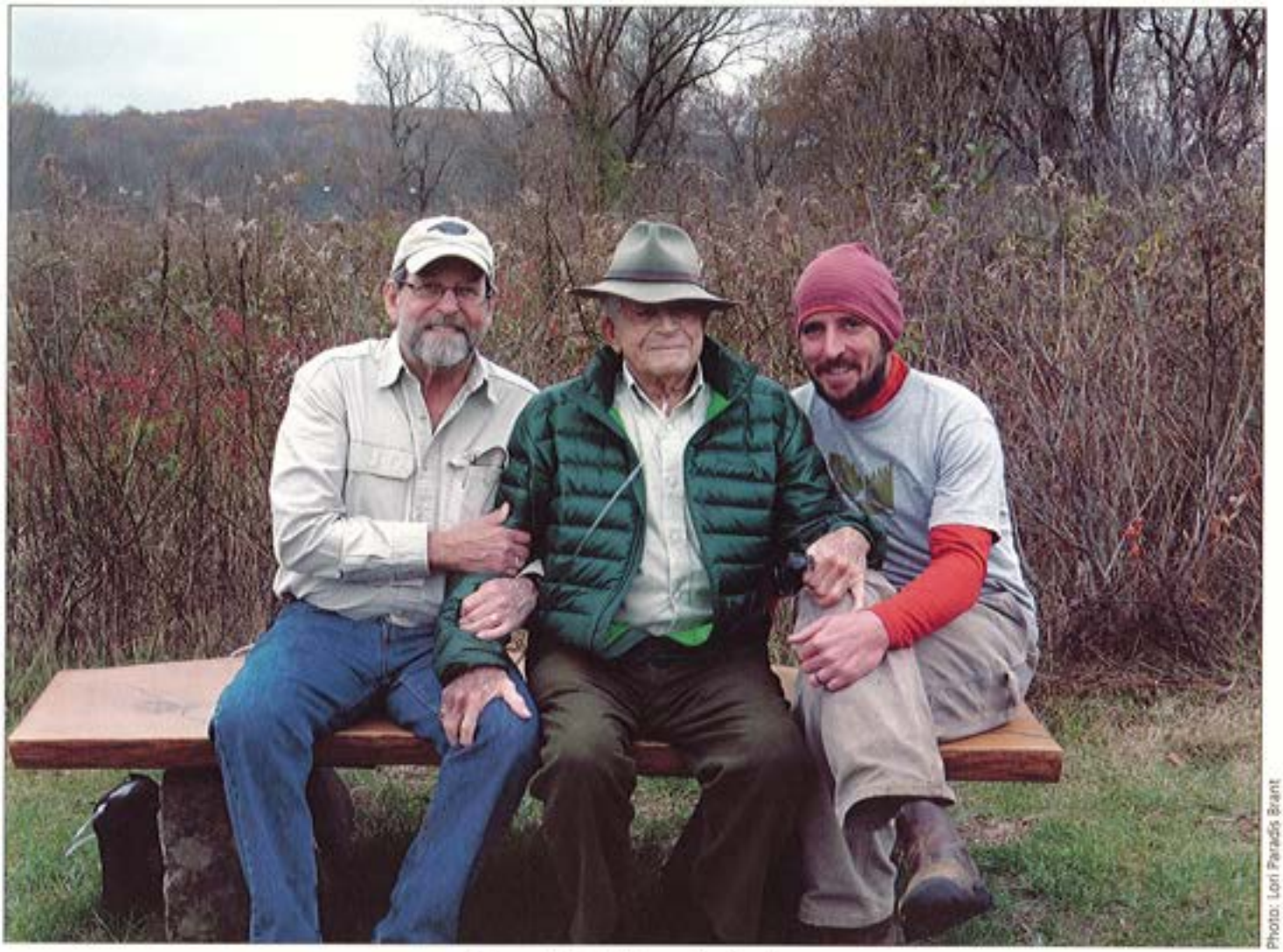


Photo: Lori Paradis Brant

Peary, John, & Clark on the bench

pass a trailhead kiosk and round a bend, which is surrounded by tall grasses and oftentimes birds flitting about the vegetation. Just before the bridge over Bee Brook, a new bench has been placed. This bench was lovingly created by Peary Stafford, a Trustee, and Clark Gifford, Land Manager, in honor of John Millington. In his tenure as an officer of the Board of Trustees, John, among many other conservation successes, oversaw the acquisition of the 238 acre Meeker Swamp, which soon thereafter became a part of Macricostas Preserve. The bench, with the Shepaug River and its tributaries routed into its flat top, beckons one to sit, be still, and reflect on the beauty of the surroundings.

As one can see, it is quite easy to begin sharing stories of the many people "in the arena" who work passionately toward our conservation mission. To all of these people who have dared greatly to be in the arena and know great enthusiasms, devotions, and worthy causes, I thank you. ■

*The title for this column is a nod to the 1910 *Citizenship in a Republic* speech given by then former President Teddy Roosevelt at the Sorbonne in Paris. The speech, now sometimes referred to as The Man in the Arena speech, accentuated the importance of people – their character and their efforts – to make a republic succeed.

Edwina and John Millington on the Macricostas bench.

Update on Ongoing Hemlock Research at Steep Rock

Story and Photos by Carole Cheah

The hemlock woolly adelgid, Adelges tsugae (HWA, Fig. 1), accidentally introduced from Japan in the early 1950s into Richmond, Virginia, has since spread widely to become a very serious threat to our native eastern and Carolina hemlocks from Georgia to Maine. Hemlock woolly adelgid was first reported in southern Connecticut in 1985. Steep Rock hemlocks have been infested with HWA since the mid-late 1990s. The hemlocks on the Steep Rock reservation are a key component of the riparian and upland ravine ecosystems which contain rare old growth stands (Fig. 2). A tiny ladybeetle from Japan, Sasajiscymnus (formerly Pseudoscymnus) tsugae (Fig. 1) was discovered and evaluated by scientists at the Connecticut Agricultural Experiment Station (CAES) at Windsor and found to be a safe, effective and specialized predator of the adelgid.

It was subsequently mass reared at Windsor's Valley Laboratory and >176,000 beetles were widely released throughout Connecticut from 1995-2007 to battle HWA. In spring 1998, 10,500 adults were released at the Steep Rock summit and a further 5,000 released at Hidden Valley in 1999 on HWA-infested hemlocks in efforts to save the hemlocks. Dr. Carole Cheah, an entomologist from the CAES, has been working on biological control of HWA for the past 22 years and was recently funded by the U.S. Department of Agriculture's National Institute of Food and Agriculture, to resume evaluations of the HWA biological control program in Connecticut. Her research will focus on continued assessments of the current health and condition of hemlocks at Steep Rock and other S. tsugae release sites in Connecticut. Her investigations will also look at the role of climate change and abiotic factors that influence hemlock health, HWA and predator abundance, and the increasingly serious impact of another exotic and damaging hemlock pest, the elongate hemlock scale, Fiorinia externa (Fig. 3). ■

Fig. 1. Sasajiscymnus tsugae adults feeding on hemlock woolly adelgid


Fig. 2. Hemlock stands at Steep Rock


Fig. 3. Elongate hemlock scales on hemlock needles

From the Garden *Story and Photo by Denise Arturi*

Volunteers are the backbone of Judea Garden and we have some great ones. We have workers who come before or after their long days to water; students who come on days off to prep beds; retirees who choose to spend their days weeding to help others. This summer Judea Garden was fortunate to have a new volunteer, Jake Johnson who came not one, but two days a week!

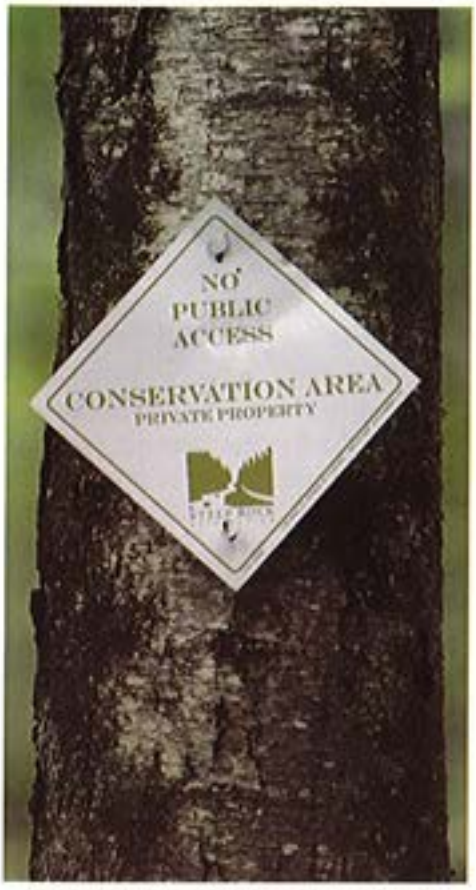

Hardworking volunteers Madeline Revere, Leni Welte and Jake Johnson in Judea Garden

Madeline Revere, who started volunteering at Judea Garden two years ago, learned through friends that Jake was available to help out. Filled with energy and enthusiasm, Jake arrived in the spring ready to take on any task we asked. He helped prepped the beds, dug in and hilled potatoes, planted and tied up tomatoes, set seeds and watered until they sprouted and all done with a smile. At the same time, he learned about growing vegetables himself. Taking home volunteer tomato seedlings, he set up pots and beds where he nurtured his own plants. Jake was especially intrigued by nitrogen fixing plants (clover and other legumes) and their ability to produce nitrogen through special bacteria and release it into the soil. An entirely different reason to search for clover!

Thank you Jake for helping Judea Garden grow, harvest and distribute over 2,700 (so far) pounds of fresh organic food to neighbors in Washington, New Milford and Torrington. Along with all our volunteers and interns, you made a difference in their lives. ■

Notes from the Field

Story and Photos By Rory Larson



Conservation easement signage around boundaries of the South Easement.

Coldwater stream (Walker Brook) running through the Coleman Easement.

As notified in the previous edition of VISTA, Steep Rock Association has submitted an application for accreditation from the Land Trust Alliance, seeking recognition for excellence as a conservation organization. A vital element under review in regard to policies and practices is the stewardship of our conservation easements.

Conservation easements (or "conservation restrictions") are legal agreements between a landowner and a land trust that permanently limits uses of the land to protect its conservation value. More detailed descriptions of easements and their benefits to both landowners and the public can be found in the Spring 1995 and Spring 2006 VISTAs, which are archived on our website.

Steep Rock Association has acquired 109 conservation easements since 1987, comprising roughly half of the land we've protected. For accreditation, we are required to monitor each of these parcels annually to ensure the terms are being upheld, identify encroachments, and document changes in condition. Monitoring is conducted during fall and winter in order to remain on a 12-month interval between inspections. In addition, these inspections are performed more efficiently once leaves have fallen and there is better visibility in forests.

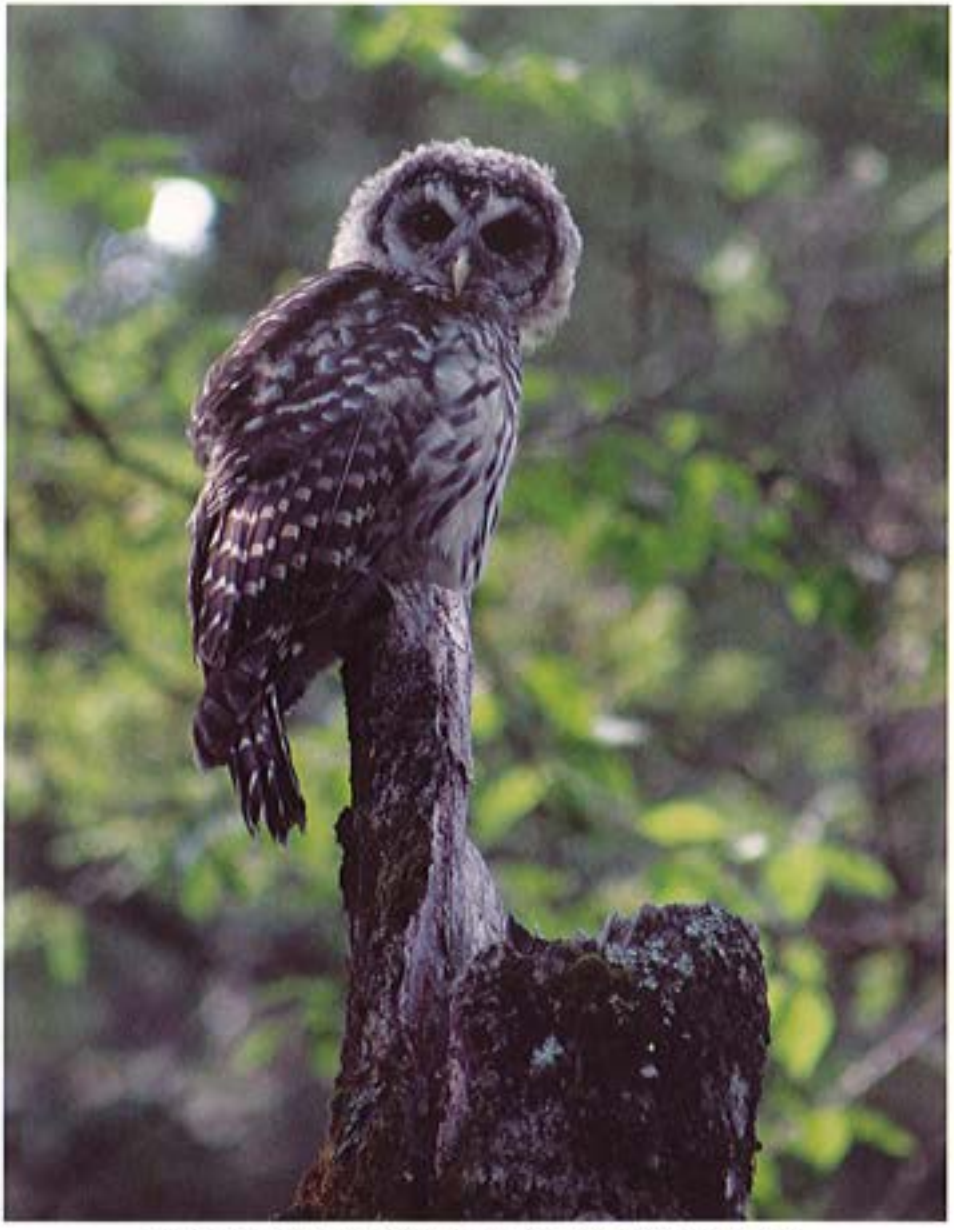
As manager of the conservation easement program, this task is by far the most consuming and rewarding. Several parcels are hundreds of acres and encompass Washington's rugged hills. Others are smaller in size and less strenuous to traverse, but still serve their purpose, which may be to preserve a specific habitat type, contribute to a protected corridor, or promote working farmland. It is a certainly a privilege to hike these private lands year after year to revel at undisturbed resources and applaud sound management efforts while a crisp breeze carries wild grape aromas and showers spent leaves that crunch underfoot. Sharing in landowners' love for their property is equally special and I whole-heartedly welcome stories about the litter of fox pups that frolic outside their den or the demise of a historic mill. Interactions like these coupled with the knowledge that the eased land will be protected in perpetuity never fail to warm the gears for those most wintry of monitoring walks. ■

Scenic, working farmland of the abutting Horan and Solley Easements.

Thumbs Up! Children's Nature Book Review

By Lori Paradis Brant

As both a parent and conservationist, I love reading nature-themed books with my kids at home. Over time, I'll share with you some of my top choices that have passed the test of kid-interest level as well as appropriate to developing a conservation ethic. I prefer books that do not preach to kids and make my children – nor yours – feel like it is their responsibility to undue all the environmental damage that their older generations have done to the land, air, water. Instead I prefer pieces that pique their natural state of wonder or inspire them to act in ways that are appropriate for their developmental level (while my 7-year old might read about mammals or recycling her old sneakers, she is too young to take on saving endangered species or fighting climate change. My middle schooler, however, can begin to grasp those subjects).



A young barred owl at one of our preserves inquires who you are.

ELEMENTARY LEVEL

Owls, Whoo are they?

by Kila Jarvis and Denver W. Holt, 1996
Mountain Press Publishing

Did you know that rather than building their own stick nest, Great Horned Owls use nests that were made and abandoned by crows or hawks? *Owls, Whoo are they?* is an interesting book for your upper elementary children to learn remarkable facts about owls, such as nest "borrowing" techniques. The Connecticut Core Standards (guidelines for what students should know by the end of each grade) encourages students to read more non-fiction texts, so our children have a balance between informational and fictional texts. This book about owls is a great way to meet those guidelines with interesting text and authentic illustrations by a wildlife biologist and artist.

Enjoy reading this book together or ask your child to share a newly learned owl fact with you. Accurate in both text and illustration, *Owls Whoo are they?* may inspire you and your children to quietly watch for owls and their nests while visiting our Preserves. If you don't have a copy of *Owls, Whoo are they?* Miss Gail at the Gunn Memorial Junior Library welcomes you to borrow this book from the library's collection. She shares that the best time to grab a book about nature is when you want to learn more about something you've seen or heard. Books can help you find answers to intriguing questions that you and your children have after an exciting outdoor adventure!

Nature Book Challenge: We'll send a free cloth map of our Preserve trails to the first 3 families who post on our Facebook page which Connecticut owl hovers in flight while hunting (hint: Read *Owls, Whoo are they?* for the answer). ■

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and burning bush, both of which were also introduced to the United States from Asia for ornamental garden purposes.

A non-alien, but aggressive plant species that can be found growing in profusion in Steep Rock Preserve is poison ivy. While everyone knows the "leaves of three let it be" wisdom, Ellis highlighted all the very different growing forms of this bothersome plant with 3 leaflets, from the shiny leaf form, to the tree climbing form to the non-shiny-low ground cover form. Clearly a very adaptable plant, poison ivy can look quite different in different places. Although, Ellis pointed out, that while poison ivy is one of the most irritating plants for humans, it is a great plant for wildlife that feed on its leaves, stems, and berries.

It was clear from Ellis's talk that some invasive plants were introduced under the most innocent of premises; mainly by enthusiastic gardeners for ornamental, culinary and livestock forage purposes. Like the Tree-of-Heaven, the majority of invasive plants found in Steep Rock Preserve were originally imported from Asia and Europe. Not all invasive plants, however, were consciously introduced to American soil. One such example Ellis pointed out to the group is the graceful and delicate low-growing Japanese stilt grass, also known as "porcelain packing grass," which was first introduced to the U.S. as dried packing material for china shipped from Asia. It was also slightly comforting to know that dealing with foreign "plant invaders" is not only a U.S. problem. Interestingly enough, plants such as the American goldenrod and the black-eyed Susan have become bothersome plant pests in foreign soils.

At the end of her fascinating program, Ellis discussed the different options available for invasive plant management: mechanical, chemical or animal. But it was quickly apparent that any one or combination of these possible methods would be extremely difficult to implement in Steep Rock Preserve, given the expansive growth of the numerous invasive plant species throughout the preserve. Their removal would require a great deal of time, commitment and planning. From the perspective of eliminating such plants, it was easy to understand why the Tree-of-Heaven, with its graceful and distinct leaves, is sometimes nicknamed the Tree from Hell due to its prolific invasiveness because of its stubborn ability to survive and reproduce. Interestingly enough, it is just this tenacity that made Smith choose the Tree-of-Heaven to be a metaphor for the survival of Irish Immigrants in the harsh circumstances of New York City in her best-seller "A Tree Grows in Brooklyn." ■

Volunteer Spotlight FrogWatchers *By Rory Larson*

Two dedicated Washington residents, Missy Stevens and Natalie Dyer, have been strapping on headlamps and heading into summer sunsets to listen for croaks emanating from two of our wetland preserves.

Citizen science has come to the Steep Rock Association (SRA), offering people like Missy and Natalie a tremendous new opportunity to learn about the area's biodiversity, participate in scientific research, and aid our conservation efforts. This summer, SRA launched the pilot season of our participation in FrogWatch USA, a nation-wide program designed to monitor toad and frog (anuran) populations. Volunteers are trained to record weather information, listen for anuran breeding calls after sunset, and report their observations to an online database.

The information volunteers collect offer valuable insight as to what amphibians inhabit our preserves and will allow us to detect a change in species composition and/or population fluctuations with continued surveys over time. Four species (spring peeper, gray treefrog, fowler's toad, and green frog) were positively identified during their surveys. The 2017 season of FrogWatch will begin in February to investigate the presence or absence of early breeders such as the northern leopard frog, a rare species in CT, and the Atlantic coast leopard frog, which was recently distinguished as its own species in 2014.

"I find frogs fascinating and wanted to learn more about them" said Missy when asked why she volunteered for this project. Natalie replied, *"I've read about the decline of amphibians worldwide and wanted to contribute to science aimed at combating this trend."* As for an interesting aspect of performing surveys, both concurred

Contributed Photo

Natalie (left) and Missy (right) collecting preliminary weather data at one of the Association's wetland preserves

that *"It was always a mystery as to what night sounds (other than frogs) you may hear while at the preserves, from unidentified wildlife walking through the woods to owls hooting from a nearby perch."*

We thank Missy and Natalie for their contributions and encourage others interested in volunteering to email info@steeprockassoc.org. ■

Farm Life: A Kestrel Family *By Lori Paradis Brant*

Photo: Todd Catlin

SRA volunteers and staff with kestrel fledglings

It's our first! A pair of kestrels (small, robin-sized falcons) nested at SRA's Carter Preserve this past summer. The Carter Preserve is currently utilized as working farm land, as part of our mission to support sustainable agriculture. It seems that the kestrels and the cows made fine roommates. The kestrel parents selected a specially designed nest box which Clark Gifford, SRA's Land Manager, erected earlier in the spring. Five nestlings in the box and the parents had been observed by Clark, who then got in touch with a local, permitted bird bander. According to the Unites States Geological Survey, "Banding birds requires capturing the birds and handling them before the banding takes place. The banding of birds in the United States is controlled under the Migratory Bird Treaty Act and requires a U. S. Federal Bird Banding and Marking Permit."[1]

Data was collected about each bird, such as length, weight, etc. and a small "bracelet" band was clamped around its leg. Each band has an exclusive number imprinted on it, which is entered into the US Geological Survey database along with the individual bird's data. If these birds are ever recaptured, or its body is found & the number is reported, that bird's band number can provide a way to learn migratory patterns, age, and other helpful information to scientists.

The land which you've helped preserve has provided critical habitat for these threatened birds to nest and rear young. Hopefully they'll provide information for ornithologists in the years to come! ■

[1] https://www.pwrc.usgs.gov/BBl/homepage/gen_info.cfm

Young kestrel against the farmers field.

Photos bottom left & right: BK Stafford

Kestrel fledgling carefully removed from nest box by licensed bird bander.

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