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Forest Notes

NEW HAMPSHIRE'S CONSERVATION MAGAZINE

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to the World

Short Hikes
to Great Views

AUTUMN 2014

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PROTECTION OF
NEW HAMPSHIRE
FORESTS



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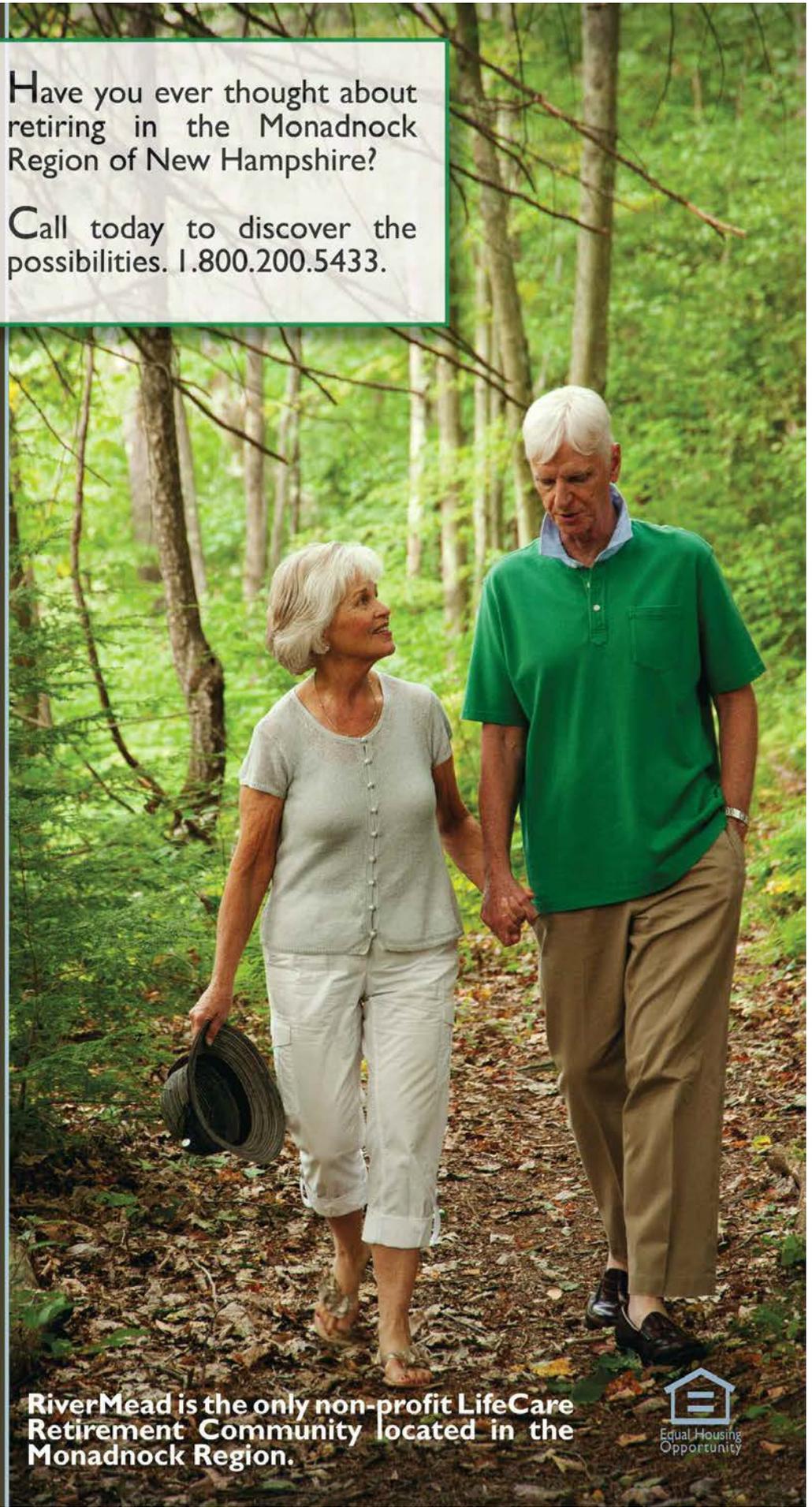


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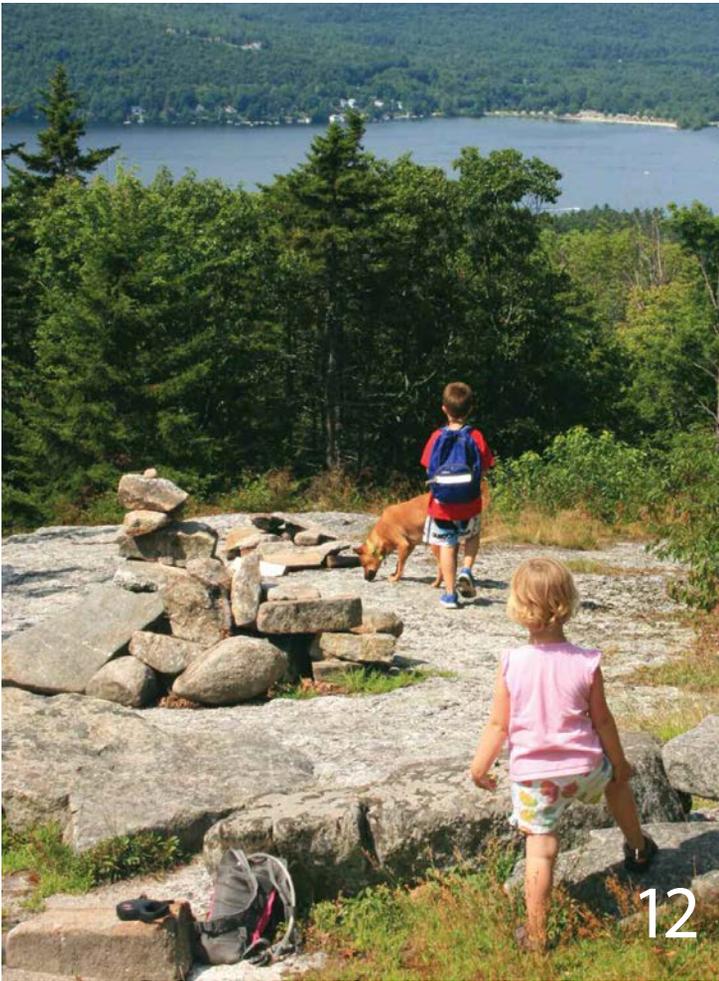
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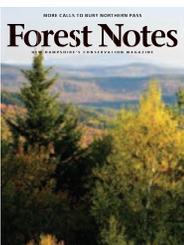
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Photo by Jerry and Marcy Monkman, EcoPhotography.



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One Committed Person

We often think of a conservation project starting with the land to be protected. We ask what “conservation values” the parcel has—is it productive, working forest? What kind of wildlife does it support? Does it protect important drinking water resources? Are there fertile soils? Recreational opportunities?

And while these attributes are important, they aren’t always what triggers conservation. Conservation often starts with one person. One committed individual recognizes an opportunity to transform their love of place into a lasting legacy for all future generations, rolls up his or her sleeves and gets to work.

This was true for the Farnsworth Hill and MacNeil properties in Washington, where John Brighton, this year’s recipient of the Forest Society Conservationist of the Year Award, was the person who insisted these properties be protected. He cajoled his friends and neighbors, led field trips, studied the land’s history and helped raise the funds to make both properties Forest Society reservations.

Then there’s the pied piper of trails, Dave Roberts, who hiked and mapped innumerable trails in the Belknap Mountain Range and encouraged others to join him in his love of those hills just south of the White Mountains. When the Lakes Region Conservation Trust and the Belknap Range

Conservation Coalition joined together with the Forest Society to protect 980 acres on Mt. Major, Piper and East and West Quarry mountains, it was Dave’s love of the mountains and trails and his decades of work there that catalyzed action.

Sometimes it’s the landowners who recognize that the land they love, the land they have labored to manage, is worthy of protection. Such was the case with Sally and Tom Wilkins, who sold conservation easements (at a huge discount) to the Forest Society to make sure the 500 acres that help supply their sawmill would always be working woodlands. They saw development encroaching on open land in Mont Vernon and Amherst and decided to act.

There are countless other stories of individuals who worked to save the places they love. Each story is worth telling again and again. Most importantly, these stories are written on the land that remains for the future.

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



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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Forest Society Welcomes Three to Board of Trustees

Forest Society members elected new board members and officers at the 113th Annual Meeting on Sept. 27 in Londonderry. Stephen Froling of Hancock, Karl Heafield of New Boston and Andrew Smith of Littleton were all elected to three-year terms.

Froling is a New York attorney who retired in 1999. He is well versed in land conservation, having served on the Forest Society's policy and development committees and as volunteer corporate counsel and a member of the Land Committee for the Harris Center for Conservation Education in Hancock since 2007. He was also a Harris Center trustee for six years and board chairman in 2006 and 2007. In 2010, The Silver Lake Land Trust of Harrisville and Nelson honored him with its Stewardship Award. Froling currently serves as chairman of the Hancock Planning Board.



Stephen Froling



Karl Heafield

Heafield is a CPA with the accounting and advisory firm Baker Newman Noyes in Manchester. He is the board treasurer for the Business and Industry Association and past president of the New Hampshire Society of Certified Public Accountants.

Smith is a real estate broker and owner of Peabody & Smith Realty, headquartered in Franconia. He is a founding member of the N.H. Commercial Investment Board of Realtors and the board's 2004 Realtor of the Year. He is past director of the Northern New England Real Estate Network. Active in the Littleton business community, Smith serves on the board for the Guaranty Bancorp/Woodsville Guaranty Savings Bank and in 2007 was named the Littleton Chamber of Commerce Business Leader of the Year.



Andrew Smith

Carolyn Benthien and Katharine Eneguess retired from their board positions. Froling, Heafield and Smith will join current board members William Webb, who was reelected as chair; Bill Tucker, newly elected as vice chair; Bill McCarten, reelected as treasurer; Deanna Howard, reelected as secretary; Charlie Bridges, Malin Clyde, Margo Connors, Pamela Hall, Andy Lietz, Jack Middleton, Rebecca Oreskes, Barbara Russell and Lorin Rydstrom.

Everybody Helps Mt. Major: Campaign a Success

The Everybody Hikes Mt. Major fundraising campaign has reached the summit, achieving our goal of \$1.8 million for acquiring 980 acres on and near Mt. Major! We are very grateful that the campaign received more than 1,900 gifts ranging from \$2 to \$340,000. Gifts came in from 31 states, from as far away as Hawaii, Arizona and Oregon.

The successful partnership between the Forest Society, Lakes Region Conservation Trust and Belknap Range Conservation Coalition has resulted in the purchase of three parcels of forests, trails and wetlands on Mt. Major, East and West Quarry and Piper mountains. A fourth parcel is in the final stages of acquisition.

We thank the Steinwachs Family Foundation for giving a leadership gift. A new trail-head on the Quarry Mountain parcel will be named in the family's honor. We also thank the N.H. Land and Community Heritage Investment Program (LCHIP); the towns of Alton and Gilford; the Open Space Institute Land Trust, Inc.'s Resilient Landscapes Initiative, made possible by a lead grant from the Doris Duke Charitable Foundation; the Bafflin Foundation; the S.L. Gimbel Foundation, the Penates Foundation; three anonymous family foundations, the N.H. State Conservation Committee's "Moose Plate" Program; the N.H. Electric Co-op Foundation; NHCF Wolfeboro Fund; Samuel P. Pardoe Foundation; the William Wharton Trust; and Bank of New Hampshire.

The popularity of Mt. Major's trails has left them degraded by overuse, so we have formed a stewardship fund to repair and maintain them. If you would like to help, please use the envelope in this issue of Forest Notes or give online at www.forestociety.org.



Forest Society mailings expert Muriel Ford.

Muriel Ford Honored As Volunteer of the Year

In the past 16 years, Muriel Ford has helped the Forest Society send out thousands of letters, packets and postcards. Now the tables have turned and she is on the receiving end of a message: a big thank-you note from the Forest Society, which takes the form of the 2014 Trish Churchill Volunteer of the Year Award.

This award is named in honor of our long-time volunteer coordinator, Trish Churchill, who retired several years ago. The award recognizes service that exemplifies the spirit of volunteerism at the Forest Society.

Forest Society President/Forester Jane Difley presented the award to Muriel at the annual volunteer appreciation dinner at the Conservation Center on Oct. 9.

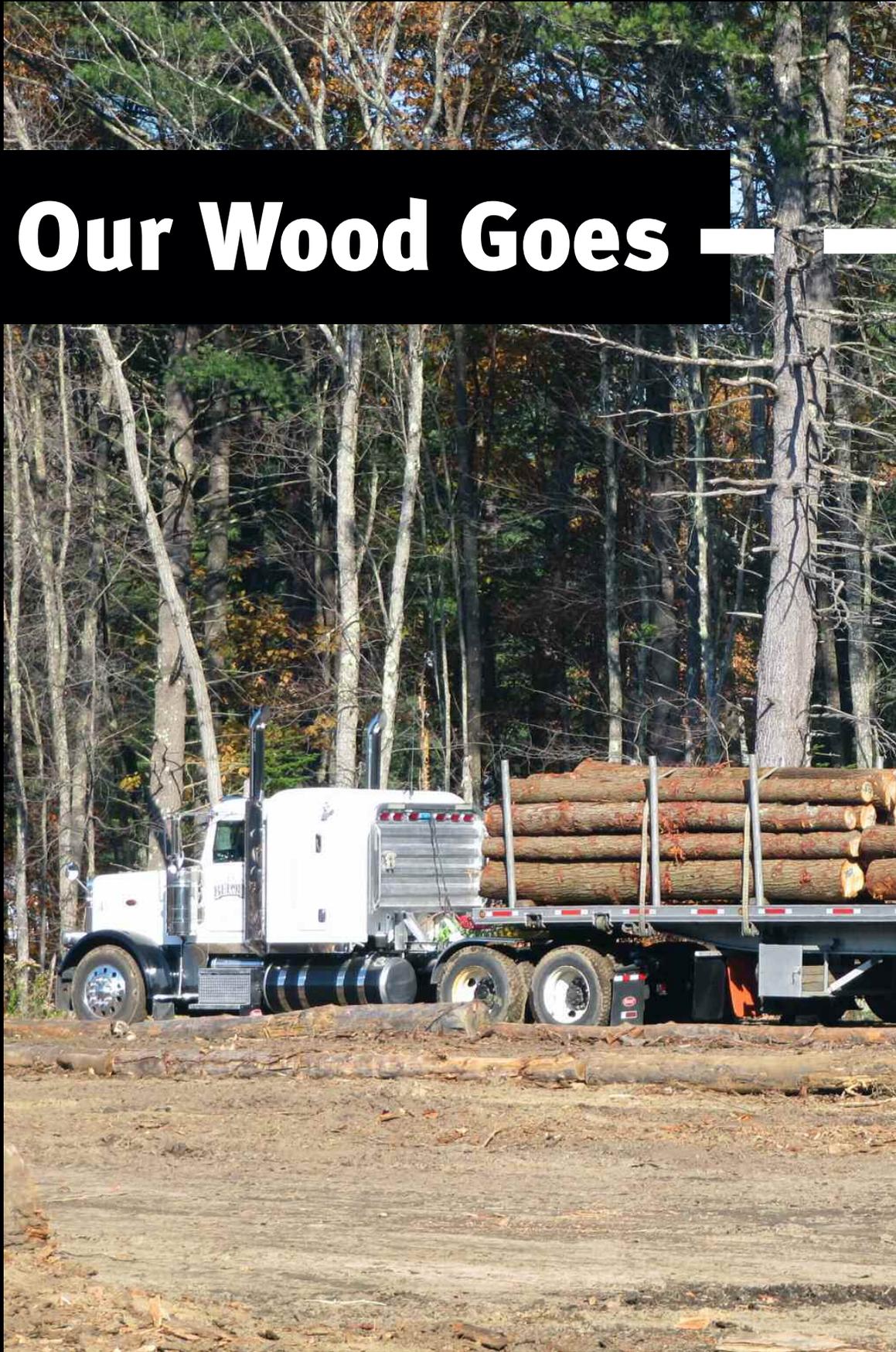
Muriel, of Concord, was a member of one of the longest-running Forest Society volunteer programs, the "Stuff-It" Club, and over the years has cheerfully helped the Membership & Development departments with some of the Forest Society's biggest mailing campaigns.

Her weekly Wednesday morning shifts have been marked by a sincere interest in the conservation work of the Forest Society and a thorough knowledge of the various types of mailings we send out to inform our membership, raise funds and thank our supporters.

"Muriel is always interested in what projects we're doing and how they're going. She's curious, she's got a can-do attitude and has a really bright spirit," said Nancy Huckins, the newly retired membership specialist who worked with Muriel for many years.

We are sincerely grateful to Muriel, and to all of our many volunteers for their dedication and service. ♪

Where Our Wood Goes —



A crane loads New Hampshire hemlock logs onto a truck headed for Quebec at the Andover log yard of Green Crow Corporation.



Photo by Scott Astle.



From the Middle East to local lumber yards, diverse markets for New Hampshire's timber are looking brighter for woodlot owners and the forest products industry.

— By Sarah Earle



Photo Courtesy New England Forest Products.

Rory O'Brien and Erik Buxton plane custom hardwood flooring at New England Forest Products in Greenfield. The company's commitment to selling New Hampshire wood locally in the retail market helped it to weather the recession.

its vision and slowly recover its losses. "We just had our best year yet," Buxton said.

Indisputably one of the hardest hit industries of the Great Recession, the forestry industry has made a comeback, thanks to several key movements and markets. Foresters, loggers, mill owners and manufacturers who have managed to capitalize on these trends are not just surviving but thriving. And though the once sturdy industry offers no guarantees, their gains suggest good prospects for the health of New Hampshire forests.

"Things are absolutely booming, off the charts, right now," said Charlie Levesque, president of Innovative Natural Resource Solutions LLC, a consulting company that works with foresters all over the Northeast. "Sawmills are running 24/7 if they can."

The recovery of the housing market is a main driver behind the boom. But other key catalysts are providing strong—and unexpected—markets for native species ranging from the prized red oak to the stalwart white pine.

A decade ago, the truckloads of logs that arrived at New England Forest Products departed in the form of wholesale lumber. Committed to sustainable forestry practices since they opened in 1993, Dave and Debbie Buxton had intended to keep their business model simple. That was before the housing crash.

"The market tanked on a Friday, and on Monday, it was dead here," said Debbie Buxton, co-owner of the Greenfield saw mill. "At first the phone was ringing constantly, but it was all people cancelling their orders. Then it was completely quiet. . . . it was really scary."

After nearly succumbing to one of the worst blows the forestry industry had seen in decades, the company was able to reimagine

One Landing, Many Market Destinations

On the Forest Society's Robie Forest in Franklin, logs on the landing are sorted into multiple piles destined for multiple markets.



A load of woodchips is ready to be trucked to New England Pellet, LLC, in Jaffrey.



Red spruce logs will soon be trucked to Canada and turned into lumber.

KEEPING IT LOCAL

From the beginning, New England Forest Products has maintained close relationships with loggers and landowners, developing forest management plans that ensure sustainability of one of the state's most important natural resources. Since 2008, they've extended that relationship in the other direction, developing a thriving retail market that attracts both the traditional do-it-yourselfer and the new buy-local breed born of the big box backlash.

Though he originally swore he'd never get into retail, Dave Buxton had foreseen the coming economic crisis and begun investigating ways to diversify the business. "There wasn't a retail store for dry lumber in the area, so we figured we could fill that need, but we also suspected that people would latch on to the buy-local idea," Debbie Buxton said.

Some other mills in New Hampshire devote a small part of their business to retail, but the Buxtons have wholeheartedly embraced it. The couple utilized several grants and programs, including a New England Trade Adjustment Assistance Grant, to enlist consultants, engineering and marketing services. Then they purchased a dry kiln at an Ethan Allen auction and began milling their own custom flooring. Today they continue to sell wholesale and to export high-quality wood on the global market. But a good deal of the wood that comes to the mill ends up in their retail shop as high quality flooring, lumber and custom products.

"We really did change the whole dynamic," Debbie Buxton said. "We get a lot of carpenters and woodworkers and artists in the retail shop. It's kind of the old-fashioned way of doing business. People like that. And people who work with wood like to come in and smell it and touch it."

In New Hampshire, that demographic is large. Wood products manufacturing, including furniture, accounts for nearly \$600 million of the \$1.4 billion forest products industry, according to a report published by the North East State Foresters Association. Additionally, these sectors of the industry employ more than 3,000 people.

While a strengthening market for local products is keeping some hardwoods close to home, a weakening infrastructure for processing—not just fewer mills but fewer *types* of mills—is doing the opposite for others.

New Hampshire no longer has turning mills, for example, capable of turning medium grade birch logs into products like popsicle sticks, dowels, tongue depressors, tool handles and golf tees. "We used to send our middle grade birch to turning mills as close as Laconia," said George Frame, senior director of forestry for the Forest Society. "While there's still a market for high grade logs as furniture and cabinetry stock, much of the middle grade material now goes for fuelwood, chips or pellets."

There are no mills in New Hampshire that process the most-prized hardwood veneer logs, either, but they fetch the highest



Left: A veneer buyer has graded and coded this stack of hard maple, yellow birch and red oak veneer logs. The code dictates the value and use for each log. Logs marked FL, for example, will become hardwood flooring, while those marked S will go to a niche market for skateboard manufacturing. Veneer logs cut in New Hampshire can currently range in value to the landowner from around \$800 per thousand board feet to more than \$3,000 per thousand board feet, with exceptional logs bringing \$5,000 to \$10,000 per thousand board feet, according to NHTOA.

Right: Operators add as much value as they can to logs on the landing, including using a mechanized delimeter to remove branches, needles and bark.



Photos by Brenda Charpentier.



Photo by Scott Astle, Green Crow.

At Green Crow's log yard in Andover, a crane loads veneer logs into a container headed for China.

But keeping New Hampshire forests healthy depends on utilizing the lower value logs.

"There's never been a problem with getting rid of higher grade logs. The dicey thing is getting rid of lower grade logs," explained Eric Johnson, program director for the New Hampshire Timberland Owners Association. "If we have good markets for low-grade products, it allows those products to be removed from the forest. It's kind of like weeding your garden. It promotes sustainable forestry."

This new overseas market is one way of utilizing lower grade species and wood products. Higher quality wood, particularly red oak, is still

prices of any saw logs and so always warrant a trip out of state.

"Our highest quality logs are leaving New Hampshire as logs," Frame said. "Our veneer can sometimes go overseas to be cut and sometimes go as close as Vermont to be cut."

It all depends on what market an individual buyer or operator has tapped into.

"Buyers of veneer will come to the landing and actually buy the logs onsite. They barcode every piece and that determines where it goes," Frame said.

Not having veneer mills in New Hampshire isn't a bad thing, Levesque noted. "Wood moves all over the place in the Northeast region—that's just how the market works. You don't need a veneer mill in every state . . . there aren't enough veneer quality logs to support that," he said.

INTERNATIONAL FORCES

While some businesses are focusing their efforts close to home, others are capitalizing on trends around the globe. The eastern white pine, which accounts for about 12 percent of New Hampshire's forested land but about 60 percent of sawmill production, is suddenly in high demand in the Middle East, particularly in Pakistan and Dubai. "These new markets are just clamoring for the stuff," said Sarah Smith, a forest industry specialist for the University of New Hampshire Cooperative Extension. "They use it for trim and concrete forms and things like that. They like it because it's easy to work with using hand tools."

In the old days, New England settlers liked the species for the same reason. Eastern white pine wound up as sheathing for homes, posts and beams, and clapboards—a signature that has defined New England landscapes. The higher quality lumber went into interior paneling, flooring and furniture. "It's a very Northeast kind of thing," Smith said.

Over the years as other products such as plywood became available, finding uses for lower quality pine became more difficult.

heading overseas too—but less of it is coming back than it did a decade ago. And that trend is changing the flow of wood into and out of the state. Ten years ago, cheap manufacturing in China created an exodus of furniture manufacturers, Smith explained.

But recently, the expansion of China's middle class has created a new demand for wood products. That market, along with economic growth and a growing distaste for Chinese manufacturing here in the United States, have increased demand while beginning to reverse the manufacturing trend. "We're seeing more manufacturing coming back here," Smith said.

The strong demand for red oak translates into more money for landowners with mature stands, at least for now. (The average price for red oak sawlogs just five years ago was \$210 per thousand board feet, whereas this year it's \$330 per thousand board feet, according to N.H. Timberland Owners Association second quarter market reports.) Some industry insiders, however, say the Chinese market has peaked and will level out soon.

The Canadian market is a more traditionally strong market for New Hampshire wood that has reignited with the increasing demand and pricing for lumber.

"It's a lot better than we've seen in the last six or eight years. A lot of Canadian mills have started up in the last year that had been shut down prior," said Scott Astle, export manager for Green Crow Corporation's Northeast region.

Green Crow exports about 90 percent of its Northeastern logs, both softwood and hardwood, to Quebec. Many upgraded mills in Quebec are accepting lower grade wood that would typically be used for pulpwood and firewood at U.S. mills and are using it instead to make flooring that is shipped right back to the U.S., Astle said.

The Quebec market works so well because of proximity as well as efficiency when it comes to transportation costs. Trucks that bring finished products down each morning at 5 a.m. can unload and bring logs back up by 5 p.m.

“They’re down and back in one day,” Astle said. “They’ve already made money coming down; they don’t need that much going back. The return load is just to pay for the fuel and a little bit extra.”

ALL THINGS ENERGY

One thing that hasn’t changed here in New Hampshire is its reliance on wood for heat. What’s changed dramatically is how wood is utilized to meet the energy needs of homes and businesses.

Collectively, wood energy accounted for about 12% of the \$1.4 billion wood products industry in 2011, according to the North East State Foresters Association report, and most wood used for wood energy stays here in New Hampshire. In 2007, 1.9 million tons of wood was used for electricity and heat generation at all levels. In 2014, the total is 2.8 million tons.

Last year’s cold winter and high prices for oil and propane have led to a strong market for cord wood to fuel woodstoves.

“The hardwood firewood product is very much in demand right now,” Johnson said. “A lot of people burned through the wood that was in their woodshed.”

The wood pellet industry is also booming. Along with wood pellet space heaters, wood pellet boilers that operate as a central heating system are growing in popularity, thanks in part to major incentives by the Public Utilities Commission and some grants from the Northern Forest Center funded by the U.S. Endowment for Forestry and Communities, said Levesque, who created the North East State Foresters Association report.

More commercial and institutional facilities are jumping on the wood energy bandwagon as well, Levesque said. Together, homeowners and businesses use about 280,000 green tons (112,000 cords) of wood in the form of firewood, chips and pellets each year for heating purposes.

FOREST SOCIETY COMPLETES 5 TO 7 TIMBER SALES A YEAR

By Brenda Charpentier

Sustainable timber harvesting has been at the heart of the Forest Society right from the beginning in 1901, when our founders joined together to fight the indiscriminate, unsustainable clearing of the White Mountains. Today the tradition of modeling and advocating sustainable logging practices continues on land the Forest Society owns throughout the state.

In the last fiscal year, our forestry staff coordinated five timber sales that covered about 450 of our 53,000 acres. These sales generated \$259,000 in revenue that supports our land conservation mission. Completing between five and seven timber harvests a year is typical, and each harvest is carefully planned with an eye toward improving the woodlot. Because of this goal, about 73 percent of the timber we harvest is “lower grade” wood.

Most Forest Society timber gets trucked to mills in New Hampshire, neighboring states and Canada, while some also gets shipped overseas, depending on market demands, what species are being harvested and how far away each woodlot is from a mill that processes those species. Over the years, Forest Society wood has been used to make everything from skateboards to paper to wood pellets to fine furniture.

“Once we sell our logs to a primary market, whether that’s an operator or a mill, then it’s up to them to determine where the wood goes from there,” said Senior Director of Forestry George Frame. “Our wood could show up in any kind of product.”

Roughly 35,000 of the Forest Society’s 53,000 acres are harvestable. The rest are mostly ecoreserves (set aside to protect their exemplary habitat types), inaccessible areas and buffer areas along lakes, rivers and streams.

Determining how much of that available 35,000 acres to cut each year has everything to do with the art and science of sustainable forestry, one goal of which is to cut at or below the annual growth of the forest but never more than that.

“If we estimate that the growth that’s happening in our forests is half a cord per acre per year, then our allowable harvest would be about 16,000 cords a year. We currently harvest only 9,000 cords a year,” Frame said. “We wanted to be conservative in our approach so that we weren’t in fact over cutting. As we get more information (the Forest Society is in the midst of inventorying all 174 forest reservations), we will adjust our harvesting levels to meet our goals.”

Each year, the Forest Society invites the public to tour several of our active timber harvests. If you’d like to learn more about sustainable forestry and wood markets, these “timber tours” are ideal opportunities to talk directly with foresters and loggers. Please check our website, e-newsletters and Facebook posts for news of upcoming tours.



Photo by Steve Patten.

An increasing demand for mats that can be lain down to protect land from heavy equipment is creating an emerging mid-grade market for wood that traditionally would end up in lower-paying markets.

Additionally, wood is in demand for fueling wood energy plants. There are eight such plants around the state that collectively burn nearly three million tons of wood each year. The most recent to open was the Burgess BioPower plant in Berlin, which started operations in late 2013 on the site of the former Fraser Paper pulp mill, with the capacity to power 75,000 homes.

The value of wood energy—particularly the biomass energy that fuels energy plants—relative to its volume is very low to the landowner compared to the value of saw logs. But like other markets that utilize lower quality wood, wood energy encourages loggers to use best management practices that contribute to the health of higher quality trees.

“As long as there’s a low grade market that’s fairly strong, you can find operators willing to do the work of weeding and thinning. You have a forester, logger and landowner—a triumvirate—and it needs to be profitable for all three. Having profitable options gives you more choices and that can affect forest management,” Frame said.

There’s a new, unexpected player in the energy sector as well.

Lower quality hardwoods are now being utilized as “mat” logs, which are squared up and fastened together to be lain down to protect land around construction areas from heavy vehicles during pipeline work and in fracking operations for natural gas. “There’s a saw mill in Maine and two in New Hampshire that are utilizing what would otherwise be a low-grade log,” Johnson said. “They’re paying twice what these logs would normally be worth to make these mats.”

“The demand for these mats is astronomical,” said Steve Patten, procurement manager for Pine Tree Lumber in Lempster, which produces the mats. Originally developed for crossing delicate wetlands, the mats worked so well that regulators began requiring them in other off-road sites, Patten said. “Once the project is completed and the mats are picked up, it’s like (the equipment) was never there,” he said. “They work so well that they’re just being required on more and more projects.”

This new market is helping create what some experts see as a mid-grade marketplace, between the high quality hardwood that

The Burgess BioPower Plant in Berlin began operating in 2013, becoming the eighth wood-burning energy plant in New Hampshire.



Photo courtesy N.H. Timberland Owners Association.

becomes furniture and cabinetry and the pulp market that becomes paper products and biomass fuel. Experts aren't sure what the long-term impact of this market will be, but for now it's helping to keep mills running.

YANKEE RESOURCEFULNESS

No single product or market trend is likely to keep saw mills, logging operators and foresters afloat in these uncertain times. Instead, the most successful forest industry businesses have learned to adapt and change and make the most of their resources.

"Back in the old days, every town had a saw mill," said B. Manning, sales manager for Durgin and Crowell, a Springfield sawmill known in the industry as one of the top three producers of eastern white pine in the world. "They're like dirt roads and family farms. Now there are just a few left, and they have to do so much more."

From the pine-paneled offices of Durgin and Crowell, Manning oversees a complex process linking the white pine trees that are harvested each week with wholesalers in the United States and Canada. He works with about 200 loggers, both the modernized sort who navigate the forests with feller-buncher machines and the old-fashioned variety who rely on just a chainsaw, a skidder and muscle.

Working through wholesale distributors, about 35 percent of the mill's white pine is purchased by traditional retail lumber yards such as the Home Depot and A&B Lumber. About 40 percent goes to manufacturing companies that make furniture, cabinetry and other wood products. The remainder goes into specialty markets such as the log home industry.

But the high quality lumber that leaves Durgin and Crowell on flatbed trucks is only part of the story. All along the way there are byproducts, and the company is among those that attribute some of their success to an ability to utilize the parts of the tree that get left behind. Bark mulch is sold to local landscapers. Sawdust is burned on site to heat the dry kilns. Shavings from the planer are

sold by the trailer-load to farmers and other local businesses. And wood chips created during sawing are sold to pulp mills in Maine.

This kind of creativity mixed with efficiency is as important to the small logging operators and foresters as it is to the large mills. Loggers and foresters are constantly seeking out new, niche markets in order to find the best use and highest price for the logs on any given landing, Frame said.

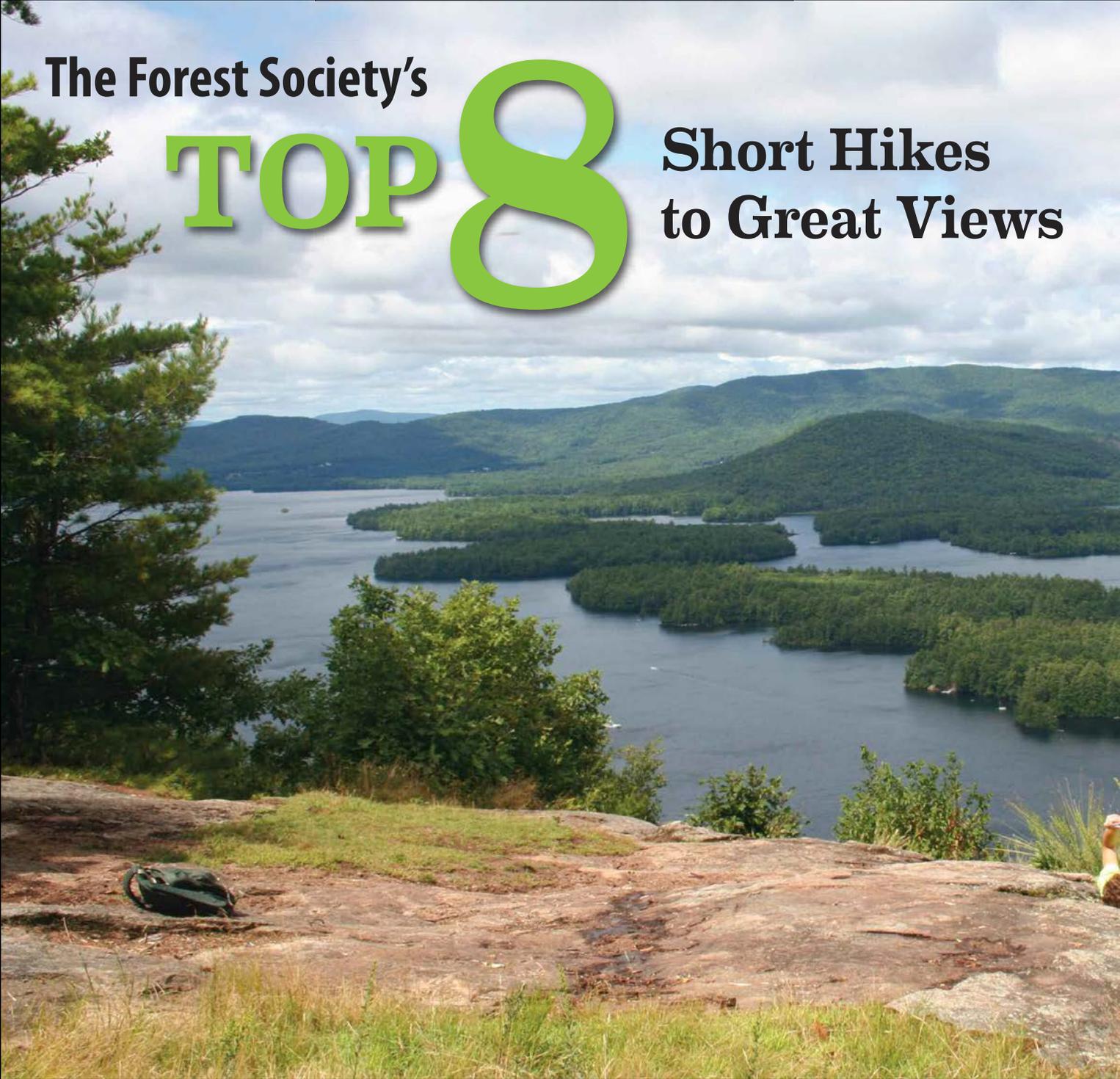
Meanwhile, traditional markets still dominate. The logging industry in New Hampshire still harvests about 419,000 cords (well over a million tons) of wood that goes to pulp mills in Maine and New York, according to the 2012 state foresters report. That's roughly one-third of the total volume harvested. Some of that wood returns to the state's paper mills, which collectively account for about 34 percent of the forest products economy (2011 data). Although the paper industry has suffered in the electronic age, sales of packaging products are brisk thanks to the online shopping industry.

In New Hampshire, a more robust market for low-grade wood also has opened up for private landowners since the large paper companies like Champion and International Paper divested themselves of large land holdings, Frame said.

"They became dependent on the free market to maintain volumes and production capacity, and they had to rely on other landowners rather than themselves. That affected the mills in how they procured wood to keep the process running. It has benefitted individual landowners by opening up a low-quality wood market to sell to pulp mills," he said.

Mills successfully diversifying, coupled with new markets and strengthening traditional ones, are vital to the future of New Hampshire forests. As long as landowners can continue to earn money from their woodlots, our forests are less likely to succumb to the developer's axe. ♣

Sarah Earle is a freelance writer who lives in Concord.



The Forest Society's

TOP 8

Short Hikes
to Great Views

Many woods-loving people are only too happy to spend a day or several walking in the mountains, looking forward to a well-earned top-of-the-world perspective. Rugged hiking reinforces what we know to be true about most things in life: You get out of them what you put into them. The harder you work, the greater the reward—right?

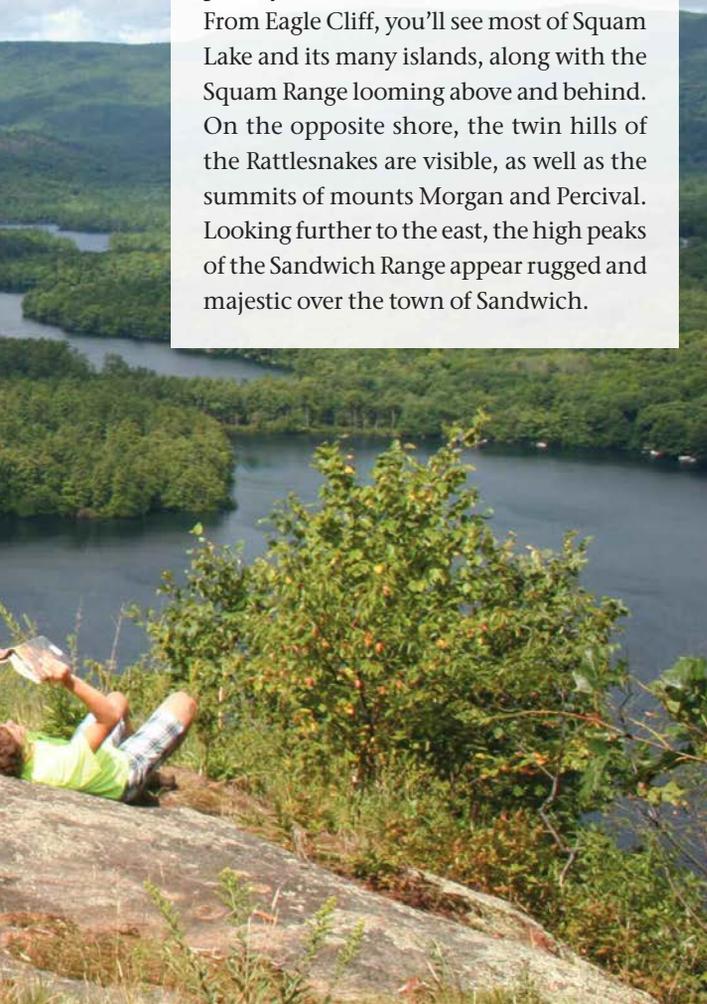
Well, not always!

 Visit our Online Guide for directions and more at www.forestsociety.org

Eagle Cliff

Merriman Forest, Sandwich, 102 acres

One of the finest views in the Squam Lakes Region is yours for the investment of about 25 minutes of climbing that climaxes with a strenuous scramble up granite ledges to get to Eagle Cliff—a 1.2-mile roundtrip hike. You can detour around the steepest part if you'd rather; the views are the same! From Eagle Cliff, you'll see most of Squam Lake and its many islands, along with the Squam Range looming above and behind. On the opposite shore, the twin hills of the Rattlesnakes are visible, as well as the summits of mounts Morgan and Percival. Looking further to the east, the high peaks of the Sandwich Range appear rugged and majestic over the town of Sandwich.



Mindful that time constraints can sometimes keep people in the valleys instead of on the mountaintops, we found eight exceptions to the “maximum effort yields maximum rewards” rule. These eight hikes offer the reward of a great view for a minimal investment of time and effort, requiring less than a three-mile roundtrip.

All eight are on Forest Society reservations and are included in the online Guide to Our Lands at www.forestsociety.org. That's where you'll find trail maps, directions and more detailed information. So with our apologies to the old Yankee work ethic, we hope you'll enjoy our Top 8 Short Hikes to Great Views.



Photos by Brenda Charpentier.

Pine Mountain

Evelyn H. & Albert D. Morse, Sr. Preserve, Alton, 432 acres

Open blueberry barrens at the summit of Pine Mountain provide spectacular views of Lake Winnepesaukee, Mt. Major and the entire Belknap Range. A wooden sign at the top gives you the names of all of the peaks you can see. Local students run up this mountain and back down the other side, since its gradual ascents and descents are perfect for their sports training. Done at a leisurely walk, it's an easy 1.7-mile roundtrip from the trailhead off of Avery Hill Road.

Sunset Hill

Hay Reservation, Newbury, 719 acres

The rocky summit of Sunset Hill offers sweeping views of Lake Sunapee, Mount Sunapee, Kearsarge, and distant peaks of the White Mountains. On the way up, enjoy the forests and old farm roads of this former hill farm once owned by Secretary of State John Milton Hay. Take your choice of either the 2.4-mile roundtrip from Route 103A trailhead or an equally moderate 1.8-mile roundtrip from the Chalk Pond Road trailhead. The hike takes about two hours roundtrip if you're not stopping—plan on three hours with kids who like to take snack breaks and find geocaches (there are at least five on the Hay reservation). It's pretty gentle incline for the first $\frac{3}{4}$ mile, but then climbs more steeply as you reach the top.

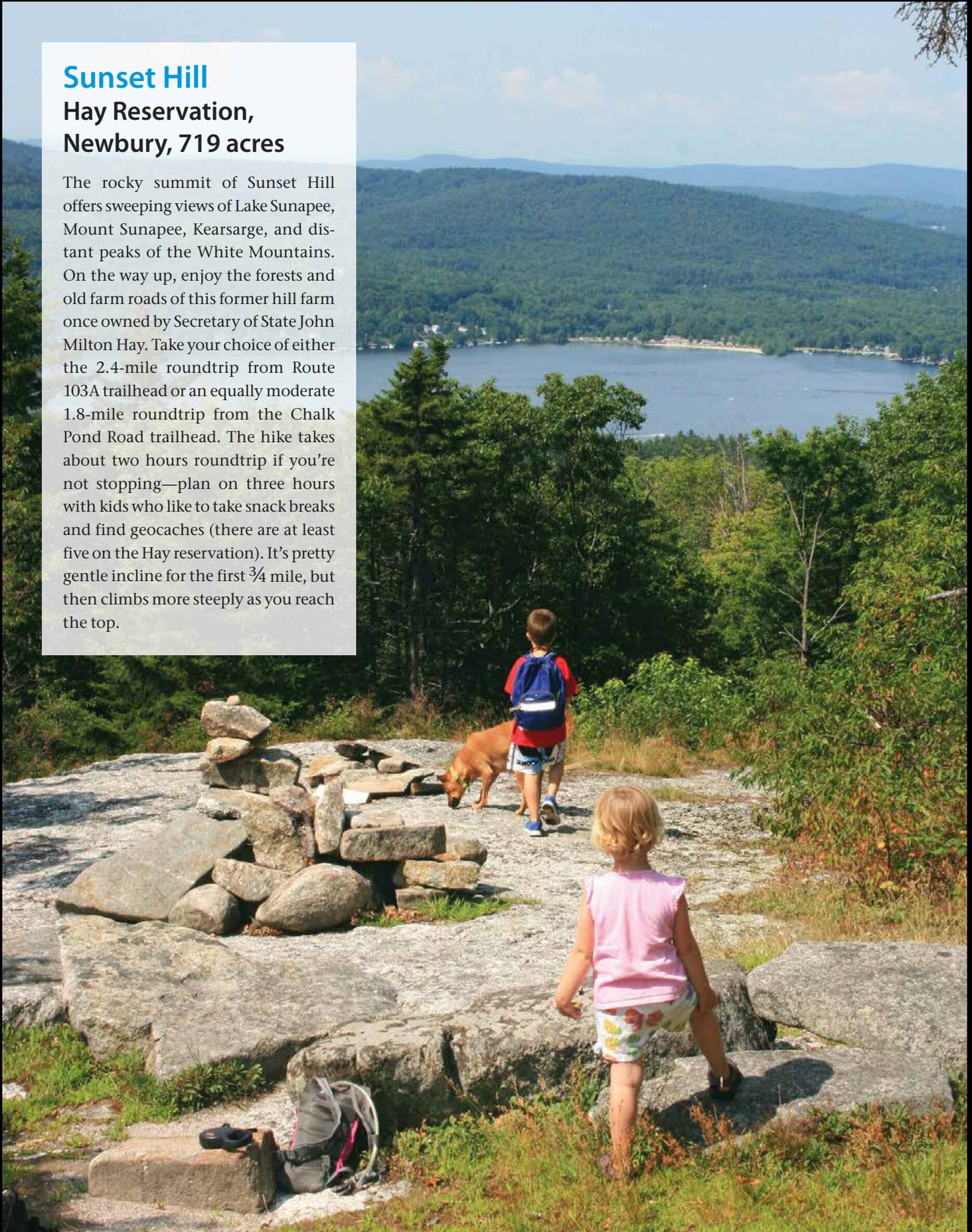
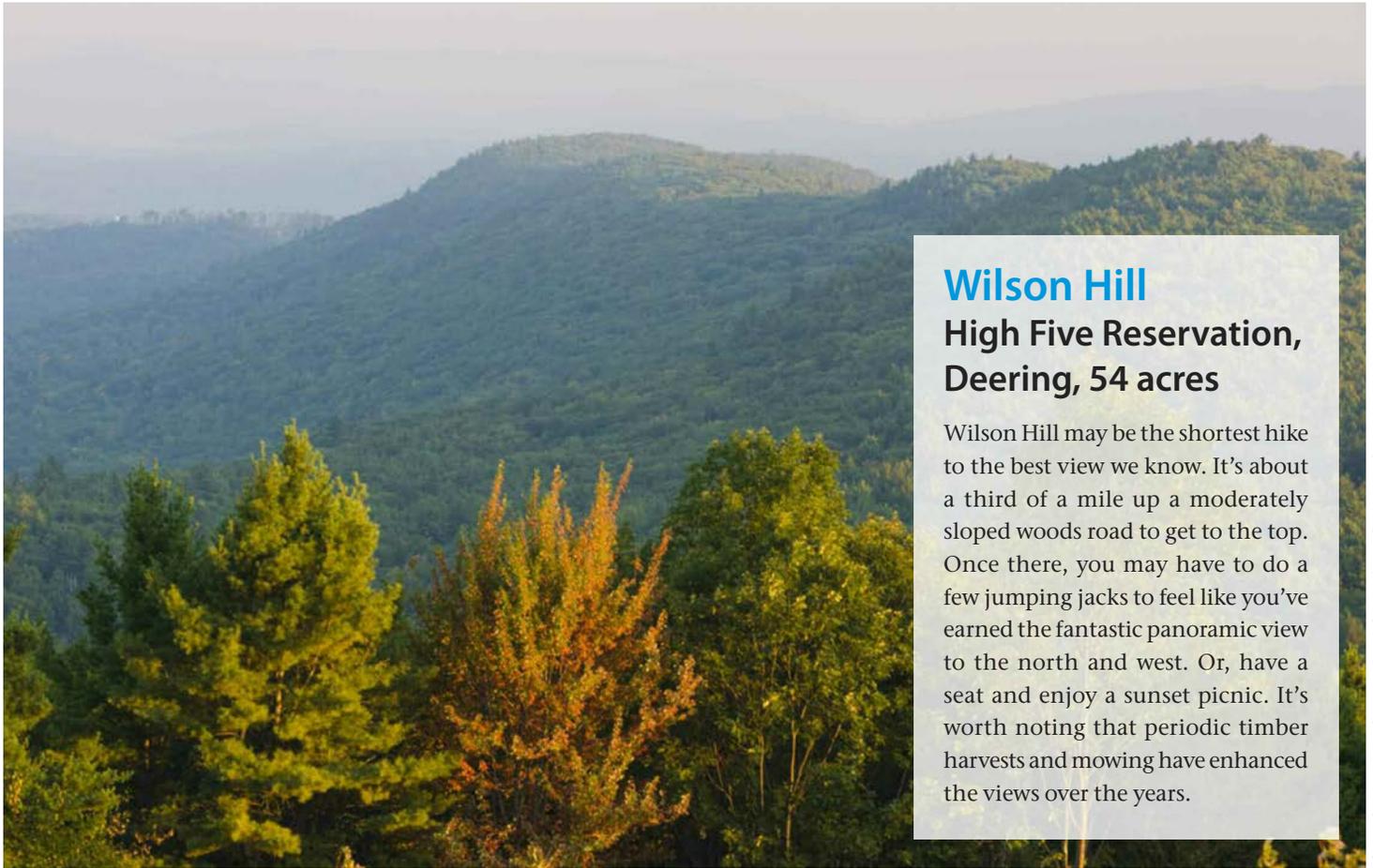


Photo by Carrie Deegan.



Wilson Hill **High Five Reservation, Deering, 54 acres**

Wilson Hill may be the shortest hike to the best view we know. It's about a third of a mile up a moderately sloped woods road to get to the top. Once there, you may have to do a few jumping jacks to feel like you've earned the fantastic panoramic view to the north and west. Or, have a seat and enjoy a sunset picnic. It's worth noting that periodic timber harvests and mowing have enhanced the views over the years.

Photo by Jerry and Marcy Monkman/EcoPhotography.com.



Old Burrows Farm and Phoebe's Nable **Moose Mountains Reservation, Middleton and Brookfield, 2,325 acres**

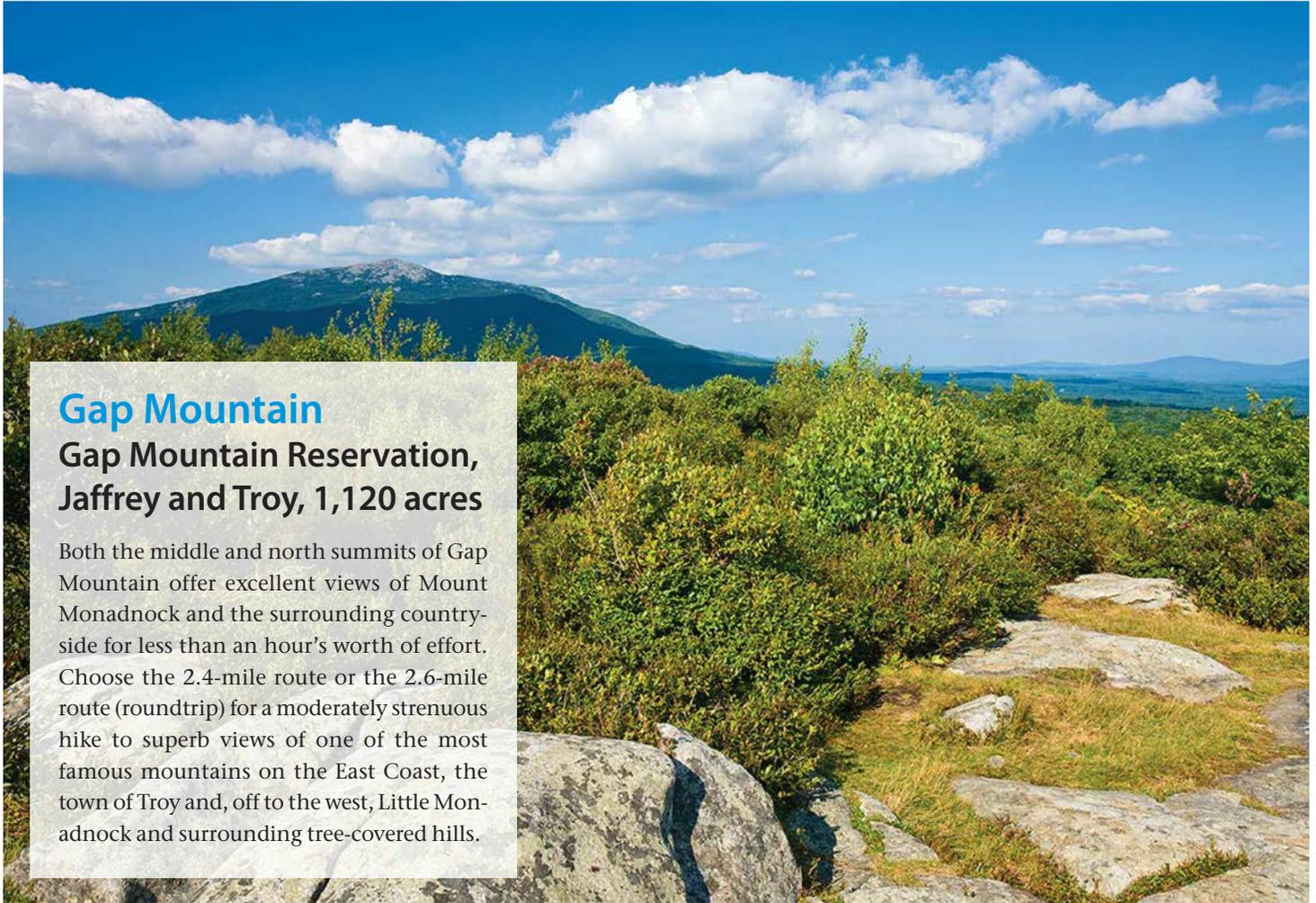
At 2.8 miles roundtrip, this one is a little longer than some of the other hikes in this collection, but you get more than a great view here—the route takes you through open fields of an old farm, and past an old cemetery before bringing you to an expansive 180-degree view of rolling, forested hills.

Photo by Jason Morris.

Silver Mountain

Ashuelot River Headwaters Forest, Lempster, 1,826 acres

A half-mile walk up a pretty forest path, softened by pine needles, is all it takes to feel on top of the world at Silver Mountain. The most dramatic views are to the west, overlooking the village of Lempster and the hills and hollows, farms, forests, and white meetinghouse steeple of Acworth. Across the Connecticut River Valley, the distant peaks of Mount Ascutney and Vermont's Green Mountains rise in the distance. With barely a structure in sight, the rolling green landscape undulates southwestward past mounts Moosilauke and Cardigan to the Wapack Range and Mount Monadnock in the south. Make sure you keep walking past the first vantage point until you get to a cairn that marks the summit and views in three directions.



Gap Mountain

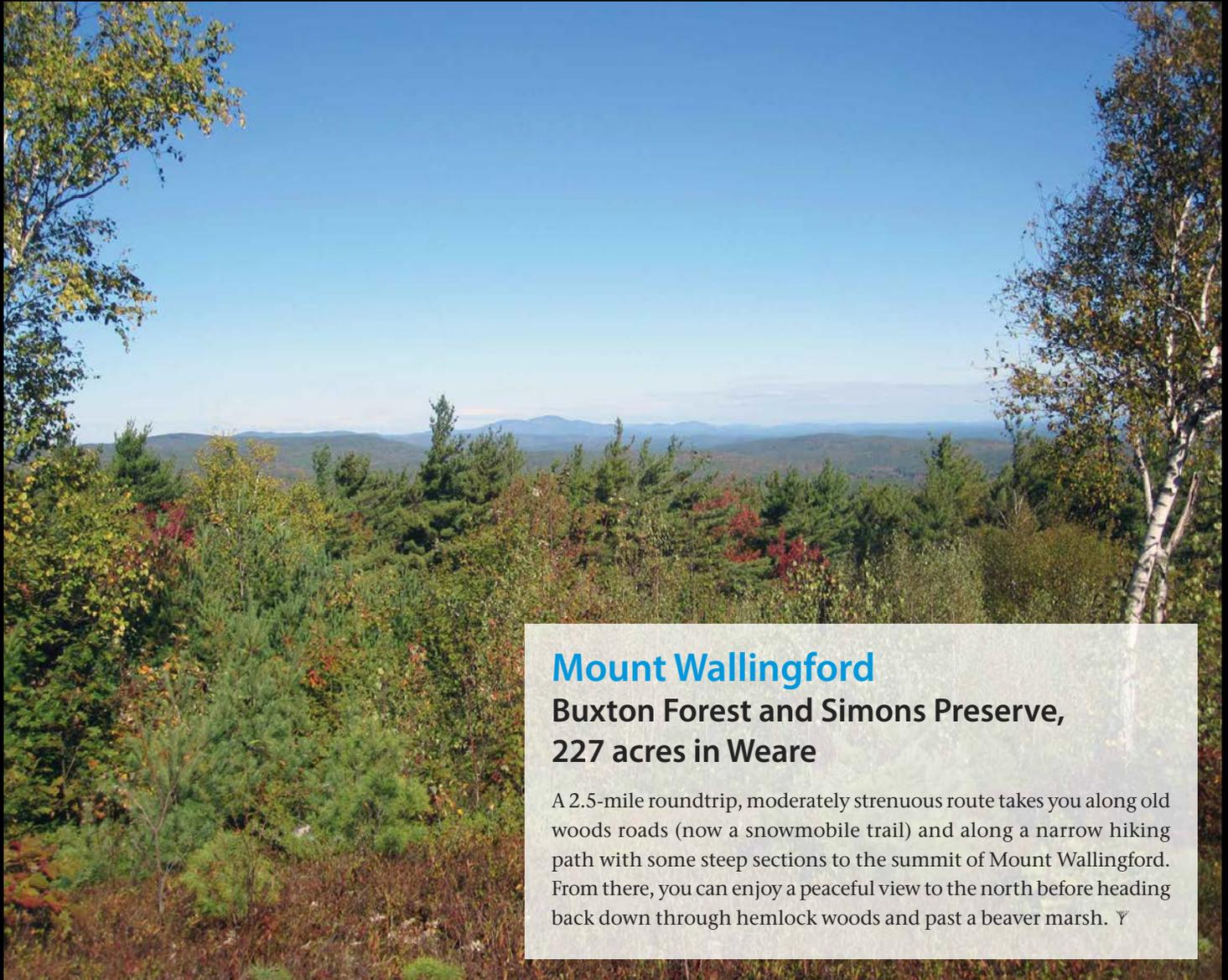
Gap Mountain Reservation, Jaffrey and Troy, 1,120 acres

Both the middle and north summits of Gap Mountain offer excellent views of Mount Monadnock and the surrounding countryside for less than an hour's worth of effort. Choose the 2.4-mile route or the 2.6-mile route (roundtrip) for a moderately strenuous hike to superb views of one of the most famous mountains on the East Coast, the town of Troy and, off to the west, Little Monadnock and surrounding tree-covered hills.

Photo by Jerry and Marcy Monkman/EcoPhotography.com.



Photos by Brenda Charpentier.



Mount Wallingford

Buxton Forest and Simons Preserve, 227 acres in Weare

A 2.5-mile roundtrip, moderately strenuous route takes you along old woods roads (now a snowmobile trail) and along a narrow hiking path with some steep sections to the summit of Mount Wallingford. From there, you can enjoy a peaceful view to the north before heading back down through hemlock woods and past a beaver marsh. ♪

Photo by Jay Irwin.

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We thank Hypertherm, Inc. for contributing an employee workday to the Forest Society!



Left: Hypertherm employees build one of several bog bridges on the trails of the Forest Society's Grafton Pond Reservation.



Right: Employees from Hypertherm join Forest Society staff and volunteers during lunch on an island in Grafton Pond while learning about the natural and cultural history and stewardship of the pond.



And many thanks to those businesses who give less than \$250.

The Forest Society... Where Conservation and Business Meet

For information on business memberships, please contact Susanne Kibler-Hacker at (603) 224-9945 or via email at skh@forestsociety.org.



Above: Locally-crafted gifts are the focus of two shops at the Rocks Estate in Bethlehem.



Left and above: Visitors can tour the scenic estate by horse-drawn carriage before or after cutting a Christmas tree from the farm or picking out a pre-cut tree.

One-Stop Christmas Ease at the Rocks Estate

The Forest Society's Rocks Estate Christmas Tree Farm has what it takes to make this Christmas season your most relaxed and enjoyable ever! Located in beautiful Bethlehem, N.H., the Rocks Estate is the Forest Society's North Country Conservation and Education Center. From now until Christmas Eve, you can make it your go-to spot online or in person for Christmas trees, wreaths, gifts, decorations and fun.

The **Marketplace and Gift Shop** are open daily (except Thanksgiving Day) from Nov. 3 to Christmas Eve. The Marketplace features an array of U.S.A.-made and locally-crafted items, from home goods and holiday decorations to jewelry and hand-made soaps, including hundreds of new Christmas ornaments. Marketplace favorites include the selection of ginger cottages, handcrafted in Virginia and complete with

display lights, as well as a line of wine and cocktail glasses etched with moose images, and designer bottles of maple syrup.

New this year are beautiful Advent calendars depicting classic New England scenes, whose artful appeal will extend beyond the holiday season. Offerings by local crafters and artisans extend from chocolates and preserves to handmade soaps and pottery. The gift shop shelves are filled with Rocks maple syrup, as well as ornaments, decorations, and tee-shirts.

Want to ship a New Hampshire Christmas tree or wreath to far-flung loved ones? Just go online or call.

Starting on Nov. 22, **cut-your-own and pre-cut Christmas trees** are available daily (except Thanksgiving Day) until Christmas Eve. Many families make The Rocks part

of their holiday tradition by combining the search for just the right tree with a **horse-drawn carriage ride** around the scenic estate. The carriage rides run weekends from Nov. 22 through Dec. 21 and are very popular, so please call ahead for reservations.

The Rocks also offers a network of **walking trails**, open daily, year-round, from dawn until dusk. The Rocks Mobile Tour, with more than a dozen signs throughout the property displaying QR codes, allows visitors to use their smart phones to learn more about the history of the Estate, modern day conservation and management practices, and the different types of Christmas trees grown on the farm.

Please visit www.therocks.org for online shopping or call 444-6228 for more information.

NOVEMBER AND DECEMBER

Art Exhibit: The Paintings of Mary R. Crump

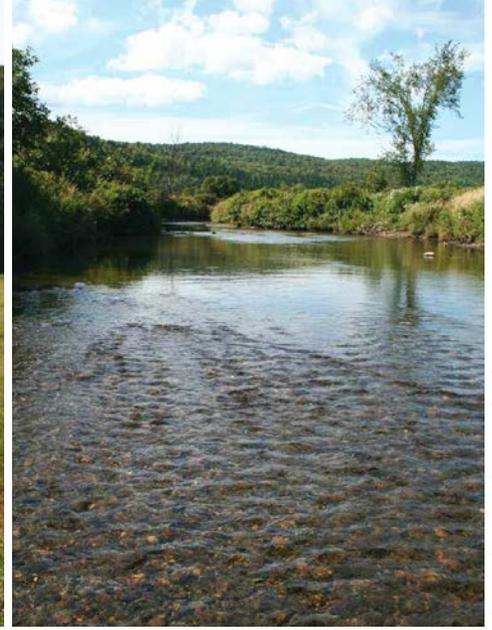
Conservation Center, Concord

Mary Crump of Concord interprets the beautiful scenery of New Hampshire, striving to capture the essence of each special place she chooses to paint. A member of the Nashua Art Association and the Manchester Art Association, Mary paints with the New Hampshire Pleine Aire Painters, a group that meets to paint in outdoors locations. A Fine Art graduate of UCLA, Mary has continued her studies in painting at the N.H. Art Institute in Manchester.

The exhibit is open for viewing Monday through Friday from 9 a.m. to 5 p.m. in the Conservation Center Conference Room, 54 Portsmouth St. in Concord. The Conference Room is used for meetings, so please call (603) 224-9945 before visiting to make sure it's open.



Loon Mountain Skiing, by Mary R. Crump.



Photos this page by Brenda Charpentier.

Above: The Maple Ridge Farm easements protect well-managed forests and hay fields, as well as frontage on Indian Stream (at right) and the Connecticut River, in a region that is the focus of native trout habitat conservation efforts by Trout Unlimited.

Below: Roy and Laurel Amey have deep farming roots in the Indian Stream Valley.

Protecting Their North Country Heritage

Farm Owners Conserve Fields, Forests and Trout Habitat

By Brenda Charpentier

It's a week after the North Country Moose Festival and Roy and Laurel Amey's barn in Pittsburg is still decorated for their annual open house, when visitors tour the farm, listen to live music and eat pie. Inside the barn, pumpkins and flowers still look festive among displays of antique farming tools, wagons and logging equipment. Outside the barn, a lawn chair looks inviting, with more like it out by the pool, but it's highly unlikely you'll see the Amey's sitting in them.

"We never sit by the pool. We work all the time, to make it look pretty for the next set of people to come," Roy said.

You get the feeling that that's the way they want it, that making it "look pretty" means maintaining and improving for a purpose beyond aesthetics, and sure enough, Roy backs up that assumption. "If it falls to shambles, what have you left



behind for the next family? All the people before me were able to farm here, raise families and pass it on. When I go—if I have to—I want it in the best condition for the next generation," he said.

Keeping up their farm is one way to preserve their rural heritage for the next generation. Others include restoring the town's 1897 schoolhouse and collecting farming tools and artifacts from every farm in the Indian Stream Valley to create a museum of sorts in their barn. And most recently, the Amey's have ensured that their land, too, an ecologically rich mix of managed woodlands and hay fields coursed through by a stream well known in fishing circles as native trout habitat, will be conserved for generations to come by selling two conservation easements on 269 of their acres to the Forest Society.

One easement covers 262 acres of Maple Ridge Farm, which is located close to the Connecticut Lakes and the Quebec border. The land includes roughly two-thirds of a mile along Indian Stream, a native eastern brook trout fishery that is a focus area for

habitat protection and restoration by Trout Unlimited, one of many partners in the easement purchases.

The other easement covers seven acres of hay land and wetlands, and runs about 2,000 feet along both Indian Stream and the Connecticut River to their junction just south of Rt. 3.

Frontage on both Indian Stream and the Connecticut River makes this land an ecological standout that attracted the funding support of many other organizations that partnered with the Forest Society to acquire the easements. They include the N.H. Land and Community Heritage Investment Program (LCHIP), the Open Space Institute's Transborder Fund, the Russell Farm and Forest Conservation Foundation, the Hunt Foundation, three local chapters and the statewide N.H. Council of Trout Unlimited, and private contributors.

The conservation of this land adds to the large mosaic of protected lands in the area, including Roy's brother John Amey's farm and forest land (where both Amey's grew up) just south of Maple Ridge Farm. Also close by is the 171,000-acre Connecticut Lakes Headwaters tract conserved by a statewide coalition in 2003. That easement protects Indian Stream north of the Amey land. Other blocks have been added since then, including the Forest Society's Washburn Family Forest, directly across the Connecticut from the Amey easements. The conservation of land across the border in Canada, including the 13,000 Mount Hereford Forest, further strengthens this region's ecological importance to wide-ranging wildlife species.

The easements will ensure that the land can never be developed and will remain open for hunting and fishing access as well as for other light recreation. The Amey's don't hunt or fish, but they do strongly support New Hampshire's tradition of open, unposted land.

"People come by and tell me what a good time they had fishing," Roy said. "What would it be like if everyone barred their land? I say let people enjoy what I call a beautiful place, let them have a place to walk

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on it, hunt on it, fish on it, and just enjoy it.”

Both Roy and Laurel Amey grew up in the Indian Stream Valley, but on nearby farms, not Maple Ridge. Their farming roots go back three generations, and Maple Ridge Farm connects both of their family histories in a way that makes it seem impossible that they would live anywhere else.

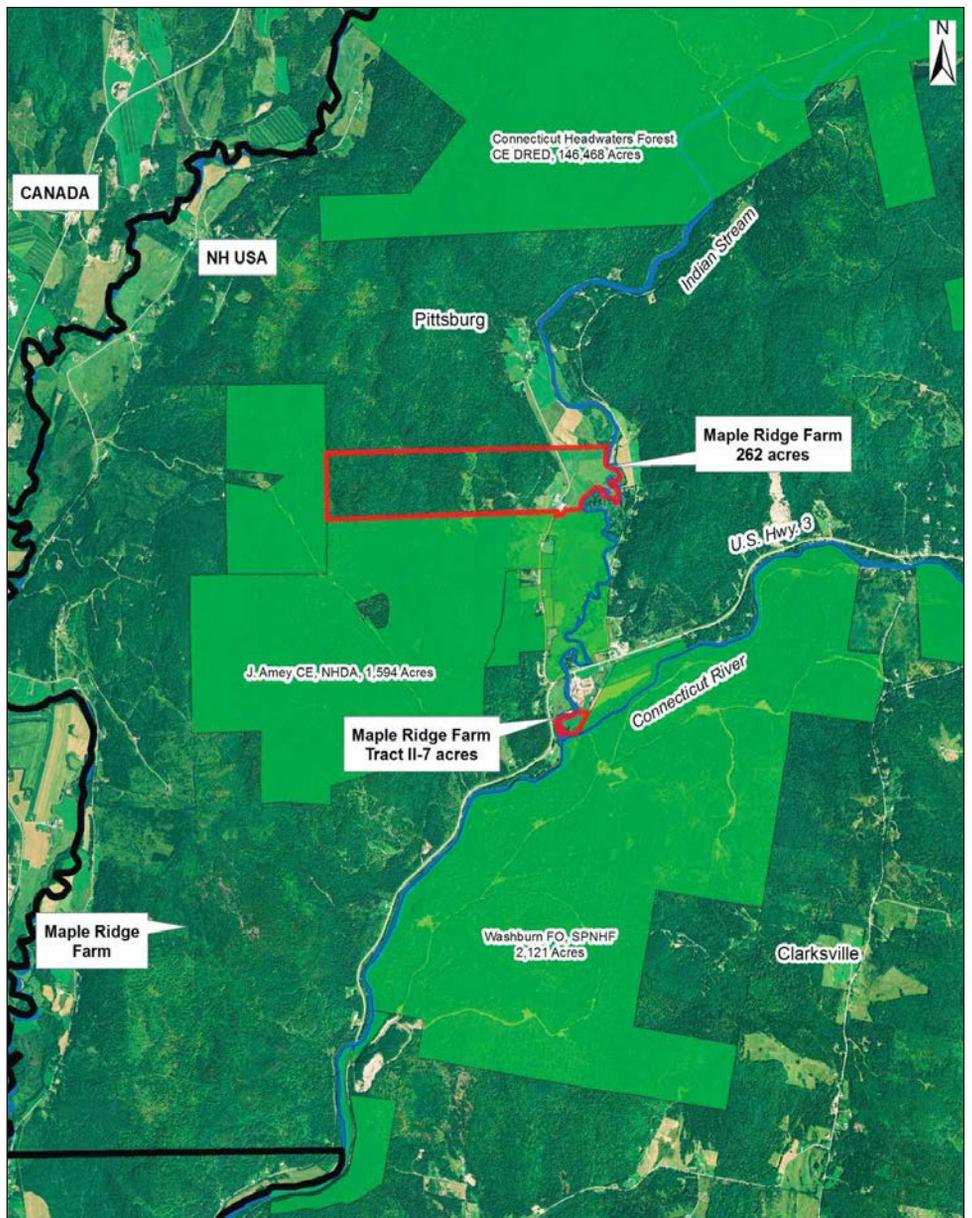
The house and barn were built in 1917 but originally sat some 10-12 miles away across the valley on land that is now at the bottom of Lake Francis. That farmland once belonged to Roy’s great grandparents. After Roy’s great grandfather John T. Amey died, Roy’s great grandmother sold the land, which was then sold again to Laurel’s great grandfather, Pat Gray. Members of the Gray family still owned it in the 1930s when the Army Corp of Engineers took the land by eminent domain in order to build Murphy Dam, which would flood the farm and others like it and create Lake Francis.

The Grays took the Army Corp’s offer to move their farmhouse and barn to their present location at Maple Ridge Farm, where Laurel’s grandparents and then parents farmed. Roy Amey grew up on the farm next door. When Roy was 18 and dating Laurel, with a down payment saved from milking and cutting pulpwood for neighbors, he bought Maple Ridge from Laurel’s grandmother.

It’s been the Amey’s home ever since, and they have raised four children there and now have six grandchildren.

Roy and Laurel have both worked both on and off the farm. Laurel is retired from working at a nursing home. Roy runs a logyard down the road from the farm that he started in the ‘80s after working in the cement business, trucking and road construction before that. Now, the logyard is busy as ever, they raise 35-36 acres of hay and are up to 35 beef cows and counting, thanks to granddaughter Cassandra’s interest in farming.

“Over the last 12 years we’ve increased and increased ... a lot of it is because of Cassandra. She wanted more animals and never wanted to sell any of them,” Roy said.



Map by Karen Rose.

The reason the N.H. Land and Community Heritage Investment Program (LCHIP) and other funding organizations supported the Forest Society’s efforts to conserve Maple Ridge Farm can be seen above. The two new easements conserve farmland and add to other large blocks of conserved land that protects the water quality of the Connecticut River and its tributaries and provides wide-ranging wildlife species with a larger corridor of conserved habitat.

The cows often graze up along the wooded hillside behind the farm buildings. One early fall day, Roy rode up the hill on the John Deere Gator, climbing until he and a visitor were high enough to see across the Indian Stream Valley all the way to Lake Francis, where both Roy and Laurel’s great grandparents once farmed. Forested hilltops surrounded the valley, save for one that had been cleared for development.

“I would turn over in my grave if there was ever a hotel up here overlooking farm-land,” Roy said of his hillside. Fortunately, the conservation easements have prevented that future, and though he may not rest in his lawn chair anytime soon, knowing that his land legacy is already in place brings another form of rest.

“As you get older you see what’s been destroyed, developed, changed,” he said. “I want this place to stay beautiful.” ♪



Left: Diana Louis, Sandy Peterson and Sherry Hadden at the log cabin built by their father in Tamworth.

Right: Robert and Don Reich during a visit to the Conservation Center.

Two Families, Two Legacies, One Bigger Conserved Forest

By Brenda Charpentier

In 2010, sisters Diana Louis, Faith (Sherry) Hadden, Sandy Peterson and Debby Ballam enabled the Forest Society, with support from the Tamworth conservation community, to acquire 138 acres of land in Tamworth by offering the land for sale at below market value, helping to create the beautiful Gilman Forest. With a picturesque stream, Mill Brook, tumbling through it and a network of inviting recreation trails, the forest became a community treasure.

But that was just the beginning. Recently the Forest Society and the Tamworth Conservation Commission worked together to add 63 more acres to the forest reservation through another generous bargain sale from the same family, with the addition of brother-in-law Charles Hitchings. In addition, the Forest Society and Commission acquired a conservation easement on an abutting 103-acre property from another set of siblings, Donald and Robert Reich, so that all told, the conserved land on and around the Gilman Forest has more than doubled in size. Both newly conserved parcels are important ecologically because they abut and enlarge 15 other contiguous, conserved tracts, totaling over 900 acres, and they add more wildlife habitat connections between the large, unfragmented forests of the Sandwich and Ossipee ranges.

The project's success has much to do with the commitment of the Tamworth community and the Forest Society to shared conservation goals, but when you trace the project back to its very beginnings in both families, you get to two very different manifestations of a powerful idea: legacy.

For Sisters, Land Holds Treasured Family Memories

"I think he would be smiling ear to ear," said Diana Louis, describing how her late father, Robert Freeto, would feel about the addition of 63 conserved acres to the Gilman Forest. She was walking along a grassy trail with her sisters, Sherry Hadden and Sandy Peterson, on the property in Tamworth they had just conserved with the Forest Society.

Like sisters frequently do, Sherry and Sandy finished her thought: "And our mom, too—she was a big part of this," Sherry said. "And Aunt Emily and Grandma and Grandpa and even GG, our mom's mom," added Sandy for the last word.

In this family, the deep shared love of this place began two generations ago, with their Great Aunt Emily. She was the first family member to visit friends in the area and form an emotional attachment that grew and grew. She tried to buy a few acres

off Durrell Road from the frugal farmer who owned it, but he would only agree to lease it to her. "She paid and paid and paid and finally persuaded the old "fahma" to sell her the land," Diana said.

Robert Freeto started visiting his Aunt Emily with his parents as a boy. When he was 17, his aunt asked him to build a log cabin, and he set to work with friends and neighbors felling trees and peeling logs for the task. The cabin was christened "Ullr Lodge," after an old Norse god of skiing, since Emily turned it into a cross-country ski lodge. (The guestbook for the lodge, filled with names from the 1930s and '40s, still sits on a table in the cabin today.) After his aunt and his parents died, Robert Freeto inherited the cabin, and it became a weekend and vacation destination from the family's home in Newton, Mass., where Robert worked as an attorney. For the Freeto sisters, the place was an adventure land of horseback riding and playing in the woods.

"We thought it was paradise," Sandy said.

"My mom loved the woods and she loved walking. We called them forced marches back then, but she would take us out there and say, 'Okay girls, I want you to take a deep breath and smell the pine needles!' To this day I love the smell of pine

needles, and when I go out for walks I think of her.”

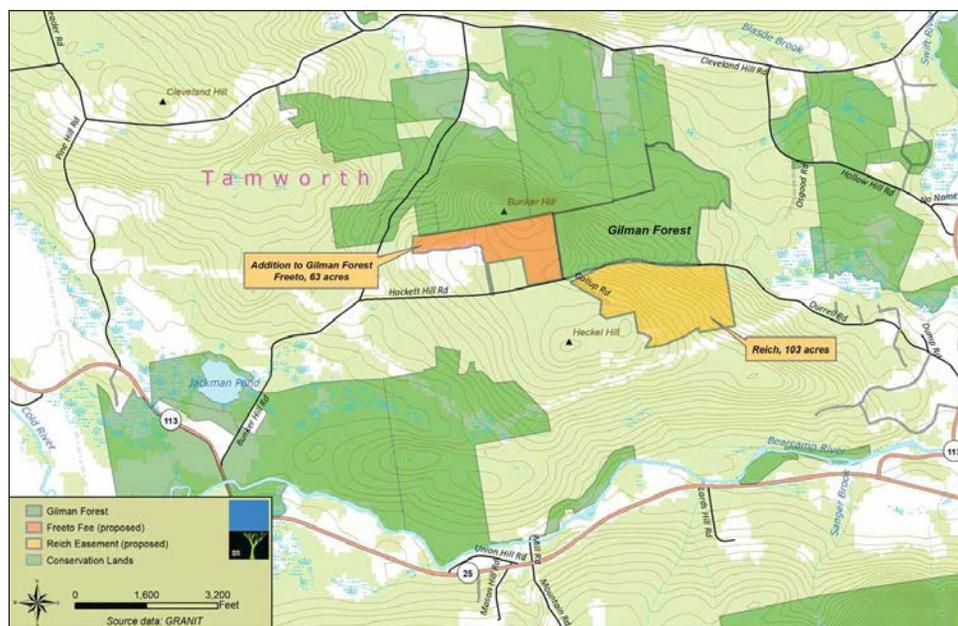
Over the years, the Fretos bought more land and when the sisters were grown up and living elsewhere with their own families, they pitched in, forming a family trust. Eventually they owned more than 200 acres. “Dad was really a conservationist at heart. He saw development coming. He just quietly bought and held the land to protect and conserve it,” Diana said.

Their parents divorced, but their dad retired to the Tamworth land and worked with fellow members of the Mill Brook Trails Association to build more trails on the property for cross country skiing and horseback riding. For a number of years, he and Diana ran a bed and breakfast, hosting visitors and their horses from far and wide. Today, the sisters still own the cabin and hold family get-togethers there. Diana lives on land nearby (and still rides horses there), while Sandy lives in Massachusetts, where she has led the Dudley Conservation Land Trust in protecting over 250 acres. Sherry lives in Vermont, where she stewards an old farm.

The first conservation project, of 138 acres, was completed after their father died in 2007. “We loved the land but we didn’t need it for ourselves and we weren’t going to farm it, so we said why don’t we try to conserve it?” Sandy said.

The second project started after their sister Debby died of cancer in 2012 and her husband wanted to divest himself of his quarter interest in land the family still jointly owned. Selling the land to a developer was not an option, and once more a bargain-sale partnership with the Forest Society and the Tamworth Conservation Commission proved to be the best solution.

“We, as sisters and as a family, believe so strongly in wild spaces that are conserved for future generations, where you can enjoy walks and peace and quiet and viewing animals,” Sherry said. “We would like other people to have that benefit for generations to come.”



For Brothers, a Family ‘Way of Thinking’

Herbert Reich was a technical writer who appreciated peace and quiet and beautiful places. About 50 years ago, he found all of that in the Hackett Hill area of Tamworth and bought more than 100 acres of land there. Former farms had left pastureland that opened up scenic views of the White Mountains.

“He had investigated it rather carefully, and he felt the view from the high country was about the finest anywhere,” said Robert Reich, Herbert’s son. “When it was pasture, of course, you could see in all directions.”

Herbert Reich, an electrical engineering professor at Yale and the University of Illinois and writer of technical books and journals, had a cottage in mind for the land at first, but life took him in other directions and he instead put the land under the care of a local forester, Scott Aspinal, who managed it for timber.

In 1976, Herbert deeded the land, now a certified Tree Farm, to his two sons, Robert and Donald Reich, Massachusetts organ builders who have kept the land under Aspinal’s care until he retired. Old cellar holes are all that remain of former farm houses on the property, and the pastures have reverted to forests. The Reich brothers’ decision to sell a conservation easement on the 103 acres to the Forest Society was made to ensure that the regrown forest will never be cleared for

development. Instead, it will strengthen the block of conserved land in the Gilman Forest area that provides wildlife with a large corridor of protected landscape. It’s a legacy fitting for Herbert Reich, a lifelong hiker who was still guiding students on mountain hikes in his 90s and walking in the woods with his sons until he was nearly 100.

“New Hampshire has lots of places that have been developed and that now have beautiful expensive homes. Our father would have been most unhappy to have that happen to our Tamworth land, so this prevents that as far as we can foresee,” Robert said.

The Reich brothers, now in their 80s, trace their conservation ethic back even farther than their father, to their grandfathers on both sides of the family. One was an artist who spent summers in the Catskill Mountains nurturing a deep appreciation for the quiet of forests. The other was a minister and farm owner who used his library full of books on farming, land management and forestry to advise his parishioners.

“He was talking conservation way back in the beginning of the 20th Century,” Robert said. “Conservation has just been a way of thinking in our family. We very much appreciate what the Forest Society is doing throughout the state, and we’re glad to be able to participate in that great work.”

Northern Pass Twisting In The Wind

Compromise unlikely despite calls to bury proposed transmission lines
Ayotte says “We’re worth it.”

By Jack Savage

In a meeting with Forest Society President/Forester Jane Difley and other senior staff this past summer, PSNH CEO Bill Quinlan delivered the clear message that his bosses at Northeast Utilities were not willing to consider burial of the proposed Northern Pass transmission line.

“It’s clear to us that NU and PSNH are not interested in meaningful compromise and won’t voluntarily withdraw their proposal,” Difley reported to Forest Society members at the organization’s annual meeting in September.

“The proposed 187-mile transmission line would directly impact three Forest Society Reservations,” Difley said. “Because of that as well as the landowners with whom we have worked to place conservation easements on nearly 8,000 acres of additional land that stands in the way of a Northern Pass route, we are confident that the proposed project does not have a viable route with site control,” Difley said. “As a non-reliability project, Northern Pass does not have access to eminent domain. It is our intent to make our case in court if it ever comes to that. As John Harrigan likes to say, “we own the dirt” and we don’t intend to invite Northern Pass to play in it.”

Ayotte Calls for Burial Along Highways

In a late August appearance at the Easton Town Hall, U.S. Sen. Kelly Ayotte called for burial of the Northern Pass transmission line along existing highway corridors, noting that the technology to do so exists and is being used elsewhere, such as in New York for the 333-mile Champlain Hudson Power Express project. That project, also conceived in partnership with Hydro-Quebec, formally received its needed Presidential Permit from the U.S. Department of Energy (DOE) just recently.

Ayotte took time hiking in the White Mountains in a scenic area that would be directly impacted by the proposed overhead Northern Pass transmission line.

“We’re worth it,” Ayotte said in contrasting the impacts of overhead lines with underground lines. “This is obviously a very important issue to the town of Easton and the state. This is about all of us, not just the North Country.”

It is our intent to make our case in court if it ever comes to that.

— President/Forester Jane Difley

The DOE has commissioned work on a required Environmental Impact Study for Northern Pass, a draft of which may be complete by spring 2015. Earlier this year, Ayotte wrote a letter to the DOE asking the agency to consider analyzing crossing points other than the applicant’s proposed crossing in Pittsburg, N.H. In a Sept. 30, 2014 response, the DOE noted that the draft EIS will likely look at the potential for co-locating a Northern Pass line on an existing transmission corridor that crosses into the U.S. in northern Vermont. But the DOE apparently chose to ignore Ayotte’s primary point: that burial of a transmission line along highways might be best facilitated by looking at other points where roads cross the border (such as I-91 in Vermont).

Another proposed underground transmission line in Vermont, also in partnership with Hydro-Quebec and dubbed the New England Clean Power Link, sailed through DOE scoping hearings recently with little or no opposition. In contrast, scoping hearings for Northern Pass held in September of 2013 drew thousands of comments, most in opposition.

Little Support Elsewhere

Meanwhile, Northern Pass hasn’t garnered support from either incumbent Gov. Maggie Hassan or challenger Walt Havenstein. At a public event in late September, they both talked about energy issues.

“I cannot support the current [Northern Pass] proposal,” Havenstein said, noting that burial is an option to consider.

“While we need cheaper and cleaner base load power, the Northern Pass project does not provide that in a balanced way,” he added. (Northern Pass is a merchant project for which there has been no determination of need.)

Over the summer, Hassan has made sure to reassert her point of view as expressed a year ago in a *Boston Globe* op-ed.

“Like our New England neighbors, New Hampshire is working hard to reduce harmful fossil fuel emissions in order to clear the air and views of our great vistas. Why would we then sacrifice those views to miles and miles of towers?” she wrote.

“New England is demanding newer, cleaner and more innovative energy sources—energy sources that create jobs here in New England. We should also demand newer, cleaner and more innovative transmission methods.”

Over the summer the Forest Society and Appalachian Mountain Club worked with the Conservation Media Group to encourage New Hampshire citizens and visitors to sign a petition thanking Hassan and urging her to push for burying Northern Pass. To date some 8,500 people have signed that petition, which can be found online at www.conservationmediagroup.org/petition. ♪

Her Love for the Outdoors Lives On in Bequest

By Brenda Charpentier

Marsha Baker was never one to be squeamish. When she was a youngster growing up in Peterborough in a house near woods and a stream, she routinely brought home what others might not dare to touch.

“If she found an injured chipmunk or if she found a groundhog baby, she would bring that back home and raise it in the den,” recalled Marsha’s brother Lee Baker, four years her junior.

“She would raise cecropia moths in the bathtub and bring in branches of cherry leaves they liked to eat. Guests would say, ‘What was that munching in the middle of the night?’ ”

Marsha’s early interest in wildlife and nature grew as she got older, becoming her passion and comfort as she dealt with the epilepsy she was born with and then a 13-year fight with cancer that claimed her life in 2003 at the age of 57. Now, nearly 11 years later, the legacy she put in trust before her death has resulted in a large bequest to the Forest Society to use for conserving the wildlife habitat she was committed to protecting.

The Forest Society is one of six non-profit organizations Marsha’s bequest will strengthen. Marsha knew the Forest Society’s land protection mission well through her brother Lee and his wife Jeannette. They are longtime Forest Society members, and Lee has volunteered as a land steward ever since the program began in 1974. He now serves at both the McGreal Forest and the Kulish Forest in Hancock.

In her lifetime, Marsha joined with Jeannette, Lee and their mother, Virginia Baker, to support conservation close to their homes through the Harris Center for Conservation Education. The center named the conserved land around Rye Pond in Nelson, Antrim and Stoddard the Virginia Baker Natural Area in honor of the family’s support.



Marsha Baker

Courtesy photo.

Marsha wanted her bequest to the Forest Society to be used to protect even more land, because it was something tangible she could do to help protect homes for wildlife and places of natural beauty she so appreciated herself, Lee said.

She expressed that appreciation through nature photography, and she spent a lot of time taking photos around Rye Pond and wherever her adventurous spirit took her. Her epilepsy prevented her from driving, but with her mother as her companion, she took sightseeing cruises to Alaska, Hawaii and Bermuda and frequent more local photography excursions. Sometimes these excursions were quite eventful.

“They’d be driving along a busy road and Marsha would say ‘Mom, stop, stop,’ and it didn’t mean stopping half a mile down the road, it meant stopping *right there*,” Lee said.

Nature photography may have been toward the top of her list of interests, but it was a very long list. “Marsha had a vast

Marsha Baker wanted her bequest to the Forest Society to be used to protect land, because it was something tangible she could do to help protect homes for wildlife and places of natural beauty.

interest in everything,” Lee said. She collected books and volunteered at the Peterborough library, where her sister-in-law Jeannette worked and where she could indulge her curiosity all the more.

She enjoyed hiking and biking, and—even after getting cancer treatment—completed a biking marathon from Maine to Florida to raise money for local conservation efforts. Gardening was another passion, and she had a knack for it.

“I used to say growing up that she could take a dead stick and make it grow,” Lee said.

An abiding love for the outdoors was the thread running through all of Marsha’s interests, as was a strong sense of determination, whether it was to keep bicycling as long as she could despite her illness, make her vegetables grow, care for animals or help to protect land. Upon hearing of a need or a project, Lee said, her response often was “Shouldn’t someone do something?”

Through her bequest, Marsha has herself become that “someone.”

“We are deeply grateful for Marsha’s bequest, said Jane Difley, president/forester. “We share and respect her love for wildlife and her desire to provide a home for them and a place where others can find beauty and tranquility, and we’re honored to be able to work for land protection on her behalf.” ♣

Forest Society Awards John Brighton as Conservationist of the Year

Each year, The Forest Society honors someone whose outstanding dedication to conservation in New Hampshire is deserving of the organization's highest recognition. This year we recognized John Brighton, of Hanover and Washington, N.H., as that person at our annual meeting in Londonderry on Sept. 27.

In 2012, John learned that a 313-acre parcel of land next to his beloved Millen Lake in Washington was to be placed on the market to be sold for subdivision. He sprang to action and negotiated the purchase of the land. He then turned to the Forest Society and Washington's Conservation Commission for help. He organized a local group of volunteers to help raise the funds for the Forest Society to be the buyer. He helped with informational meetings about the project, studied the history of the foundations on the property and helped lead field trips during the fundraising campaign.

John helped to raise more than \$400,000 in the successful effort to buy and establish the Society's Farnsworth Hill Forest. Not ready to consider his job done, he became a volunteer land steward in that area and has put in countless hours cleaning up the landings on the property, repairing stonewalls and maintaining trails.

And then, when another abutting 245-acre parcel became available, he did it all over again. Thanks in large part to John's tireless efforts, the Forest Society closed in late September on our MacNeil Family Forest project (more on this project in the next issue of Forest Notes).

As is often the case, the willingness of an individual to go to such lengths arises from a deeply rooted conservation ethic. Back in 1962, John's family purchased an old hill farm on the shore of Millen Lake in Washington. At age 16 he met the love of his life—his wife, Susan, there, and today they live in Hanover, but spends as much time as



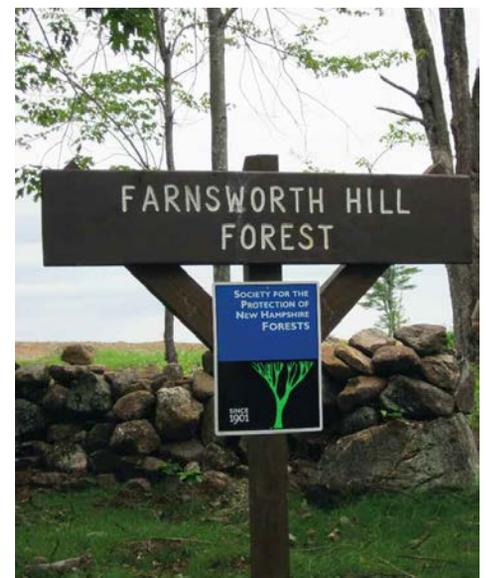
Photo by Diane Forbes.

Above: President/Forester Jane Difley presents the 2014 Conservationist of the Year Award to John Brighton at the annual meeting Sept. 27 at the Londonderry Country Club.

Below: John championed the creation of The Farnsworth Hill Forest in Washington.

he can in the hills of Washington. He knows the history of the first settlers, early farm families and their connections to the very first Seventh Day Adventist (SDA) religious community, which started in Washington. If you are lucky enough to join him on a field trip, he will not just give a tour, but will tell a story, read a poem, share a joke—he may even sing you a song! He is an a-capella singer also known to play “Taps” on his trumpet on warm summer evenings over Millen Lake.

Most important, he exhibits the traits of a true conservationist: an ethic, fueled by passion, energy and a willingness to be the person who takes the first step forward to protect a special place. ♪



On the Front Lines of the Bug Battle

Forest Society Land is a Test Site in the Search for Defenses Against Emerald Ash Borer

By George F. Frame, CF

EAB ... Extremely Aggravating Bug or Emerald Ash Borer (*Agrilus planipennis*), I guess they pretty much mean the same thing. First confirmed in Concord in March of 2013, the most damaging forest pest in North America is now in at least five New Hampshire towns and is creeping or flying close to a third county. Not very large, only a half-inch long, this bug in its various forms is a voracious eater of ash. The adults eat the leaves, and the larvae eat the inner bark of the tree where all the nutrients flow up and down along the stem.

It is presumed that the bug arrived from northeast Asia in packing materials accompanying shipping deliveries to Detroit. The latest APHIS (The Animal and Plant Health Inspection Service of the US Department of Agriculture) report states that the EAB has killed more than 30 million ash trees in Michigan alone. The EAB was discovered in 2002, but researchers believe it was busy for longer than 10 years before it was first realized. By 2008 it was in 10 states, and now it has been found in 24 states from New Hampshire to Colorado and from Minnesota to Georgia.

Ash makes up approximately six percent of the trees in New Hampshire's northern hardwood forests, or about 25 million trees. Because ash trees are a common landscape tree and have been used frequently in urban landscapes to replace American elm when that species suffered from Dutch elm disease, the effect of a possible widespread infestation would be seen along city streets. Ash makes up one percent, or 2.6 million board feet, of the 223 million board feet of wood harvested annually in New Hampshire, representing approximately \$500,000 in stumpage income to landowners and \$1.15 million in lumber at the mill, according to the state's Dept. of Resources and Economic Development (DRED).



Photo by Molly Heuss.



An emerald ash borer decimates an ash leaf.

Photo courtesy Debbie Miller, USDA Forest Service.

As can be seen in the picture above there is very little left of the tree's cambium when the tree is severely infested by EAB. Multiple larval galleries overlap in a spaghetti-like Gordian knot, starving the tree to death in just a few short years.



This ash tree was chewed by a beaver resulting in a decline that invited a subsequent EAB attack. Note the 'blonding' on the stem above the area where bark was removed to view the larval galleries. These bark changes are due to woodpecker activity as the birds excavate to get at the larvae underneath and are one of the key visible symptoms of an infestation.



Photo on left by George Frame; photo on right by Molly Heuss.

This picture shows the small EAB larval galleries in trees on the Forest Society's Conservation Center property. Notice the switchback track of the gallery which is a sure sign the culprit is EAB.

There are several control efforts being used to slow the advance of the EAB. Slowing the spread is the only recourse currently available. Nothing has stopped the movement of EAB, but slowing it would give forest managers time to prepare their woodlands for the inevitable, allow scientists more time to find cost effective treatments, and who knows, maybe even find a way to control the intensity of the attack.

Control efforts range from luring the beetle to reproduce on a particular tree and then removing the tree, which kills all the bugs within it, to treating the trees with an insecticide that kills the insects and their

larvae before they can reproduce, to using naturally occurring parasites in an attempt to reduce the numbers of EAB and slow their spread. The three controls are called mechanical, chemical and biological.

Mechanical Control

In the late winter of 2014, the Forest Society received the bad news that we had an infestation of EAB on our Conservation Center property in Concord. As a partner with NH Division of Forests and Lands (DFL), we had offered several of our ash trees to be partially girdled to act as traps last summer. We knew how important it

was to support DFL's efforts after helping work on delineating the initial impact zone around Concord in 2013.

A trap tree is a wounded ash that lets off chemicals that are received by the beetles as a message that there is a good weakened tree around perfect for EAB egg laying. This spring the trap trees were felled and the bark removed to expose any larval galleries. In our case, EAB galleries were found not only in the manmade trap trees, but also on ash trees that had been chewed by beavers in an area along Mill Brook, becoming naturally occurring trap trees.

"A society grows great when its people grow trees whose shade they will never sit in."

— Greek proverb



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Emamectin Benzoate (the active ingredient in Tree-øge[®], pronounced triage) is a systemic insecticide that has to be injected into the vascular system of the tree. Only insects that feed on portions of the tree (leaves, sap, and inner bark) will be affected. Because it moves using the tree's internal systems, the tree needs to be fairly healthy for the insecticide to distribute well and be effective. The chemical was approved for use in treating invasive pests by the EPA in 2011. It is restricted in New Hampshire and can only be purchased and applied by a licensed applicator. The chemical has been used effectively in Michigan for several years but overall costs and duration of efficacy have not been determined.

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Chemical Control

In early spring this year we helped DFL folks again when they needed an area for the application of an insecticide effective against all the larval stages of the EAB and against the adult when they eat the tree's leaves. Dr. Phillip Lewis from APHIS accompanied Kyle Lombard and Molly Heuss of the Forest Health Program to administer the insecticide to eight trees, several of which were known to have active larvae within them.

Emamectin benzoate was injected into the trees through small drill holes placed just above ground level. The injections were done under pressure, ensuring the chemical moved quickly into the tree's vascular system. Each application uses only 2 ml of chemical for every inch of tree diameter.

The active ingredient will remain within the tree for up to three years. The hope is that EAB adults will find these trees and lay their eggs on them. Then as the eggs hatch and the larvae bore into the tree, they will die.

In mid-June the foresters were back with a modified treatment plan that they established in several sites in our floodplain forest. This modified system combined partially girdled trap trees each attended by an insecticide treated tree. The strategy in this experiment is to lure the adults into the area and if they land on any of the ash in the area something will happen to them or their offspring. On these sites the trap trees will still be felled, but the insecticide-treated trees will be left to continue their work.



Photos by George Frame.

Left: Molly Heuss and Ray Boivin of the DFL get ready to hang a small bolt of ash containing living larvae of *Tetrastichus planipennisi* at the Forest Society's Merrimack River Outdoor Education and Conservation Area. The parasitoids were produced and supplied from the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) EAB Parasitoid Rearing Facility in Brighton, MI. (For parasitoid information please call 866-322-4512.)

Right: A small block of ash wood tied to an ash tree marks one of the wasp release sites.

Biological Control (BioControl)

Another tier of control treatments involves the use of parasitic wasps that lay their eggs inside either the EAB eggs or the EAB larvae. After searching northeastern Asia for natural controls to EAB, scientists found three parasitic wasps that spend their entire lives living off EAB eggs and larvae. Several years of testing later and all three were approved for use in the United States as the serious impacts of EAB were realized. Two wasps are being released in New Hampshire. *Tetrastichus planipennisi* drills through the ash bark to lay her eggs inside the EAB larva. *Oobius agrili* lays eggs within the EAB eggs before they hatch and enter the tree as larvae.

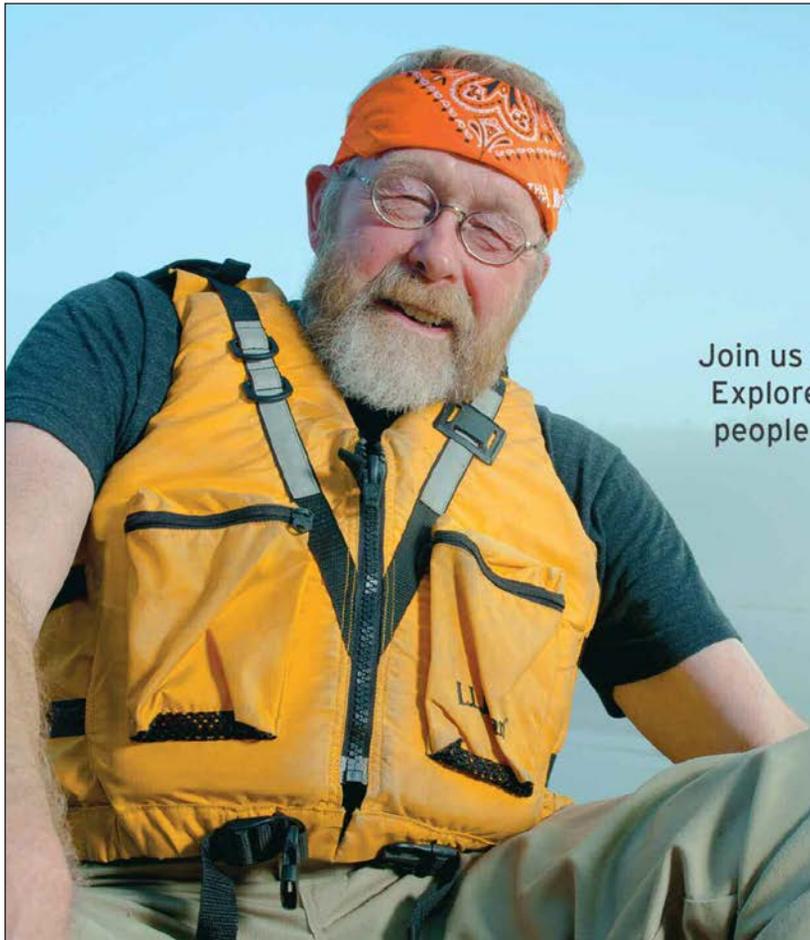
In late May, DFL staff received their first supply of *Tetrastichus* and delivered some to the Forest Society's Merrimack River floodplain reservation in Concord, where they were prepared for release on one large site. We were surprised to see little blocks of wood when we were expecting to see a bunch of tiny wasps. But inside the blocks were EAB larvae already carrying their little parasitic packages. Each EAB larva can be the host for over 100 wasp eggs. The adult wasps would soon emerge from the little blocks of ash wood and immediately move to the larger host tree and begin looking for EAB larvae. They would then drill through the bark to where the EAB larvae are feeding and place their eggs inside those larvae.

Several generations of the wasps would be produced over the summer and into the fall.

A second release of *Tetrastichus* was carried out in early June. At this release 500 adult wasps, all enjoying their transportation quarters of a lidded plastic cup, were set free near some infested ash trees. The third and final release of *Tetrastichus* will also be of adults.

The timing of the release of *Oobius agrili* is set to match the egg-laying season of the adult EAB beetle. Timing is everything in this field of science as the *Oobius* parasitize the eggs of EAB, laying their eggs inside the EAB eggs they locate in tiny fissures on the bark. On July 1st Heuss again showed up at the

Continued on page 33.



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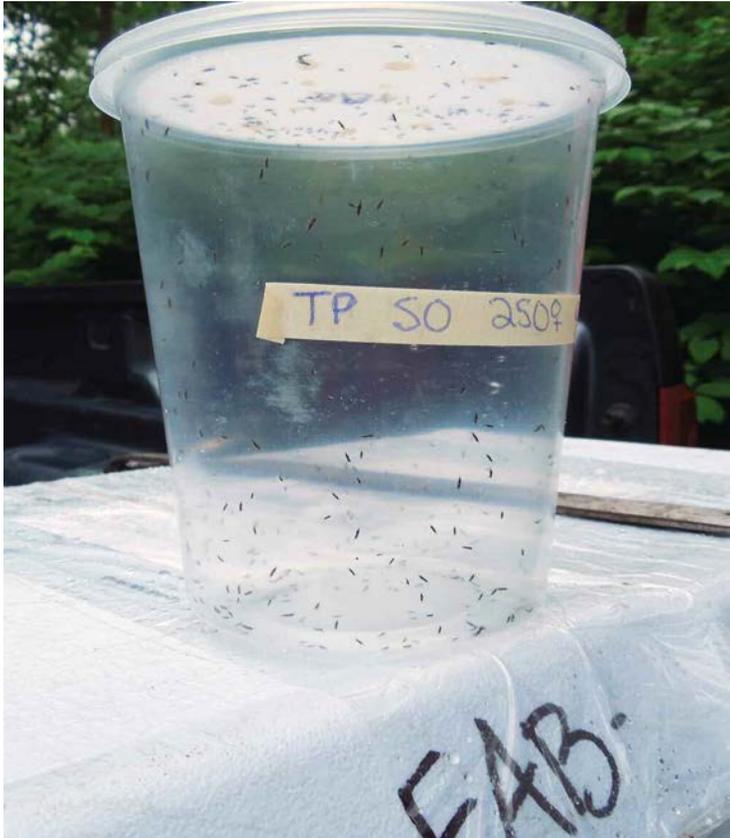
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Continued from page 31.



Photos by Molly Heuss.

Adult *Tetrastichus* wasps are tiny but deadly to EAB. About 250 adults were released last spring at the Merrimack River Outdoor Conservation and Education Area in Concord. Scientists hope the parasitic wasps will lay their eggs inside the eggs of nearby emerald ash borers and kill them.

Conservation Center's floodplain forest with a blue plastic cup containing EAB eggs already parasitized by the Oobis. As eggs hatch the adult wasps would find their way onto the ash tree stem and begin their search for any EAB eggs. Each Oobis can parasitize up to 62 EAB eggs during its short life.

The Future

The future could be pretty grim if you are a healthy ash tree growing in New Hampshire. In many places visited by the EAB beetle very few ash trees remain. I'm not saying that to be anything but realistic; while efforts will continue to slow the progress of the beetle and to find a control that reduces the impacts of an attack, the reality is that we are some distance from finding a solution. In the meantime, we will do three important things.

First, we'll continue providing some of our trees to the experts researching and carrying out control solutions. We believe offering some of our resource to move the research forward is one of highest and best uses of that resource at this time.

Second, we'll continue managing our lands using the best information we can find. We will enlist the support of experts when needed and continue to move forward, as that's the only direction that really seems to matter. Ash makes up between 3 and 6 percent of the trees on Forest Society reservations. You may not see their passing, since the holes left in the woods will quickly fill in with other species, but ultimately we will all feel the loss. That leads to our third action, which is to hope that a solution will be found in time to bring this extremely aggravating bug to heel before the last ash is gone.

Visit www.NHbugs.org for updates on the movement of the EAB and other pests found in the state. If you're a landowner, visit the site to learn the signs of an EAB infestation and report issues you find on your land. ♪

George Frame is the Senior Director of Forestry at the Forest Society. He can be reached at gframe@forestsociety.org.

*Note: Information in this article about the biocontrol of EAB came from "USDA-APHIS Biological Control of Emerald Ash Borer (*Agilus planipennis*)," by Juli Gould and Leah Baurer of the USDA FS Northern Research Station in East Lansing, Mich.*



P.E. teacher Sean McGrimley (left), who leads the annual Little Harbour School fourth-grade expedition to Mt. Major, enjoys a perfect sunny afternoon on the summit with retired P.E. teacher Steve Schulten, who started the tradition.



The entire fourth grade of Portsmouth's Little Harbour Elementary School gathers for the traditional group photo on top of Mt. Major.

Photos by Brenda Charpentier.

Where Today's Land Conservation Will Matter Most – The Future

By Dave Anderson

The outreach volunteer stationed at the main trailhead parking lot at Mt. Major related a scene from last year: two yellow school buses arrived to disgorge a *huge* gaggle of nearly 100 excited kids. Some 25 parent chaperones followed in private vehicles.

The students raced up and down the mountain. Chaperones descended a little more slowly. All had a great time climbing rocks, getting fresh air and exercise.

We then heard a suggestion from that volunteer and her husband, longtime Forest Society supporters Martha and John Chandler of Laconia: As the Forest Society becomes a key landowner hosting segments of the most

popular trails on Mt. Major, perhaps we might provide education resources for the many schools with traditions of climbing the peak.

This inquiry led us to the Little Harbour Elementary School in Portsmouth, where we met P.E. teacher Sean McGrimley. Sean organizes a school hike at Mt. Major for fourth grade classes as an annual LHS tradition. We asked if LHS students would be willing to share their Mt. Major experiences. What had they liked? Disliked? What had they wondered about? The idea for a new pilot education program was born!

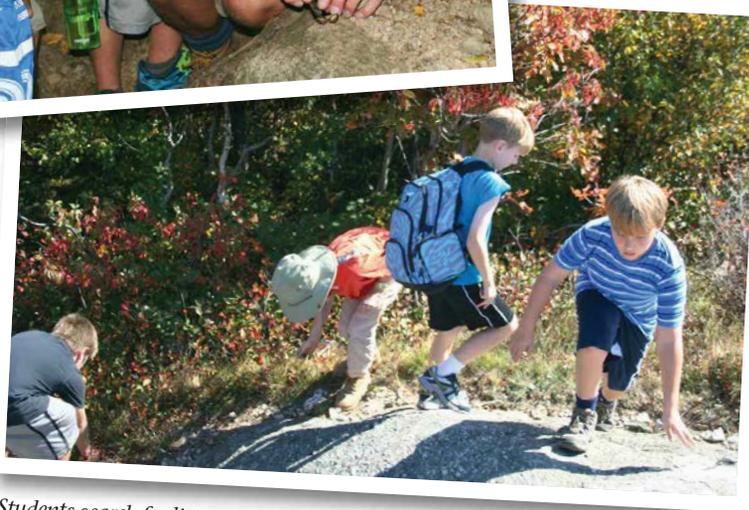
Fast-forward to this past September. I visited LHS on a Wednesday afternoon

with an introductory presentation designed for students about what to look for and what to expect from their upcoming hike, including prominent features along the trail, forest types, examples of wildlife, geology, land use history and hiker etiquette and basic safety. That same evening, I met with two dozen parent chaperones to share the same information and news of the land conservation campaign by the Forest Society and Lakes Region Conservation Trust, culminating in the acquisition of four tracts in the Belknap Range, including two on Mt. Major.

The following Friday brought perfect weather. We joined students, parents and



Dave Anderson cuts into an oak gall found along the trail to look for an insect larva.



Students search for litter to pick up before heading down the mountain.

staff for their hike. Retired P.E. teacher Steve Schulten, who established the LHS tradition, returned to accompany his former colleagues. The mountain itself did most of the teaching that day. Students knew more about what to look for regarding the natural and cultural history of Mt. Major. As they climbed, they proudly pointed out landmarks – blazes, carved initials in beech bark, stonewalls, USGS benchmarks and Mr. Phippen’s hut at the summit. Some students documented the hike with cellphone photos, collecting selfies and images from the pre-hike presentation in an impromptu scavenger hunt! The summit group photo is another LHS tradition. The photo is displayed in large format on the gym wall.

We’re learning from the experience of working with Little Harbour School just as they’re learning more about the mountain from us through this unique partnership,

sponsored by grants from the George Dorr Foundation and an anonymous donor. We’ll endeavor to expand to reach other New Hampshire schools with hiking traditions at Mt. Major ... or perhaps elsewhere. It’s not hard to imagine expanding this school outreach to other places where the Forest Society has a significant land conservation history and owns portions of popular hiking trails.

The experience of sharing a perfect September day with a vibrant community of faculty, parents and students puts land conservation work in context. This is where today’s land conservation efforts will matter most: the future. ♪

Naturalist Dave Anderson is director of education and volunteers for The Forest Society. He can be reached via e-mail at danderson@forestsociety.org.



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Licensed foresters should address inquiries about advertising to Jack Savage at (603) 224-9945 or jsavage@forestsociety.org.



Photos by Brian Hotz.

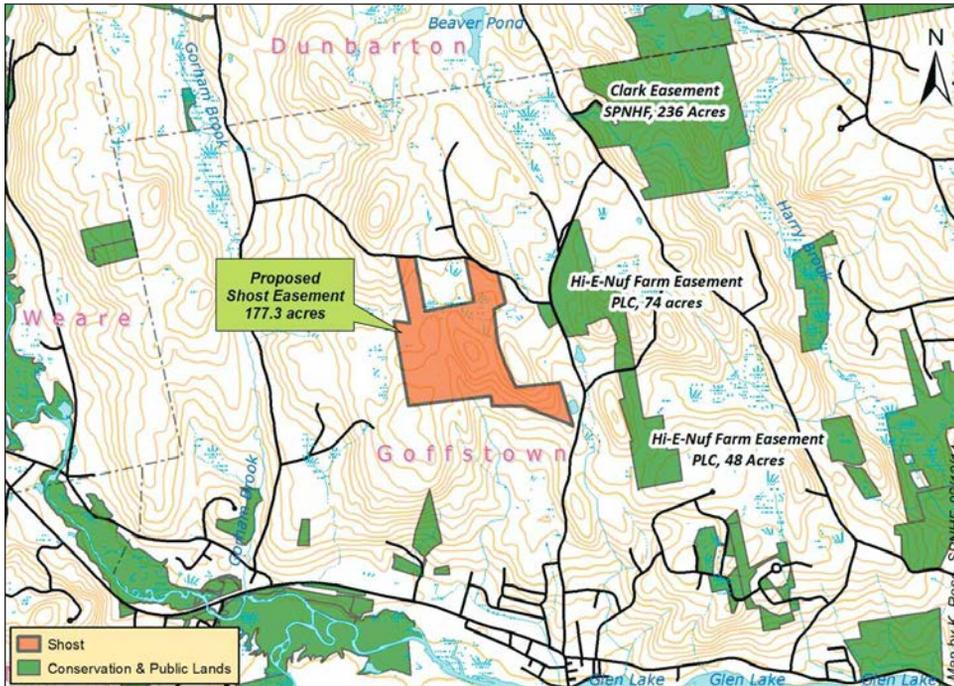
Great blue herons use the swamp on the Shost property as a rookery, building their nests in the standing dead trees.

Help Us Protect Prime Wetlands and Wildlife Habitat in Goffstown

The Forest Society is partnering with the Goffstown Conservation Commission to protect a 177-acre property with forests, fields and an exceptional variety of wetlands that provide important wildlife habitats and protect water quality in a region under heavy development pressure.

The property, off Snook Road, belongs to the Shost family and has an apple- and hay-farming heritage. The Shost family has agreed to sell a conservation easement on the property to the Forest Society at a price that is substantially below market value, providing an exciting opportunity to





protect one of the remaining undeveloped woodlands of Goffstown.

We must raise \$300,000 to close on this property, and we hope you can help. Your gift by Dec. 31 will help us to meet our matching grant requirements. The town of Goffstown has pledged \$140,000 in matching funds for the project, so we are off to a promising start.

One of the gems on this property is a beaver pond known as Snook Road Swamp. It's part of a complex of wetlands that

features vernal pools and a perennial stream that drains south to the Piscataquog River which in turn flows into the Merrimack River. The Department of Environmental Services has designated these wetlands as "prime," and the area is designated as a conservation priority in the town's master plan and Open Space Conservation Plan as well as the Merrimack Valley Regional Conservation Plan completed in 2013.

Great blue herons use the wetlands for a rookery. The nests that adorn the swamp

trees symbolize the value this property holds for wildlife, noted in the N.H. Fish and Game Dept.'s Wildlife Action Plan, which identifies nearly the entire property as the highest quality habitat of its kind in the state.

Protecting this property while we still can will surely benefit wildlife, but the benefit extends to all of New Hampshire as we save the best of what we have left of our open spaces to perpetuate the quality of life we all value. ♪

YES, I WANT TO HELP THE FOREST SOCIETY PROTECT WILDLIFE HABITAT AND OPEN SPACE IN GOFFSTOWN

Name: _____

Address: _____

Town/City: _____ State: _____ Zip: _____

Telephone: _____ Email: _____

Enclosed is my tax-deductible contribution for \$ _____ to support wildlife habitat and open space in Goffstown

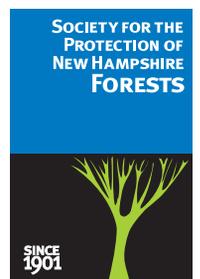
VISA MasterCard Number: _____

Expiration date: _____ Security code: _____

Please mail the completed form to: Society for the Protection of New Hampshire Forests
54 Portsmouth Street, Concord, NH 03301. Or donate online at www.forestsociety.org.

For more information, contact Susanne Kibler-Hacker at 603-224-9945
or via e-mail at skh@forestsociety.org.

Thank you for your help!





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THE MANY FACES OF CONSERVATION



Photo by Jeremy Barnaby/www.picturenh.com.

Garnet Hill Franconia

Members since 1992

Left: Sonya Clark, Human Resource Manager of Garnet Hill, a multichannel marketer specializing in original designs in clothing and home décor.

“**G**arnet Hill was born in New Hampshire in 1976, the brainchild of two entrepreneurial spirits who met as students at Franconia College. Our first home was an old sugar house in the woods of Sugar Hill—just space enough for a few people, lots of ambition and no plumbing.

We’ve since moved to the big city—Franconia!—but can still be found evenings and weekends hiking, climbing the White Mountains, clearing land for a local summer camp, or tackling the snowy trails of Cannon Mountain. We are never far from the forest.

Since 1992 we’ve given every employee a holiday gift certificate to the Forest Society’s Rocks Estate Christmas Tree Farm in Bethlehem. Employees use the certificates toward the purchase of a Christmas tree or wreath, or donate them to the Christmas Spirit Foundation for delivery of trees to service men and women and their families.

We thank the Forest Society for its preservation and stewardship of the Rocks Estate and the forests outside our window and beyond. It is a vital and honorable pursuit, and we are delighted to play our small role along the way.” ♣

MEMBERS MAKE THE DIFFERENCE!

Garnet Hill is 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.