

# Forest Notes

NEW HAMPSHIRE'S CONSERVATION MAGAZINE

## A New Hampshire Town Forest Tally

## Protecting a River at Risk

WINTER 2018-19

SOCIETY FOR THE  
PROTECTION OF  
NEW HAMPSHIRE  
FORESTS



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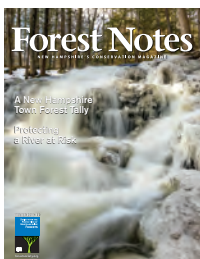




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*An ambitious project to inventory every town-owned property in the state wrapped up this year, and the results are staggering.*



*On our cover:*

In winter, Milford's Tucker Brook Town Forest is a go-to destination for photographers seeking enchanting waterfalls. Photo by Ryan Smith.

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## THE FORESTER'S PRISM

*"I long for wildness....woods where the wood thrush forever sings,  
where the hours are early morning ones, and there is dew  
on the grass, and the day is forever unproven....  
A New Hampshire everlasting and unfallen."*

— Henry David Thoreau —

# An Everlasting Vision

During the Forest Society's 100th anniversary in 2001, we published our vision for land protection and forest stewardship for the state and called it New Hampshire Everlasting after a passage penned by Henry David Thoreau. We didn't anticipate that we would accomplish our vision alone. We would work with and inspire other organizations, communities, and state agencies to achieve protection of the lands that keep New Hampshire, New Hampshire.

Notably, we proposed that every community permanently protects 25 percent of its open space for town forests, parks, trails, and drinking water. Our vision follows a long tradition in the state of community stewardship of forests and watersheds. In the 1930 biennial report of the then Forestry Commission, an entire chapter was devoted to town forest acquisitions in Nashua, Dunbarton, Brookline, and

Claremont. At the time of the report, there were 16,049 acres of town forests and watershed lands in the state. Additionally, a conference of town officials met in Warner to inspect forestry activities there. Others were encouraged to follow with similar meetings. The idea then, as now, was not just to provide open space and watershed protection, but also to engage citizens in forest management and in the economic, environmental, and recreational benefits such forests can have. In 1975, the legislature codified town forests, their acquisition, and oversight (RSA 31:110-113).

There was foresight in this legislation; townspeople were to oversee the forests and work with foresters and other natural resource professionals to create management



### Society for the Protection of New Hampshire Forests

A nonprofit 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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plans and plan for sustainable harvests and revenue. It was meant to be a community endeavor. In a state that is nearly 85 percent forested, this gives citizens a role not only in their community, but also in one of the state's most valuable resources.

The recent inventory of New Hampshire's town-owned lands (see "Taking Stock of Town Forests," page 6) demonstrates the success of this notion. While each municipality's ownership may seem insignificant, the cumulative impact is impressive. Along

with the White Mountain National Forest, state parks and forests, and the lands owned or stewarded by land trusts, managing town land is a considerable venture in the Granite State.

As successful as this has been, there is always more that can be done. While many town forests are permanently protected by conservation easements, some are not. And the Forest Society recognizes its own obligations, working side by side with communities, to entice more folks to visit New Hampshire's forests to enjoy

them and along the way, perhaps become interested in stewarding these lands.

As a new year begins, our vision can only remain an everlasting one if we work together to steward what we cherish the most for us and generations to come.

*Jane Difley*

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

## WEB EXCLUSIVES



### Slideshow: Look Back at 2018 [forestsociety.com/2018slideshow](https://forestsociety.com/2018slideshow)

Forest Society staff and volunteers accomplished a lot of work in 2018. Check out this slideshow for all the highlights.



### How Trees Survive Winters [forestsociety.com/howtreessurvive](https://forestsociety.com/howtreessurvive)

Some trees are better adapted than others to endure freezing rain and heavy snow. Find out how.



### Flavors of the Forest [forestsociety.com/foragetotable](https://forestsociety.com/foragetotable)

Evan Hennessey, owner of Stages at One Washington Street in Dover, brings the outside in with a dose of forage-to-table.



*A group of winter hikers pose for a well-earned summit photo atop Mount Major.*

Tag #forestsociety on Instagram for a chance to be featured in a future issue of *Forest Notes*.

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# Winter–Spring 2019 Events

## BRETZFELDER PARK FAMILY EDUCATIONAL SERIES

For more information, visit [therocks.org/calendar](http://therocks.org/calendar). Cost: Free.

FEBRUARY 20 | 7–8 P.M.

### To Bee or Not to Bee

*The Rocks, Bethlehem*

Join certified master beekeeper Janice Mercieri for an informative program on the plight of honeybees and how it affects our food chain. Learn about what you can do to help make sure our bees and food supply remain vibrant and healthy.

FEBRUARY 27 | 7–8 P.M.

### Moose, Marten, and More: How a Changing Climate Might Affect Northern Wildlife in Vermont

*Bretzfelder Park, Bethlehem*

Join Doug Morin, a biologist for Vermont Fish and Wildlife, for an informative program on some of the region's northern wildlife, including moose, American marten, and boreal birds. Morin will discuss the future of these iconic animals in the face of a changing climate, land use patterns, and other human impacts.

MARCH 6 | 7–8 P.M.

### Cruising New Hampshire History

*Bretzfelder Park, Bethlehem*

Join a local expert for a night of New Hampshire history. The state's history is uniquely on display along its highways. New Hampshire roadside historical markers commemorate significant events and individuals from the first settlers arriving in 1623 to the notable figures who helped define what New Hampshire is today.

## THE COTTRELL-BALDWIN ENVIRONMENTAL LECTURE SERIES

All presentations take place in the Henry I. Baldwin Environmental Center at the Caroline A. Fox Research and Demonstration Forest in Hillsborough. For more information, email Dave Anderson at [danderson@forestsociety.org](mailto:danderson@forestsociety.org) or visit [forestsociety.org/events](http://forestsociety.org/events). Cost: Free.

MARCH 19 | 7–8:30 P.M.

### Dragons and Damsels of New Hampshire

Welcome to the fascinating world of the insect order Odonata! You may be familiar with dragonflies and damselflies, but what do you really know about these ancient insects? Dr. Pamela Hunt, avian conservation biologist for the New Hampshire Audubon, will provide an overview of the order's biology and ecology, from their amazing lifecycle to their incredible diversity. She'll also highlight a few of New Hampshire's notable species and talk about the "New Hampshire Dragonfly Survey," a five-year volunteer project that documented the distribution of these insects across the state.



MARCH 26 | 7–8:30 P.M.

### The Original Forests of New Hampshire

Charles Cogsbill, forest ecologist and co-author of *The Changing Nature of the Maine Woods*, will provide a fascinating introduction to the forests of New Hampshire from the emergence of the forests 12,000 years ago at the end of the Ice Age to the time of European arrival. Learn about the latest scientific research that helps explain how the forests have changed over time to what we have today. Cogsbill will also discuss the role of key ecological forces, climate change, insects, disease, windstorms, and other agents of forest change.

APRIL 2 | 7–8:30 P.M.

### New Hampshire's Loons

The Loon Preservation Committee was formed in 1975 with a mission to restore and maintain a healthy population of loons throughout New Hampshire; to monitor the health and productivity of loon populations as sentinels of environmental quality; and to promote a greater understanding of loons and the larger natural world. Join Harry Vogel, senior biologist and executive director of the Loon Preservation Committee, to learn more about loon natural history, challenges facing loons, and the organization's mission.

APRIL 9 | 7–8:30 P.M.

### More than Granite: An Introduction to New Hampshire's Geology

New Hampshire's "granite state" identity dates back to the early nineteenth century, even before the first geological survey was authorized by the state legislature in 1839. Although the nickname is well-deserved given the widespread occurrence of granite and the early importance of granite quarries as local, then commercial, sources of building stone, it fails to convey the true complexity of the geology that is found here. Join Frederick "Rick" Chormann, New Hampshire state geologist, to learn more about the state's glaciated landscape—and what lies beneath it.



## More Forest Society Events

FEBRUARY 23 | 10–11:30 A.M.

### Making Tracks with Wildlife

Creek Farm, Portsmouth

What happened here? Whose footprints are those? Join us to answer these questions and more. We'll hike around the Forest Society's Creek Farm, identifying tracks of local wildlife as we go. By recognizing the wing prints of an owl catching its prey or the midden left over by a red squirrel's snack, we can learn so much about wildlife's winter habits. We'll also practice making our own tracks and seeing how these impressions look in the snow.

*This program is co-sponsored by the Center for Wildlife and is open to all ages and features a moderate hike. For details, visit [forestsociety.org/events](https://forestsociety.org/events). Cost: Free.*

MARCH 12 | 10 A.M.–2 P.M.

### Apple Pruning and Releasing Workshop

The Fells/Hay Reservation, Newbury

Releasing and pruning wild apple trees can keep them healthy and result in greater fruit production for use by a wide variety of wildlife. This basic introduction to releasing and pruning wild apple trees, with both an indoor classroom session and outdoor field practice, will be led by Nigel Manley, director of The Rocks. The indoor portion will be held at the The Fells and then we'll head outdoors to do some field pruning practice (one-mile hike).

*Bring a bag lunch and water. Warm layers, winter footwear, and traction (snowshoes might be necessary) are highly recommended. Pre-registration is requested. No experience required. To register, email Andy Crowley at [acrowley@forestsociety.org](mailto:acrowley@forestsociety.org). Cost: Free.*

MARCH 17 | 10 A.M.–2 P.M.

### Apple Pruning and Releasing Workshop

The Rocks, Bethlehem

This program is for anyone who has apple trees growing in their fields or yard, and

## Volunteer Opportunity

### Citizen Science Project: Sugar Maple Regeneration

The Forest Society is collaborating with researchers at Hubbard Brook Research Foundation to study sugar maple regeneration on four Forest Society reservations starting this spring. Sugar maples seedlings have a number of challenges to their survival, including soil acidification, insect and mammal predation, competition with other tree species, and climate change. You can help us determine whether sugar maple seedling failure is happening in similar habitats across the state. The Forest Society is looking for individuals who can train and work with researchers to collect tree data at Yatsevitch Forest in Cornish/Plainfield, Kauffmann Forest in Stark, Sudrabin Forest in Orange, and Monadnock Reservation in Dublin.

*To learn more, contact Carrie Deegan at [cdeegan@forestsociety.org](mailto:cdeegan@forestsociety.org) or visit [forestsociety.org/maplestudy](https://forestsociety.org/maplestudy).*



**Left:** Participants learn how to maintain apple trees at The Rocks in Bethlehem.



**Right:** A family explores The Rocks' maple sugaring trees.

wants to focus on releasing and pruning the trees to improve wildlife habitat. Nigel Manley, director of The Rocks, will lead the workshop. Manley has been pruning apple trees on the property for the past 25 years. He will begin the workshop inside with a discussion of the process of pruning and what tools should be used.

*Participants should bring a bag lunch to eat before heading out to one of the orchards at The Rocks, where they will practice pruning trees under Manley's guidance. For more information, visit [therocks.org/calendar](https://therocks.org/calendar). Cost: Free.*

MARCH 16, 23, 24, 30, 31; APRIL 6

### The New Hampshire Maple Experience

The Rocks, Bethlehem

With hands-on lessons in maple sugaring, horse-drawn wagon rides, and a visit to The Rocks' working sugarhouse and its resident sugarmaker, the Maple Experience is a sweet welcome to spring. Tours begin at 10 a.m., 10:45 a.m., 11:30 a.m., 12:30 p.m., 1:15 p.m., and 2 p.m.

*Reservations are highly recommended and can be made by calling 603-444-6228.*

## For a complete list of winter and spring events and volunteer opportunities, check out [forestsociety.org/events](https://forestsociety.org/events).





# Taking Stock of Town Forests

From Pittsburg to Nashua, New Hampshire Towns Own A Lot of Land.  
But How Much and Why Does It Matter?

By Kelly Short

A trio of organizations collaborated on a treasure hunt across the Granite State over the last two years, searching to discover how much forestland New Hampshire's towns and cities own, and to understand how these lands contribute to the state's economy and environment.

The University of New Hampshire Cooperative Extension (UNH Extension), the Northern Forest Center, and the New Hampshire Association of Conservation Commissions (NHACC) conducted the Town & Community Forests Project with the goal of helping communities recognize the value of their land and encouraging them to protect more open space for environmental, economical, and cultural benefits.

The project unearthed an extensive set of data that had never been collected before: Communities own nearly 180,500 acres, about 4 percent of New Hampshire forestland, and permanently protected 119,640 acres of this land. The inventory also found that 127,867 acres are managed with foresters or other natural resource professionals and 97,888 acres are covered by stewardship plans.

"The amount of town-owned land is exciting," says Julie Renaud Evans, program director for the Northern Forest Center, "but it was a huge surprise that sixty-six percent of it is permanently protected. I think it shows the value that communities place on conservation, and that we have good resources and tools in the state to help them do it. This is really something to celebrate."





*The concept of protecting land from development and overuse to preserve its valuable natural resources dates back to 1710 when Newington (right) became the first town in America to set aside land for this purpose. Over the years, many towns have followed suit, including Randolph and its 10,000-acre community forest (left), created in 2001.*

#### **Online:**

See the complete set of town ownership data at <https://nfcenter.org/inventory>.

All this community-owned land—totaling about 10,000 acres more than all state-owned forests and parks combined—generates financial treasure as well. John Gunn, research assistant professor of forest management at the New Hampshire Agricultural Experiment Station and UNH Extension, compiled the survey data and calculated the economic benefit of the land. Using per-acre values from the North East State Foresters Association for the forest products industry and recreational uses, Gunn estimates the total economic benefits of community-owned land at \$146 million a year, comprising \$54 million from recreational uses and more than \$92 million from forest-related industries such as logging, milling, wood products manufacturing, the maple industry, and Christmas trees.

The inventory also researched actual harvest and revenue data from community-owned land in Coos, Grafton, and Carroll counties. “I’m glad to see the towns using professional foresters and generating revenues,” says Renaud Evans. Both she and Karen

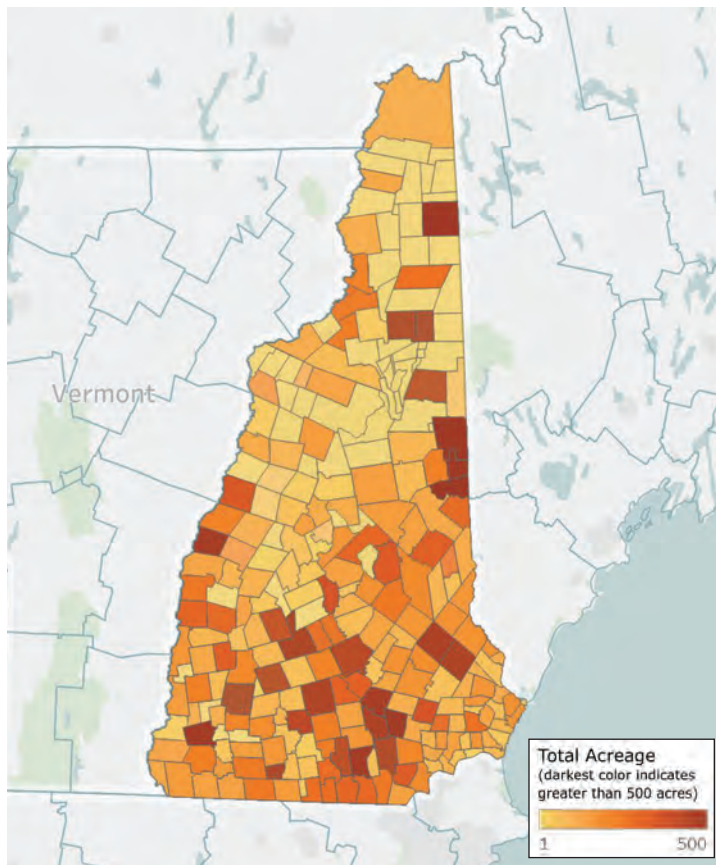
Bennett, forestry state specialist for UNH Extension and one of the project leaders, say there is an opportunity for towns statewide to do more once they see the many options for managing their forestland.

To collect the survey data, UNH Extension county foresters met with local officials—primarily conservation commissions but also planning boards, select boards, school districts, and others—from 220 of New Hampshire’s 256 towns, cities, and unincorporated places. The survey counted all municipally owned property greater than 10 acres that has no buildings and no plans for development. “Before, all this information was held locally, but now we know where the land is, and in some cases how it relates to other important land in the state,” says Bennett.

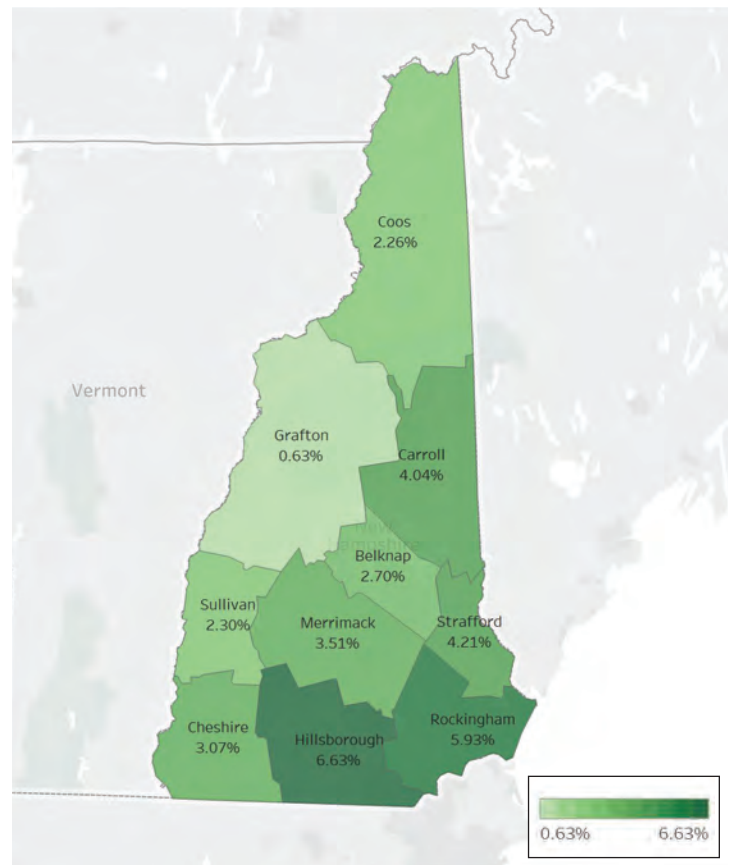
The U.S. Forest Service funded the project with a \$148,000 grant, which UNH Extension, Northern Forest Center, and NHACC matched better than 1:1 with their time and resources.



## Acres of Town-Owned Forests



## Percent of County in Town Ownership



Towns own a varying amount of land in New Hampshire, with Randolph, Freedom, and Errol owning the most.

## Behind the Numbers

Results of the town-by-town survey vary widely. Twenty-three communities reported owning 100 acres or fewer each, including Chatham, Westmoreland, Jefferson, Campton, Windsor, and Andover. Randolph tops the list with 10,688 acres; Freedom is close behind with 10,644 acres; and Errol is third with 7,596 acres. Fifty-six communities either reported no ownership or did not respond to the survey.

At the county level, the highest percentage of community-owned land is in Rockingham, Hillsborough, and Carroll counties, with the lowest in Grafton and Coos. The percentage rankings were based on total acres in each county, including all public lands (see sidebar at right).

The nature of the lands, whether they're permanently protected and how they're managed, have as many variations as a kaleidoscope. Many communities have designated official town forests, putting the property management into the hands

COUNTY	TOWN-OWNED ACREAGE	NUMBER OF PARCELS	RECREATION AND FOREST SECTOR ECONOMIC CONTRIBUTIONS (\$/YEAR)
Belknap	6,905	81	\$5,663,067
Carroll	24,086	135	\$19,753,892
Cheshire	13,877	129	\$11,381,083
Coos	25,945	28	\$21,278,532
Grafton	6,877	85	\$5,640,103
Hillsborough	37,170	397	\$30,484,604
Merrimack	21,355	310	\$17,514,090
Rockingham	26,358	350	\$21,617,250
Strafford	9,945	126	\$8,156,292
Sullivan	7,921	85	\$6,496,329
<b>Grand Total</b>	<b>180,439</b>	<b>1,691</b>	<b>\$147,985,241</b>





*An angler casts a line into placid Trout Pond in the Freedom Town Forest. In 2001, Freedom residents joined together with several organizations to protect more than 2,500 acres of land for mixed-use purposes, including recreation and sustainable logging.*

of a town forest committee or a conservation commission, though the designation does not guarantee permanent conservation. Others have worked with a land trust like the Forest Society or a state agency to add a conservation easement on the property, which permanently protects the land, even if the town someday sells the property. A third option is to create a community forest (see “Land Protection 101,” below).

“One of our goals,” says Renaud Evans, “is to help towns understand the ways they can get the most out of the land they own through sustainable management. They can realize substantial benefits from both active forest management and permanent protection for natural resources and habitat.”

Like any good treasure hunt, this one also had some surprises: Cornish found 36 acres the town hadn’t realized it owned. Stratham discovered about 20 acres in two lots and Hillsborough found management plans covering eight properties and 500 acres.

“This is an amazing data set, and there’s so much we’ll be able to do with it—analysis, research, planning,” says UNH Extension Field Specialist Andy Fast, county forester for Belknap and Strafford counties who also assisted other counties with their research. “The process gave us the chance to do a lot of basic education, which was really important and rewarding,” he says. “For instance, some towns had goals of improving wildlife habitat, but they may not have realized that harvesting timber can be a tool for achieving those goals.”

Fast cites Alton in Belknap County and Portsmouth in Rockingham County as examples. He says both communities are thinking about possible changes to how they manage some parcels because of what they learned through the survey. “We can

## LAND PROTECTION 101

Communities have many options related to owning, managing, and protecting land. Communities can own land for conservation or other purposes without any special designation and without a management plan. Public ownership of this type does not guarantee permanent protection of the land from development.

New Hampshire statute 31:110 allows communities to vote to establish a town forest. This is a legal designation that stipulates the forest must be managed by either a town forest committee or a conservation commission rather than a select board. However, voting to establish a town forest does not guarantee permanent protection of the land from development.

**Conservation easements** are legal transactions with another institution, such as a land trust or a state agency, that provide permanent protection from development on most or all the property when there are high conservation values to protect in the public interest. Communities can donate or sell (if they have a buyer) the development

rights on a property to establish a conservation easement that will last forever, regardless of who owns the property. (Individuals can establish conservation easements on private property as well.)

**Community forests** are a relatively new conservation model that supports a wide variety of community priorities and ensures that the benefits from the land return to the community. Key elements of the model are town ownership of the land, permanent protection of the property through a conservation easement, and citizen participation in property management decisions. Cambridge, Durham, Easton, Errol, Freedom, Hampton Falls, Meredith, Milan, Strafford, and Randolph have established community forests, as have many communities in other states. (Franconia, Landaff, and Sugar Hill helped establish the Cooley-Jericho Community Forest in Easton.) The Northern Forest Center worked with the Trust for Public Land and the Quebec-Labrador Foundation to develop the model. View project profiles at [nfccenter.org/commforests](http://nfccenter.org/commforests).





*Left: Meredith's Page Pond and Forest was protected in 2009 for its cultural, economic, and recreational uses.*

*Middle: Greater Goose Pond Forest in Keene, a town-owned property on which the Forest Society holds an easement, is a popular spot for walking, fishing, boating, and other outdoor activities.*

help towns find ways to manage multiple objectives on a property, such as reducing the visual impact of harvesting, and even help them change public perception about harvesting. In some cases, a harvest can create new wildlife habitat or create conditions that support rare or unique plant communities,” notes Fast.

For the town of Farmington, the survey sparked a focus on forest health that led to an educational session for the conservation commission, select board, and public. It also launched some broader discussions about property management.

Bennett and Fast say the survey itself was an excellent tool for reconnecting conservation commissions with their UNH Extension county forester. “Now that the foresters have sat with people in each community to do the inventory, they have a better understanding of who is charged with stewarding these public lands,” says Bennett.

Another gem turned up by the survey is insight into what conservation commissions need help doing. “Beyond the data, we

heard resoundingly from conservation commissions that they want to learn how to better engage community members in town forest management,” says Bennett. Commissions also requested help with forestry and wildlife management, recreational trails, education, land protection, and financial issues.

Barbara Richter, executive director of NHACC, says the partnership between UNH Extension and NHACC will continue with advanced workshops in the spring and new written and web-based information available in 2019–2020.

“We hope to work with communities that are receptive to public involvement and move them further along the ‘best practices’ spectrum,” says Richter. “Ideally, a ‘model community’ has an established group that takes responsibility for land management, forestry, record keeping, and public engagement, and works closely with foresters and natural resource professionals. These best practices can help expand and protect town forests by advancing them toward the community forest model.”

## PROJECT PARTNERS

The **New Hampshire Association of Conservation Commissions** is a nonprofit conservation organization that provides education and assistance to New Hampshire’s local conservation commissions. (nhacc.org)

The **Northern Forest Center** is a regional innovation and investment partner creating rural vibrancy by connecting people, economy, and the forested landscape. (northernforest.org)

**UNH Cooperative Extension** strengthens people and communities in New Hampshire by providing trusted knowledge, practical education, and cooperative solutions. (extension.unh.edu)

## Mapping the Treasure

John Gunn of UNH says he is intrigued by the fact that the more populous counties have a higher percentage of town forestland. “Somebody realized it was important to conserve that land,” he notes. “It’s good to see from an ecological perspective.”

The project is sharing mapped locations of town-owned land with GRANIT, the state’s data-rich GIS mapping system housed at

### Learn more

Explore GRANIT’s extensive online mapping tools and data at <https://bit.ly/2Ft47T6>.





**Right:** Permanently protected with a Forest Society conservation easement in 2017, the Milan Community Forest is one of the newest town-owned properties in the state.

UNH, to make sure all 1,691 community-owned parcels are added to the database. The new data will allow towns, individuals, and organizations to see the lands they own in the context of adjacent community parcels.

Will Abbott, Forest Society vice president of policy and reservation stewardship, sees several ways the new data will be useful. “If there’s a town forest with hiking trails adjacent to a property we own, we might decide not to develop trails on our own property, or conversely, to create trails that link to the town’s trails,” he says.

“It’s certainly a tool we’ll use in doing our own forest management plans,” he notes. “We always look to see what other conserved lands are nearby and how that relates to or affects our own plans. It will help us see our properties in the larger landscape.”

Gunn adds that when the parcels are mapped in GRANIT, he expects land managers will find enhanced value from seeing a more complete picture of how these lands relate to conserved state lands and important natural assets like drinking water.

## What’s Ahead

The project’s research team presented its findings to conservation advocates from across the state at the NHACC annual meeting in early November, and Gunn plans to post a data dashboard of the results online. Map changes have already begun to appear on GRANIT and are expected to be completed in the spring.

Bennett says even though the project wrapped up in August, the outcomes will be continual as towns and organizations work with the data. “We have a good story to tell in terms of the economic, ecological, and social benefits that communities are realizing from their property,” she says. “Beyond dollars, there’s the value of clean air and water, and other ecological services.”

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*“We have a good story to tell in terms of the economic, ecological, and social benefits that communities are realizing from their property.”*

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The real gold in this treasure hunt may be that the conservation commissioners are asking for help engaging citizens and explaining the value of town forestland and management so they can build support for future acquisitions.

“Ultimately,” says Renaud Evans, “we want to support increased community ownership of protected land. It can be an important part of a community’s economic base, and it can make a town a more appealing place to live, with easy access to natural places and amenities like trails.”

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*Kelly Short is communications director for the Northern Forest Center, a member and past chair of the Canterbury Conservation Commission, and co-recipient of the Forest Society’s Conservationist of the Year award in 2005.*

## Learn More:

- For general information about town and community forests (e.g., benefits and establishment), email Barbara Richter at NHACC (Barbara@nhacc.org) or Julie Renaud Evans at the Northern Forest Center (jevans@northernforest.org), or call your county forester at 800-444-8978.
- For further information about the project, contact Karen Bennett at UNH Extension (karen.bennett@unh.edu).



# Go Fish: Improving Brook Trout Habitat, One Log at a Time

By Carrie Deegan

Something fishy happened last fall at the Forest Society's Black Mountain Forest in Sutton. Dressed in waders and carrying tape measures and tablets, Kearsarge Regional High School (KRHS) students stood in a small stream measuring logs that had fallen across the water. It might not be obvious at first, but KRHS science teacher Emily Anderson and her students are assessing native brook trout habitat on one of the reservation's unnamed streams. One student sashes in the water and calls out a measurement to a classmate who records the data, takes a couple photos of the log, and verifies its location with a small red flag. Content with their findings, the team moves on to the next log.

Before the fieldwork began, Anderson taught her class about brook trout and the habitats the fish need to thrive. They learned that brook trout seek out the cool, clean water of forested streams, and that they require different habitat types within these streams at different ages, sizes, and times of year. The key to creating these habitats is trees—lots of them. Trees help to shade the streams in the summer, keeping the water cool and making trout happy. When the older trees die, their fallen trunks and branches get lodged in stream banks, creating in-stream structures that trap sediment and organic material, produce upstream pools and cascades, and scour plunge pools below. "People don't think about a fish living in the forest," mused one of Anderson's students, "but this fish really does. It needs trees."

Earlier in the semester, Anderson's students spent a day assisting New Hampshire Fish & Game biologist John Magee electrofishing in the stream study area. Electrofishing involves strapping on a large battery backpack that powers a 6-foot pole



*Students from Kearsarge Regional High School study and record stream data on the Black Mountain Forest in Sutton.*

with an electrified ring at the end. When submerged in water, the ring can deliver enough voltage to stun fish momentarily, so that they float to the surface where they are netted, weighed, and measured before being released unharmed. By the end of the day, the students analyzed nearly 30 fish in just 100 meters of stream, all of them native eastern brook trout. Most of the fish were less than a few inches in length, but one fish elicited shouts and

cheers from the students. "It's a monster!" exclaimed one student. At 9 inches long, even Magee was impressed. "That fish is likely 4 or 5 years old," he notes. "Its presence in this location is a good indicator that the stream's ecosystem is healthy."

The class collaborated with Forest Society and New Hampshire Fish & Game staff to develop an assessment methodology that quantifies physical characteristics of the stream, including its width, length,

## DID YOU KNOW?

Since 2015, the Mount Kearsarge Outdoor Classroom, an experiential learning program developed by Kearsarge Regional High School and the Forest Society, has provided hands-on projects for students on the 1,294-acre Black Mountain Forest, which abuts the school's campus.





**Left:** John Magee (right), a New Hampshire Fish & Game biologist, uses electrofishing equipment to collect native brook trout.

**Right:** Students weigh and measure a brook trout before returning it to the water.

and depth of pools, riffles, and cascades; the streambed's substrate types; and the location, orientation, and size of downed wood in the stream. After collecting the data, Anderson's students analyzed it using Geographic Information System (GIS) software, and then synthesized the results into a digital presentation to understand the stream's habitat potential for native brook trout. "This was an amazing opportunity for these students," says Anderson. "Many of them are interested in natural resource careers, and for this project they got to work with professionals, learn real field techniques, and collect real data for a nonprofit organization."

The Forest Society is especially interested in the results of the study because staff are planning to improve more trout habitat in Black Mountain Forest this year. Enhancing trout habitat involves creating additional in-stream structures by felling

whole trees into and across the water. A heavy-duty come-along called a griphoist is used to drag felled trees into strategic aggregations, effectively creating man-made log jams that will generate new pool and cascade habitats for trout.

Managed forests like Black Mountain often lack older trees that, over time, topple over in a stream corridor, so artificially creating these in-stream structures is one solution to improving trout habitat. This fall, Forest Society staff spent a few days with Trout Unlimited project leaders learning how and where to create these "installations" along a stream. "It's a bit counter-intuitive," says Steve Junkin, a Forest Society field forester. "As foresters, we're always taught that the best management practice is to leave an uncut buffer along streams, so it seems strange to just drop trees into the water. But it's really more technical than that."

It takes some practice to recognize locations where the stream could benefit from additional structures, as well as where there are enough trees to create an installation without removing too many that the brook will be unshaded. Foresters also need to identify which trees will come down, and in what order and orientation. It's physically and technically demanding work, but there's an element of artistry to it as well. "We really have to let the forest dictate where the installations will go," says Colin Lawson, New England culvert project coordinator for Trout Unlimited. "If there aren't enough trees close to the stream, or they aren't well positioned, we can't create structures easily no matter how badly the stream could use it."

At a recommended 200 installations per linear mile of stream, Forest Society staff will be busy this year on the Black Mountain Forest. When the work is complete, a new group of Anderson's students will quantify the extent to which the trout habitat has changed, and eventually, they may be able to identify a difference in the abundance, lengths, and weights of brook trout in the stream. With any luck, the future of the Black Mountain Forest will be even more fishy than it is today. ♪

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*Carrie Deegan is volunteer and community engagement manager for the Forest Society.*





*Dick hikes on a clear, brisk day in December 2018 at the Forest Society's Moody Mountain Forest in Wolfeboro.*

## Man on a Mission:

### A Hiker's Quest to Visit Every Forest Society Reservation

By Emily Lord

**D**ick Widhu of Nashua has an ambitious plan. He wants to be the first person to visit all 185 Forest Society reservations, but his challenge is not as easy as it sounds. Some properties, like Mount Major in Alton, are a piece of cake to find, have well-marked trails, and feature stunning scenery, while other properties are harder to locate unless you know what you're looking for. It's safe to say that his endeavor is not for the faint of heart.

Dick, 76, hasn't always been a hiker. A lifelong kayaker, bicyclist, and cross-country skier, Dick started hiking in 2008 when he retired from the post office as a rural letter carrier. He joined a hiking group led by his neighbor that hiked every Wednesday year round, mostly in the White Mountains. By 2017, Dick summited all sixty-five 4,000-foot mountains in Vermont, New Hampshire, and Maine. He went on to hike the 100 highest peaks in New England and also in New Hampshire.

Visiting every reservation is different from the hiking lists that he has completed because there is more bushwhacking involved. While all Forest Society reservations are open to the public, many lack features like trails and parking, and are conserved for ecological reasons rather than recreation. Dick actually prefers to travel off-trail, and he carries a topographic map, compass, and GPS unit on every visit.





*Dick, who prefers to hike off trail using a map and compass, takes a bearing at Moody Mountain Forest.*

Dick appreciates the variety of environments the Forest Society preserves; in that no two properties are the same. Heald Tract is a favorite of his because of the property's diverse landscape. Heald is a huge 1,492-acre reservation in the towns of Wilton, Temple, Mason, and Greenville that features large active beaver ponds, hemlock groves, and old farmsteads. Dick even wrote a poem about his most recent visit to the property (see sidebar).

While he enjoys hiking with others and has learned a lot from his days hiking in groups, he is aware that bushwhacking is not everyone's cup of tea. He mainly hikes solo, though he is conscious to invite friends on hikes when he knows they'll have a good experience. Otherwise, they might be shocked at how much time and effort it takes to visit certain properties.

So far, the most difficult property for Dick to find is the trail-less Colby Hill Forest in Henniker. In July 2018, he drove around the town trying various deteriorated roads to no avail until he finally resolved to come back another day. A month later, with his mountain bike in tow, Dick

returned to Henniker, this time trying the west end of Colby Hill Road. To his delight, the road looked passable. About a half mile in, he found a place to park and started on his bike. Almost immediately, the road became a rocky streambed, and he was forced to push his bike. The temperature was a sweltering 93 degrees. Since he was wearing a long-sleeve shirt and pants for bug protection, he began sweating profusely. "The heat made me frequently stop to check my body to see whether it was safe to continue this insanity," he notes.

Before long, Dick looked for any indication that he was on a Forest Society property: blue blazes, metal tags, or the iconic Forest Society signs. Nothing. His map suggested that he was, in fact, in the Colby Hill Forest, so he took some photographs, ate a snack, and guzzled some refreshing water before heading back to the car, one reservation closer to completing his list.

Dick plans to finish this summer. As this issue goes to press, he has visited 158 reservations. When asked what he plans to do after he finishes, Dick says he wants to volunteer on trail work days and explore some of the Forest Society's properties in a little more depth. If anything, he plans to keep moving, one foot in front of the other. ♪

*Emily Lord is digital outreach manager for the Forest Society.*

## Go Online, Get Outside

Looking to start your own quest? Check the Forest Society's Forest Reservation Challenge at [forestsociety.org/challenge](https://forestsociety.org/challenge) for details.

**Note:** All Forest Society reservations are open to the public; however, those without detailed Reservation Guide information may be difficult to locate and access due to lack of signage and parking.

## Heald Tract

by Dick Widhu

A bright December day, already ice on Heald Pond, surface scratched with crazy curves.

A duck bursts up as I approach, the flock takes flight around the pond, and I regret their waste of energy on winter days.

A smooth-trod runway leads to water's edge; a beaver, maybe otter, slides in here.

Along an upland path a gray bird lifts up softly, silent, and settles hidden there among the branches, safe and higher up from me, the interloper, visitor unwelcome here.

My crashing steps disturb the wildness, bring disorder, out of place.

The owl looks down with cool disdain.

A hill, quite steep, is next; the trail does not switch back or condescend to give me rest.

I reach the top and there's a cairn: assorted stones in careful balance laid. Descending north, a hemlock grove in shade. On fallen needles, walking quiet, here the mountain laurel thrives in acid soil.

Between the trees, I spy a patch of blue: Castor Pond.

The beavers built their lodge with mud and new-cut

branches, part on land. The quiet breaks, a downy woodpecker knocks from dying birch across the frozen marsh. Atop a flooded tree trunk,

resting high, a platform built of sticks: an osprey nest.

By now I've almost hiked a loop, come out upon an old woods road abandoned long ago, now crowded, shaded by maple, oak, made firm by years of cart and wagon wheels that crawled their way to this height of land. The gray and weathered buildings sinking down, now only grass where house and barn once stood.





## The River Rediscovered

### Documentary Puts New Spotlight on the Merrimack

By Jack Savage

*"The farmhouse lingers, though averse  
to square  
With the new city street it has to wear  
A number in. But what about the brook  
That held the house as in an elbow-crook?"*  
— from "A Brook in the City" by Robert Frost

I came across this Robert Frost poem, "A Brook in the City," written nearly 100 years ago in 1920. He penned it in a time of increasing awareness that industry and

urban development in New England were overwhelming the natural world. Frost laments the imbalance, and writes in the poem that as the city grew up around that farmhouse,

*"The brook was thrown  
Deep in a sewer dungeon under stone  
In fetid darkness still to live and run—  
And all for nothing it had ever done  
Except forget to go in fear perhaps."*

*No one would know except for ancient maps  
That such a brook ran water..."*

Frost's vision of a brook overlooked caught my attention because some of us at the Forest Society have been spending a fair amount of time on and around the Merrimack River this year and last. Like Frost's brook in the city, the Merrimack for some—perhaps for most—is similarly forgotten. To this end, the Forest Society is





### Learn more

Turn to page 28 to learn more about the film and to help support the production.

*A stretch of the Merrimack straddles the forested and developed border of Boscawen and Canterbury, N.H.*

working with videographer Jerry Monkman on a documentary film about the river and its watershed, the health of which will be critical to our future livelihood.

Once a transportation corridor itself, the Merrimack has been usurped by highways that flank its banks. Sequestered in our climate-controlled cars and trucks, we whiz along from Franklin to Concord to Manchester to Nashua, crisscrossing a nearly invisible body of water below. Do we remember from where it flows? Do we know where all that water goes?

The river's edge is even more developed—and arguably more invisible—once it bends east to help define our border with Massachusetts. Lowell, Lawrence, and Haverhill crowd its banks, where Route 495 entwines it like bittersweet around an oak before spilling into the Gulf of Maine in Newburyport.

While the river may no longer power the textile mills that drove the urban development of the nineteenth and early twentieth centuries, it is still prominent in our economy. More than half a million households and businesses rely on it for drinking water. More cities and towns are planning for the time when they, too, will need to stick a straw into the river. We still generate power thanks to the river, and the river powers a recreation economy.

However, both the U.S. Forest Service and American Rivers have listed the Merrimack among the topmost threatened rivers in the United States, in large part because of the predicted pace of development in the watershed. The forested buffer

along the river and its tributaries are the natural filter and sponge for water; the more we convert to pavement, the less healthy the river becomes.

The Merrimack has been a focus area for the Forest Society since our beginning in 1901.

Our first advocacy goal was the passage of the Weeks Act, which enabled the establishment of eastern National Forests. The Weeks Act cited protecting the “Navigability of navigable streams”—i.e., the Merrimack—as the source of Congress's authority to acquire lands to protect a watershed. The Weeks Act passed, the White Mountain National Forest (the upper reaches of the Merrimack River watershed) was established, because business and conservation interests came together in recognition that we had common interest in protecting a natural resource.

We made a lot of progress improving the water quality of the Merrimack since then. Today it is fishable and swimmable—and I can attest that in many stretches, it is remarkably beautiful. To keep it that way, for business and pleasure, we will need to heed Robert Frost. ♪

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*Jack Savage is vice president of communications and outreach for the Forest Society.*

### Online:

Check out the trailer for the in-progress documentary, *The Merrimack: River at Risk*, at [forestsociety.org/merrimack-river-risk](https://forestsociety.org/merrimack-river-risk).



# Get Schooled in Barkology

Winter provides the perfect opportunity to contemplate tree bark

By Dave Anderson

One of the most reliable ways to identify trees year round, particularly in winter, is by recognizing the intricate details of tree bark. Bark varies by species and its colors and textures are a function of age and rate of growth. Young, fast-growing trees have smooth bark analogous to the supple skin of youth while old, slow-growing trees develop craggier “facial” characteristics—wrinkles, fine lines, crinkles, and crevices—that can make identifying a tree harder.

Spend some time contemplating the bark of deciduous and coniferous trees and you’ll quickly notice the colors and textures that make one species stand out from the other. If you’re quiet, you might even notice many of New Hampshire’s resident winter birds—jays, nuthatches, titmice, and chickadees—caching seeds in the nooks and crannies of bark. You might also catch these birds gleaning tasty insects tucked beneath the tree’s armor. Keep an eye out for the diminutive brown creeper, whose preferred nesting habitat is in the large peeling plates of bark on standing-dead white pine snags.

How dark or light a tree’s bark is can reveal which species is more or less adapted to life in the northern climate. The thin, light-colored bark of beech, aspen, and birch admits sunlight into the corky inner bark of twigs and stems where photosynthesis takes place even in the absence of leaves, an important adaptation to surviving in the northern forest. Dark bark absorbs more sunlight, warming the trunk and radiating more heat. Too much temperature fluctuation from daytime warming and re-freezing at night causes bark to crack, granting access for insects, fungi, and bacteria to grow into the sapwood and cause permanent damage to the

tree. Adaptations, including smooth surfaced or peeling strips of bark, make it difficult for epiphytes—mosses, lichens, or liverworts—to grow on trunks, thus masking the penetration of sunlight into the inner bark.

In southern New Hampshire, red oaks and white pines prefer warm, dry, well-drained sites while white oaks and red pines, rife with lowbush blueberry in their understory, choose even drier south-facing sites. Thick, corky bark is one adaptation that allows oaks and pines to survive fast-moving ground fires, which occur in these drier regions. In fire-prone areas, including the Ossipee Pine Barrens, black oak, bear oak, and pitch pine boast some of the

thickest plates of fire-resistant bark. Northern hardwood trees, including beech, birch, and maple, cannot survive where fire recurs because of their thin bark. These three hardwood species comprise the northern transition zone where bark color, texture, and thickness represent adaptations to a northern latitude where fire disturbance is limited.

So, this winter, grab a thermos of hot chocolate, a warm jacket, and a tree ID book and spend some time in your local forest admiring the intricacies of tree bark and its many-faceted “faces.” ♫

*Naturalist Dave Anderson is senior director of education for the Forest Society.*

## Learn More

To find out more about tree bark, pick up Michael Wojtech’s *Bark: A Field Guide to Trees of the Northeast* (University Press of New England, 2011).

To learn more about tree adaptation, check out Peter J. Marchand’s *North Woods: An Inside Look at the Nature of Forests in the Northeast* (Appalachian Mountain Club Books, 1987).

## BARK TRIVIA

1. Typically thin, smooth, and light gray. People often carve initials in this tree’s bark.
2. When young the bark is curly and golden colored. When very old, the bark appears like “burnt potato chip” flakes similar to the bark of black cherry or mature red spruce.
3. This bark varies from light reddish brown when young to grayish brown in middle age. Light-colored lichens add splotches of color to the bark in middle age.
4. The diamond-shaped bark of this tree creates a netting pattern like a cantaloupe rind.
5. Long-hanging plates give this tree’s bark a shredded appearance. When mature, the bark is brown and has deeply furrowed ridges.
6. This bark is thin and often found with white streaks of aromatic pitch when young. The bark becomes thick and deeply ridged in mature and older stems.
7. This bark often appears reddish brown and was used to tan leather.
8. This tree is best known for its streaks of salmon pink between plates of bark.





ANSWERS: 1. Beech 2. Yellow birch 3. Sugar maple 4. White maple 5. Shagbark hickory 6. White ash 7. Eastern hemlock 8. Red oak





*Left: Kate Wilcox, a Forest Society land steward and a volunteer photographer, emerges with her camera in hand from one of Lost River's caves.*

*Right: Rustic and brimming with character, New England's maple sugarhouses are one of Wilcox's favorite subjects to photograph, including LaBounty's sugarhouse in Lunenburg, Vt.*

## Sweet Deal:

### A Forest Society Volunteer Shares Her Love of Photography and Maple-Sugaring Obsession

By Carrie Deegan

Most photographers have favorite subjects to photograph, and Kate Wilcox is no exception. The Rochester, N.H., native enjoys taking pictures of the natural world and telling stories with her images. As one of the Forest Society's volunteer photographers, Wilcox takes photos of people on guided hikes, workshops, volunteer gatherings, and more. Her photographs genuinely convey the energy and exhilaration of people exploring the Forest Society's reservations and it's a skillset the organization is lucky to have. "Kate's photos are wonderful," says Digital Outreach Manager Emily Lord. "Whenever she is attending an event, I know we'll have something special to share."

One of Wilcox's ongoing personal projects is photographing as many of New England's sugarhouses as she can—100 and counting. She enjoys photographing the barns and shacks where the syrup is made, but she gets a bigger kick out of capturing the sugarmakers at work. She started the project to not only show the photographs of the sugarhouses to the public but also the sugarmakers themselves. "I realized the sugarmakers would love to visit a number of other sugarhouses, but none of them have the time during maple season." Her photos are so popular that the North American Maple Syrup Council asked her to present a slideshow of her work at their annual meeting in October 2018.

Wilcox is also a long-time land steward for the Forest Society's Salmon Falls Reservation in Milton Mills, N.H., where she spends hours wandering the reservation's woods, roads, and riverbanks. On the job, she has discovered old farm plots with cellar holes and wells, beautiful freshwater marshes lined with pitcher plants along the river, and bobcat and snowshoe hare tracks in winter.

Wilcox considers herself a lifelong learner and is a self-professed "science geek." Working for the University of New Hampshire as a facilities dispatcher affords her the opportunity to take classes at the university free of charge. Currently, she's taking courses in geographic information systems and dendrology, the study



of trees. "I just love to hang around with people who know what they are talking about," she says. "If you ask me to take photos at a workshop and I get to spend some time with the experts, I'll go!" The Forest Society looks forward to providing Wilcox with many more learning opportunities down the road in exchange for her photographic storytelling talents. We understand why she loves to learn and photograph; we are science geeks, too! ♪

*Carrie Deegan is volunteer and community engagement manager for the Forest Society.*

### Learn More

Check out a list of volunteer opportunities at [forestsociety.org/volunteer](https://forestsociety.org/volunteer).

A banner for the Forest Explorer newsletter. The top half has a blue background with white text. The bottom half shows a person standing on a large rock in a forest under a blue sky with clouds.

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A banner for the 'Adventure' section of 'Windows to the Wild'. It features a man with a beard and a red bandana sitting on a rock in a forest, holding a small dog. The background is a dense forest with green trees.

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## 2018 Volunteer Work By the Numbers

By Andy Crowley

I am humbled by the endless effort Forest Society land stewards and trail crew volunteers put forth this past year, especially considering the weather was uncooperative and we had a heavy backlog of projects to complete. Many volunteers love trail work and it shows—just look at the numbers! General trail work projects exceeded 870 volunteer hours this season with about half of those hours coming from Monadnock Trails Week. Our trail projects vary from cleaning water bars and drains to completely rerouting trails after a timber harvest.

Volunteers also spent 420 hours cleaning up properties. Although not glamorous in any sense, these workdays draw many people. The sense of accomplishment and improvement is high on these types of projects. Last year, volunteers came out of hibernation to get parking areas and trailheads ready for spring. Other projects involved removing old and deteriorated buildings to improve the landscape.

Last but certainly not least are our more skill-intensive workshops and infrastructure projects. Every year, volunteers show up with their own tools and experience to create trail and property signs at



*Volunteers came from near and far to lend a hand, and some muscle, at last year's Monadnock Trails Week.*

the Forest Society's Conservation Center in Concord. Other volunteers brought their engineering skills along for bridge building projects. I am proud of the work we accomplished this year and very much looking forward to many more

volunteer workdays in 2019. To sign up, visit [forestociety.org/volunteer](http://forestociety.org/volunteer). ♯

*Andy Crowley is land steward program coordinator for the Forest Society.*

ACTIVITY	VOLUNTEER HOURS
<b>Infrastructure</b> Cockermouth Bridge Build, Quarry Mountain Bridge Build, Gap Mountain Kiosk Repair, Langenau Footbridge	96
<b>Workshops</b> Sign Making, Tool Maintenance	114
<b>Property Cleanup</b> Lost River Ice Breaker Day, Earth Day at Mount Major, Grafton Pond, Merrimack Floodplain (spring), Conservation Center (fall), Creek Farm (spring), Creek Farm (fall), Quarry Mountain Demolition, Yatsevitch Demolition, Gardner House (Hollis)	420
<b>Trailwork</b> Monadnock Trails Week, Andrew Brook Trail, Langenau Forest Re-Route, Hutchins/Ambeau Trail, Gap Treadwork Day, Jones Forest Trail, Bockes–Mega Food	870+
<b>Trailwork Postharvest</b> Buxton Forest–Simons Preserve, Ashuelot River Headwaters Forest	114

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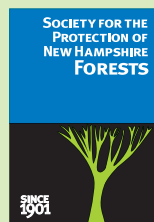
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*Scenic pastureland along Route 153 in Wakefield makes up part of the diverse 226 acres recently conserved there by Nancy Spencer Smith.*

## Conserving a Long Legacy of Land Stewardship in Wakefield

By Tom Howe



Nancy Spencer Smith recently cinched her family's long legacy of land stewardship in Wakefield by donating a conservation easement to the Forest Society on seven parcels encompassing

226 acres. Some of these lands have been in her family for centuries.

Nancy grew up spending summers at her family's place at the center of "Wakefield Corners," where Wakefield Road and Province Lake Road (Route 153) join. Her family's home—now her home—is an

historically significant former tavern. From her back door, she can access her newly conserved 15-acre hayfield. Venturing beyond the field, she can explore woodlands making up the rest of this 180-acre block, the largest component of her recently protected land.

This easement protects about 1.5 miles of undeveloped road frontage, adding substantially to the rural character and agrarian heritage of the area. The Wakefield Road frontage is part of a 14-mile-long, state-designated Scenic and Cultural Byway called the Branch River Valley Trail,

created for its "agricultural, industrial, and tourism heritage."

Her land has other diverse and worthy features, including a small pasture, forested wetlands, highly productive soils for agriculture and forestry, and forestlands providing opportunities for future management. The New Hampshire Wildlife Action Plan rates 43 percent of the land as a priority for protection. There are cultural and historical features as well, including a site where granite blocks were quarried by hand back in the 1800s. On another part of the property, a set of

*Nancy is a “hands-on” conservationist who’s made a difference from state to local levels.*

parallel stone walls about 15 feet apart runs more than 500 feet between two adjacent hayfields. This so-called “drift-way” helped early farmers move grazing animals between farmstead and pasture, and is unusual for its length.

Nancy is a “hands-on” conservationist who’s made a difference from state to local levels. Having generously supported the Forest Society for years, she joined with others in 2000 to found the Moose Mountains Regional Greenways, a staffed land trust active in the Wakefield area, and she continues to serve on its board of directors. Buying conservation tracts as opportunities arose, Nancy completed her first protection project four years later, securing the future of the 129-acre Gage Hill Property, just west of Route 16. For that project, she pulled together a partnership comprising the Town of Wakefield, Moose Mountains Regional Greenways, Southeast Land Trust of New Hampshire, and Forest Society, the latter now holding an

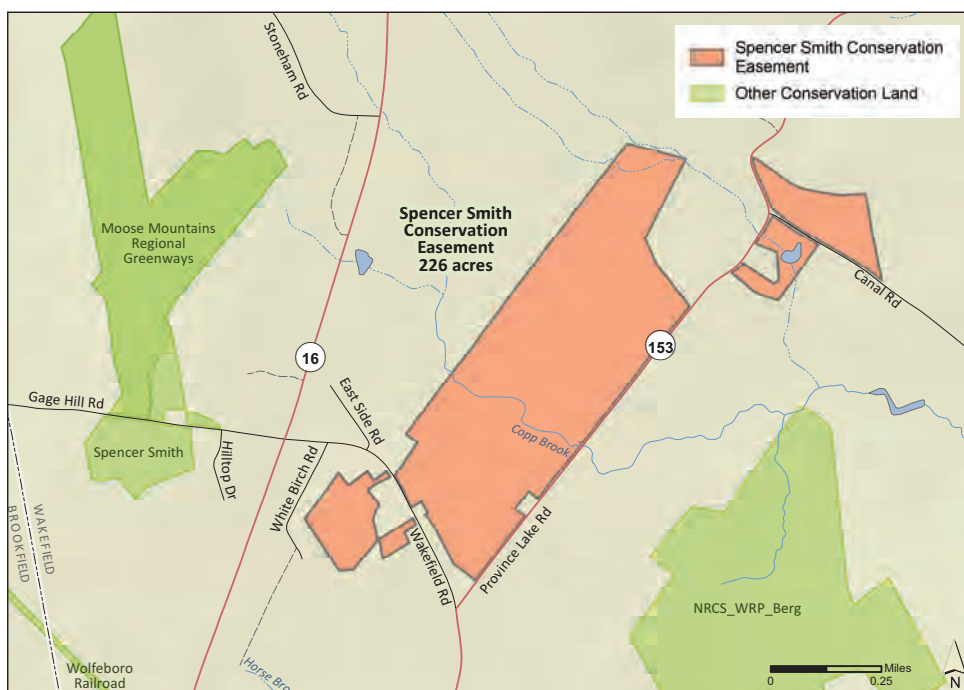
easement on some of this land. Another public-spirited initiative involved her purchase of a tract at the junction of Routes 16 and 153, where she subsequently installed a farm stand now doing brisk business at this strategic location.

Nancy’s the sort of go-getter every community and conservation group could wish to have, and so the Forest Society feels particularly grateful for her most recent, generous conservation easement contribution. ♪

*Tom Howe is senior director of land conservation for the Forest Society.*

### ▲ Online:

Learn more about the Branch River Valley Trail at <https://bit.ly/2LWjnHO>. For more on the Moose Mountains Regional Greenways, visit [www.mmrinfo.org](http://www.mmrinfo.org).



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# Supreme Court Sets Schedule for Northern Pass

Eversource briefs due February 4, opponents March 21

By Jack Savage

Northern Pass will need to file its maximum 9,500-word brief outlining its appeal to the Supreme Court by February 4, 2019, per the schedule put out by the court in late December 2018. Opponents, who contend that the New Hampshire Site Evaluation Committee (SEC) made the correct decision to deny a Certificate of Site and Authority to Northern Pass, then have until March 21 to respond with their briefs.

The December 20, 2018, order also granted a joint motion by the Forest Society and other parties asking the high court to use the same groupings for intervenors filing briefs that was used during the SEC. Importantly, this allows diverse opponents to make their own arguments against the appeal by Northern Pass rather than limiting them to a single 9,500-word brief.

In the SEC process, the more than 150 intervenors were grouped by commonalities—municipalities in different areas along the proposed 192-mile transmission line, for example. The Forest Society was a stand-alone intervenor.

Northern Pass had objected to the court using those same groupings, seeking to limit legal opposition to its appeal.

The court's order did not include any indication about how long it may take to render a final decision. Presumably, there will be an opportunity at some point after briefs are filed for short oral arguments before the court.

The voluminous record of the SEC proceedings was delivered to the court (in digital form) on December 11, 2018. Given its size and the overall caseload before the court, it may well be a year before a final decision is handed down.

Northern Pass first came to the attention of the public in October 2010, and has engendered overwhelming opposition for more than eight years. The appeal to the state Supreme Court is the project's last glimmer of hope for going forward as proposed.

Northern Pass was a proposal by Eversource to partner with Hydro-Quebec to build a transmission line from the Canadian border in Pittsburg, N.H., to a

terminus in Deerfield. It included 132 miles of overhead lines on towers up to 160 feet high and 60 miles of buried transmission lines, primarily along rural roads in the White Mountains.

Northern Pass appealed to the Supreme Court in August 2018 following the formal written denial in July of a Motion for Rehearing to the SEC. The seven-member SEC subcommittee hearing the application unanimously denied a permit for the controversial transmission line at the end of March 2018, citing the applicant's failure to prove that the project would not unduly interfere with the orderly development of the region.

In its written orders, the SEC has explained and defended its decision-making process and concluded that the decision to deny Northern Pass was consistent with the law and its own administrative rules. ¶

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*Jack Savage is vice president of communications and outreach for the Forest Society.*

## Think Globally, Act Locally

By Matt Leahy

The forests, wetlands, and agricultural lands in our country could absorb the equivalent of all greenhouse gas emissions from U.S. vehicles, per a recently released Nature Conservancy (TNC) study. That encouraging information should be good news to the 53 percent of Americans who feel helpless to do anything about global warming. That feeling of separation from the political process is undoubtedly one of

the biggest challenges facing governments at all levels and on all issues. So the question as it relates to the specific issue of climate change is how can public policy be aligned to empower those who are unsure about their place in this debate?

According to surveys the Yale Program on Climate Change Communication and George Mason University's Center for Climate Change Communication have

conducted, 70 percent of Americans believe climate change is definitely occurring and 53 percent believe global warming is mostly caused by humans. With numbers that high, one would think finding constructive solutions to this challenge would be easy. Unfortunately, as we continue to see, that is not the case. Instead, the search for solutions too often becomes bogged down in Congress or in state legislatures

across our country. Perhaps part of the reason is the small percentage of the population who are completely dismissive of the science behind climate change and strenuously fight any effort to address it.

But maybe there is another explanation for this continued difficulty. It is, frankly, entirely understandable why 53 percent of Americans feel helpless to do anything about global warming. Usually, the impacts from global change are presented in catastrophic terms: rising sea levels, increased coastal flooding, more destructive hurricanes, and severe droughts. Such stark predictions leave the public overwhelmed. Yes, they need to know the truth about what our future will look like, but how can an individual possibly prevent a Category 5 hurricane from destroying a coastal community? Furthermore, the solutions sometimes sound either far too wonky—try explaining the operating mechanics of the Regional Greenhouse Gas Initiative—or are politically controversial, such as

those that would institute an economy-wide carbon tax.

However, if we can shift the search for long-term answers to actions that resonate with those overwhelmed Americans, we can do far more to preserve the way of life people in New Hampshire and elsewhere cherish. For example, Americans love the outdoors. A 2018 U.S. Department of Commerce study noted that overall spending on outdoor recreation hit \$412 billion in 2016. Maintaining a strong outdoor recreation industry with its 4.5 million jobs is directly linked to the protection of the special natural areas which draw these outdoor enthusiasts. Likewise, Americans expect the water they drink and the air they breathe will be clean and safe. By taking action to preserve natural landscapes, which filter the amount of pollutants that enter drinking water systems, and to preserve forests, which sequester the pollutants that dirty the air, more local successes can lead to more long-term solutions.

As the TNC study highlights, these nature-based solutions directly impact the health and well-being of us all. Just as importantly, if presented as viable and proven answers, they can provide outlets for concerned citizens to act on those seemingly crushing problems like droughts, floods, or wildfires. If you are a member or supporter of a land trust or conservation commission, or if you are a private landowner who has committed to keeping your woodlands in an undeveloped state, you are already acting to address these problems. The challenge before us is twofold: (1) show our neighbors they also have the capacity to take-on this problem and (2) demonstrate to policy makers that solutions already exist. They are called our forests, our grasslands, and our undeveloped natural areas. ♧

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*Matt Leahy is public policy manager for the Forest Society.*

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**[forestsociety.org/A2A](https://forestsociety.org/A2A)**



*Ellen Kennelly donated this summer house in Dublin surrounded by 49 protected acres to the “Assets to Acres” program.*





*Once used only for industrial purposes, the Merrimack has become a hot spot for paddlers and kayakers.*

*"The goal of the Clean Water Act of 1972 was simple, very simple!  
All the waterways in the state will be fishable and swimmable by 1982.  
We're not quite there yet."*

— Ted Diers, New Hampshire Department of Environmental Services, August 2017

## The Merrimack: River at Risk

**T**housands of people drive over or along the Merrimack River daily, rushing to work, school, or play. Below the bridges, sometimes out of sight and often out of our modern minds, the river flows in the shadow of our highways. It provides us drinking water and electricity while supporting commerce, wildlife, and

recreation. The mills that were the industry of the Merrimack Valley a century ago now house offices and technology companies, and the river is no less essential to our livelihood than it was then. We cannot take it for granted.

But did you know that the Merrimack has been designated as one of the most

threatened watersheds in the nation? If we allow ourselves to indiscriminately develop the shores of the river and its tributaries, to replace forests with too many parking lots and rooftops, the river will suffer. And so too will we.

But there is good news—it is not too late to work towards permanently protecting



In August 2018, the crew of *The Merrimack: River at Risk* interviewed New Hampshire residents in Concord (left) and Manchester (right).

critical lands in the watershed. To that end, the Forest Society is at work on a documentary film called *The Merrimack: River at Risk*, produced by New Hampshire-based videographer Jerry Monkman.

Slated for release in fall 2019, the documentary will remind viewers, and educate some for the first time, about just how significant the river and its supporting watershed landscapes are to the health and wellbeing of the flora, fauna, and people who rely on the river each day. The film will pay particular attention to how land

conservation efforts within the watershed are key to protecting drinking water, wildlife habitat, and our way of life. At its heart, this film will serve as an inspiring call to action that offers realistic goals and practical strategies for how people of all ages can advocate for the protection of this natural resource.

### Learn More:

To donate and watch a trailer for the film, visit [forestsociety.org/merrimackriverfilm](http://forestsociety.org/merrimackriverfilm). For more information, contact Jack Savage at 603-224-9945 or at [jsavage@forestsociety.org](mailto:jsavage@forestsociety.org).

But we need your help today to complete the film. Please donate today to help us show how significant the Merrimack River and its surrounding landscapes are and how people can speak up for and support this threatened resource. You can donate online or by sending in the form below. Thank you! ♪

## ☐ YES, I WANT TO SUPPORT THE FOREST SOCIETY FILM *THE MERRIMACK: RIVER AT RISK*

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## THE MANY FACES OF CONSERVATION

### **Stephen and Patrice Rasche** Canterbury, N.H.

*Members since 1987*



PHOTO: AL KAREVY

### **MEMBERS MAKE THE DIFFERENCE!**

*Stephen and Patrice 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.*

“**F**irst thing most mornings, I take the dogs for a walk in the nearby forest. There aren’t many things I enjoy more than spending time in the woods with my dogs. And on days when we see a fox, bear, bobcat, or coyote it just makes life that much better. After living in New Hampshire for more than 30 years, Patrice and I still find ourselves saying to each other, ‘We are so lucky to live in such a beautiful place.’ But of course, it isn’t just luck that we live here. We moved here precisely because of the forests and mountains and lakes and rivers that New Hampshire offers.

And it isn’t just luck that keeps New Hampshire beautiful. My morning walk takes me across land protected by the Forest Society. When we walk up the hill to the orchard near the center of town, we are walking through land protected by the Forest Society. When we look at the view of Mount Kearsarge from the center of town, we can thank the Forest Society for protecting that land. When we canoe the Merrimack, we pass riverbank that almost became a landfill. The land is now owned by New Hampshire Fish and Game, and the Forest Society helped protect it and holds an easement on the property. When we bicycle around town, we go by wood lots that are protected by Forest Society easements. We also have the Forest Society to thank for the White Mountain National Forest.

Patrice and I joined the Forest Society not too long after moving to New Hampshire in 1986. We are proud to be associated with them and grateful for the work they do.”