

FOREST SOCIETY 2017 PHOTO CONTEST CALL FOR ENTRIES

Enter your best shots taken on a Forest Society reservation or easement land for a chance to have your photo published in the fall issue of *Forest Notes*, and win free passes to Lost River Gorge and Boulder Caves or a Forest Society hat.

The top three winners will be chosen in these categories:

Lovely Landscapes — your best shot highlighting the forest, fields, waters and mountains you find on our conserved properties.

Having Fun Outdoors — people enjoying our conserved land.

Dog Heaven — dogs having their day on our conserved land.

Flora & Fauna — wildlife, plants or other beautiful natural resources you encounter on our conserved lands.

Young Shutterbugs — photos of any subject taken on our conserved lands by anyone under age 18.

Welcoming submissions now through Aug. 5.



Lost River Gorge and Boulder Caves, North Woodstock.



Top photo by Jerry and Marcy Monkman, EcoPhotography. Left photo by Eliza Cowie. Middle photo by Kirsten Durzy. Right photo by Bart Hunter.

Go to forestsociety.org/photocontest for rules and how to enter









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Forest Society easement steward April Costa tours a property in Warner with landowners George and Elibet Chase, who conserved their land with a conservation easement with the Forest Society in 2005. The Chases' conserved land includes a large beaver pond, where great blue herons build nests in standing dead trees and wood ducks nest in the box George's father put up years ago. *Photo by Al Karevy.*



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A Model of Land Stewardship

alking in the woods at Harding Hill Farm in Sunapee is a neck-craning experience. The pines are tall, straight and clear of limbs for at least the first log and a half (that's forester talk for 16 to 24 feet). They are beautiful. The trail is wide and well-groomed—no fear of losing one's footing while looking into the canopy. I was there for the outdoor memorial service for tree farmer Dick Webb, a long-time Forest Society member, former chair of our board and wise advisor to our work. New Hampshire lost a generous, active citizen when Dick died on July 6.

He welcomed others to share the bounty of his land and its management. He hosted field trips for other landowners and conservationists and he was always available to conduct a private tour. He was proud of his woods work and wanted to share what he had learned from his 60-year relationship with the forest. He was a role model and mentor for his son and grandson, who are now custodians of the land he so lovingly stewarded during his lifetime. He always had a plan, whether it was pruning pines for clear lumber, harvesting "junk" trees to allow others room to grow or making sure the lands were permanently protected by easements.

Dick—like the Forest Society—believed that everyone can participate in the stewardship of New Hampshire forests, whether they own land or not. There are volunteer programs at most conservation organizations (the Forest Society's nationally recognized Land Steward Program among them). There are workdays on conservation lands, hikes



with naturalists, citizen science programs (see forestsociety.org/blog-post/please-use-our-picture-posts). There are opportunities to participate in planning for the White Mountain National Forest and the State's forests and parks. Taking kids for a walk in the woods is a way to pass the ethic of stewardship on to those who will someday bear the responsibility for taking care of our natural resources.

Whether it's enjoying the stewardship of others, recreating in the woods, supporting organizations that manage natural resources or actively participating in caring for and enjoying land the way Dick did, Granite Staters are fortunate to have opportunities to be good stewards of our state's forests.

Jane Gralyley

Jane Difley is the president/forester of the Society for the Protection of New Hampshire Forests.

POTATION CON

Society for the Protection of New Hampshire Forests

A non-profit membership organization founded in 1901 to protect the state's most important landscapes and promote wise use of its renewable natural resources. Basic annual membership fee is \$40 and includes a subscription to *Forest Notes*.

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The Forest Society proudly supports the following organizations:







One Year Later... A Solar Enthusiast's Experience

By Tom Howe

December 8, 2015, was the first day our solar photovoltaic array began producing electricity for our home (see Spring 2016 Forest Notes). More than a year later, my wife and I remain delighted with the system, and offer some findings from our experience.

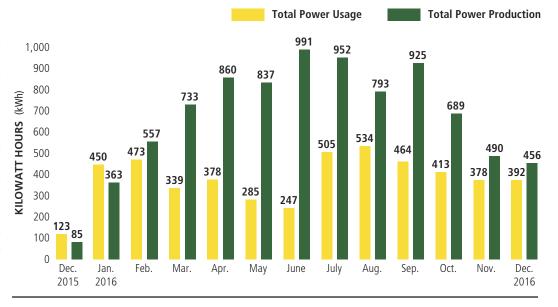
First, a quick review. We own our system. Whatever electricity we're generating at any given moment goes first to meet the demand of our home at that time. If we're making more power than we're using, we sell/export the surplus into the grid and get credit for it on our next

monthly bill from the power company. When our array shuts down at night, or is otherwise not making enough power to meet our demand, we buy/import the additional electricity we need from the grid.

In our first year, we generated 8,731 kilowatt hours (kWh), way more than the 4,972 kWh we used, because of our deliberate oversizing to accommodate a future electric car. Of all the power we generated, we actually only used 10% of it ourselves, selling the rest of it into the grid. This was due not only to the oversizing, but also to the fact that most of our electrical demand was occurring at night or other times with low light levels, when we weren't producing all the power we needed. Put another way, of all the power we used, only 17% of it was homegrown. The rest we had to buy from the grid, likely generated by much more carbon-emitting sources.

Our highest momentary production was about 6,020 Watts, at noon on a cloudless March day, vs. our theoretical capacity of 6,792 Watts (24 panels@283 Watts). Our best month was June, when we generated 991 kWh; our lowest was January 2016, when we made only a third as much. (See table.)

We paid a total of \$111 for electricity for the year. We saw diminishing bills for the first three months, and then, March through November, our bills showed a credit balance, and we paid nothing! We resumed a small payment for our December 2016 bill, and expect more of the same until late winter, when a higher sun



angle and typically fewer clouds will, again, dramatically increase our power production.

So why did we pay anything for electricity, if we generated way more power than we used and sold most of it back into the grid? Because of the \$34 fixed service charge billed to us every month, and the 28% higher price we paid for each kWh we bought vs. sold. To reduce further our out-of-pocket expenses, and carbon footprint, we'll try to shift more of our electrical demand to daytimes, to use more of our "free" homemade power and less of the power we have to buy.

We had no maintenance issues with our ground-mounted array. The only task I chose to undertake was sweeping snow from the panels right after each storm, to resume generation sooner than the day or so it would take for the array to clear on its own. During my sweeping, I noticed tracks in the snow revealing an unexpected beneficiaries of our system: Deer were regularly visiting the sheltered area under the array, to eat the clover and grasses there!

As for that question about whether we could generate power from the reflected sunlight of a full moon, I must report a wishful thinker!

Tom Howe is the Forest Society's senior director of Land Conservation. He's happy to field follow-up questions, and to give tours of their solar array at their home, in Gilmanton. thowe@forestsociety.org

Save the Date!

Saving Special Places, New Hampshire's annual land conservation conference, features nationally renowned author and speaker Terry Tempest Williams as the keynote speaker this year. Williams is the author of Refuge: An Unnatural History of Family and Place; An Unspoken Hunger: Stories from the Field; Desert Quartet; Leap; Red:

Passion and Patience in the Desert; The Open Space of Democracy; Finding Beauty in a Broken World and When Women Were Birds. Her latest book, The Hour of Land: A Personal Topography of America's National Parks (May 2016) honors the centennial of the National Park Service.

The conference takes place Saturday, April 8, at Prospect Mountain High School in Alton. Register at savingspecialplaces.org. Y







A Tale of THREE Reservations

How Does the Forest Society Care for 185 Disparate Properties? That Depends.

By Dave Anderson

ne of my favorite display tools to illustrate the land conservation work of the Forest Society at public events is a towering statewide map that shows all of our 185 Forest Reservations located around the state. People naturally find their hometown and look for a Forest Society property nearby. I always enjoy talking about the reservations they may have visited or driven past or would like to visit.

When people ask what the Forest Society is doing with a property, the answer is never the same for any two places. We manage each of our ever-expanding collection of reservations somewhat differently; Forest reservation stewardship is never a "one size fits all" proposition.

Our management activities vary depending on forest types, wildlife habitats and the natural and cultural history features present. Perhaps equally important, we must ask: How do people living in the local community use the property? Do people travel from other places to visit? If a property was donated, did the donor include any conditions? Our Rocks Estate, for example, was donated with the stipulation that the land in Bethlehem would be used to grow a crop, which is why today it's known as The Rocks Christmas Tree Farm.

Stewardship of private conservation land differs from that of public lands like the state parks or the federal White Mountain National Forest. Yet increasingly, I sense a sort of default assumption that each of our forest reservations has a property sign at a prominent gate with a nice parking lot and a visitor kiosk with maps depicting a network of well-marked trails to popular yet still uncrowded summits, ponds, waterfalls and shady groves. Oh and it'd be nice if there were picnic tables, a pavilion, an area of mowed lawn and restroom facilities... you get the idea.

The truth is while we manage some Forest Society properties primarily for public recreation, we manage most of them primarily for other purposes. These include the protection of special wildlife habitats and wetlands and natural communities— places where new trails and enhanced recreation access could be antithetical to protecting fragile or rare natural resources. It quickly gets complicated. How does the Forest Society manage such a sprawling, statewide collection of unique Forest Reservations?

The best way to illustrate our approach is to look at three very different forest reservations and how we care for them.

BIG AND WILD: The Ashuelot River Headwaters Forest, 1,826 acres, Lempster

he Ashuelot River Headwaters Forest is located in a rural setting. It contains portions of two mountains: Silver Mountain and Bean Mountain. The Ashuelot River has its headwaters nearby. It includes rocky, shoreline frontage on both Long Pond and Sand Pond. Loons, bald eagles, black bears, moose, bobcats, otters and snowshoe hares—pursued by baying beagles during the winter hunting season—made cameo appearances at public field trips during the Forest Society's campaign to purchase the wild tracts. Acquired in 2009-10, this forest is now managed for these purposes:

- 1. Conserve and enhance native biological diversity
- 2. Protect historic and cultural features
- 3. Conserve scenic quality and provide for recreation compatible with other uses
- 4. Improve the commercial timber growing stock of the forest
- 5. Harvest forest products when ecologically and economically appropriate

But that's not all.

Conservation easements are held by the N.H. Fish and Game Department. A back-up interest is held by the N.H Land and Community Heritage Investment Authority. So we must take into account 23 specific conservation easement restrictions related to forestry, structures, soil disturbance, use of pesticides and herbicides, snowmobiles or other motorized vehicles, creation of rights of ways, trails, kiosks, signs, camping, horseback riding, stewardship plans and use of best management practices.

Additional encumbrances on the property include a 20-foot-wide utility easement for electricity and telephone line rights of way, an



The Ashuelot River Headwaters Forest is big enough for landscape scale silviculture. Two ponds and two mountains offer plenty of beautiful destinations for outdoor fun.

obligation to enforce restrictive covenants on a small abutting tract transferred to the adjacent homeowners association and negotiation of a snowmobile trail agreement with the Hidden Valley Sno-Riders. One more unique provision: Previous landowner Tom Wright asked to reserve a right to cut a few Christmas trees annually, and we said, "Sure."

Not all stewardship goals are simultaneously compatible on any given portion of a property. However, timber harvesting can yield wood products while improving wildlife habitat diversity in some areas. In other places, timber harvesting would be detrimental to





Scrapes show that a striped maple and a yellow birch provided browse for the abundant wildlife like deer, moose and porcupines of the Ashuelot River Headwaters Forest, where it's not uncommon to see bear tracks like those above. One section of the forest is managed specifically with black bear in mind. Tracks photo by Ryan Young.

vulnerable habitats or exemplary natural communities. Thus, stewardship decisions must be made on an acre-by-acre basis.

The timber harvest prescriptions, for example, on a 75-acre portion (representing 4% of the entire tract) are *specifically* designed to enhance black bear habitat. Our consulting forester translated recommendations from N.H. Fish and Game wildlife biologists into on-the-ground forest management designations where bear sign is most prevalent and bear habitat potential is best.

An 18-acre "seed tree harvest" is designed to remove competing trees in one area to release and favor mature beechnut-producing stems. An adjacent spruce ridge provides a cool, protected resting area with nursery trees featuring stout lower branches for climbing. Open, sun-grown spruce trees allow cubs to climb to resting perches in the shelter of the canopy, functioning as "baby sitter trees" that allow sows to continue foraging nearby. Mature black cherry trees are retained throughout as a food source. Eight small (one to two acres) patch cuts in a yellow birch forest will be entirely cut to favor regeneration of ferns, forbs, blueberries and raspberries. This mix of both soft mast fruits and hard mast beechnuts can provide season-long sustenance to black bears. A remote, rocky, boulder-strewn area of thick pine, spruce and hemlock nearby will remain uncut, managed specifically for its value for winter denning opportunities in this wilder, roadless portion of the tract.

On the "Pollard Tract", a winter timber harvest last year re-opened roads and trails that had been used during earlier timber harvests. At an historic cemetery and old farm cellar with an adjacent apple orchard along Lempster Mountain Road, hazard trees

will be removed from the cemetery and competing species will be removed around the apple trees to encourage them to put on more fruit for wildlife. A larger, hilltop opening of nearly five acres will regenerate more sun-loving trees including birch, white pine, cherry and red oak.

While public recreation remains a secondary goal, scenic and aesthetic considerations include maintaining sweeping views over open blueberry barrens. Work is needed to cut scrubby spruce and fir encroaching on the open summit of Silver Mountain. All of the views at this reservation require volunteer stewardship workdays to maintain them for hikers.

Forest Society managing forester Wendy Weisiger emphasizes "not only is this property *huge*, but it is surrounded by other large, conserved tracts of forest land including our own nearby forest reservations. From the patch cuts on the Pollard tract, you can look clear across the Lempster Town Forest and upper Ashuelot River valley to the Forest Society's Farnsworth Hill Forest."

This reservation, Weisiger said, "really has it all,"—wild remote places and stands that have been extensively managed.

"Management opportunities aren't constrained by the location in this rural part of the state," Weisiger said. "The truth is, it's often easier to practice real silviculture and make landscape level decisions about management in rural places than on reservations in the middle of the city."





he city of Rochester's 2014 census lists nearly 30,000 residents in a community that is 82 percent urban and 18 percent rural. As the Seacoast Region has grown, so has Rochester. Its population has increased by nearly 14,000 since 1960.

Just across the road from the Skyhaven Airport is a 185-acre property transferred to the Forest Society in 2006. Former owner Virginia Champlin sought the transfer to honor her late husband Bill, and the parcel became the William H. Champlin Jr. Memorial Forest. Now replete with a gravel parking lot, gate, signs, a hiker kiosk map and a new access road, the property is a local favorite.

This reservation's top management priorities are to

- 1. provide recreational access for fishermen, hunters, and other passive users of the property, like hikers and dog walkers,
- 2. provide wildlife habitat and preserve water quality,
- 3. improve the commercial timber growing stock within the forest on the property,
- 4. generate revenue through the harvest of wood products on a sustainable rotation,
- 5. maintain or increase biodiversity and protect sensitive areas.

Stewardship at the Champlin Forest reflects its popularity for local recreation.

"It's a fantastic place for people who live in the city of Rochester to walk their dogs after work," Weisiger said. "The scale of harvesting timber at Champlin is entirely different from Ashuelot. We wouldn't likely consider putting in many large, 10-acre cleared openings here. Our approach is more focused on harvesting at a scale appropriate to the recreational trails by removing single and small groups of trees."



Top: A former pond site, drained when a dam was dismantled, has reverted to a wet meadow at the Champlin Forest, providing lush habitat for wildlife.

Above: The property sign is located off bustling Rt. 108 opposite SkyhavenAirport in Rochester.



Left: Active forest management still happens at Champlin, in an increasingly urban setting. Logger Jake Bronnenberg cuts white pine sawlogs to length. Right: Evidence of an earlier era, surface-quarried granite slabs remain, revealing that the Champlin property once provided local stone.

"We need places for people to connect to nature in an increasingly urban backyard." – managing forester Wendy Weisiger

This forestry is improvement cutting rather than regeneration cutting, which removes all mature trees to establish a new, young forest. Canopy openings are small, and skid trails revert back to use as recreational hiking trails.

The neighborhood includes homes and small, backyard woodlots. Yet illegal trespassing by local ATV riders, littering and illicit after-dark activities in the parking lot opposite the airport have the Forest Society staff and volunteer land steward for the tract increasing brush cutting to keep the area between the parking lot and the highway as open as possible.

The property faces more subtle and pervasive challenges. Invasive plants crowd into sunny former dairy pastures now mowed by a local contractor to maintain the openings. Invasive plants include Eurasian bittersweet, glossy buckthorn, Japanese barberry, ornamental burning bush, honeysuckle, multiflora rose, autumn olive and an increasing number of Norway maple seedlings and saplings. It'd almost be easier to list invasive plants not found there. Once established in the surrounding urban and suburban community, invasive exotic ornamental plants continue to regenerate on Forest Society woodlots.

A cynic might say that future forest managers will continue to need to deal with boundary line encroachments, ATV trespass, littering, invasive species and new people problems as the population in this region continues to grow. However, those most directly involved in stewardship plans for the Champlin Forest see a future of welcoming—and educating—more visitors and continuing to have modest opportunities to harvest timber.

Today the Champlin woods provide a quiet, 185-acre urban refuge in the increasingly busy near-Seacoast region. Sunny edges of two former ponds feature highbush blueberries. Wildlife including a diversity of songbirds live here. Sounds include quiet flowing water, wind in the pines and birdsongs. Perhaps the highest and best use of a 185-acre urban forest reservation like Champlin is for the Forest Society to provide free, public access to walking trails though mowed meadows and pine forest growing along wetlands.

"We need places for people to connect to nature in an increasingly urban backyard," Weisiger said.





f 55,000 acres owned by the Forest Society statewide, nearly a third is not available for timber harvesting because of a combination of steep slopes, wetlands or intentional management restrictions. This includes land designated as permanent ecological reserves. These "eco-reserves" total 12.4 percent of all reservations or 6,839 acres. Most of these require no active management activities. A handful of them-eight propertiesrequire active management to sustain unique natural communities that would otherwise disappear.

The 334 acre Dr. Melvin A. Harmon Preserve tract in Freedom has frontage on both N.H. Rt. 25 and the Ossipee River, which forms the town line with Effingham. In the Ossipee region, pine grows particularly well on well-drained sandy glacial outwash soils of floodplains. The term "Ossipee pine barrens" broadly describes similar forests where decades of fire suppression have allowed white pine, scrubby gray birch, red maple, beech and hemlock to encroach on more fire-adapted native forests. This region boasts the state's best examples of a unique, globally-rare pitch pine and scrub oak natural community.

The Harmon Preserve requires active management to perpetuate the pitch pine and scrub oak community, important habitat for 13 rare moth and butterfly species along with a suite of well-known birds like the whip-poor-will, rufous-sided towhee and brown



Top: Hard-won habitat: With the competing white pines removed, the sandy soil of the flat river terrace at the Harmon Preserve grows a rare fire-adapted pitch pine forest with an understory of scrub oak.

Above: Smoke management was a key component of a successful controlled burn along heavily travelled NH Rt. 25.





A fast moving ground fire favors regeneration of the fire-adapted oak understory at Harmon. This reservation offers important habitat for 13 rare moth and butterfly species along with a suite of birds like the whip-poor-will, rufous-sided towhee and brown thrasher.

What do these tormented 150 acres look like today? "It looks like a rapidly-recovering, healthy pitch pine barren!" Weisiger said.

thrasher. These species favor open understory of black huckleberry, blueberry and laurel growing in pitch pine barrens. The sandy soils also overlie the state's largest aquifer, a gift of the glacier that provides critical drinking water to thousands of Carroll County residents.

A prescription to restore Harmon pitch pine barrens basically calls for cutting all tree species not associated with the unique rare natural community.

"So we are not necessarily managing for timber value," Weisiger said. "It's an ecological restoration in progress, not a done deal. It's a perpetual job relying on continued funding and the shared resources of the N.H. Prescribed Fire Council and expertise cooperatively led by The Nature Conservancy (TNC)."

The first step prior to developing a burn plan was complete removal of the not-fire-adapted white pine/mixed overstory in 2010 to release suppressed pitch pine and scrub oak in the understory. The Forest Society cut the majority of the timber volume in a whole tree harvest operation. Then a large industrial tub grinder was brought in to grind leftover wood—"blocks and buttons" on the landing to remove coarse fuel.

Then contractors were hired to mechanically cut down brush through the use of a machine called a brontosaurus to mow fire lanes and much of the then-overgrown scrub oak so the property was prepared to burn.

Envision the kind of harvest employed to prepare a forest to become a new shopping center parking lot! As you might imagine, neighbors and passing motorists were aghast. The Forest Society held community meetings to convey the goal of this unconventional logging prescription: cut, grind, mow and clear, in order restore the pitch pine forest.

The Forest Society contracted with TNC to implement the burn plan. The Harmon Preserve was the very first property using the shared agency resources of the N.H. Prescribed Fire Council. The first controlled burn at Harmon in September 2013 was conducted on 50 acres. A second burn on 80 acres took place in September 2015. Last year, 25 acres were mowed to remove competing hardwoods.

What do these tormented 150 acres look like today?

"It looks like a rapidly-recovering, healthy pitch pine barren!" Weisiger said.

But there's more to be done, including moth and bird surveys to assess success and work to knock back returning competing hardwoods. Burned aspen stumps began re-sprouting soon after the fires. The longer-term future will rely on regular agency assistance to conduct burns in order for this ecological community to become self-sustaining and continue functioning as a pitch pine and scrub oak community.



When the Forest Society looks to the long-term future of all its forest reservations, there are challenges as well as opportunities. Setting the stage for sustainable recreation, timber and wildlife habitat management and the protection of water quality and unique and rare natural communities requires both funding and expertise.

"We're obviously going to need to increase our capacity so we can continue what we started when we first protected these forest reservations," Weisiger said. "Stewardship is an ever increasing responsibility. We're laying the groundwork for the next hundred years." Y



Left: Field forester Steve Junkin takes a GPS reading at a boundary (left) and checks the underside of a hemlock branch for signs of hemlock woolly adelgid (bottom right) at the Heald Tract in Wilton. Top right: Field forester Gabe Roxby looks through a glass prism at the Heald Tract to estimate the basal area of a stand of trees.

Taking Stock

Come along on an inventory with a forester

By Gabe Roxby

now crunches underfoot as a forester from the Forest Society walks in the woods, looking over a parcel that was just protected. What is he looking for? What information will he gather to help plan how to care for the property?

The Forest Society owns almost 55,000 acres scattered across New Hampshire. It's a challenge and a privilege to give each of our 185 reservations the attention it deserves. You've got to be organized and you've got to be disciplined. What you need is an inventory and a management plan.

The inventory takes stock of everything the property has to offer—timber, wildlife habitat, wetland features, recreation potential, rare plants, cultural features, geology. The forester also keeps an eye out for anything that might pose a threat to the property's natural resources—erosion, dumping, unauthorized vehicle use, encroachment, invasive species, disease. All of this information goes into the management plan, which will guide activities on the property for the next 15 years, when the cycle will begin again.

Before we even step foot outside, we read up on how we acquired the property, restrictions on how we can manage it, and promises we made that need to be honored. This is actually one of my favorite parts of the whole process. It's a way to connect with the past, by reading a handwritten letter from the property's donor or about the goals of a timber harvest that was done decades ago. It's an exciting treasure hunt, and you never know what you'll find. In researching one of our properties in Rindge, I discovered an incredibly detailed report of the area's cellar holes, with stories of the families who lived there in the 1800s. In another, I found a letter from 1975 written by the current Forest Society president/forester when she was a lowly summer intern.

But let's head back to the woods, where this forester loves to be. A forest is characterized by its trees, so let's start there. What tree species are dominant? With enough practice, every tree can be identified by a combination of bark, leaves, buds, fruit, location and growth form. Be careful though—identifying living things is addic-

tive. Once you learn the trees, then you should probably learn shrubs, because really they're just like trees that don't grow as tall. And before you know it a wonderful world of flowers, sedges, lichens, and slime molds opens up in front of you. You'll need another book shelf for all your field guides.

But back to trees. We always pick individuals to sample as representatives of a particular area. We measure the diameter, height and quality, noting what forest products a particular tree could produce

Personally, I like inventorying the

where there's a palpable sense that

something new may be discovered.

newly acquired properties best,

if we decide to cut it down. If it is straight, tall and large, perhaps it could be sawn into dimensional lumber and used to build a house or a piece of furniture. Trees that don't have these qualities can be used as firewood, ground into pulp to make paper, or chipped and

burned at a biomass renewable energy plant. Perhaps the tree has a large cavity that is being used as a den by a porcupine. This is useful information also noted during an inventory.

We note the mature trees but also pay careful attention to the small ones beneath. These seedlings and saplings represent the next generation of trees that may eventually dominate the forest. Are they healthy and made up of species that are likely to thrive on the site's soils? If so, is there something we can do now to encourage their growth? If not, how can we encourage new regeneration to take root?

Inventorying is all about asking such questions. It's an exercise in thinking about the future, growing the existing trees a couple of inches in diameter and pondering anything else that may occur in the next 15 years. Is the property dense with hemlock and near a known infestation of hemlock woolly adelgid? Are the overstory trees ready to be harvested before they begin to gradually die? Is the forest a special area that should be set aside and allowed to become old growth forest?

The Forest Society has many goals in owning and managing land—water quality, biodiversity, wildlife habitat, forest products, recreation—and balancing these can be a challenge. But this challenge is central to what forestry is all about, and why it's such a great profession.

Back in the woods, the forester has finished measuring live trees. Next up is measuring dead trees, which can be split into those that are standing (snags), and those that are on the ground (downed woody debris). In New Hampshire, 26 bird species and 18 mammals use snags or cavity trees for nesting, roosting or denning. Downed woody debris is used by more than 30 percent of the region's mammals, 45 percent of its amphibians, and 50 percent of its reptiles. These habitat features don't have any financial value as a forest product, but they are important to the health of our wildlife populations. We measure snags and downed woody debris to make sure we're meeting the benchmarks set forth by Good Forestry in the Granite State,

a manual of voluntary, recommended forest management practices.

The inventory is the time when the forester maps all of the trails, roads and any other recreational infrastructure on the property. Are the trails getting regular use that keeps the encroaching vegetation at bay, or do they need to be re-cleared? Should recreational use of this property be promoted or discouraged? Trails can be an extremely useful tool in getting people outside to experience the land we own and the good stewardship work that we do. But they also re-

> quire effort and money to keep up. We take a focused approach to trails, locating them only in areas where they will get significant use.

On one property, I found a rare

There are countless other fascinating things to be found in a forest during an inventory.

plant species that hadn't been recorded in that location since 1966. On another, a granite slab located by a cellar hole was cut in an unusual way, attesting to some centuries-old use that was, and continues to be, inscrutable to me.

Sometimes on an inventory, just for fun and especially during the spring and fall, I'll keep a list of all the wildlife species I see or hear. Personally, I like inventorying the newly acquired properties best, where there's a palpable sense that something new may be discovered. Unfortunately, the things we discover aren't always good things. Certain properties have perennial issues with people dumping trash or appliances. Old tires seem to be a popular item to dump, presumably to avoid the disposal fee at a local transfer station. Every year we organize many workdays, and volunteers help us remove trash and bring it to proper disposal areas. Periodically we also discover offenses such as a boundary encroachment or timber trespassing (theft). We regularly paint our boundaries in an attempt to avoid these issues, but with more than 500 miles of line, problems are inevitable.

After the exciting field work comes the necessary task of returning to the office, transferring and analyzing the data collected, and writing the management plan. The actual writing takes several days (or weeks for a large property), and includes making eight to 10 custom maps to show the property's features.

This lengthy process of inventorying and management-plan writing has been a large part of my job for the past four years. The goal of having an up-to-date management plan in place for every Forest Society property is finally within sight. Owning and managing land in perpetuity is a responsibility we take very seriously.

The management plan is in some ways the first step. But then we need to carry it through: Conduct the timber harvest to create young forest habitat that benefits a local species of concern. Install a gate in an area that's being damaged by illegal motorized vehicle use. Build a trail along a scenic area, and then a safe place for people to park and access it. It's called stewardship, it's our job, and we love it. Y



Where Stewardship Meets Shepherdship

Landowner brings conserved land back to its former life as a working farm

By Brenda Charpentier

One of the first things Joe Cavalletto needed after deciding to become a sheep farmer was a sheep farm.

Since he didn't grow up on a farm or find a working one to buy, he took on the greater challenge: Buy land that long ago was a working farm and put it back to work. And along the way, transform himself from a big-city business owner and dog trainer to a rural sheep farmer.

He was 33 and had already spent two years considering the prospects and the risks. His research was extensive: How feasible is starting a profitable sheep farm from scratch? What would it take to make a living at it? Is there a market for local, ethically raised lamb? Where should he make a go of it?

After looking at some 20 properties in Maine, Vermont and New Hampshire, Joe and his wife Liz drove down a dirt road in Lempster, N.H., in 2013 to arrive at a 95- acre property with a small pond. Stone walls stitched across the land beyond a brick farmhouse built in 1820 during New Hampshire's "sheep boom." The land was also conserved through an easement with the Forest Society. The "Where" question was answered. It was the one. They bought the land and the dual transformation—of the land and the man—began.

Top: Joe Cavalletto may have been born and raised in New York City, but the farm he is reclaiming in Lempster for raising sheep is the place that feels like home.

Bottom: Expanded and reclaimed pastureland stretches off into the distance from behind Joe and Liz Cavalletto's 1820 farmhouse.

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The Cavalletto Farm is raising White Dorper sheep. White Dorper is a breed that sheds, eliminating the time and expense of shearing. The breed also browses on sprouting shrubs and trees, helping to keep pasture land cleared.

On a late fall day, the morning sky is grey and blustery, the ground not yet frozen. Joe gestures with an ungloved hand toward a fenced pasture between his house and the road. It's the ram lamb pasture, empty now since all the sheep are in the nearby barn.

"This was all trees and boulders" he says, going on to describe the huge mounds of rocks and stumps he had to dig out in order to use the spot. One of the first tasks as a farmer was to learn how to use a rented excavator and bulldozer to bury the rocks and move the stumps to an out-of-the-way spot for small mammals to use for shelter.

He thinks back to the attention all the activity garnered and the inevitable inquiries from locals about what this new guy was up to.

"People who grew up farming around here were scratching their heads saying, 'What the hell are you doing? It can't be done, man!'"

He's well aware of the dwindling dairy farm situation. But he's three years into this thing and his progress keeps him hopeful.

"I'm trying to see what can be achievable and workable and

profitable in making this a small, commercially viable farm," he says. "It seems like an impossible task but I'm determined to make it work... while at the same time not sacrificing conservation and animal welfare. I think there's a good intersection of all that to come together."

He pauses, then adds, "I hope so. I'll find out... ask me in five years."

The Land

When the Cavallettos bought it, the land looked much different than it does today. Mature trees had overtaken many of the fields and pastures of yesteryear. The stone walls that once served as perimeter pasture fences stretched through the woods testifying of long-ago livestock. Small hayfields, maintained by perpetual mowing, were surrounded by an encroaching mix of pines and hardwoods.



When Joe heads out of the barn with the feed bucket, his sheep and their guard dog, Tess, eagerly come along. Now that the work of creating pasture is mostly done, Joe is turning to increasing the size of his flock, starting with a shipment of 50 more sheep from a farm in New York later this year.

The property was managed as a certified Tree Farm, and its previous owner, Bob Odell, a N.H. state representative, had conserved it through a conservation easement. Joe knew that he would need to both clear and expand those former fields for pastureland and to grow forage for his sheep. He knew he'd want to put up a barn and build a driveway accessible to semi-truckloads of hay. One of Joe's first undertakings before closing on the property was to determine how the easement might affect his plans.

"I wanted to know if there were going to be any restrictions on what I could do," Joe said.

So he studied the easement deed and called to talk to Paul Gagnon, the Forest Society's easement steward assigned to periodically monitor the property to make sure the easement is being upheld.

"He spelled out very clearly what I could and could not do under the easement," Joe said. "I got reassurance that if I wanted to pursue agriculture here in line with best practices as spelled out by the state Department of Agriculture with advisement from UNH, that I was free to do that. Our interests coincided. That made me comfortable buying this place."

The easement deed specifically allows for agricultural improvements. The Lempster land was also affordable compared to other properties they looked at in New England. "That allowed me to put money into building a farm up," he said.

Other consultations ensued. Joe retained forester Andy Clifford, who had worked for the previous landowner and already knew the property. "I started talking to him about what I wanted to do and walking the land with him," Joe said.

task but I'm determined to make it work... while at the same time not sacrificing conservation and animal welfare. I think there's a good intersection of all that to come together.

UNH Cooperative Extension's Seth Wilner and Sullivan County Forester Dode Gladders provided early guidance as well.

"Dode spoke a lot about forest health and the benefits of good selective cutting and the areas to be cautious with. It was very helpful for me to understand how a timber cut could be not just to my economic interest but also just beneficial in spurring new growth and adding diversity to the habitat," Joe said.

A plan emerged. Clifford worked with a logging outfit to harvest timber from 60 acres, clearing 15 for pasture.

"I was selecting for holding onto hardwoods. I wanted to hold the oak and the sugar maples and, some day, make our own maple syrup," Joe said.

The money from the sale of the timber, much of it white pine, financed much of the clearing and stumping. Slowly, the property transformed into what it may have looked like back in the 1800s, during New Hampshire's sheep heyday, when subsistence farming evolved into prosperity farming.

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Behind Joe's house, his fields stretch out in uneven, hill-and-vale folds of green and brown. A lone crow caws from one of the maple trees Joe left standing in the newly expanded pasture—for shade and just because he likes to look at them.

Joe crouches down to examine the ground under his feet, bare in more spots than he wants to see. The cover crop of feed-grade oats didn't sprout well. Joe is discussing the pros and cons of winter rye vs. oats when he sees a pottery shard in the dirt and





A former dog trainer, Joe is teaching Tess, a 4-month-old Maremma sheepdog, to watch over the sheep. An Italian breed, the Maremma sheepdog lives with the flock starting as a puppy and learns to view sheep as members of her pack, to be protected from any outside threats. Tess seems to like the sheep's grain as much as the sheep do.

picks it up. "That's earthenware... that's old," he says, tossing it out of the pasture.

He finds the shards often, little broken time capsules left there by farmers who worked this same spot a century ago, maybe two centuries. Every so often, those farmers cross his mind.

One of them, at some point in the farm's history, started a stone wall in the northern end of the pastureland but abandoned it.

"They had grander ambitions but dialed them back because it was so stony," Joe surmises. "Because I have machinery, I can do things they couldn't do."

One of the things Joe needs to do to become profitable is to have enough productive grazing land to extend grazing as far into the fall as possible and buy less feed. He nods toward the pasture.

"Right over there, I buried a boulder the size of a shed."

The Farmer

Joe was born and raised in New York City, one of five children of a teacher and a social worker. But he traces his most formative experiences to the family's escapes from the city.

"We spent a lot of time out in nature as kids. Everybody got in the van and we drove up to Canada and we'd spend a month in the woods camping, canoeing."

As a pre-teen, he also spent a summer with an aunt in the Gallway, Ireland, countryside, where he befriended a local teenager who worked as a field hand on a neighboring horse farm.

"I spent my summer hanging out with him, taking care of the horses, cleaning out the barns, working in the fields. That made a per-

manent impression on me... I always kept that in my head," he said.

And then there's the pull of heritage. Joe's great grandfather Giovanni Cavalletto immigrated to California from Italy at age 16 and found work chopping firewood. He turned to growing hay next, then lemons, in Galeta, Calif. Joe's grandfather George expanded the farm to include avocados. Joe remembers walking around the orchards with his grandfather.

"He had these little rings you'd put up to see if the avocado was the right size to pick. If the avocado's too small, it goes right through the ring. If the avocado can't fit through the ring, it's ready and you can take it off (the tree)," Joe said.

Although his father eschewed farming to become an educator far away in New York City, Joe was drawn to the idea of living off the land, seeing tangible results of your labor. That interest remained as Joe grew up to work in various businesses, including dog training. He worked in his brother's Boston dog training business and later started his own business after a move back to Brooklyn, N.Y. But more and more, he hated city life. Every chance he got, he packed up his dogs and headed out of the city to find woods and hills.

"I would feel this tremendous relief come over me," he said.

Then, he and his siblings inherited their grandfather's estate, and Joe sold his portion to a cousin and invested the funds.

With the means to make some big life changes, he decided it was time to follow that lifelong desire to work on the land. He picked sheep to raise because he enjoys lamb, sees a market for it, and likes working with animals.



One of Joe's early goals was to gain as much grazing land as possible in order to cut down on the amount of hay, shelled corn and soybean meal he'll have to buy. Looking for efficiencies is as much a part of his business plan as marketing his lamb meat to customers concerned about how animals are raised.

"I thought it was a manageable animal for a newcomer like me to take on," he said.

He knew it would not be easy reinventing himself.

"To do what I'm doing now is such a tremendous leap of faith. I had to have that experience of moving back to the city and realizing that it had no appeal to me. I had to go for it, so I did. I met my wife along the way, and now we live in Lempster. I want to live here for the rest of my life."

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Inside the sheep barn in early December, Joe's sheep are eagerly munching hay. It's flushing time, when the ewes get extra hay and grain to prepare them to be bred. When Joe grabs a bucket of shelled corn and walks out of the barn, the sheep clamor after him, and Tess the guard dog trots along like she's one of them.

Joe so far has 15 ewes, nine ewe lambs and two rams. He's contracted with a farmer in New York to bring in 50 more ewe lambs this year.

"The first goal I set out is to have 100 breeding ewes, but I think what I'm going to try to do is push that higher," he says.

As he doles out grain to the sheep, he outlines some of his plans for growing his herd and his goal of providing high quality, humanely raised and slaughtered, locally sourced lamb. His business plan includes stewarding his animals with the same high standards he's using to steward the land.

It's clear that over the last three years of putting 15 of his 95-acre property back to work for raising sheep, the appreciation for its forests, fields, wetlands and pond frontage has grown in tandem with an understanding of why the previous owner took action to conserve the property.

"If I was ever to go and sell this place," Joe says, "I'd want to have an easement on it, too." $\,\mathbb{Y}\,$



Reflections of a Professional Easement Steward

By April Costa

That rolls out across the scrubby hayfields nearby, underneath a pale yellow sun, talking with a landowner who is well into her 80s about her land. By the time the breeze has reached us all the way across the fields, it has whipped up quite a force, and though we've already been talking for a few minutes and the woman is wearing neither a hat nor scarf, she doesn't seem to notice the cold. Decades after having placed a conservation easement on her farm and woodlands, she is still there keeping the fields open and tending to her animals.

On another day much earlier in the season, I listen as a landowner describes the view from the top of a hill on his property as he remembers it from when he was a child. It used to be completely open and blanketed by hayfields. Standing on that same hill during my visit to the property today, we are surrounded by forest.

As a conservation easement steward at the Forest Society, I do the on-the-ground work of meeting with landowners on their properties across New Hampshire to ensure that the terms of their conservation easements are being upheld. We walk the land together and, more often than not, I find that they have a very intimate knowledge of their properties. A visit to a conserved property may include checking on a timber harvest, hiking to a remote

and seldom visited property boundary, viewing the proposed site of a new barn or shed, or walking some old woods roads.

Many of the landowners that I meet with express a sentiment that ties them all together: Their love of the land has moved them to be proactive in caring for it, and they take great comfort in knowing that their land will be protected in the years to come. By holding a conservation easement on a property, the Forest Society has made a promise to ensure that the land remains protected in perpetuity. Stewardship takes many forms but, for a land trust, to hold an easement on a property is to commit to an unending relationship with the land and its owners.

Once the ink has dried, the perpetual work of stewardship begins.

The most I could ever hope to learn about a property can be gleaned from conversations with the landowner, and by walking the land with them. Be it somebody who has lived on the land for their entire life or somebody who purchased a property that already had a conservation easement on it, many seem to find a deep sense of comfort and belonging on the land. It is through our shared connection to these outdoor spaces that land trusts and landowners are able to shoulder the burden of stewarding protected properties together. I serve as the landowner's guide to the conservation easement, giving them assurance that activities they







The best part of any easement steward's job is to tour conserved properties with landowners. Left: Easement steward April Costa walks through a recent timber harvest site in Antrim with landowner Carol Karsten. Middle: April and landowners Elibet and George Chase talk while walking along a woods road on the Chases' conserved land in Warner. Right: The Chase property includes a beaver pond where wood ducks will nest in the box put up by George's father. Great blue heron nests in nearby dead trees promise a noisy spring.

Be it somebody who has lived on the land for their entire life or somebody who purchased a property that already had a conservation easement on it, many seem to find a deep sense of comfort and belonging on the land.

have planned for the property are or are not within the allowances of their easement. If an activity is not allowed by the conservation easement, I do my best to work with the landowner to find an alternate solution.

My work is most gratifying when I can be useful to landowners, be it by directing them towards helpful resources or advising them on what exactly is permitted under the easement. The tightrope walk that is stewardship relies on balancing the restrictions of the conservation easement with the wants and needs of changing times, ownerships, and other factors that the land trust never could have foreseen when some of these properties were first protected. I hope that landowners think of me as someone they can work with to ensure that their land is protected in perpetuity.

My work is always simplest when a landowner is proud of their

conservation easement and enthusiastic about adhering to its terms. The challenge lies in working with landowners who view their easement as a cumbersome burden that stands in the way of something they would like to do with their

property. Unfortunately, stewards can't always say yes when landowners inquire about projects they're considering. Maintaining that important positive relationship through these interactions is perhaps the most difficult task that we are dealt.

As time passes, all conserved land will inevitably end up with owners who never knew the person who protected it in the first place. I have the opportunity to meet with new landowners who are excited about managing their land with a nod to the future, and I see these new beginnings balance the long histories that many of the previous landowners had with their properties. The connecting thread between all of them, even if they have never met, is that they all love the land and want to see its natural features protected. At its core, a land trust serves to protect land permanently, and stewardship is the promise of protection upheld daily. Y

STEWARDSHIP BY THE NUMBERS

Once the celebration of a new forest reservation or conservation easement is over, what then?

Although our favorite numbers are **55,000** (acres conserved through Forest Society ownership) and **130,500** (acres conserved through Forest Society easements and deed restrictions), the less-known numbers in this info-graphic tell an important story: When the last signature is penned on the closing documents that conserve a property, the work of stewardship has just begun.

185

Forest Reservations owned as of December 2016

700 PROPERTIES

for which the Forest Society holds conservation easements or deed restrictions as of December 2016

Members of the Easement Stewardship Department staff (five full-time, one part-time) responsible for ensuring that the purposes and natural resources of all 700 conservation easements and deed restrictions are protected into perpetuity









9

Truckloads of trash collected during clean-up days on our reservations last year



5,120 HOURS

volunteers put in each year to help us care for our properties and trails

\$60,000

Cost in 2016 of aerially monitoring all properties for which we hold conservation easements or deed restrictions

61 EVENTS

(workdays, guided hikes, trainings) we coordinated on our reservations last year



\$26,078

Average annual amount spent in legal fees for defending and upholding easements in the last nine years



4,400 ACRES

we must inventory each year

in order to continually update management plans for all properties. (This number will increase as new reservations are added.)

New violations found and addressed by easement stewards in 2015

Violations resolved by easement stewards in 2015

15



Annual amount of Forest Society land with no timber harvest activity each year

Goal for amount of Forest Society-owned land to be treated with a timber harvest annually

FOREST SOCIETY'S HARVESTED LAND

(1.6% of total acres owned)





is logged in order to regenerate new trees



is logged in order to increase the growth, quality and health of the existing trees (thinning)



504

Properties visited by our easement stewards in 2015 for on-the-ground monitoring (422 properties) and consulting (82 properties).

Visits made by volunteer land stewards to monitor our reservations last year:







24 HOURS OF STAFF TIME

needed to gather data and write one Current Conditions Report (the report required for more than 700 properties for which we hold conservation easements or deed restrictions)

561

500 MILES

of property boundary lines we maintain with blazes and paint, at a rate of

60 MILES PER YEAR

173 Trained volunteers

helping to care for our reservations and easements



Individual trees we measure on a typical 100 acre property. We use the data on species, diameter, height, health and value to write management plans for our reservations.



Come out and have some fun! Sign up for one or all of our winter/spring series of hikes and tours.

Winter/Spring Cure for Cabin Fever Hiking Series

Ready to shake off those winter doldrums? The Society for the Protection of N.H. Forests is teaming up with WMUR and Stay Work Play New Hampshire to offer a series of events to help participants get outside this season and to showcase conserved properties around the state. The events—hikes and an evening of pub games and conversation—are all free and coordinated by Forest Society staff in cooperation with WMUR's "Escape Outside" segment and Stay Work Play New Hampshire. You're welcome to come for one or all, but please register for each event separately. Bring the whole family to enjoy nature and learn more about New Hampshire's wildlife, habitats and other natural resources.

Register at forestsociety.org/events or by calling 224-9945.

WEDNESDAY, MARCH 1 | 1 p.m. to 3 p.m.

Winter Wildlife Tracking

Bretzfelder Park, Bethlehem

Join the Forest Society's Nigel Manley, director of The Rocks North Country Outdoor Education Center, for a winter tracking snowshoe hike. Learn about winter mammal ecology and winter wildlife habits and habitats.

THURSDAY, MARCH 16 | 7 p.m. to 8:30 p.m.

Special Event: Trails Tales & Games

Venue tbd

Join WMUR's Paula Tracy, host of "Escape Outside," and Dave Anderson, the Forest Society's director of education, for a beverage, stories and games. Have fun playing "Stump the Naturalist" and "Trails Trivia" with fellow outdoor enthusiasts and naturelovers. Submit your own questions.

SATURDAY, MARCH 18 | 11 a.m. to 1:30 p.m.

Maple Orchard and Sugarhouse Tour

"The Maple Guys" Sugarhouse, Lyndeborough

Meet maple sugaring expert Chris Pfiel at his Lyndeborough sugarhouse for a special tour of a working maple sugarbush and sugarhouse operation. This is a perfect learning opportunity for families.

THURSDAY, APRIL 6 | 4 p.m. to 6 p.m.

Vernal Pools Walk & Pizza

McCabe Forest, Antrim

Learn about early amphibian breeding—rites of early spring for wood frogs and yellow-spotted salamanders found in vernal pools along the upper Contoocook River at the Forest Society's McCabe Forest. After the walk, join us to share some (buy-your-own) pizza in Antrim and celebrate the arrival of springtime!

Check our website for information about two more hiking series, one in summer devoted to scenic summits and one in the fall aimed at enjoying New Hampshire's spectacular fall foliage.

2017 Cottrell-Baldwin Environmental Lecture Series Begins March 7

The Cottrell-Baldwin Environmental Lecture Series celebrates the environmental and scholarly legacy of Bill and Annette Cottrell and Henry Baldwin. Join us for four free presentations aimed at increasing your enjoyment and understanding of the natural world. Held at the Baldwin Environmental Center, 309 Center Road in Hillsborough, the presentations are co-sponsored by the N.H. Division of Forests and Lands, Fox State Research and Demonstration Forest and the Forest Society. Each starts at 7 p.m.

TUESDAY, MARCH 7

The Big Trees of New Hampshire

Author Kevin Martin

Author and wooden boat builder Kevin Martin will bring us through the woods and into cities all over New Hampshire to find and measure the largest living trees in our landscape. Some examples include the state's largest northern white cedars in Clarksville that have been marked by bears for generations, and a horse chest-



nut in Portsmouth that was planted by a signer of the Declaration of Independence in 1776. New Hampshire has seven national champion Big Trees.

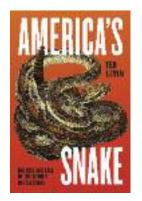
Martin will share 28 hikes to find 85 of the largest trees on public land and in cities where the public may visit. Martin includes tree history, management and current stewardship.

TUESDAY, MARCH 21

America's Snake: The Rise and Fall of the Timber Rattlesnake

Author Ted Levin

"This lecture is about love-but also about fear, danger, and a long history of misunderstanding." Ted Levin will tell the story of a much-maligned animal: Crotalus horridus, the eastern timber rattlesnake. One of the most iconic animals of the American landscape, rattlesnakes were feared and hunted relentlessly since



the time of the Pilgrims. The few remaining colonies are now the focus of sustained and contentious conservation efforts on the part of professional scientists and dedicated amateurs. Levin details the life cycle, physiology, habitat, conservation challenges and folklore surrounding this species.

Levin is a veteran naturalist, photographer and award-winning author of three critically-acclaimed books and co-author of five children's books. In 2004, Levin won the prestigious John Burroughs Medal for nature writing.

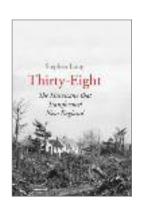
1.5 SAF Category 1 continuing education unit credits assigned

TUESDAY, MARCH 28

Thirty Eight: The Hurricane That **Transformed New England**

Author Stephen Long

September 21, 1938. No living person had experienced a hurricane in interior New England. After devastating coastal Long Island, Connecticut and Rhode Island, killing hundreds, the hurricane raced inland bringing 100 mph winds into Vermont and New Hampshire, uprooting a



half million acres of trees. Of the 2.6 billion board feet of timber blown down, New Hampshire's white pine forests were particularly hard hit. City streets and rural roads were choked with tangled trunks and limbs to be cleared using axes and crosscut saws.

Stephen Long, a founder of Northern Woodlands magazine, chronicles how the hurricane of '38 transformed New England, bringing about social and ecological changes still observed nearly 80 years later.

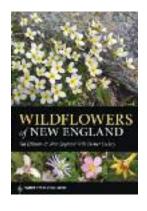
1.5 SAF Category 2 continuing education unit credits assigned

TUESDAY, APRIL 4

Wildflowers of New England

Author Ted Elliman

What is that plant? Wildflowers of New England by Ted Elliman and The New England Wildflower Society covers the six New England states. It describes and illustrates nearly 1,100 of the common and rare wildflowers that occur in the region's forests, meadows, mountains, wetlands, and coastal areas. The user friendly organization by flower color



and petal count is augmented by 1,100 color photographs.

Elliman's slide-illustrated presentation includes information on when and where these species grow. Elliman is staff botanist at The New England Wildflower Society. For years he has conducted botanical inventories, natural habitat surveys and invasive species management throughout New England. He has a master's degree from Yale School of Forestry and Environmental Studies.

1.5 SAF Category 1 continuing education unit credits assigned





Left: Bob Tuite (right) splits wood at The Rocks Estate with Rocks manager Nigel Manley. Bob kept volunteering well into his 90s. Right: Jackson Tuite and his dad Joel Tuite represent the fourth and third generation of Tuites to volunteer at The Rocks Estate.

An Enduring Friendship, Four Generations of Volunteerism at The Rocks

By Nigel Manley

hen I met Robert "Bob" Tuite, 30 years ago, I never imagined the bond that would form between us and what an effect he and his family would have at The Rocks. I was 24, had just moved to the States from Stourbridge in England and wanted to learn. Bob was 65, retired from a successful and hectic business and wanted at first to teach someone how to trap. Bob had learned this skill from a Native American in Canada and wanted to put his knowledge into action while teaching someone his "tricks" of the trade. I was more than willing and little did I know that my interest in trapping would be the foundation of a volunteer commitment by four generations of Tuites at The Rocks.

Robert was one of those guys who could do anything, and as we became the best of friends he not only looked after me but also taught me so much.

Robert was one of those guys who could do anything, and as we became the best of friends he not only looked after me but also taught me so much.

The first few years Bob would come up from his home in Littleton and we would trap together before he left for Florida to spend the cold months. In the spring he would return and ask what he could help with. In the early days, Bob arrived every morning at 6:45 to start splitting wood with me as we slowly worked our way through the 40 cords that the Society needed to heat three of The Rocks' buildings. After the wood splitting, Bob would ask what I was going to do for the rest of the

day. If I mentioned cutting trees or other jobs he considered dangerous, he would politely tell me he was coming along to help. Little did I know that he thought that I would get seriously hurt in the woods with my lack of knowledge and working alone most of the time.

John Tuite, one of Bob's sons, was the first of the "next generation" to volunteer, helping to sell Christmas trees. Ever the prankster, if asked what the difference is between a Fraser and a Balsam, John will tell you "about \$10!" Paul, one of John's younger brothers, was the next to volunteer, tying trees onto cars during the busiest of our sales days.

Paul was quickly followed by his two sons Joel and Brody. I watched these two young men grow up, and it was exciting to see that they wanted to help out. Brody helps tie trees onto cars and has branched out as the tractor and wagon driver during every day of the maple programs in the spring. For the past five years, Joel has helped tie trees onto cars for guests, and last year he brought his 4-year-old son Jackson to help make apple cider during the fall celebration. Jackson is the fourth generation of Tuites to volunteer at The Rocks, and he was a hit.

The list of what Bob accomplished is staggering. He re-glazed and painted all of the windows of the buildings, built the frames and then shingled the tops of the entrance pillars, shingled the historic Bee House, rebuilt the wall in the pond, spent every year running the handle of the wood splitter, picked up wreaths, bundled balsam fir brush for sale, repaired the weather vane, rebuilt the greenhouse—the list is endless.

Earlier this year Bob passed away after 95 years, 30 of which he spent volunteering at The Rocks. By a twist of fate I was in Europe when Bob passed and could only participate in his celebration of life by sending my thoughts about his accomplishments at The Rocks and to thank him for such a close friendship.

Bob loved his family and was so proud that some of his children, grandchildren and now great grandchildren would continue the legacy he started by volunteering to help maintain The Rocks as one of the North Country's premier properties. He always asked which of his grandchildren was "helping out" and what they were doing in order to keep the programs at The Rocks going.

We named Brody the Volunteer of the Year for 2015.

"As a third generation Rocks volunteer, I guess I would have to say volunteering at The Rocks is in my blood," Brody wrote in an email to me. "Though I put in a lot of hours, I enjoy every minute of my time."

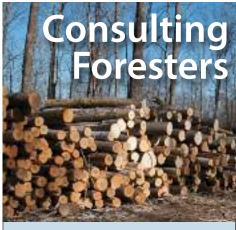
Joel Tuite told me that he volunteers to honor the memory of his grandfather. "I am honored to continue the tradition, but what is most special to me is having my young son beside me as the preservation of The Rocks Estate remains alive and well. I think my grandfather would be proud."

Bob touched almost every part of the property in his 30 years of volunteerism and he will be sorely missed. As I go about my daily work, I can see all of the improvements that he made for the Forest Society and I can hear him giving me advice on how to do certain jobs as well as managing the farming side of the property.

Knowing how much Bob gave me and to the Forest Society, it was good to hear from his son John that Bob felt he got something in return.

"My father knew that his volunteerism helped the Forest Society and ... he loved the fact that The Rocks was protected. He wanted to spend time with his friend and loved to be active through useful work—and that is what kept him going to 95." \textsqr{

Nigel Manley is the director of The Rocks Estate and Christmas Tree Farm, the Forest Society's North Country Education and Conservation Center.



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Volunteers of Uncommon Grit

By Jenn Seredejko

I knew a few things about Forest Society land stewards when I started working with them. I knew how many there were, what was asked of them, and that some had been volunteering for more than 20 years. I heard plenty of other things too, about their grit and dedication to the Forest Society, but seeing is believing.

The first land steward I met, Len Martin, quickly put the Land Steward Program into better perspective. "The people I do [workdays] with, both staff and other volunteers, I consider my friends. Working on projects together is a bonding experience in itself," he said.

I met many more land stewards on their adopted reservations. Some, likely double my age, hiked briskly through the woods at a pace I struggled to match while they pointed out animal sign. Other stewards paused at natural features to tell a quick story on local history.

As I put out a call for volunteers to help remove illegally dumped trash from our conserved land, I worried about rallying enough help. I didn't need to worry; plenty of land stewards came through to help pick up someone else's littered garbage. One of them was Walter Weeks, who helps unwaveringly at work days no matter what the task.

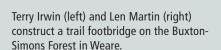
"To maintain good health and a quality of life during retirement, I had to keep mentally and physically active," Walter told me. "I am helping [the Forest Society] and they are helping me."

Land stewards don't hesitate to get right to work. I usually have a tougher time getting these volunteers to "call it a day." On a particularly frigid work day in December, I asked long-time steward Bart Hunter why he braved the cold. He credited his upbringing for his hardiness.

"We dealt with it—cold, hot, it didn't matter. I had to milk the cow, by hand, no matter [the weather] or she'd get sick. Today, I carry the same mindset. You dress warm and do what needs doing," he said.

Beyond their hours of donated work, land stewards have stories about their reservations and communities that I cannot get in the office. I must mention that they are a fun bunch of people, too. These folks are the real deal.

Jenn Seredejko began coordinating the Land Steward Program in the spring of 2016.



Jason Morris (left) and Ray Jackson (center) assist crew leader Nate Preisendorfer (right) in moving a large rock that will be part of a stone staircase on the Moose Mountains Reservation in Middleton.



Hilary Thomson prunes back vegetation along the Kidder Tract Trail on the Hay Reservation in Newbury.

A wood duck nest box is cleaned out by Gail Yearke at Rosemary's Woods in Danbury.









Gale Tobbe (left) and Ben Haubrich (right) bag trash and dumped items collected from Hedgehog Mountain Forest in Deering so that they can be disposed of properly.

Linda Howes (far left) teaches a group from Hypertherm, Inc. about loon conservation and preventing the spread of invasive weeds at Grafton Pond Reservation in Grafton.





Henry Taves prunes an old apple tree so that it will bear more fruit for wildlife on the Hay Reservation in Newbury.

Bob Lyon carefully paints white lettering on a new routed property sign during our annual volunteer sign workshop at the Conservation Center in Concord.





Brenden (left) and Charlie Bowen (right) learn how to interpret a survey map at the Land Steward Core Training

RuthAnn Eastman gives a kiosk a good spring cleaning at the Reney Memorial Forest in Grantham.





Walter Weeks helps burn invasive buckthorn shrubs that have been removed from a field on Gap Mountain Reservation in Jaffrey.

Ken Marvin (center, orange) talks about wildlife habitat and winter mammal tracking while leading a snowshoe hike on Morse Preserve in Alton.





The Kearsarge Region's beauty owes much to the conservation of land on both Kearsarge and Black mountains and their foothills.

Wild for a Trout Stream

Forest Society Adds Pristine Brook Trout Habitat to Black Mountain Forest

By Brenda Charpentier



pristine wild trout stream and old-growth forest are among the natural resources protected by the Forest Society's purchase of a 233-acre forest near Mt. Kearsarge and adjacent to the Kearsarge Regional

High School on North Road in Sutton.

The Forest Society has added the property to its now-1,293-acre Black Mountain Forest Reservation—conserved since 2010 and located next to Mt. Kearsarge State Park and a collection of other conserved lands

on Mt. Kearsarge and its sister peak Black Mountain. The area is considered a high priority for conservation by the towns of Sutton and Warner.

"Keeping this land intact and undeveloped preserves the beautiful view of unbroken forested hillsides that many people who live in this area have told us they value seeing when they're driving south on I-89 in Sutton," said Jane Difley, the Forest Society's president/forester. "Both the scenery and the incredible natural resources on this land are important to the community, and

we are grateful for the many donors who partnered with us to buy it."

The cold mountain stream that cascades down the property's hillside and into Stevens Brook supports one of the largest densities of populations of wild brook trout in the Warner River Watershed. Much of the grant funding that enabled the Forest Society to buy the land was awarded in order to protect the stream's water quality, Difley said.

Those grants included a \$150,000 Aquatic Resources Mitigation (ARM) grant from the





state's Dept. of Environmental Services (DES), a \$10,000 habitat conservation grant from the state Fish and Game Dept., a \$5,000 grant from the Basil Woods Jr. Chapter of Trout Unlimited and \$5,200 from the Quabbin-to-Cardigan Initiative.

George Embley, the chair of the local Basil Woods Jr. Chapter of Trout Unlimited, said the project fits well with Trout Unlimited's mission to preserve cold water fisheries.

"You surely want to protect the riparian zone along a stream, but to protect the whole section of forest around it is even better," he said.

Local Trout Unlimited volunteers have spent five years and more than 1,500 hours of labor assessing the aquatic habitat and wild brook trout populations in the Warner River Watershed in partnership with the N.H. Fish and Game Dept.

N.H. Fish and Game fisheries biologist John Magee said the assessments show a healthy wild trout population in the Black Mountain Forest addition's stream and healthy habitat that helped the trout there survive current drought conditions.

"If that habitat had been impacted by a housing development or roads, that population would likely have been wiped out," he said. "The best way to conserve the wild brook population is to make sure the habitat remains healthy, and a great way to do that is land conservation."

The property has frontage along North Road in Sutton. An old woods road, used as a running trail by Kearsarge Regional High School's cross-country team, leads to several scenic high points of land surrounded by old-growth forest, unchanged by humans since before European settlement. Several large vernal pools are also among the natural resources protected by the Forest Society's purchase.

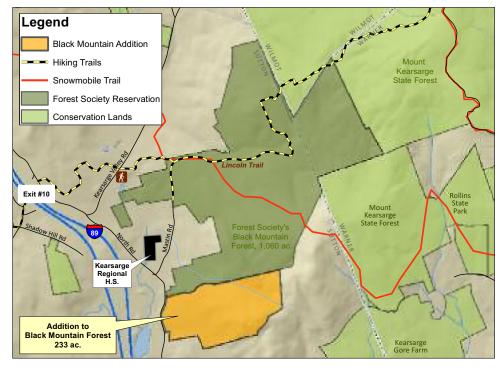
The adjoining Black Mountain Forest hosts part of the Lincoln Trail to Mt. Left: An yet unnamed, the brook on the Black Mountain Forest addition may be small, but its pools helped wild brook trout to survive even during last summer's drought.

Right: If you look very closely, you can make out bear scratches on the beech tree trunk on the right. The addition features superb wildlife habitat.

Kearsarge's summit. The Forest Society has been partnering with students and staff from Kearsarge Regional High School to improve the trail. Students completed a bridge project last spring and a trail re-route this fall.

"The addition to the Black Mountain Forest provides more diverse natural resources conserved close to the high school, and we are looking forward to many more opportunities to work with the high school and help students connect to the land in their community," Difley said.

The Forest Society raised \$356,000 for the purchase, acquisition and stewardship costs of the addition. "There were 224 donors who helped us get this project done, and we thank each one as well as the grant providers who partnered with us to the benefit of the entire Kearsarge region," Difley said. \mathbb{Y}





Jim Gregoire's experience as a hiker and conservationist led to his donation of land in Alton.

A Long-Distance Hiker Helps Others Get on the Trails

By Brenda Charpentier

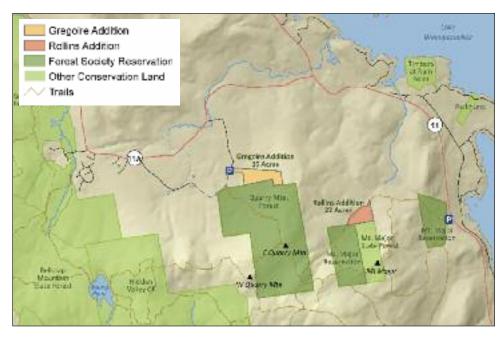


Where the old skidder trail he hiked along opened to a small overgrown clearing, Jim Gregoire stopped and gestured toward the view of Lake Winnipesaukee sparkling below, framed by the Ossipee and Sandwich mountains beyond.

"This is why we bought this property," he said.

With that view and the quiet of the wooded hills all around the clearing, it seemed to Jim at one time to be the ideal spot for building a retirement home in Alton. As it turned out, a home in Meredith was the place for Jim and his wife, Jane, both of whom had grown up in New Hampshire and looked forward to moving back from New Jersey.

They kept the Alton land on Reed Road, waiting for the right time to do something with it. Then the Forest Society bought the adjoining 469 acres and created the Quarry Mountain Forest in 2013. The Gregoires,



longtime Forest Society members active in local conservation, saw an opportunity to make a lasting contribution to the Lakes Region they love.

"When the Forest Society acquired the

adjoining piece, I knew the right time was near," Jim said.

Meanwhile, the Forest Society was looking for the best place to build a small parking area to provide access to a new trail





Left: The new, gravel parking area is located off Reed Road in Alton. It's a short walk from there to the beginning of a new trail up Quarry Mountain. Right: The scenic new trail up Quarry Mountain leads to the Dave Roberts Trail, which leads to other peaks in the Belknaps.

it was building up the north side of Quarry Mountain, which adjoins Mt. Major. With its frontage on Reed Road, which leads to the new trail, the Gregoire land was ideal. So when Jim offered to sell the land to the Forest Society for just the cost of their transfer expenses, it was a deal made in hiker heaven.

Once the transaction was complete in October, the Forest Society utilized grant money from the State's Recreational Trails Program to build the trail and a gravel parking area on the land that the Gregoires donated for the now-expanded Quarry Mountain Forest.

"I'm glad to see it and glad to be part of helping people explore this beautiful region on foot," Jim said

It seems fitting for the land to be used for trail access, since the Gregoires are longdistance hikers themselves. Jim has hiked from the East Coast to the West Coast and the entire Appalachian Trail, completing both in segments—about three to four weeks at a time. He's now within reach of hiking from Key West, Fla., to Eastport, Maine.

"I've got only 500 miles left to do—two more trips," he said.

Jim took up hiking soon after retiring in 2011 from running his own investment firm in New Jersey and moving to the Lakes Region.

"That's when I got really into the woods, doing the hiking," he said.

That interest led Jim to get involved in hiking and trails organizations and the work of land conservation. He is currently the treasurer for the Castle Preservation Society, which stewards Moultonborough's Castle in the Clouds—surrounded by some 5,000 acres of conserved land and hiking trails owned by the Lakes Region Conservation Trust—and is a member of the Meredith Conservation Commission. With such a personal interest and commitment to Lakes Regional conservation, the decision to add his property to the Forest Society's Quarry Mountain Forest became just a matter of working out the details, Jim said.

"I knew I wanted the Forest Society to have this property, one way or the other,"

As one who spends weeks in the woods along the trail, he's happy to have found a way to facilitate outdoors experiences for others. Over and above the access to the Belknap Range trails it provides, the 38 acres are home to deer and moose and plentiful other wildlife and they offer a rewarding woods excursion to visitors.

"I'm glad this is going to be open to the public and more people will get to appreciate it," Jim said. Y

FOREST SOCIETY ACQUIRES KEY TRAIL SEGMENT ON MT. MAJOR

The Forest Society has acquired a 22-acre property containing part of one of the main trails to the summit of Mt. Major in Alton. This piece is next to the Mt. Major Reservation's Jensen Tract, acquired in 2013. The Forest Society purchased this piece from Steve Rollins-a descendent of one of our founders, Gov. Frank Rollins—to enlarge the reservation and because it contains about 2,000 feet of the Brook Trail, followed by thousands of hikers each year (see map on opposite page).

Now that the Forest Society owns the land, we can make plans to repair the trail erosion that has occurred in this section of trail and maintain the trail along with local stakeholders. Aside from hosting the popular trail, the property adds excellent wildlife habitat to the Mt. Major Reservation.



A Once and Future Woodlot

Donor supports forest products industry by saving timber land

By Brenda Charpentier



A long career in forest products has given Lorin Rydstrom of Hollis a deep appreciation for a healthy woodlot of good size and, conversely, a concern about the fragmentation of forested land into smaller lots no longer available for timber production.

Being a grandfather has given him more personal reasons to support N.H. land conservation.

This fall he acted on both of those concerns and donated a conservation easement on the 347-acre woodlot he owns in Northfield to the Forest Society, sealing its future as one intact property.

"Hopefully in 100 years it will still be a working woodlot," Rydstrom said.

Rydstrom retired as president of Seaboard International Forest Products in Nashua after 40 years with the company and now consults with its parent company. As a member of the Forest Society's Board of Trustees, he is in a unique position to judge the organization's worthiness to receive his donation.

"The Forest Society is a strong and very well run organization with a clear sustainable mission that will be successful well



A variety of wetlands like this one makes the Rydstrom easement land excellent as wildlife habitat.

into the future. It is the correct organization to hold the conservation easement on our property," he said.

The property is located along an unmaintained road near the Northfield-Canterbury border. Two snowmobile trails cross it that are also used by horseback riders, but other than that its most frequent users are birds, moose, bears and other wildlife. Hazelton Brook tumbles through it, part of a network of marshes and wooded wetlands that complement the upland forest dominated by white pine, oak, maple, beech and hemlock.

The entire property is first-rate wildlife habitat.

"It was important to put a conservation easement on the property for the wildlife, as well," Rydstrom said, "to make sure their habitat would not be fragmented in the future."

Rydstrom bought the property in 1999 and has since managed it as a woodlot, harvesting timber on about 80 of the 347 acres. He and his wife Nanci plan to continue doing improvement cuts, and are looking ahead to passing it down in the family.

"We would like to leave the kids some good quality stumpage,"

Rydstrom said. "I'm hoping that if the grandkids (eventually) get it, that it helps them become interested in forestry and land stewardship."

Ryan Young, the Forest Society's land protection specialist who worked with Rydstrom on the easement, said the property is surrounded by a large block of forest land that has not yet been conserved, even though it ranks high in the Lakes Region Conservation Plan.

"This is truly a beautiful property. We hope that Lorin's leadership will beget more conservation projects in the area," he said. Y



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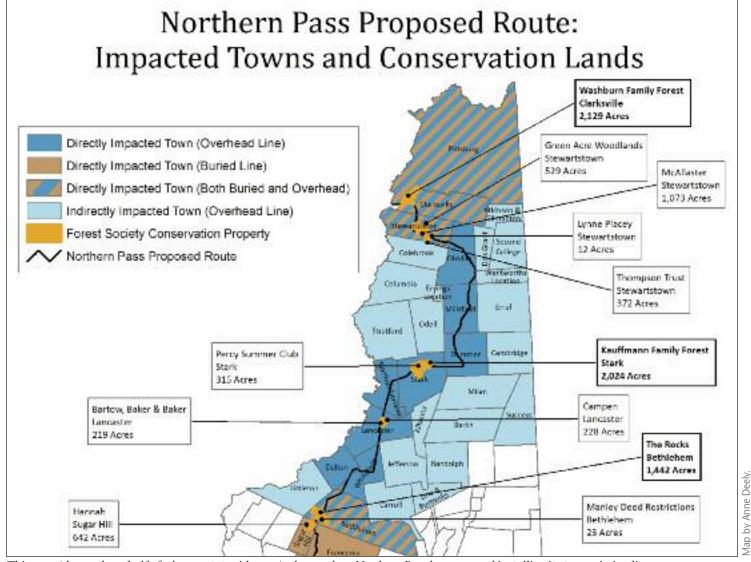
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This map (the northern half of a larger, statewide map), shows where Northern Pass has proposed installing its transmission line on Washburn Family Forest land under and next to NH Route 3.

Northern Pass Property Rights Issue Remains Unresolved

N.H. Supreme Court does New Hampshire no favors

By Jack Savage

decade ago, the people of New Hampshire took a step to protect ourselves when we voted to amend our state constitution to disallow the use of eminent domain for private commercial development. A few years later, the state Legislature amended state law to make it

clear that private transmission lines cannot use the state's power of eminent domain.

At the end of January 2017, the N.H. Supreme Court rejected a lawsuit brought by the Society for the Protection Forests against one such private transmission line, Northern Pass.

The Forest Society originally filed suit against Northern Pass in Coos County Superior Court in November 2015, citing the Northern Pass application to the SEC as an improper attempt to make use of lands the Forest Society owns adjacent to and underneath Route 3 in Clarksville.

Given that the application made Northern Pass's intentions clear, it seemed prudent and reasonable to raise the Forest Society's objections sooner rather than later.

The Forest Society asked the court for a declaratory judgment that Northern Pass's proposed use of that land, known as the Washburn Family Forest, is unauthorized without the landowner's consent. Northern Pass is a private entity seeking to make use of Forest Society lands for the exclusive use of Hydro-Quebec.

It is the Forest Society's contention that the proposed use along Route 3 constitutes an additional compensable burden on our land that exceeds the scope of the highway easement, and—as private commercial development other than agriculture or forestry—is contrary to the conservation purposes of our ownership.

And while the Supreme Court decision clarified the state Dept. of Transportation's (DOT) authority to license the use of a state roadway, it did not address the specific complaint regarding the Washburn Family Forest.

The Forest Society sought the opportunity to argue that a DOT license to Northern Pass across the Washburn Family Forest would violate the N.H. Constitution because it leaves the State open to paying eminent domain damages for Northern Pass's use of the public way.

But we have yet to get our day in court. There was one hearing of about an hour, less than what you'd have in a typical slip-and-fall or contested divorce case. The Superior Court did not allow the parties to engage in significant discovery to develop evidence, and did not allow the case to go to trial. The Supreme Court did not even allow oral argument.

The Supreme Court's order said that the issue is not yet "ripe:"

At the outset, we agree with the trial court that "whether the DOT would effect a taking of [the plaintiff's] property if it granted [the defendant] a license to install the transmission line underneath the stretch of Route 3 at issue is purely speculative" and, thus, is not ripe for adjudication.

And similarly,

Whether any regulatory action results in an unconstitutional taking of private property is a question that turns upon the specific facts of that case. See Burrows v. City of Keene, I2I N.H. 590, 598 (1982). Here, because the DOT has not yet acted upon any license application, whether its potential approval of a license might result in inverse condemnation is too speculative a question to be fit for judicial determination.

From the Forest Society's perspective, the Supreme Court did not settle the prop-

erty rights and eminent domain issues with regard to Northern Pass's proposed use of the Washburn Family Forest. Instead it requires us to wait until the DOT acts. As such, the decision raises the specter of a longer timeline for any final resolution.

At the same time, now that we are more than a year into the SEC process, the Forest Society is more confident than ever that we and other intervenors will demonstrate that the 192-mile Northern Pass proposal, with 132 miles of overhead transmission line, will not meet the required standards. Y

NORTHERN PASS SEC OVERVIEW

The one-year anniversary of the Site Evaluation Committee's (SEC) declaring the Northern Pass application complete passed without much notice in December 2016.

Earlier in the year, the SEC had pushed off a final decision on Northern Pass to September 30, 2017.

To go forward, Northern Pass must get a permit from the SEC. The project must also get a Presidential Permit from the U.S. Department of Energy, among other permits.

Northern Pass—and its many opponents—is also waiting for word from the Public Utilities Commission on a proposed Power Purchase Agreement and a proposed lease of PSNH's existing right-of-way to Northern Pass. (Both seem to be problematic.)

The delays in the SEC schedule continue to mount. In August 2016, the SEC granted requests by three key agencies, the Department of Environmental Services, Department of Transportation, and the Division of Historical Resources, to extend their deadlines for submission of final decisions on the relevant parts of the applications by six months, to March 1, 2017.

Technical sessions, which are part of the discovery process meant to prepare the applicant and intervenors for the adjudicatory (or "trial") portion of the SEC process, have extended well beyond their intended schedule as well. Faced with an out-of-date and insufficient economic study, Northern Pass announced it would resubmit an updated economic study in February 2017.

The trial portion of the process is scheduled to begin in early April 2017 and last several months. Given the delays, it will be challenging to adhere to this schedule without jeopardizing due process.

For its part, Northern Pass has pushed to stay on schedule, presumably to facilitate its desire to compete for long term contracts. A competing project, the New England Clean Power Link (NECPL), sailed through state permitting and received its Presidential Permit last fall. NECLP officials said they plan to begin construction on their underground and underwater transmission line in late 2017.

— Jack Savage

Leave it to Beavers

By Dave Anderson

eavers are nature's master engineers, changing the landscape to suit their needs more so than any other creature... except humans." So goes a quote from a wildlife field guide. "Busy as a human," beavers might be heard to mutter when no humans are within earshot. And why not? From Disney movies to chainsaw commercials, beavers are bestowed with human attributes. The extent to which we believe the comparison is proportionate to our experience with beavers. Opportunities to gain experience are increasing as our state's beaver population continues to grow. But this was not always so.

Beavers were extirpated from much of their former range in North America by the fur trade. Early European explorations of New Hampshire's waterways were conducted by fur trappers in search of beaver pelts. Pelts were a monetary standard of their time, traded for essential frontier commodities like blankets or rifles. Following the fur trappers, settlers cleared once vast New England forests converting hundreds of thousands of acres of potential beaver habitat to farmland.

In 1905, when the N.H. Legislature passed a law protecting beavers, state Fish and Game Dept. officials were certain that none remained. But in 1912, a beaver colony was discovered on Cedar Stream near the remote Diamond Peaks in Stewartstown. In 1920, the Forest Society sponsored a one-man expedition to Minnesota to live-trap two pairs of breeding beavers for release in Kinsman Notch adjacent to the Appalachian Trail and the Forest Society's Lost River Reservation in Kinsman Notch.

Encouraged by the success at Lost River and rapid repopulation of Coos County by the progeny of the Cedar Stream colony, Fish and Game officers relocated four beavers from Errol to Three Ponds in Ellsworth in 1926. Two North Country beavers were exhibited as a curiosity at the 1930 Rochester State Fair and later released in nearby Middleton. In 1940, when the state's beaver population was esti-



Beavers change the environment every time they build a dam or down a tree.

mated to be roughly 7,000, 58 beavers were trapped and released in southern New Hampshire while 369 beavers were legally taken in Coos County during a two-week trapping season; the first in 35 years. In 1955, 2,014 beaver were trapped and the New Hampshire population had reached carrying capacity.

The reintroduction of beavers to New Hampshire is a classic wildlife success story. According to Fish and Game biologists, the population has reached a near-historic high, too high for any meaningful statewide census. In hindsight, it seems ironic the Forest Society launched an expedition to the wilds of Minnesota to live-trap two pair of beavers for release at what is now called "Beaver Pond."

New beaver ponds appear annually in unlikely places. Nuisance wildlife trapping contractors respond to complaints of plugged culverts, submerged roads and real estate, soggy lawns and ornamental shade trees girdled by "pesky" beavers. A summer resident on Lake Sunapee returned in spring to discover a beaver lodge built inside a boathouse!

Commercial nuisance wildlife trappers generally remove beavers in spring and fall when flooding issues become acute. Beavers trapped by nuisance wildlife contractors are not sold for pelts. Prime beaver pelts are harvested only in midwinter by some of the 550 licensed New Hampshire trappers. But beaver trapping isn't what it used to be just a few years ago.

Fur is a global economic commodity. China and Russia are the largest purchasers of wild and farm-raised furs. North America is a fur-rich region and reliable exporter when the economics support private trapping. In recent years, fur prices tumbled following a Russian economic crisis. In 2013, the price paid for an average quality beaver pelt at the North American Fur Auction was \$32.49 when a total of nearly 108,000 were sold. The price fell to \$9.83 in 2016 when a total of 70,755 were offered for sale. Decreased global demand and falling prices reduced the number of trappers willing to invest the time and effort to trap while beaver populations remained stable or continued to expand.





Photos by Ellen Kenny

In ecological terms, the century-long beaver population rebound has been positive. Beavers are a "keystone species," changing landscapes to suit their own needs while also benefiting a host of other wetland-dependent species. Wildlife species rebounded along with beaver in post-agricultural New Hampshire: wild trout, frogs, salamanders, turtles,

muskrats, minks, otters and moose. Dead and dying trees killed by flooding benefit birds such as wood ducks, hooded mergansers, eastern kingbirds, tree swallows, woodpeckers, great blue herons and ospreys.

Historically, the best situated beaver meadows cycled wet and dry for decades, in some cases, for centuries in response to regenerating

Top: Shady spots can turn sunny after a couple of nights of beaver chewing.

Bottom: A Canada goose takes advantage of a beaver lodge for nesting and the entire beaver pond for finding food. A beaver pond is a magnet for other wildlife.

food supplies. When beavers rebuild old dams, re-flooding wetland meadows which again support growth of their preferred hardwood trees, it is rural redevelopment. Even in the dead of winter, wildlife activity is concentrated in the neighborhood of beaver ponds.

While beavers do not pay property taxes at least not yet—they do provide an interesting model of land stewardship. Beavers modify their surroundings for their own purposes but do not destroy the environment. As human land managers—foresters, farmers, landowners, hikers, snowmobilers and wildlife watchers—we do much the same. Rarely, people decide the best way to steward a tract of land is to not change it at all. Preventing rampant real estate development, subdivision, asphalt and curbing by placing permanent conservation restrictions will allow future land managers, from foresters to beavers, to practice their respective stewardship activities.

Statewide, land stewardship has included enlightened restoration of a keystone wildlife species, the beaver and all the other wildlife species whose fortunes rise and fall with their populations. Perhaps one definition of "good land stewardship" is to perpetuate the widest range of wildlife habitat opportunities by sustaining forests against a rising tide of human population growth across a changing New Hampshire landscape. Y

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Building Respect for the Land

Kids see how well-grown trees in their community become meaningful gifts

By Meghan McCarthy McPhaul

cheerful chorus of "Jingle Bells" rings through the chilly morning air students from Bethlehem Elementary School move fir trees, bucket brigade style, into a FedEx truck parked by the large barn at The Rocks Estate, the Forest Society's Christmas tree farm and North Country education center in Bethlehem, N.H. It is early on an almost-winter day, before the sun has quite risen above the roof of the barn, and the children's breath rises in frosty puffs as they work, the pom-poms on their Santa hats bobbing with their efforts.

This loading of the Christmas trees is an annual tradition for BES students, and today is the day when weeks of hard work culminate with this outing to the farm. The trees-450 of them—were grown at farms like The Rocks throughout New Hampshire and Vermont. They are bound for U.S. military families stationed both stateside and abroad as part of the Trees for Troops project. Since its inception in 2005, Trees for Troops, a program of the National Christmas Tree Association's Christmas SPIRIT Foundation, has donated and distributed more than 176,000 farm-grown Christmas trees.

"Trees for Troops is rewarding to everyone involved, because we're given the opportunity to help military families enjoy the tradition of a Christmas tree at the holidays," said Nigel Manley, The Rocks Estate's director and a board member of the Christmas SPIRIT Foundation. "It's a way we can say thank you to them for their service."

Bethlehem students have been involved since 2006. They started by simply loading the truck, but now they do that and much more. Fifth graders raise between \$1,000 and \$2,500 annually to support Trees for Troops. They ask for donations from local businesses and host a read-a-thon at the school. Students call businesses, track donations, draft and send thank you letters, and write out tags for each of the 450 trees. The tags bear 40 | FOREST NOTES Winter 2016-2017



Local students who visit The Rocks to help ship balsams to military families around the country can see first-hand how good stewardship of the land yields an important crop.

the names of donors, along with a short holiday message and sometimes a drawing.

In the process, the students gain not only math and writing skills, but also life lessons—a sense of helping others and an appreciation for how a well-grown, beautiful tree from a farm in their community can be a meaningful gift to someone far from home.

"The program really matters to the students," said Susan Greenlaw a BES teacher who has helped develop the partnership over the years. "It becomes something bigger than they are. They realize it makes a difference to people they don't even know."

By the time BES students reach fifth grade, they have already developed a relationship with The Rocks Estate. Students visit the farm for the first time in kindergarten to plant trees as part of the Forevergreen program, then return each year to care for their Christmas trees until harvesting them in sixth grade.

"Trees for Troops is a way we can build on that connection these kids are developing with a farm in their community. This gives

us another way to show kids the importance of agricultural land and the importance of caring for it well," Manley said.

For some students, there is a personal connection, too. Simon Pitre, now a sixth grader at BES, thought often about his brother, a Marine stationed across the country in California, as he volunteered last year. Simon knew his brother missed home, especially during the holidays. And while the trees being loaded at The Rocks were not bound for California, he hoped the fir trees from New England would bring some sense of home and comfort to the military families who would receive them.

"It felt really important to me," Pitre said. "It felt like I was helping someone like my brother who's helping our country." \mathbb{Y}

Meghan McCarthy McPhaul lives in Franconia and writes for a variety of publications. She often visits The Rocks and enjoys watching the BES fifth graders load the Trees for Troops trees each year.

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Photo by Al Karevy.

Northwoodlands, Inc. Don and Andy Clifford, Owners Newport, N.H.

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Don and Andy are among the 10,000 members who helped the Forest Society protect more than one million acres in New Hampshire. To join them, use the envelope in this issue or contact Margaret Liszka at 603-224-9945.

s licensed foresters for many years, my son Andy and I have enjoyed educating and assisting landowners to identify their goals and establish conservation easements and accompanying stewardship plans to ensure that their goals will be carried out.

It is very satisfying to see the pride and sense of security that a landowner has once a conservation easement and stewardship plan is in place. Just the fact that a landowner can be assured that the forestry work performed in the past, present and future will provide continued positive results for decades to come is very rewarding for them and good for our environment.

In addition to working with clients in developing their forestry plans, Andy and I have worked with the Forest Society on several conservation easement projects. The Forest Society's acquisition of easements on those lands made it possible for our company to acquire the lands at a reasonable price and continue forest management. Quite frankly we could not have done this without the Forest Society's help.

So personally and professionally we believe that the combined existence of a conservation easement and a stewardship plan go a long way toward protecting the landowner, the land and the environment." Y