

Forest Notes

NEW HAMPSHIRE'S CONSERVATION MAGAZINE

**A New Look at NH's
Changing Landscape
The Push to Protect Mount Monadnock**

WINTER 2012

SOCIETY FOR THE
PROTECTION OF
NEW HAMPSHIRE
FORESTS



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Jumping at the Chances

Even as we measure our changing New Hampshire landscape (see Dan Sundquist's article on page 4), the Forest Society continues to work to stave off the loss of our forests.

Today that means we must be nimble enough to take advantage of opportunities at the moment they arise. Late in 2011 we were presented with the chance to conserve the landscape surrounding the historic Balsams Wilderness Resort in Dixville Notch — nearly 6,000 acres we've sought to protect for at least a decade. Though it has meant a very short deadline for fundraising, we jumped at that chance. Just minutes after asking for help on our website, people like you began making donations. By the next issue of *Forest Notes*, I hope we can report that we were successful.

Elsewhere, the Forest Society is working to conserve some 400 acres on Mount Monadnock. Monadnock is among our earliest landscape-scale conservation initiatives. If we are successful with this latest project, this will be the largest addition to our 4,000-acre Monadnock Reservation since 1915.

I'm proud of the lead role we're playing on Monadnock, but we are not working alone. We are working with willing landowners whose conservation ethic is prompting them to want the land protected. The Town of Marlborough is helping with conservation fund monies. The state of New Hampshire has awarded the project a grant from the Land and

Community Heritage Investment Program (LCHIP). The Conservation Alliance (a group of outdoor industry companies that supports campaigns to protect threatened areas where outdoor enthusiasts recreate) helped kick things off with a national grant thanks to a strong recommendation from New Hampshire-based outdoor retailer EMS. Local individuals and foundations have been reaching deep to contribute as well.

I mention the Balsams and the Monadnock campaigns for two reasons. First, frankly, because we need your help to complete the fundraising. Second, because it's important to remember that while we often measure success in terms of how many acres are conserved, it is in fact the people and partners — public and private — that enable to us to protect these special places.



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 \$35 and includes a subscription to *Forest Notes*.

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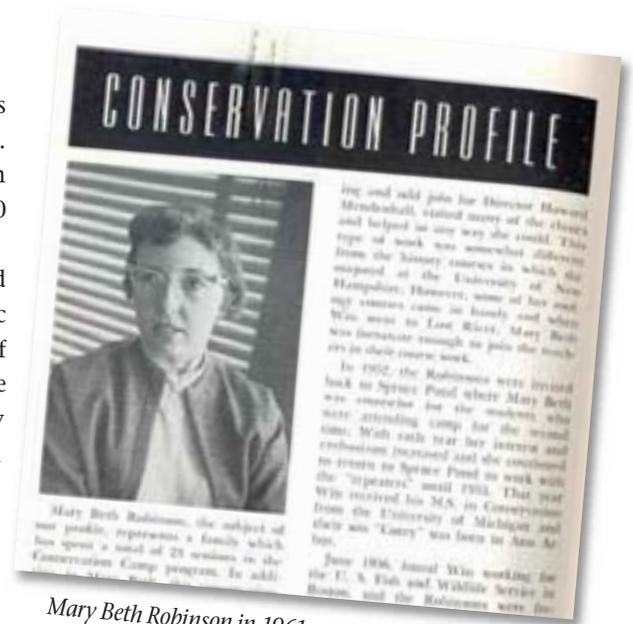
By Jack Savage

50 years ago in Forest Notes

The Winter 1961-62 issue of *Forest Notes* included comments by various dignitaries on the 50th anniversary celebration of the Weeks Act. Edgar C. Hirst—New Hampshire’s first state forester (from 1909-1920, during which time the Weeks Act was passed)—was the president of the Forest Society 50 years later.

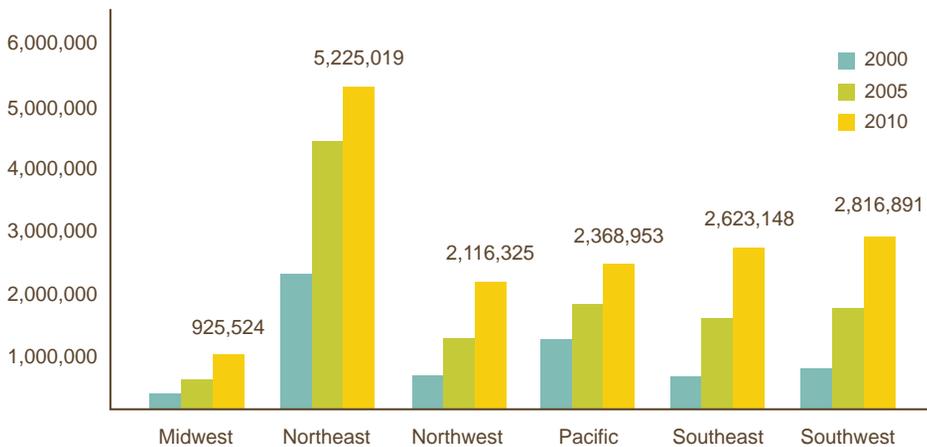
“The membership of the Society, especially in the early years, included many whose absorbing interest was the preservation of forests for their scenic value, while our lumbermen and most woodland owners thought chiefly of conversion into industrial and commercial products,” Hirst reported at the Weeks celebration. “These groups did not always see eye to eye, but as they met and rubbed shoulders in our meetings they began to appreciate each other’s point of view.”

By the way, also profiled in that same issue was a young conservationist named Mary Beth Robinson. A few years after that Mary Beth would begin working on staff at the Society—she retired not long ago after four decades of service.



Mary Beth Robinson in 1961.

Total acres conserved by state and local land trusts by region as of 2000, 2005, and 2010



National Land Conservation Census

According to the most recent census conducted by the Land Trust Alliance, states and local and national land trusts collectively conserved some 10 million acres nationwide between 2006-2010. This compares to 13 million acres conserved between 2001-2005. In total, it’s estimated that all land trusts have conserved 47 million acres nationally.

In New Hampshire, approximately 30 percent (1.746 million) of our 5.7 million acres is protected, almost half of which is represented by the 800,000 acres that is the White Mountain National Forest. The state and local land trusts in New Hampshire have collectively protected 348,274 acres. As part of this total, the Forest Society owns and manages some 50,000 acres among our 170 forest reservations and holds conservation easements on nearly 120,000 acres owned by others.



Left to right: Mike Smith, Ben Gayman, Harold Janeway, John Hardie (seated), retired President/Forester Paul Bofinger, Don Wharton, Jameson French, John Barto, Hank Swan, current President/Forester Jane Difley, and Dick Webb. Absent from this December 2011 meeting was Bill Dunlap. Photo by Joyce El Kouarti.

The President/Forester’s Council, comprising former chairs of the Forest Society Board of Trustees, meets from time to time to advise President/Forester Jane A. Difley on various matters of importance to the Forest Society.



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New Hampshire's Changing Landscape

Where to from here? By Dan Sundquist

Based on predictive models linked to population growth, another 225,000 acres of New Hampshire's forests will be developed in the years out to 2030.
Photo by Joyce El Kouarti.

We like to think of New Hampshire as a landscape embroidered with archetypal images of rural villages, farms, forests, and mountains. But our state has been changing dramatically over the last three decades, and our experience of the places we live and visit has been forever altered. To better understand these transformations and their impacts upon our natural resources, the Forest Society began a research project in 1998 called *New Hampshire's Changing Landscape* using geographic information systems technology and a host of data about population change, housing construction, and natural resources.

This study, first produced in 1999, was most recently updated in 2010. The trends that emerge from the data and maps tell a story of growth and change on the landscape. They highlight for communities and land conservation organizations areas of the state under development pressure and those places rich in important natural resources that are eddy spaces in the swirl of change.

Who Lives Here

Municipal population growth data from the New Hampshire Office of Energy and Planning and the US Census tell us much about where New Hampshire is changing.

Ken Johnson, senior demographer at the Carsey Institute at the University of New Hampshire, has been actively studying the new Census 2010 data. According to Johnson, these data tell a story about how New Hampshire has changed since 1990, and how these demographic shifts play into our collective will to conserve land

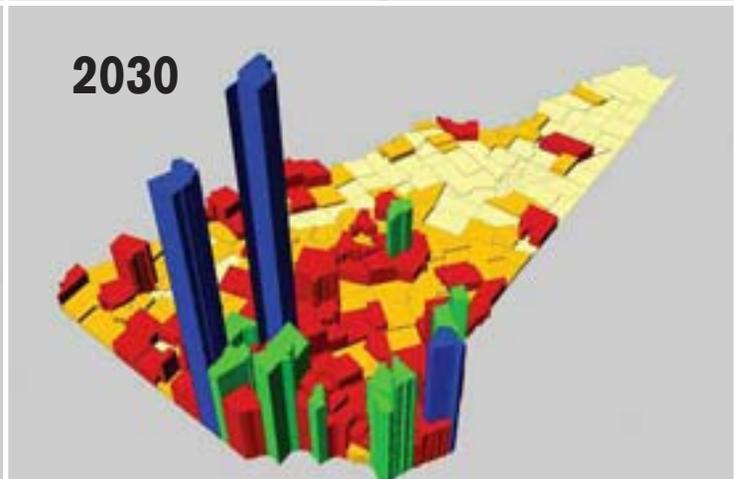
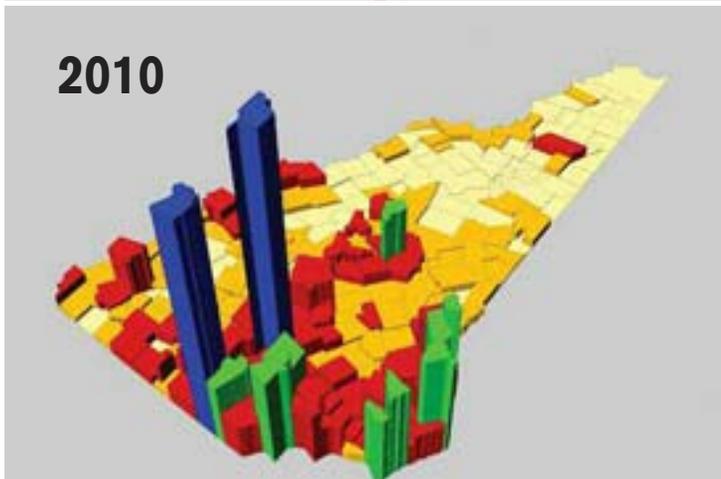
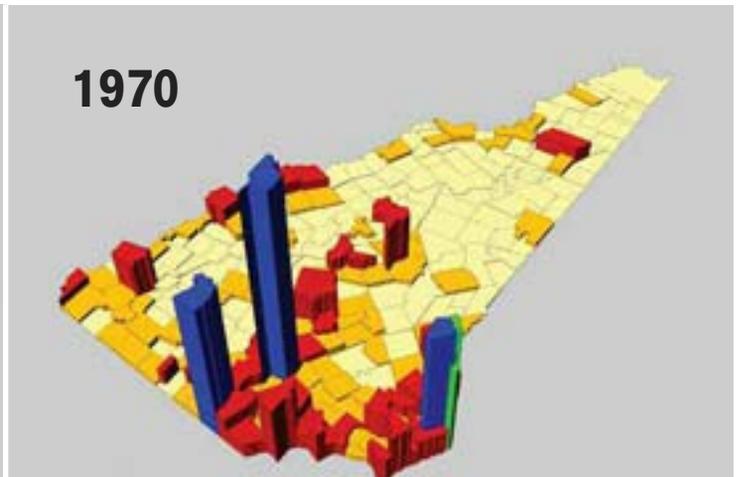
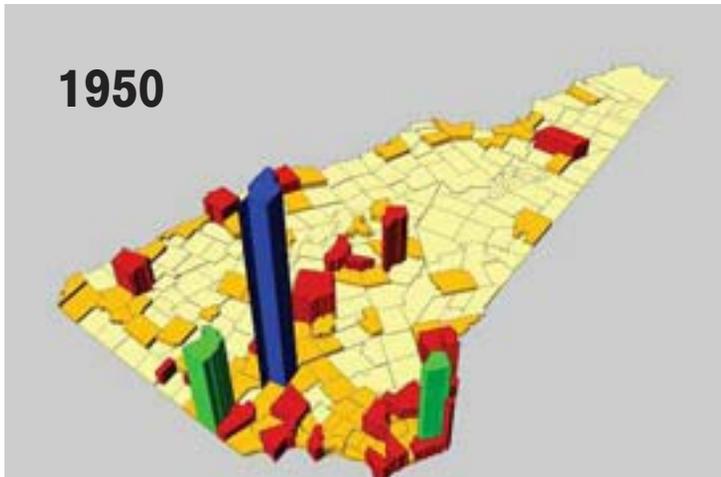
and natural resources. He notes that about 46 percent of all New Hampshire residents were born in the state, and that New Hampshire's population is older than it was 20 years ago.

"The state does not have a particularly large proportion of people over 65, but it does have a large middle-aged population, a function of the Baby Boom," he said. "To the extent that these people are more sensitive to natural resource issues because they grew up in an era when such issues were a dominant theme, this might lead to greater support for conservation."

Where We Live

Population density is defined as the number of people living within a square mile. In 1950 New Hampshire had a population of 532,000, and rural density was the dominant characteristic. By 1970 growth in the Boston metropolitan area had begun to influence our southern tier communities. By 2010 much of southeastern New Hampshire had shifted to suburban and urban densities. Factoring out to the projected population change in 2030, we can see a New Hampshire that will be radically different from the quaint and quiet patchwork of hamlets of the last 60 years.

Given the glimpse we have of the projected population density in 2030, we may want to consider how we will provide clean drinking water, access locally grown food, sustain working forests, allow for adequate wildlife habitat, and retain access to recreation opportunities in the natural environment in the future.



Population Density by Land Class

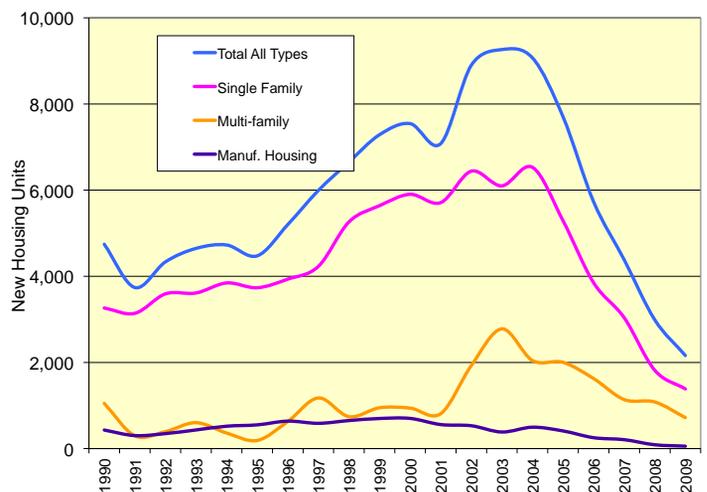
- Rural (<36 persons/sq mi)
- Exurban (36 to 144 persons/sq mi)
- Suburban (144 to 850 persons/sq mi)
- Urban (850 to 1445 persons/sq mi)
- Dense Urban (>1445 persons/sq mi)

These four graphs show population density change in each New Hampshire municipality for four periods: 1950, 1970, 2010, and projected out to 2030. Factoring out to the projected population change, we can see a New Hampshire that will be radically different from the quaint patchwork of hamlets of the last 60 years.

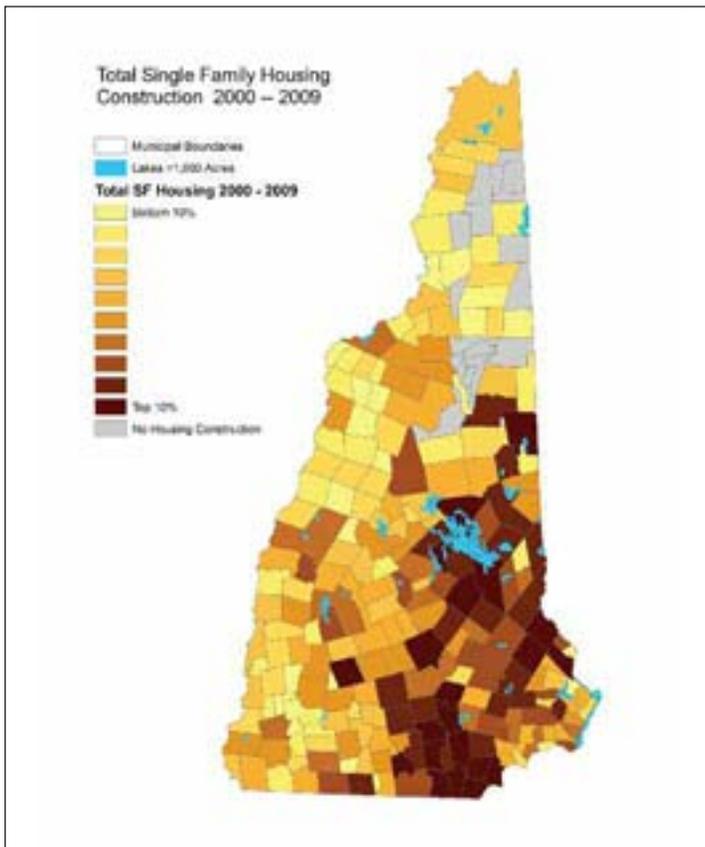
How We Live

People need habitat too, so new housing construction must keep pace with population change. The 2010 Census tallied up nearly 615,000 homes in New Hampshire, up from about 547,000 just ten years ago — about a 12 percent increase in the state’s housing base. Much of this new housing takes the form of single-family, detached dwellings on lots of one or two acres, driven in large part by municipal zoning ordinances seeking to preserve community character by keeping housing densities relatively low. However, low-density housing also requires vast amount of land, and it adversely impacts natural systems.

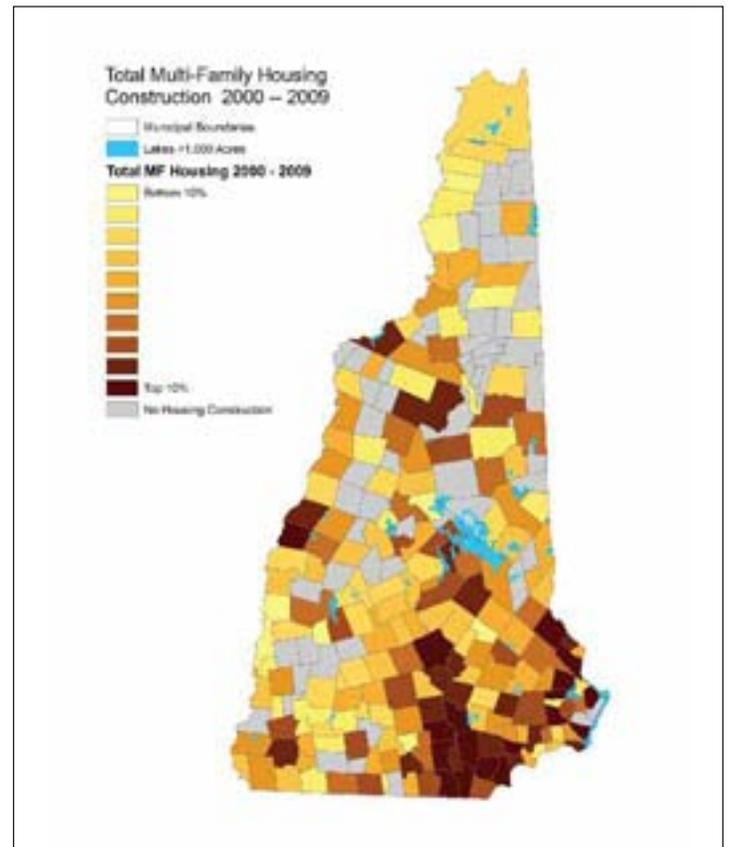
Single-family housing represents the huge majority of all new housing, totaling more than 86,000 units in this time period. If each of these new single-family homes were sited on two acres of land, nearly 270 square miles of forest, fields and farms would be converted to residential use. However, some New Hampshire



This New Housing Units chart, based on data developed by the New Hampshire Office of Energy and Planning in 2010, shows new housing construction in New Hampshire from 1990 to 2009 by housing type. Much of this new housing takes the form of single-family, detached dwellings on lots of one or two acres.



This Total Single Family Housing Construction map shows the percentile change in single-family housing by municipality from 2000 through 2009. The darker colors indicate the greatest increase in housing numbers. If each of these new single-family homes were sited on two acres of land, nearly 270 square miles of forest, fields and farms would be converted to residential use.



The darker colors in this Total Multi-Family Housing Construction map show which municipalities experienced the most construction of multi-family housing from 2000 to 2009. This map suggests an intense in-fill trend in already urbanized communities, increasing pressure on remaining natural resources.

communities are experiencing higher densities of new single-family housing construction and much smaller lot sizes, blending into multi-family housing. This trend reflects localized demand in built-up suburban and urban areas, where land for new housing is limited, and market drivers differ from more rural areas of the state.

New housing construction since 2000 has not occurred evenly across the state. Some of the greatest increases have occurred in the lower Merrimack River Valley and surrounding Lake Winnepesaukee. In the 1990s, Seacoast communities built a quarter of all new single-family homes statewide; during the last decade, that share dropped to about 8 percent. Over the past ten years, that growth center has moved up the Route 16 corridor into the Lakes Region. Merrimack River Valley communities continued apace over the last decade compared to the 1990s.

Multi-family housing construction is the second greatest contributor to growth in the state's housing stock and includes a range of options from attached townhomes to multi-story apartment buildings.

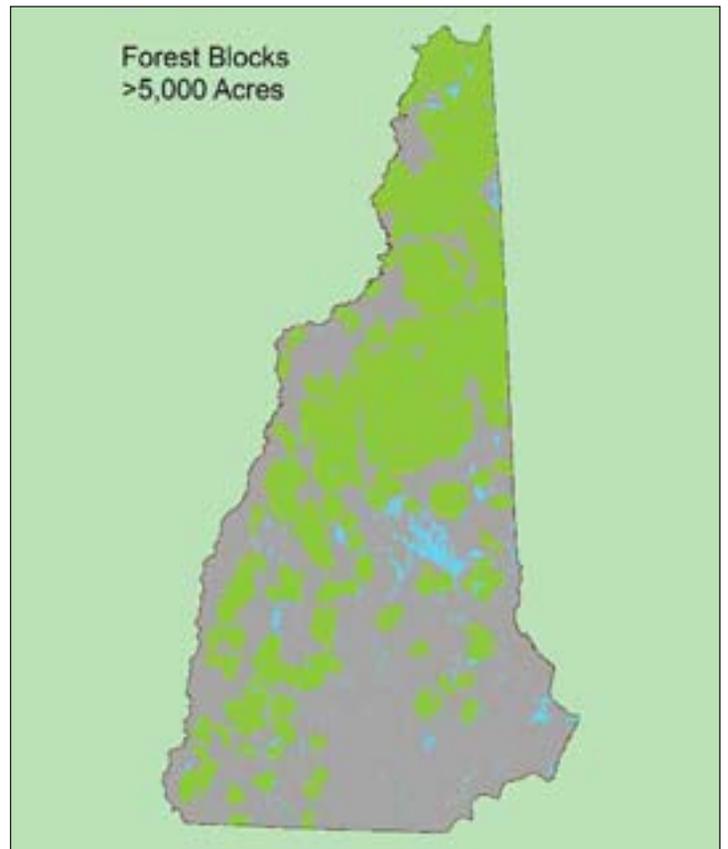
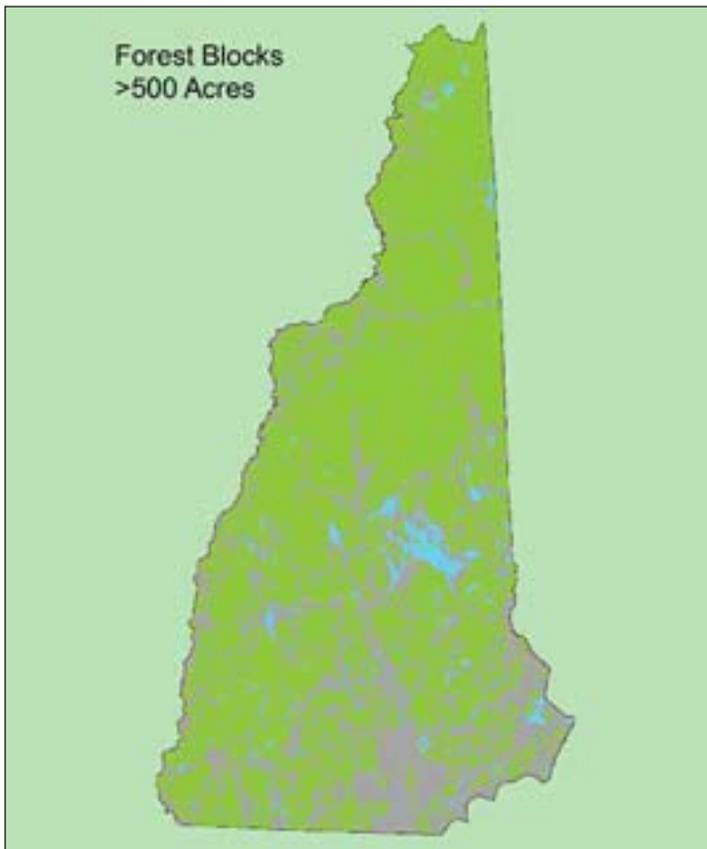
Of the 15,320 new units built since 2000, the majority were concentrated in New Hampshire's southeastern communities. About 75 percent of all new multi-family housing in the Seacoast was built in the "bedroom" towns of south-central and southeast New Hampshire. This tells a story not only of market drivers in housing construction, but also of the availability and cost of land to

be developed in this region. It also points to a long-term and intense in-fill trend, coupled with high single-family housing numbers in already urbanized communities and increasing concentrated pressure on remaining natural resources and ecosystem services.

Just Visiting?

Seasonal housing can be thought of as a sleeping giant in the future of both population growth and forecasts of land use change due to new housing construction. New Hampshire has long been a destination and home to the "summer people" — those who live elsewhere and keep a second home in New Hampshire to enjoy all the amenities the state offers. Over the last decade, seasonal homes have amounted to only about 11 percent of the total housing stock in New Hampshire. However, census data for 2010 that indicate a surprisingly high proportion of housing stock in certain counties are presently seasonal or recreational homes. In Carroll County, 42 percent of nearly 40,000 homes are classed as seasonal. In Belknap County, the share is 28 percent, while Coos and Grafton each have about 25 percent of those counties's housing stock in seasonal status. Together, seasonal homes in those four counties total more than 45,000, or about 70 percent of all seasonal homes in the state.

Johnson reports that people who move to New Hampshire are attracted by the elements that contribute to the state's overall



These maps show forest blocks in 2006 with acreage thresholds of 500 acres and 5,000 acres. Urbanization in the Southeast and along the I-93 and Route 16 corridors is clear, but so is the effect of development around Keene in the Southwest, Lake Sunapee in west-central New Hampshire, and in the Ossipee/Mt. Washington Valley region. Since 1960, New Hampshire has lost about 450 square miles of forest, with about one-third of that change occurring since 1997.

quality of life, notably, its environmental resources and amenities. He suggests that the significant stock of seasonal homes concentrated in the Lakes Region indicates that these areas will likely experience even more migration in the future.

“In high-amenity areas like those in the middle of the state, prior experience in the area and ownership of a second home are good predictors of migration,” he said. “Some of our research suggests that the Baby Boomers may be more likely than prior generations to move to recreational areas like those in New Hampshire.”

He points out that retirees are particularly drawn to the state’s quality of life because the availability of employment opportunities does not factor into their decisions to move. “However, it is important to remember that retirement-age migrants represent only a modest part of the overall migration stream to the state,” he said. Migrants are also motivated by the availability of jobs and the desire to be closer to family.

Fragmented Forests

While New Hampshire remains the second-most forested state in the nation (after neighboring Maine), our forest lands continue to decline from a high of 87 percent in 1960 to about 82 percent today. This represents a loss of about 450 square miles of forest,

with about one-third of that change occurring since 1997. *Forest fragmentation* is now a common term in natural resource management. It refers to the progressive dissection of forested areas by the construction of new roads and highways, as well as the clearing and conversion of forests for residential, commercial, and other land uses. Because forests are the dominant natural land cover in New Hampshire, fragmentation also has negative impacts on wildlife habitat, water quality, and other natural systems.

Forest blocks are defined by roadways, large water bodies, and non-forest land uses rather than by land ownership patterns, and they represent one of the major structural frameworks of the natural world. A 500-acre block can provide adequate habitat for some species, help protect water quality, allow for economical forest management, and offer opportunities for outdoor recreation. A 5,000-acre block represents the minimum size needed for sustainable forest management at regional scale, as well as a framework that supports long-term ecological functions and processes.

Land use conversion over time has pushed back the frontier of large forest blocks. Today, intact forest blocks larger than 5,000 acres are already scarce statewide and virtually non-existent in southeastern New Hampshire except where large tracts of conservation and public land exist.

Letting the Present Inform the Future

Based on current trends and predictive models, our state's forested lands will continue to decline. Forest loss linked to population growth suggests the conversion of another 225,000 acres in the years out to 2030, dropping New Hampshire forest land to less than 79 percent of total land cover.

In 1950 almost two-thirds of New Hampshire was at rural density; by 2030, it will be only about one third, and most of that will be in the northern half of the state.

New Hampshire's population growth has slowed appreciably. The 2010 Census indicates that the state population grew by 6.5 percent, well below the national figure of 9.7 percent. Although our growth rate was nearly twice as fast as New England as a whole, some say we are the fastest turtle in the Northeast. Just a few years ago — from 1990 to 2005 — the data showed New Hampshire's growth rate at 17.2 percent. Perhaps we are adjusting to a new status quo, one of slower, yet steady growth.

New housing construction in New Hampshire has plummeted from its high point during 2003 to 2005. This "breather" represents an opportunity for communities to plan for more sustainable growth after the economy rebounds, including the conservation of critical natural resources in those regions that have experienced the most land use change.

The Forest Society envisions a living landscape where managed woodland, farms, and wildlands are woven into the fabric of community life. We envision people caring for lands that sustain dynamic communities with clean water and air, employment, forest and agricultural products, habitat for native plants and animals, scenic beauty, and recreational opportunities. Our vision is, at its heart, an initiative to conserve New Hampshire's quality of life, with the realization that the state's rich endowment of natural resources sustains its economy and culture. By studying *New Hampshire's Changing Landscape*, we hope that by calling attention to the state of our landscape today, we can shine a light on the road to sustainably managing our resources in the future. ♣

Dan Sundquist is the director of land conservation planning at the Forest Society.

FOR MORE INFORMATION

More information about *New Hampshire's Changing Landscape 2010* — including interactive web pages, a town-by-town database, and complete technical report — is available online at <http://clca.forestsociety.org/nhcl>. 



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Meadowsend Timberlands Ltd. owns and manages 30,000 acres, including 12,000 in NH, all of which are in the American Tree Farm Program. Employing the same high standards of forestry, Meadowsend manages an additional 27,000 acres of New Hampshire client lands through its forestry consulting division, The Ecosystem Management Company. The company's staff of four works with landowners to develop and

apply forest management strategies that will meet landowners' financial, ecological, and social objectives. The company also provides state-of-the-art GIS mapping and conservation, wildlife, and recreational management consulting services.

Most of the company's customers are private landowners, municipalities, and non-profit organizations like the Forest Society, Conservation Fund, and The Nature Conservancy.

"We work in 60 New Hampshire communities with clients who insist upon high standards of forest management," said Jeremy Turner, managing forester. "Our clients share our stewardship ethic."

Almost two-thirds of the land on which the company works is protected with conservation easements. The Ecosystem Management Company works with eight different conservation easement holders and is responsible for 8,500 acres owned by the Forest Society, including Yatevitch Forest in Plainfield and Cornish.

"I encourage landowners to invest time and effort to understand the big picture of forest management and to appreciate the importance of biological integrity in working forests as well as the role of the forest products industry in local markets," said Turner. "Working landscapes are important to the economy of NH communities. Local sawmills, truckers, and loggers are mutually vital to keeping healthy forests in New Hampshire.

"Forests with conservation easements are our greatest resources," he said. "Working conservation land gives the forestry industry a secure land base not only for renewable resources like timber, but also for other ecosystem services like clean air and water."

Three Logging Systems:

Matching

Equipment

to the job





Dick Lewis, of Chester, New Hampshire, has been logging since he was a teenager in the late 1950s. He started with horses and then a farm tractor, each of them pulling a scoot, a rugged sled that kept the logs off the ground. With the leverage of a peavey and a strong back, he loaded the scoot. If a horse was doing the pulling, he'd load 300 to 500 board feet of logs; with the tractor, he'd load 800 feet. Later, using a Caterpillar D4 bulldozer, he could pull 2,000 board feet. At the landing, he unloaded the scoot onto a raised skidway. When the skidway was full, he parked the truck below it, and rolled logs onto the truckbed. He still wasn't done. After he drove to the mill, he unloaded the truck by hand.

Having handled each log at least five times, he'd gotten to know them all quite well. "I knew my chiropractor really well, too," he said.

Most loggers who worked in the 1940s and 50s will describe a similar setup. Loggers were happily discarding their crosscut saws — perhaps mounting them on the barn wall as relics — and hefting the new chainsaws, which by 1948 were portable enough to be handled by one man. That was a sea change for most loggers, but the most significant technological shift in Lewis's logging career was the introduction of the truck-mounted log loader. Before long, scoots and log-length wood were gone, and cable skidders were pulling hitches of tree-length wood.

By Stephen Long

Shown here: Grapple Skidder. Photo by Jerry and Marcy Monkman, EcoPhotography.



They didn't pull whole trees — that would come later with grapple skidders — but trees that had been delimited. Lewis bought his first cable skidder in 1972, and for many years he was a one-man operation — a man, a saw, and his skidder.

Engineering innovations have continued to change the way logging is done and, as with the log loader, most advances have increased production and enhanced safety. More recently, as concerns over environmental impact have heightened, engineers have developed equipment that reduces damage to soil and remaining trees.

The logging operations going on in your area most likely fit into one of three categories: hand felling and a cable skidder (tractors and horses still play a role); feller-buncher with grapple skidder, delimitter, and slasher; or a cut-to-length harvester with a forwarder. Here's a closer look at what's going on in each type of operation.

Hand Felling

Hand felling and cable skidding continues to be the least expensive way to enter the trade. Well-maintained skidders and tractors have long lives, and used equipment is readily available. Aspiring loggers can find a no-frills 1970s John Deere or Timberjack skidder starting at \$15,000, and a new professional-grade chainsaw for around \$500.

Across the Northeast, a few thousand loggers are making a living with a chainsaw and a cable skidder. Those who learn to market their logs effectively can make a viable living. Loggers who stay in the business are likely to add a dozer, maybe an excavator, so they can build their own roads instead of having to contract that job out. In some cases, this accumulation of big iron starts a logger down the road to mechanization and a larger payroll.

As Dick Lewis noted, using a skidder is less grueling than loading and unloading a scoot by hand, but it is still dangerous and demanding work. The logger has to cut the tree and delimit it — picture a gnarly spruce with a whorl of branches every 6 or 12 inches. He then backs the skidder up what is



Clockwise from top, left: From farm tractor to feller buncher in 50 years; Setting a choker; CTL Harvester; Cable Skidder. Photos by Andy Crosier.

Opposite: Feller Buncher. Photo by John Deere.



often a gut-wrenching incline, drags a steel cable to the tree, and wraps one of its chokers around the tree's butt for skidding. Not many of us could stand up to the beating these guys take, scrambling into the skidder's cab, jumping off, felling 30 or 40 trees a day with a chainsaw.

Jack Frost, a long-time logger in Maine who now sells logging equipment, started in high school with a chainsaw and a tractor, but before long his physical condition led him to idle his saw. "It's a young man's game," he said. "You can do it for 10 or 20 good years, but it starts taking its toll on your body."

Hand cutters do best when they have large-diameter trees to cut. Because of the attention they can give to each tree, they are in a good position to make the best decisions on how to buck a tree into the logs that will bring the most money from the mill. Particularly with hardwood and white pine sawlogs, good bucking decisions can dramatically increase revenue.

Cable-skidder loggers thrive on smaller woodlots because their operating costs are lower than mechanized outfits. Every time he starts at a new jobsite, a logger has to have his equipment trucked there. A single cable skidder might cost \$200 to move, while moving the armada of equipment required in a whole-tree harvest might cost five or six times that. A low skidder loan payment and low operating costs means a logger doesn't need to produce huge volumes of wood, though an industrious logger working in softwoods can fill a small logging truck with about 4,000 board feet in a day.

Mechanical Harvesting

In 1975, an outbreak of spruce budworm began killing millions of spruce and balsam firs across the northern forest. Many landowners tried to salvage as much of their softwood as possible.

The outbreak lasted approximately 10 years, and hand cutters and cable skidders couldn't keep up with the demand, so feller-bunchers and grapple skidders jumped into the fray. Then, in the early 1980s, wood-fired power plants sprang up across the Northeast, bringing a hunger for wood chips. To supply that market, even more loggers bought bunchers and grapples, and they've been here ever since. A new feller-buncher can cost \$500,000. Add two grapple skidders at nearly \$400,000 each, a delimitter and a log loader, and before long your loan payment could be large enough to buy a

small house every month. With that cost hanging over your head, you'd better be processing lots of wood.

The daily output of a feller-buncher can be more easily measured in acres than in board feet. Bryce Limlaw, who operates a feller-buncher for his father's company, Limlaw Chipping and Land Clearing in West Topsham, Vermont, estimates that he can thin two acres a day, and if the job is a land clearing job, he can cut four acres a day. On harvests with a large volume of lowgrade wood going to pulp or chip markets, mechanical harvesting is the best choice.

Let's look at the feller-buncher, the heart of the system known as conventional mechanized harvesting. Ignore its cutting head for a moment, and what you'll see is an excavator: it rides on tracks, and the logger sits in an enclosed cab operating a boom that can reach out 25 feet or swing in a tight 360-degree rotation with the cab. Swap out the excavator's bucket for a 5,000 pound cutting head and you've got a feller-buncher. The cutting head has two arms that grip the tree and another that holds previously cut trees in place on a platform. The saw, known as a hot saw, uses the centrifugal force of its 500-pound rotating blade to plow through a tree up to 24 inches in diameter. Some feller-buncher heads use a chainsaw-style bar saw, and earlier versions used a shear, a powerful pair of scissors. But when the job requires cutting thousands of small trees, loggers use a hot saw.

A feller-buncher is like a 40-ton weedwhacker, but instead of spraying weeds all over the place, it collects each one as it goes. When the operator has accumulated a bunch — thus the name, feller-buncher — he positions the trees on the skid trail so the grapple skidder can grab the bunch with its opposing pincers and drag it to the landing. A grapple can skid more wood than any cable skidder, and it picks the load up in one movement. No climbing in and out, no chokers to set and then release. A grapple operator spends all day in the cab, focused on moving trees from the woods to the landing, but the feller-buncher is so efficient that it typically takes two grapple-skidders to keep up.

On the landing, the trees are delimited and cut into logs by a slasher — a large circular saw mounted on a bunk. The logger uses a loader with a boom and grapple to pick up a tree and position it on the slasher, which then zips it to a specific length depending on the product. Sawlogs go in piles according to species; pulp goes in another pile. If the tops, branches, and limbs are going to be chipped, they will be piled for the chipper. If not, the grapple skidder will pick up a pile of the debris and carry it with him on his return trip to the woods. He'll drop the brush into low spots or wet areas on the skid trails to stabilize them and keep them from washing out. As he does this, he maintains radio contact with the feller-buncher operator to coordinate their actions.

No matter which piece of equipment the logger is running, he is working from the safety of an enclosed cab, which shields him from the controlled chaos of high-speed wood processing. In some states, that reduces the company's rate for workers' comp insurance, with the difference most dramatic in New Hampshire, where manual fellers pay \$44.67 per \$100 of payroll, as opposed to \$9.40 for mechanical.



*By the mid twentieth century, tractors pulled logs out of the woods on scoots.
Photo by Andy Crosier.*

SCOOTs, SKIDDERS, AND HOTSAWS

Here's a quick sketch of the evolution of logging equipment beginning in the 1940s.

Chainsaws replace crosscut saws and axes after World War II when they become light enough to be operated efficiently by one man. **1948**

Crawler tractors and farm tractors pull logs out of the woods on scoots, emulating the horses and oxen they replace. **1940s -1960s**

Truck-mounted log loaders drastically reduce the amount of loading and unloading that has to be done by hand. **1960s**

Winches are added to tractors to replace scoots. The winches are equipped with a long cable and choker chains to pull more than one log at a time in a hitch. Ground skidding means that logs arrive at the mill caked in mud, so sawmills install debarking equipment. **1950s**

Cable skidders with articulated steering are developed. It separates the machine into a front and back half connected through a central pivot point, which allows tighter maneuvering and enables the machine to operate on rougher terrain. Because the front axles are stationary like rear axles, they are more rugged than the front axles of a tractor. **Late 1950s**

Skidding becomes more mechanized with the development of grapple skidders. **1970s**

Mechanical harvesters like the feller-buncher are introduced; they increase both safety and production. **1970s**

Cut-to-length (CTL) cutter heads do the work of three machines: they cut the tree, bring it to horizontal, delimb it, measure logs out of it, and cut them to length. **Late 1980s**

Forwarders carry logs rather than skid them, reducing the environmental impact on the forest floor. **Late 1980s**

Cut-to-length

If a mechanized operation with feller-bunchers and grapple skidders is a heavyweight boxer, a cut-to-length system is a welterweight. It's not lacking in power, but it has a lot more finesse.

A CTL harvester can ride on an excavator-style carrier or one designed specifically for logging in tight spaces. Some carriers have tracks, others use broad rubber tires. The cutter can be a fixed or dangle head. Across the region, tracked systems are twice as common as those on rubber tires, but there's only a slight preference for dangle heads over fixed heads. Rod Lampe, of Putney, Vermont, prefers the dangle head because it allows him to use a small carrier. "With a fixed head, you need a bigger carrier, because you are holding the tree and carrying it. With the dangle head, you just control the fall, then pick it up and slide it through the delimiting knives," he said. The smaller carrier means he can maneuver in tight spots to pluck out single trees in a thinning job.

Lampe had been logging for 10 years when he had a moment of truth similar to Jack Frost's. The vibration from running a chainsaw all day had given him carpal tunnel syndrome. "I saw myself getting older and didn't want to be doing that work for the rest of my life. I just knew I had to do something different, so I took a chance and bought a CTL harvester," he said.

With no training available to him, he floundered. After running it for two weeks, he was sure he'd made a big mistake.

Frost was also challenged by the complexity of the equipment and the lack of available training. "It was a disaster for me," he said. "In Scandinavia, where these machines came from, loggers go to school for two years, studying business, mechanics, hydraulics, and forestry. Then they finally get to operate a machine. We made fun of them, but when many of us failed at it, we stopped laughing."

Frost and Lampe are not the only loggers to have had difficulty adjusting to a CTL system. A cost-benefit analysis prepared for Sustainable Forest Futures and Lyme Timber Company showed that most CTL loggers had no choice but to learn the new technology on the job, without much support from the manufacturers.

Still, Lampe stuck with it, replaced his first machine with his — nine years into it — he is totally committed to CTL. He works in partnership with Long View Forest Contracting of Westminster, Vermont, and serves as a mentor to Long View's new CTL operators.

Why is it so challenging? A harvester is more complicated than a feller-buncher because it does more tasks. A logger running a harvester grasps the tree and cuts it,

controlling its direction of fall by putting pressure on it. He then holds the tree in a horizontal position and engages spiked rollers to propel the whole tree through a set of onboard delimiting knives. With the log cleaned up, he returns to the butt end and runs it through the rollers again. A sensor measures the tree's length, and the bar saw (the same saw that felled the tree) cuts logs to a predetermined length.

This single machine is doing work previously done by three machines: feller-buncher, delimeter, and slasher. And it's doing all of it in the woods, which is one of the main reasons that many foresters and landowners prefer this technology – the tops and limbs stay in place, cushioning the forest floor, and the landing can be considerably smaller because it doesn't need to accommodate so much equipment.

The logs are carried to the landing on the bunk of a forwarder, which could be viewed as the perfection of the truckmounted log loader. It has a boom and grapple to load logs into its bunk, and its balloon-like tires minimize its pressure on the ground. Because it carries logs instead of skidding trees, it doesn't dig up the soil. Dragging its load across soggy ground, a grapple skidder or cable skidder can create ruts that will never disappear, so they have to stay out of the woods in mud season. Even with its heavier load, a forwarder can operate successfully on softer ground, which means that CTL loggers can work more weeks of the year.

The first-generation CTL equipment worked well in Sweden's and Finland's flat ground and monoculture softwoods, but the technology required re-engineering to work in the more varied terrain and forest types of the Northeast. Today, you'll find CTL crews that can work in any of the terrain that conventional mechanical can, though CTL doesn't pile up the wood as quickly.

Which One?

If you want to start a ruckus, go to a meeting of loggers and foresters and ask, "Which is the best system?" Proponents of any of the three can make an impassioned case for why their system is the most profitable, why it provides the best return to landowners, why it does the least amount of damage to the woods, and why it is the future of the industry. Of course, none of the three systems is right for every situation.

If a landowner wants to see all the branches, limbs, and tops stay in the woods for nutrients and shelter for animals and seedlings, handcutting or CTL accomplishes that. A person who wants to have the woods cleaned of all that mess will choose conventional mechanical.



Forwarder. Photo by Andy Crosier.

Mechanical harvesting is clearly the best way when a harvest entails removing large volumes of low-grade wood. Small woodlots generally favor handcutting, but CTL can pile logs on postage-stamp landings and profit from jobs with a preponderance of small-diameter, low-value trees — jobs that a hand-cutter would avoid.

Hand cutters have a distinct advantage in a forest with high-value hardwoods, where they can maximize value by paying close attention to detail.

Lampe said, "You can't see the log's grade from the cab, so I don't try to buck good hardwood from the cab." When he fells a promising tree, he'll climb down, carrying paint and a tape measure, and mark where to make the cuts. "If the job has a lot of higher-grade hardwood, we hand fall the larger trees."

Long View's combination of hand-felling and CTL demonstrates how difficult it is to draw clear lines of distinction between the systems. Loggers tinker with their equipment mix and often end up with hybrids. Some hand-fellers use a forwarder. Some contractors own both a feller-buncher and a CTL harvester.

A good logging job is one that provides fair and adequate return to the landowner and the logger. It leaves behind a forest with little or no damage to its soils, watercourses, and residual trees. Each of these three harvesting systems — and hybrids of them — can do a good job if the logger is committed to both production and protection of the woods. ♪

This story was originally published in the Autumn 2011 issue of Northern Woodlands. Stephen Long is a founding editor of Northern Woodlands.

Winter Events: Feb. through April 2012

Go online. Get outside. Visit our website for a complete and up-to-date list of field trips and special events: www.forestsociety.org and click on the "Things To Do" tab.

You may preregister by calling (603) 224-9945 extension 311, or you may register online at signup@forestsociety.org. Most programs are free unless otherwise noted.

www.forestsociety.org/thingstodo



Explore the slopes of Mount Monadnock on a guided tour with Forest Society staff. Photo by Danny Richardson.

SATURDAY, FEBRUARY 25 | noon to 4 pm (snowdate Sun. February 26)

Mammal Tracking and Conservation Snowshoe Tour

Monadnock State Park to Royce Tract

Join Forest Society staff on a guided snowshoe hike from the Monadnock State Park headquarters along the Old Keene Road and adjacent cross-country ski trails. We'll look for tracks and signs of winter wildlife while learning about the effort to add 400 acres to the Monadnock Reservation land. Monadnock State Park has eight miles of ungroomed trails available for cross-country skiing and hiking, but we'll explore just 2.5 miles.

SATURDAY, FEBRUARY 18 | 10 am to 1 pm
(snowdate Sun. February 19)

Timber Harvest Tour

Donas and Margaret Reney Memorial Forest, Grantham

Learn about sustainable forestry with Forest Society staff and consulting forester, Jeremy Turner from Meadowsend Timberlands Ltd. Find out which trees have been selected to be cut in a thinning to improve overall timber stand quality, and learn about wood markets and the diverse mix of wood products generated by a careful timber harvest. You'll also see logging equipment firsthand.

Moderate hiking along skidder trails.

Cosponsored by Meadowsend Timberlands Ltd.

SATURDAY, APRIL 7 | 10am-1pm

Wild Apple Tree Pruning Workshop

Harris Center for Conservation Education and the Forest Society's Welch Family Farm & Forest, Hancock, NH.

Releasing and pruning wild apple trees can keep them healthy and lead to greater fruit production for wildlife. Forest Society Director of The Rocks Estate Nigel Manly will lead this basic introduction to releasing and pruning wild apple trees, with both indoor classroom session and outdoor field practice. We'll begin at the Harris Center in Hancock, NH and then carpool to the nearby Welch Family Farm and Forest for field pruning practice.

This workshop is sponsored jointly by the Forest Society and the Harris Center for Conservation Education.

BRETZFELDER PARK LECTURE SERIES

These lectures take place at Bretzfelder Memorial Park, Prospect Street, Bethlehem, NH

WEDNESDAY, FEBRUARY 15 | 7-8 pm

Big Trees of New Hampshire

Learn about the champion trees of New Hampshire with Sam Stoddard, former Coos County Forester. See photos of some of the biggest and tallest trees in the state and learn how to measure trees and participate in the Big Tree program.

WEDNESDAY, FEBRUARY 22 | 7-8 pm

In the Footsteps of Charles Darwin — Exploring the Galapagos Islands

The undisturbed volcanic islands of the Galapagos are home to some of the Earth's most extraordinary and mysterious creatures. Join Chuck and Betsey Phillips as they present pictures and stories of blue-footed boobies, ageless giant tortoises, unusual marine iguanas, Galapagos penguins, lava lizards and more.

Owned by the Forest Society, Bretzfelder Park is managed in cooperation with the Town of Bethlehem. Bequeathed to the Forest Society in 1984 by Helen Bretzfelder in memory of her father Charles, the park includes a classroom, educational trails, a pond, and several picnic sites. Two series of free educational programs are held here each year in February and August.

AT THE ROCKS ESTATE

All events take place at The Rocks Estate in Bethlehem; visit www.therocks.org for details.

FRIDAYS AND SUNDAYS,
FEBRUARY 3 – MARCH 4 | all day

Dog Sled Rides with Muddy Paws Kennels

Explore the fields and forests of The Rocks Estate on a guided dogsled tour offered by Muddy Paw Sled Dog Kennel on Fridays, Saturdays, and Sundays through March 4.

Advance reservations required; for details and prices visit www.dogslednh.com or call 603-545-4533.

ART EXHIBITS

These exhibits can be viewed Monday thru Friday from 9 am to 5 pm at the Conservation Center Conference Room, located at 54 Portsmouth Street in Concord, NH. As the Conference Room is used for meetings, please call (603)224-9945 before visiting to confirm that the room is open.

JANUARY 3 – FEBRUARY 29

Ruin, Reclamation, and Renewal: For all Good Things, a Second Life

Ross Bachelder has been active in northern New England for many years as a writer, musician, theatre professional, arts advocate, public speaker and multimedia visual artist. In his photography, he seeks to chronicle the inherent beauty of things, even items long abandoned and believed to be ugly and useless. "When we allow our eyes and our minds to be as open as thirsty flowers in a springtime meadow, we can see beauty everywhere we turn, in all its forms and complexities," he says.

A resident of Berwick, Maine, Bachelder is the manager of the Frame Shop and Franklin Gallery at Ben Franklin Crafts in Rochester, NH. He is also the founder of Artful Endeavors New England and the Founder and Coordinator of the Kittery Art Association Seacoast Moderns.

MARCH 1 – APRIL 30



Snowy mountain with pine trees — Winter Mountains.
Photo by Brian Simm.

New Hampshire's Woods and Mountains

Although he hailed from Melrose, Mass., Brian Simm lived in Hillsboro, NH for 50 years. A district forester for the State of New Hampshire for 35 years, his love for the New Hampshire landscape and the Maine coast shines through his work.

He began painting in oils at age 40 and took classes in watercolor painting at the Sharon Arts Center a few years later. He also attended art classes in Contoocook and Hopkinton for many years. He exhibited at the Sharon Arts Center, at the annual Hopkinton art show, and participated in the Hillsboro Area Artisans Tour. Brian passed away seven years ago.



Red house — Sanctuary, Arthur's Pass, NZ. Photo by Ross Bachelder.

MARCH 17, 24-25, 31 AND
APRIL 1 AND 7 | 10 am-4 pm

The New Hampshire Maple Experience

Hear the history of maple sugaring, learn how to identify the sugar maple trees that produce the sweet sap for making syrup, and see part of the process demonstrated by fourth-generation sugarer Brad Presby. The New Hampshire Maple Experience takes place at The Rocks Estate in the renovated historic Sawmill-Pigpen Building, which also features a museum with a collection of sugaring artifacts.

Cost: Adults \$10, children \$7. Reservations recommended; call 603-444-6228.



Fourth-generation sugar maker Brad Presby boils clear sap into sweet syrup. Photo by Danny Richardson.

2012 COTTRELL-BALDWIN ENVIRONMENTAL LECTURE SERIES

Conservation and Management — It's for the Birds!

All events will take place at the Caroline A. Fox Research and Demonstration Forest, Hillsborough, NH

TUESDAY, MARCH 13 | 7 to 8:30 pm

A (Boat) Trip through Time with the Birds of Lake Umbagog

Lake Umbagog is one of the wildest, most bird-rich areas in all of northern New England. Bob Quinn from Merlin Enterprises Eco-Tours will talk about some of the changes in the lake's bird life over the last 130 years and the role that the Lake Umbagog National Wildlife Refuge plays in protecting this northern lake and its surrounding forests.

TUESDAY, MARCH 20 | 7 to 8:30 pm

Habitat Management for Birds and Biodiversity

Research Wildlife Biologist David King from the USFS Northern Research Station, Amherst, MA will discuss trends in early successional habitats and the species that depend on them. Many bird species are declining, but landowners and natural resource managers can help by managing farmlands, forests, and wetland habitats to maximize avian diversity.

TUESDAY, MARCH 27 | 7 to 8:30 pm

The State of Birds: How You Can Help NH Bird Populations.

The recent *State of New Hampshire's Birds: A Conservation Guide* cites current population trends by habitat types and specific actions individuals can take to sustain avian diversity. Audubon Society of New Hampshire Avian Conservation Biologist Pam Hunt will share some current trends and threats to long-distance migrant birds.

SATURDAY, APRIL 28 | 8 to 10 am

Fox Forest Birding: Early Migrants Arrive in Hillsborough

Senior Biologist, Audubon Society of New Hampshire Diane DeLuca will describe the habitat needs, breeding behavior, plumage and songs of early migrant birds as they return to our forests. Participants will explore a number of habitats, including wetlands and early succession forest.



TransCanada makes its land available to the public for hunting and fishing and provides free public boat ramp access to First and Second Connecticut Lakes.
 Photo by Ryan Young.

Shorefront Conservation Bonanza: 39 Miles of Lake and Stream Frontage Protected by TransCanada in Pittsburg

The Forest Society and TransCanada Hydro Northeast Inc. have finalized a conservation easement on some 2,300 acres in New Hampshire’s North Country. Donated by TransCanada Hydro, the conservation easement protects 32 miles of shoreline on the First and Second Connecticut Lakes in Pittsburg as well as seven and a half miles along the Connecticut River in Pittsburg and Clarksville. The land

will continue to be owned by TransCanada Hydro, and the Forest Society will hold and monitor the conservation easement.

Completion of this easement is a special milestone in the protection of the Connecticut Lakes. With the exception of some camp lots and homes, nearly the entire watersheds of these iconic lakes are now protected.

“The Connecticut Lakes are the head-

waters of the Connecticut River and in a literal and symbolic sense constitute the ‘headwater’ of our business,” said Cleve Kapala of TransCanada. “We are pleased to have been able to work with the Forest Society to complete the conservation of this land. We look forward to continuing to welcome recreational users of the property and to being a good neighbor and steward in Pittsburg and Clarksville.”

“This conservation easement protects extraordinary resources found nowhere else in the state.”

— Tom Howe,
senior director of
land conservation

Recreating on Land and Water

The newly conserved land hosts several extraordinary scenic and recreational features, such as more than four miles of picturesque road frontage — including a section of Route 3 designated as a National Scenic Byway, snowmobile trails, and a portion of the Cohos Trail favored by hikers.

“This conservation easement protects extraordinary resources found nowhere else in the state,” said Forest Society Senior Director of Land Conservation Tom Howe. “Second Lake is the largest entirely undeveloped lake in the North Country, and First Lake hosts very limited development. The views across the lake to the protected Connecticut Lakes Headwaters Forest are magnificent. No single land conservation project in the state’s history has protected this much lake frontage at one time.”

TransCanada Hydro also makes its land available to the public for hunting and fishing and provides free public boat ramp access to First and Second Connecticut Lakes, both premier cold-water fisheries managed by the state. The river frontage includes the “Trophy Section” of the Connecticut River, ranked one of America’s Top 100 Trout Streams by Trout Unlimited.

Members of the public will see no notable changes in their ability to visit and enjoy this spectacular area, a key foundation for the local recreation-based economy. The company also will continue to have the right to limit public access to the dam and other facilities for public safety and security purposes.

Outstanding Habitat for Wildlife

Most of the land — 97 percent — is ranked as Tier 1 Best in State wildlife habitat



The river frontage includes the “Trophy Section” of the Connecticut River, ranked one of America’s Top 100 Trout Streams by Trout Unlimited. Photo by Ryan Young.

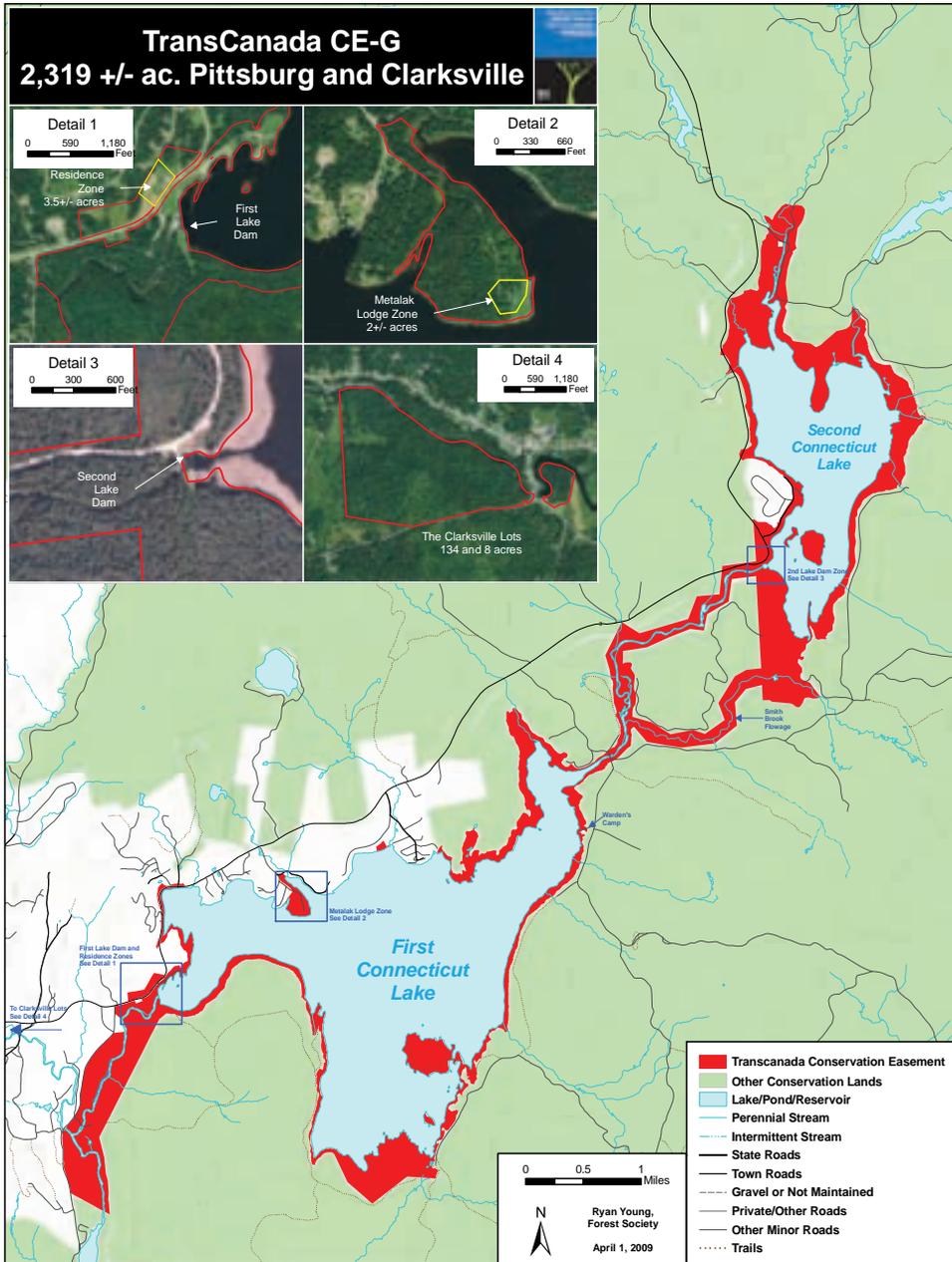
by the New Hampshire Fish and Game Department’s Wildlife Action Plan. These lands host exemplary ecological communities, numerous deer wintering areas, nest sites for Common Loons, a Great Blue Heron heronry, and habitat for a number of other threatened or endangered species.

The TransCanada Hydro land also abuts the 146,000-acre Connecticut Lakes Head-

water Forest, which was protected in 2003 through a state-held conservation easement. Such a large block of relatively unfragmented habitat meets the needs of many plant and animal species, including such charismatic mammals such as moose, bear, and the Canada lynx now making a comeback in the North Country.



Left, top: The protected TransCanada land abuts the 146,000-acre Connecticut Lakes Headwater Forest shown here, creating a large block of relatively unfragmented habitat that meets the needs of many plant and animal species. Photo by Ryan Young.



Left, bottom: The conservation easement protects 32 miles of shoreline on the First and Second Connecticut Lakes as well as seven and a half miles along both sides of the Connecticut River.

History of the Land

The land was originally acquired early in the 20th century by the predecessors to TransCanada Hydro in order to allow dams to be built to raise the levels of the lakes and keep them stable enough to provide reliable flows of water to the downstream hydroelectric dams near Littleton.

In the 1990s, New England Power Company agreed to place a conservation easement on the land at the Connecticut Lakes as part of a settlement agreement negotiated during the re-licensing of three of its downstream hydroelectric dams. The 1997 settlement agreement, a collaborative effort among the owners of the dams and many public agencies, conservation groups, and others, succeeded in facilitating a timely federal re-licensing of the largest hydroelectric stations in the region at Fifteen Mile Falls. TransCanada Hydro acquired the hydropower assets in 2005.

As mandated by the settlement agreement, the easement provides that TransCanada Hydro will be able to continue its related business activities, including the ability to install turbines in either of the dams on the two lakes should it choose to do so in the future.

“TransCanada is to be congratulated for pursuing this conservation outcome the way that they have,” said Paul Doscher, vice president of land conservation for the Forest Society. “The easement represents a major donation of their time and resources. The natural and recreation resources of one of New England’s iconic landscapes have a secure future as a result.”

For more information about TransCanada Hydro, visit www.transcanada.com.



The recently conserved land in Deering contains important habitat for turtles, like this young snapper on an overland journey. Photo by Amanda Nickerson.

Turtle Nesting Area Protected

By Brian Hotz and Margaret Liszka

The Town of Deering recently conveyed a conservation easement on 47 acres to the Forest Society, adding to a large block of conservation land and protecting important turtle nesting habitat.

Protecting connected landscapes helps maintain viable populations of turtles, which require both wetland and upland habitats. During spring and early summer, female turtles seek sandy, sparsely vegetated areas to lay their eggs and often must travel considerable distances to find suitable nesting habitat. They face many dangers as they travel over land to and from nesting sites, including being killed on roadways or eaten by predators. Hatchling turtles must find their way to wetland areas and can en-

counter many obstacles including roads, rip rap, curbs, and drains.

This newly conserved tract was once comprised of three separate parcels, each with its own story. Several years ago, the Town of Deering retired its sand pit on Clement Hill Road. Because the old sand pit is heavily used as a nesting area for various turtle species living in the adjacent wetlands, the land was placed into the hands of the Deering Conservation Commission. Over the past few years, the town has worked to reclaim the pit and revegetate the disturbed area.

Two years ago, the Conservation Commission used its conservation fund to acquire 13 additional acres across from the

old sand pit. This new parcel provided a narrow connection between the reclaimed pit tract and Audubon's existing 700-acre Deering Wildlife Sanctuary.

Last year the Conservation Commission learned that a 10-acre parcel abutting the 13 acres was about to be placed on the market. The Town secured a grant from a local foundation to purchase this land last fall.

At last, the Conservation Commission was ready to contact the Forest Society with a request to convey a conservation easement on all three tracts to ensure their permanent protection. The Russell Foundation generously covered the transaction costs that the Forest Society incurred in the process. ♪



Left: The Hedgehog Mountain landscape visible from many vantage points in the area, including Route 202 between Hillsborough and Antrim.

Right: Hedgehog Mountain offers outstanding views to the explorers who venture up the mountain's slopes.

Hedgehog Mountain Forest Doubles in Size

By Joyce El Kouarti, photographs by Danny Richardson

Over the last year, the Forest Society has added another 492 acres to its 607-acre Hedgehog Mountain Forest in Deering, bringing the total reservation to 1,100 acres.

Not only is the Hedgehog Mountain landscape visible from many vantage points in the area, including Route 202 between Hillsborough and Antrim and a nearby rail trail, but it also offers outstanding views of that landscape to the explorers who venture up the mountain's slopes.

Both the Forest Society and the Deering Conservation Commission have conducted a sustained long-term effort to conserve

this ecologically rich area, which is also a conservation priority of the Quabbin-to-Cardigan Partnership. This effort has produced many conservation projects over the last 10 years, including several other abutting or nearby Forest Society reservations.

Comprising five separate properties that all directly abut the Hedgehog Mountain Forest, the recent acquisitions almost double the size of the protected landscape and complete the permanent conservation of the entire Hedgehog Mountain ridge-line, including the mountain's northern summit. It is this prominent ridgeline that

offers many overlooks of the Contoocook River Valley and the Quabbin-to-Cardigan highlands.

Natural Diversity

The rocky ridges, forested hillsides, and tranquil wetlands of Hedgehog Mountain have enormous conservation as well as scenic value. With its forests, steep talus slopes leading to open fields, and a huge wetland complex, this area contains some of the most diverse natural habitat in the region that benefits moose, bears, deer, and bobcats, which all need large tracts of forestland to thrive.



As a part of the Contoocook River watershed, the forests and wetlands on and around Hedgehog Mountain provide a natural buffering system that helps preserve water quality in the streams feeding the Contoocook River.

A Legacy of Conservation on Hedgehog Mountain

The story of conservation on Hedgehog Mountain goes back to the 1960s, when retired Governor John King and his wife Anna purchased a collection of properties comprising several thousand acres in Hillsborough County. Hounded by calls from developers during the building boom of the 1990s, the Kings approached the Forest Society to conserve their favorite 311-acre parcel — the forests and hollows on the southern end of Hedgehog Mountain. This became the first Forest Society reservation on the mountain, the John and Anna King Reservation that visitors enjoy today.

This work has inspired other landowners

As a Forest Society reservation, this land will remain open to the public for hiking, hunting, wildlife viewing, and the enjoyment of spectacular views.

along the Contoocook River and adjacent to Hedgehog Mountain to place conservation easements on the intervals of rich agricultural lands and special flood plain forests that hold unique habitats for wildlife.

The protection of this ecologically rich area expands a prominent forest reservation for visitors to enjoy while maintaining the region's rural character and opportunities for outdoor recreation. As a Forest Society reservation, this land will remain open to the public for hiking, hunting, wildlife viewing, and the enjoyment of spectacular views.

Much of the \$757,000 needed to purchase the land was generously provided by

a private local foundation and through the support of many individuals. However, the last piece of the puzzle was generously donated by Mark and Marcia Lewis of Penn. A grant through the Quabbin-to-Cardigan Partnership helped to cover transaction costs and staff time. ♪

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www.forestsociety.org/news



Walking the Walk in Canterbury

By Mike Speltz

Ken Stern may be quiet in terms of talking the talk, but he certainly walks the walk. Ken has a thing for water, specifically, for conserving water. He worked for many years in the state's Dam Bureau, keeping water in its place, so to speak. He also worked for many years as the Forest Society's director of easement stewardship, keeping easements in their place.

After years of advocating for the protection of land and water, he and his wife Ilene recently donated a conservation easement on 47 acres of land in Canterbury along Picard Brook, memorializing his commitment to conservation forever.

Along the Water's Edge

Located on the north side of Baptist Road, a stone's throw from Canterbury Shaker Village and upstream from several other conserved properties, Ken's land features an old beaver pond on its way to becoming a beaver meadow. This wet area is in turn surrounded by an alder swamp that supports many wetland species and provides excellent flood storage.

The land also includes 1,850 feet of frontage on both sides of Picard Brook, a year-round stream that supports a wide range of wildlife, as well as 520 feet on both sides of a tributary that joins the brook. With its pools, riffles, coarse woody debris, and heavy shading from hemlocks and other trees along its banks, Picard Brook is ideally suited for the native brook trout that call it home.

A Place for Wildlife

Half the land is dominated by mixed hardwoods including sugar maple and yellow birch, along with other hardwood and softwood species. Wildlife sightings on the property include deer, moose, great blue heron, beaver, otter, mink, and snapping turtles. The remains of turtle eggs have been observed in the gravel landing area after the nest was raided by a predator.



The pools, riffles, coarse woody debris, and heavy shading from hemlocks and other trees along its banks make Picard Brook ideally suited for the native brook trout that call it home. Photo by Ken Stern.

This property is deer heaven, offering a source for drinking water, plenty of hardwood mast to eat, and winter shelter under the hemlocks. When Ken first showed me around the property after a three-foot snowfall, the deer tracks were everywhere, making clear to us which snow bridges across the brook were safe for a couple of lightweights on snowshoes.

Ken and Ilene's closing on the conservation easement was picture perfect. The deed was signed on the bridge over Picard Brook with many of his former Forest Society colleagues in attendance. In one sense, it was the end of a perfect day and a perfect project, but in another sense, it was just the beginning of the perpetual protection of a beautiful piece of land. ♪

IN HIS OWN WORDS

By Ken Stern

I have always enjoyed being in the woods. Beginning in my early years while hiking and camping the White Mountains during summer camp, the forests and streams became deeply imbedded in my sense of place.

The goal of conserving open space has been with me for most of my adult life and has guided me in helping my town, the state, and the Forest Society conserve land. Having grown up in a suburban area where virtually all open space was eventually consumed by development, the idea of permanently conserving a special place appealed to me.

It was a great day when Ilene and I were able to purchase this very special place near our home in Canterbury. Some of the most interesting wildlife sightings have included playful otters rising out of the water to take a good look around, a moose nursing her young, and the annual spring chorus of frogs announcing the pending arrival of summer.

Having spent 10 years working at the Forest Society as the director of easement stewardship, I met many kind and generous people who made the commitment to permanently conserve their land. We are grateful for being able to fulfill a lifelong dream and thankful that the Forest Society will ensure that this conservation easement will be respected in perpetuity.



Acworth Grows Its Town Forest

By Brian Hotz

The Town of Acworth recently purchased 86 acres near Crescent Lake and has donated a conservation easement to the Forest Society. The land is part of a large connected forest block that includes the 300-acre Gove Town Forest overseen by the Acworth town forester. The Forest Society also holds a conservation easement on the town forest, which will be augmented by this new 86-acre addition.

While stonewalls attest to the property's former use as farmland, today it contains a mixed forest of maple, beech, and birch trees, with stands of pines and hemlocks that provide habitat for deer, moose, bear, smaller mammals, and birds.

The property has two sizeable forested wetlands within the watersheds of the Cold River and Crescent Lake. Two small streams run through the parcel into Crescent Lake,



Desbiens bog is one of the property's two forested wetlands. Photo by Alan Briere.

thus the land's protection helps maintain the lake's water quality.

The land is also important for recreational use, as it contains maintained snowmobile trails that run along the abutting class 6 road and pass through a short section of woods road on the property.

These routes are also attractive for hiking, wildlife observation, snowshoeing, cross-country skiing, photography, and hunting. In addition, the land features several foot trails used by hikers coming from nearby Crescent Lake.

"This is the third project we have done with the Town of Acworth since 2003," said Forest Society Senior Director of Land Conservation Brian Hotz. "Because of these town projects, several other property owners in the area have approached the Forest Society to donate easements on their land."

This recent project was made possible through grants from New Hampshire's Land and Community Heritage Investment Program and the State Conservation Committee's Moose Plate program, which were matched by town conservation fund monies. ♣

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New Trustees Join Forest Society Board

Two new trustees were voted onto the Forest Society Board of Trustees at the organization's annual meeting:

William H. Smith is an environmental consultant and adjunct faculty member at Granite State College and Hesser College. Now retired from full-time employment, he formerly taught forest biology and environmental studies at Yale University, from which he also received his master's degree. A certified senior ecologist, forester, and arborist, he is currently the president of Bees and Trees Environmental Consulting. He has served on the Forest Society's Policy Committee for several years and also volunteers with the New Hampshire Lakes Association, the Lakes Region Conservation Trust, and the US Forest Service in the White Mountain National Forest. Smith lives in Moultonborough and has been a member of the Forest Society since 2006.

William W. McCarten is the chairman of DiamondRock Hospitality Company (NYSE:DRH). He also served as CEO of DiamondRock Hospitality Company as well as president and CEO of HMS Host Corporation. Over the course of his career, he enjoyed 18 years with Marriott International in a variety of executive level positions. Today Bill is a director of Cracker Barrel Old Country Store, Inc. and will serve on the Board of Marriott Vacations Worldwide Corporation. He has also served on the Jefferson Scholars Foundation National Selection Committee and the McIntire School of Commerce Advisory Board at the University of Virginia. A Forest Society member since 1999, he serves on the organization's Finance Committee and last year donated to the Forest Society a conservation easement on 117 acres in Lancaster near his home. McCarten is an alumnus of McIntire

School of Commerce at the University of Virginia.

The new trustees join current board members **Carolyn Benthien** of Goffstown, **Malin Clyde** of Durham, **Hunt Dowse** of Hancock, **Midge Eliassen** of Sunapee, **Katharine Eneguess** of Jaffrey, **Pam Hall** of Portsmouth, **Deanna Howard** of Etna, **Amy Meyers** of Jaffrey, **Jack Middleton** of Freedom, **Howard Moffett** of Canterbury, **Hank Swan** of Lyme, **Stephen Taylor** of Meriden, **Bill Tucker** of Goffstown, **Patricia Vasbinder** of Concord, **William Webb** of Holderness, and past chair **Donald Wharton** of Landaff. ¶

To see the complete annual report, visit www.forestsociety.org/aboutus/annual-reports.asp



Volunteer Helps Upgrade Conservation Center Lobby and Heating System

By Jason Teaster

As you walk through the main entrance to the Forest Society's Conservation Center, you may notice some new additions to the lobby. Right away, you'll see New Hampshire artist Jon Brooks' sculpture "Oh Elm" — showcased at the Currier Museum last summer — welcoming you into our headquarters. Beyond the sculpture, you'll see an improved view of downtown Concord and the Merrimack River Valley, thanks to some selective tree removal this past autumn. You may notice the new portrait of Forest Society Founder Governor Frank Rollins, and our new interpretive panel display with an interactive touch-screen computer and information about our mission and commitment to reducing fossil fuel use through energy-efficient design.

The energy efficiency of the Conservation Center improved this year thanks to a generous donation by Ron Gehl, president/CEO of EOS Research in Rochester, NH. Ron previously collaborated with the Forest Society on several land protection projects through his role as a selectman and member of the New Durham conservation commission. When he learned that we were looking into upgrading our heating system, he approached the Forest Society to offer his expertise and experience.

Volunteering his time and energy, Ron worked closely with Forest Society staff and design engineers to update the controls and metering systems of the main building's heating system. Before the improvements, heat was distributed unevenly throughout the conservation center. How-

ever, the new design created four separate zones that enable each area of the main building to receive heat from the central heating plant.

Ron worked with the electrician to install his company's ProControl® hardware, which coordinates special sensors positioned in strategic locations to monitor water temperature in the pipes and air temperatures in the building. Now each zone has a control valve that opens and closes based on the need for heat. The control system also alerts the property manager to any potential problems, so issues with the heating system can be dealt with quickly.

"This successful project could not have been completed without the volunteer efforts of Ron Gehl and his company," said Jason Teaster, Forest Society property manager. ¶

Weeks Family Honored as Conservationists of the Year

Among the Forest Society's most prestigious recognitions, the Conservationist of the Year award honors those exemplary people who have worked to promote land conservation through many different avenues, often with significant sacrifice. It is the Forest Society's highest recognition.

In 2011, the year of the Weeks Act Centennial, the Forest Society recognized the descendants of John Wingate Weeks for the conservation work they have accomplished to further the protection of New Hampshire's forests that John Weeks began 100 years ago.

The children, grandchildren, great grandchildren, and great, great grandchildren of John Weeks have been long-time members, promoters, and supporters of the Forest Society and its work. Each in their own way they have helped conserve New Hampshire's forests, scenic vistas, and recreational assets.

In 2000 the grandchildren of John Weeks protected the original Weeks Family Estate on Martin Meadow Pond in Lancaster. The family donated a conservation easement to the Forest Society on 479 acres surrounding the pond, including most of the shoreline. The land also includes a



President/Forester Jane Difley (left) with members of the extended Weeks family, who were honored with the Forest Society's Conservationist of the Year award. Family members include (from right) Rebecca Weeks Sherrill More (great grand-daughter of John Wingate Weeks), More's husband Timothy More, John Davidge (great grandson of John Wingate Weeks) and Davidge's wife Deborah Lott. Photo by George Mitchell.

Christmas tree plantation, fields, a small orchard, and a sugar bush. Views of the White Mountains from the estate are spectacular.

These lands are just down the road from Weeks State Park — 430 acres given to the State of New Hampshire in 1941 by John Weeks' children, Katherine Weeks Davidge and Sinclair Weeks. Set at the very top of Mt. Prospect in Lancaster, the house and grounds offer a 360-degree panorama of mountain splendor that includes the Presidential Range of the White Mountains, the Green Mountains of Vermont, the Kilkenny Range, the Percy Peaks, and the upper Connecticut River Valley.

In 1990 it was members of the Weeks family who helped the Forest Society add a wing to the Conservation Center in East Concord. Named for John Wingate Weeks,

the wing was constructed from native wood and contains innovative energy conservation features, natural lighting, and a portrait and bust of John Weeks donated by the family.

"Sometimes collectively, sometimes individually, Weeks family members continue to leave their conservation mark on the New Hampshire landscape," said Forest Society President/Forester Jane Difley, who presented the award. "For all their work and their conservation ethic, we are proud to recognize the Weeks family members as our Conservationists of the Year."

The award was presented at the Forest Society's 110th Annual Meeting, held at the Mountain View Grand Hotel in Whitefield, NH. ♪

Rhoda Mitchell Honored as Forest Society Volunteer of the Year

Concord resident Rhoda Mitchell was honored as the Forest Society's Trish Churchill Volunteer of the Year.

The Trish Churchill Volunteer of the Year award is presented to recognize an outstanding Forest Society volunteer and to inspire others in their efforts to support the organization's mission. The award is named for Patricia "Trish" Churchill, longtime Forest Society volunteer coordinator.

Mitchell moved to Concord from Plymouth, NH in 2001 and found her way to the Forest Society's Conservation Center almost immediately. The Forest Society takes pride in this energy-efficient building, made from recycled materials and filled with natural light and elements of the natural

world — including many, many plants. The interior plants are as much a part of the building as any other architectural feature, cleaning the air, providing texture and color, and helping to make the place unique. Mitchell has assumed responsibility for the health of these plants for the past 10 years.

"She's here each week, quietly and cheerfully watering and tending the plants, pruning them and keeping them in tip-top shape," said Forest Society President/Forester Jane Difley, who presented the award. "She's always friendly to the staff, businesslike in her work, and incredibly dedicated."

Mitchell has had a houseful of plants of her own, with which she enjoys experi-



Rhoda Mitchell was honored as the Forest Society's Trish Churchill Volunteer of the Year.

menting. She also enjoys exploring Concord's walking trails, including the Forest Society's floodplain forest along the Merrimack River.

The award was presented at the Forest Society's Annual Volunteer Appreciation Dinner. ♪

The Worst Bills of 2012

By Susie Hackler Interim Executive Director, Conservation NH

Conservation NH asks all New Hampshire voters to ask their elected representatives to cleanse the legislative calendar of the dirtiest dozen bills introduced in 2012. These bills range from the dismantling of town conservation commissions to micromanaging state agencies; from making uneconomic decisions for our state parks, to undermining the state's energy laws.

HB 1515 — To Upend Local Control for Land Conservation

Echoing HB 1512, this would repeal the authority of municipalities to establish conservation funds with proceeds from the Land Use Change Tax (LUCT).

SB 217 — To Lease Cannon Mountain Absent Any Master Plan for Franconia Notch State Park

This bill would require the Department of Resources and Economic Development to solicit bids from private entities to lease Cannon Mountain ski area. A more logical approach would be for DRED to develop a master plan for Franconia Notch State Park and fully engage the public in the development process.

HB 1222 — To Weaken Protection of NH's Crown Jewels: Our Lakes

This bill would reduce the permitting fees collected by the Department of Environmental Services under the Shoreland Water Quality Protection Act, likely leading to further layoffs at the Department that could undermine water quality protection in lakes across the state.

HB 514 — To Preempt Public Access to Unposted Private Lands

This bill would prohibit entry by anyone to private land without the written consent of the landowner, undercutting the ability of hunters, fisherman, and others from

accessing and enjoying the state's wildlife and natural resources.

HB 1428 — To Gut the State's Renewable Energy Law

This bill would make major negative changes to the state's popular and successful Renewable Energy Law. Among other things, the bill would give special treatment to nuclear energy and fundamentally change the rules of the game that have led more sustainable energy businesses to start up — and create jobs — right here in New Hampshire.

HB 1490 — To Repeal RGGI, Leaving NH with "All Pain and No Gain"

This bill would repeal the Regional Greenhouse Gas Initiative (RGGI). This is a repeat attempt by the House to jam through a failed anti-RGGI effort from last year that was vetoed by the Governor and sustained by the Senate. If NH gets out of RGGI, the state will still have to pay for the program, but won't get any of its funding or benefits back.

HB 1415 — To Look the Other Way on Failed Septic Systems

Today, if your septic system fails, your replacement system has to be checked by DES to verify that it will work better than the original one. This bill would eliminate DES's oversight, putting New Hampshire's lakes, rivers, and estuaries at risk.

HB 1234, HB 1435 and HB 1436 — To Micromanage State Agencies

These three bills would establish a "DES grievance committee" in the Legislature to micromanage the Department of Environmental Services and the Department of Resources & Economic Development, essentially making the state Legislature responsible for issuing complex technical permits.

HB 1540 — To Cripple Local Land Conservation Efforts

Current state law enables counties and municipalities to sell and/or give conservation easements to non-profit organizations like land trusts. This bill would obstruct land conservation at the local and regional levels by halting all such conveyances.

If passed, these bills would pull the rug out from under the very partnerships that work to protect our state's unique natural resources and maintain New Hampshire's quality of life.

"Legislators have proposed dozens of bills that weaken, and in some instances eliminate, bedrock environmental laws that are critical to our state's economy and way of life," said Rick Russman, former Republican State Senator and Conservation NH Board Member. "We urge the citizens of NH to join with Conservation NH in calling on our elected officials to put an early end to the dirtiest dozen bills of 2012." ♪

LCHIP Awards New Grants

On December 15th, the New Hampshire Land and Community Heritage Investment Program (LCHIP) announced a new round of grant awards to 23 land conservation and historic preservation projects across the state. The program invested in the protection of 14 historic structures and the conservation of 2,808 acres of land, including more than 1,000 acres of farmland. The new LCHIP grants totaled \$1.16 million, or about nine percent of the projects' \$13.5 million total value — far exceeding the minimum 1:1 match required by the program. LCHIP estimates the projects will support more than 120 jobs and contribute over \$3.7 million in economic activity to the state economy.

Federal Land Conservation Programs Hold Their Ground

By Chris Wells

In a federal budget cycle marked by repeated brushes with government shut-down and even a default on US debt, Congress still managed to quietly pass spending bills for the current federal fiscal year 2012, which began October 1. FY12 appropriations work was completed via a “minibus” spending bill passed in November that funded the Departments of Agriculture, Commerce and Transportation, and a larger “omnibus” spending bill passed in December that combined the other nine appropriations bills that would normally be passed individually. Given the nation’s difficult fiscal position and sharp partisan divisions in Congress, the final results for land conservation programs were surprisingly good, especially given the draconian cuts that seemed possible earlier this year.

Looking first at the Land and Water Conservation Fund (LWCF), the final omnibus spending bill passed in December included nearly \$323 million for LWCF-funded conservation programs, a 7 percent increase over last year’s levels. The primary

use of LWCF dollars is land acquisition by federal natural resource agencies. In FY12, the US Forest Service saw its LWCF allocation rise to \$52.6 million, up from \$33 million the previous year. The Forest Legacy Program, administered by the Forest Service and a critical funding source for working forest easements in New Hampshire, held steady at \$53 million for the year. The National Park Service (NPS) saw its allocation for land acquisition increase to \$57 million, a four percent gain over FY11, while NPS-administered “stateside” LWCF grants, which fund state and local parks and recreation projects, increased to \$45 million, a 13 percent increase. LWCF funding for US Fish & Wildlife Service land acquisitions also held largely steady at \$54.7 million for FY12.

Not all conservation programs escaped budget cuts. The LWCF-funded Section 6 Cooperative Endangered Species Fund, which provides support for habitat protection efforts, saw its funding decline by 24 percent to \$25 million for the year. Another

key land conservation program that saw a decrease was the Farm and Ranchland Protection Program, or FRPP. The program is administered by the Natural Resources Conservation Service, an agency of the Department of Agriculture, and funds permanent conservation easements on prime farmland and associated woodlands. The “minibus” bill passed in November capped the program at \$150 million, a \$25 million cut below the FY 11 level.

With FY12 funding levels now set, attention turns to the FY13 budget cycle, which begins in earnest with the release of the President’s budget request in February 2012. ¶

Visit www.forestsociety.org/issues for more information about these and other policy issues.



“These matching grants are a tool to help protect the special places that are such an important part of New Hampshire’s high quality of life,” said Rusty McLearn, the LCHIP Board Chair. “LCHIP is not just about land and old buildings, but also about investing in a future that attracts both tourists and new residents.”

A 335-acre Forest Society conservation project on Mount Monadnock (the Stowell tract) received \$125,000 — the largest amount awarded to a land protection project. Another 122-acre project along the Merrimack River being pursued by the Town of Hooksett and the Forest Society was awarded \$80,400, and 76 acres that the Town of Freemont and the Forest Society are working to protect was awarded \$25,000.

The 23 awarded projects were selected from 44 applications and evaluated by the criteria outlined in the state statute governing LCHIP law (RSA 227-M), including the imminence of threat, the significance of the resource, local support, leverage, and the ability to sustain long-term stewardship of the resources.

LCHIP is an independent state authority that provides grants to protect and preserve the state’s most important natural, cultural, and historic resources through partnerships with New Hampshire communities and non-profits. Its legislatively mandated mission is to ensure the perpetual contribution of these resources to the economy, environment, and the quality of life in New Hampshire. Previous LCHIP funds to 202 projects have helped 136 New

Hampshire communities conserve more than 260,000 acres and 118 historic structures and sites.

The LCHIP program is supported by a dedicated fee on documents recorded at county registry offices. Unfortunately, the fee has been repeatedly raided since being created by the state legislature and is currently being diverted entirely to the state’s general fund. The grants announced in December came from fees collected during the second half of state Fiscal Year 2011, before the 100% diversion of funds took effect. Unless the legislature takes action to restore LCHIP’s dedicated funding, there will be no new LCHIP grant rounds for at least the next two years.

For more information about LCHIP, visit www.lchip.org or call (603) 224-4113. ¶



The sound of absolutely nothing at all — except, perhaps, your heart beating in your ears — is a rare experience. Pure silence is unnerving at first, an acquired taste. Conserved forestland far from inhabited homes and paved roads offers the best opportunity to find it. The sound of softly falling snow is often the only sound at all. Photo by Margaret Liszka.

Silent Nights

By Dave Anderson

Have you ever heard silence for a few hours? The midwinter forest is an excellent place to start.

The “Dark Skies” movement was created in opposition to pervasive, creeping nighttime light pollution that obscures constellations in urban areas. But what about noise pollution? To my knowledge, there’s no companion “Silence is Golden” organized campaign against pervasive unnatural sounds. Each day, we hear background noise every minute. Listen: what do you hear right now? I’ll bet you can hear *something*. Pristine natural soundscapes are hard to find. We seem unaware of constant artificial background noise in our daily lives... that is, until you experi-

ence the utter absence of any sound at all.

The wee hours after midnight — when most people and equipment slumber — are the best times to experience silence. Yet even at home, I hear the hum of my refrigerator, a ticking clock, the whine of an airplane or rumbling truck tires or compression brakes on a lightly traveled highway bisecting a rural village half a mile down the valley.

The sound of absolutely nothing at all — except, perhaps, your heart beating in your ears — is a rare experience. Pure silence is unnerving at first, an acquired taste. Increasingly, I work a little more intention-

ally to find it. The midwinter woods are an excellent place to begin.

Conserved forestland far from inhabited homes and paved roads provides the best opportunity to find silence. Although chirping crickets are the punch line used to denote the absence of sound, winter silence is even deeper than its summer counterpart. The vast whiteness contributes to the absence of all sounds, even the trickle of water is encased by ice. During a snowfall to further muffle sound, a forest comprised of dense conifers can yield the librarian’s dream: Silence. The sound of softly falling

snow is often the only sound at all.

For a more advanced study, try sleeping outdoors during a heavy snowstorm. The silence is akin to being in a cave. I know of a particularly cozy winter campsite provisioned with dry firewood and sheltered place to sleep. It's a forested hideaway that beckons when heavy snow is in the forecast.

With a hot bed of campfire coals, a sumptuous dinner, and a dry, winter-rated sleeping bag inside a Gore-Tex bivouac sack, I lie stock still by the dying campfire listening to snow fall in a rare natural silence — a quiet almost deeper than imaginable. I will sleep even more deeply.

For those easily bored, spending a night alone in the woods during a snowstorm in dark winter woods may not be for you. But for those occasionally stressed-out and overstimulated, it's a nice antidote to the modern condition. After long months of frenetic spring, summer, and fall activities and the festive diversions of the December holidays, my winter den is a near-silent refuge.

Attuned to silence, an unexpected nearby sound — the call of a barred owl, bark of a fox or coyote's wail — will make hair instantly rise on the back of my neck followed by the sound of my heart pounding in my ears. And with no electromagnetic buzz from a glowing clock or electronic gadgets, including my cellphone and I-pod, I confess to the impulse to talk to myself aloud. But pursuit of silence is the objective, an ancient form of self-discipline practiced by monks and religious ascetics.

By dawn, snow has piled an undrafted 18" deep outside my hidden fortress deep in the woods. By seven o'clock, while perking coffee and cooking breakfast, I note the distant whine of civilization: a snowblower, rumbling snowplow, or steady drone of a standby electric generator. The comforts of modern living are undeterred by an old fashioned New Hampshire snowstorm. Yet after the rare experience of a comfortable silent night in the woods, I wonder if we've all lost the opportunity for introspection found in pure silence that our not-too-distant predecessors knew in these same locales not long ago. ♪

The Forest Society thanks the following businesses for their generous support.

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For information on business memberships, please call Susanne Kibler-Hacker at (603) 224-9945.

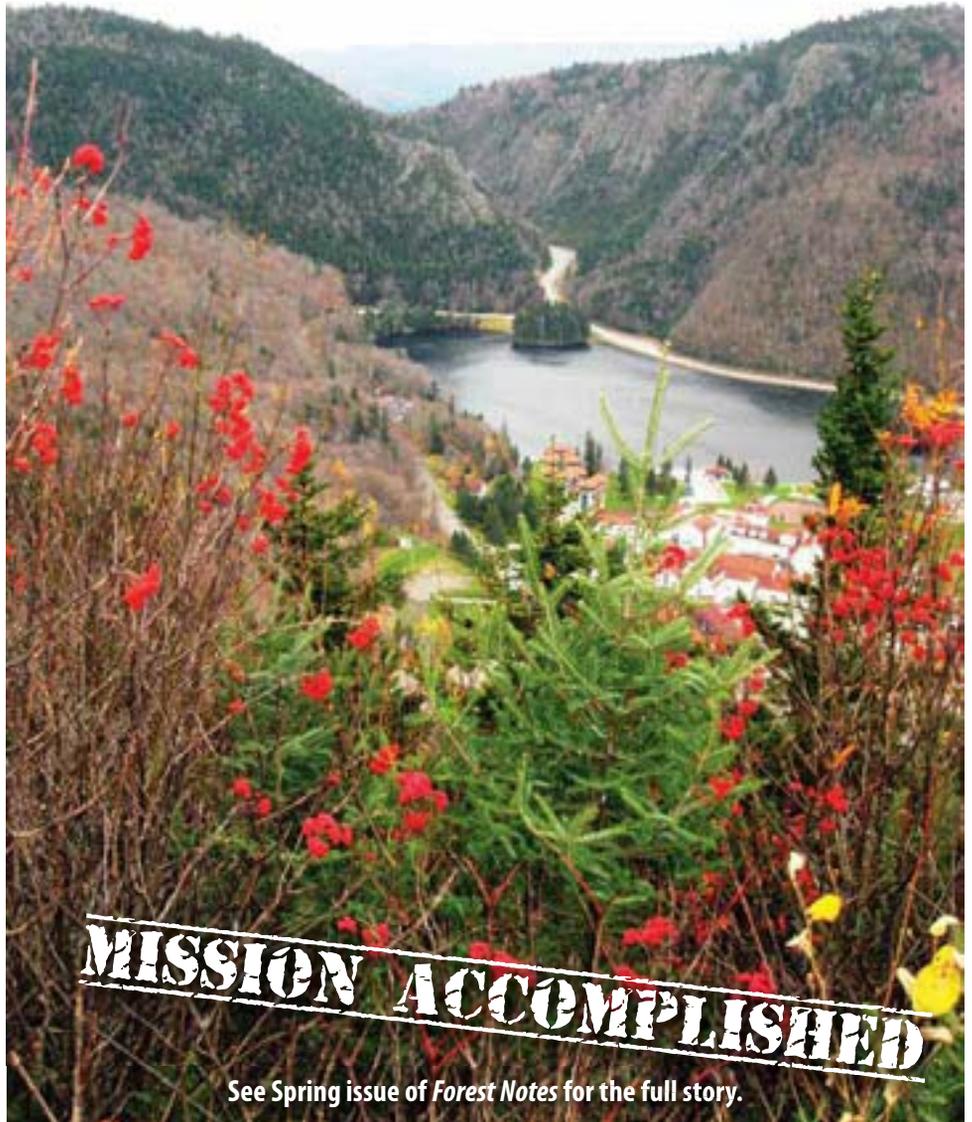
Conserving 5,800 Acres of the Balsams Landscape Dixville Notch, NH



Late in 2011 the Forest Society signed a purchase-and-sale agreement that would enable the protection of 5,800 acres surrounding the historic Balsams Wilderness Resort. We quickly began working to raise the \$850,000 needed to conserve this working forest in Dixville Notch. As of press time, this effort was still underway.

This rugged landscape contains an impressive array of wildlife habitats and unique natural communities. Northern boreal spruce and balsam fir forests are prowled by rare pine martens and gray jays. Stands of sugar maple, beech, and yellow birch include likely old growth, tucked away in secluded areas. At the valley floor, where the headwaters of the Mohawk River find their source, the fens and peatland bogs surrounding Mud Pond provide habitat for moose, deer, and itinerant waterfowl.

Generations of North Country residents and vacationers have shared a love of this rough-hewn natural landscape. Nearly 30



The historic hotel in Dixville Notch and surrounding land was recently sold by the Tillotson Corporation to two North Country investors. Now we have a once-in-a-lifetime opportunity to permanently conserve this dramatic landscape. Photo by Chris Borg.

miles of trails lead explorers to destinations like Table Rock, Sanguinary Ridge, Abenaki Mountain, and Mud Pond. If we are successful in our campaign, this land will remain accessible to the public and protected from commercial development.

Our deadline for raising the funds was short. Please check our website at www.forestsocty.org to get an update on this project. There is also a blog with a video tour of the property at www.savethebalsamslandscape.blogspot.com. ¶



Conserving these lands will protect the panoramic forested mountain views of Mount Monadnock, which are widely visible from across the region. Photo by Jeff Sluder.



Deadline extended — Help the Forest Society conserve nearly 400 acres on Mount Monadnock in Jaffrey, NH

In 1915, the Forest Society conserved its first 650 acres on the slopes of Mount Monadnock. Thus began the organization’s first step on a 100-year journey to protect the most-climbed mountain in the western hemisphere.

In the years to follow, the Forest Society would purchase, parcel by parcel, more than half of the mountain’s 6,900 conserved acres and come to hold conservation easements on more than 1,000 additional adjacent acres.

The more things change, the more they stay the same. Almost one hundred years later, developers continue to nibble at the mountain’s slopes. But today, the Forest Society has an opportunity to protect another 390 acres in what could be the largest amount of acreage on the mountain conserved at one time since that first parcel was conserved in 1915.

We are working with two landowners to conserve lands that have tremendous natural and recreational significance. Their protection will guarantee that important

sections of active hiking trails will continue to be maintained and open to the public under Forest Society stewardship. With their forests and wetlands, these two parcels also enhance the varied wildlife habitat that the region is renowned for. These lands include several wetland complexes that provide important waterfowl nesting and feeding areas, as well as habitat for amphibians and reptiles. The waterways also serve as key travel corridors for mammals and birds.

The conservation of these lands will also protect the panoramic mountain views of Mount Monadnock that are widely visible from across the region.

With your help, we will guarantee that these trails remain open to the public, and that these lands continue to provide food and shelter for moose, bear, and other wildlife. We must raise \$760,000 by March 20. We still need to raise \$445,000 to reach our goal.

Please help the Forest Society ensure that New Hampshire’s treasured Monadnock landscape remains unbroken. ♪

YES, I WANT TO HELP THE FOREST SOCIETY CONSERVE NEARLY 400 ACRES ON MOUNT MONADNOCK

Name: _____

Address: _____

Town/City: _____ State: _____ Zip: _____

Telephone: _____ Email: _____

Enclosed is my tax-deductible contribution for \$ _____
(Please make check out to the Forest Society, with "Monadnock Landscape" on the memo line.)

Please charge my tax-deductible contribution to my credit card in the amount of \$ _____
 VISA MasterCard Card number: _____ Expiration date: _____

Signature: _____

Please mail the completed form to: *Monadnock Landscape, Society for the Protection of New Hampshire Forests*
 54 Portsmouth Street, Concord, NH 03301. Or donate online at www.forestsociety.org/np.
 For more information, contact Susanne Kibler-Hacker at 603-224-9945 or via e-mail at skh@forestsociety.org.

Thank you for your help!





**SOCIETY FOR THE PROTECTION
OF NEW HAMPSHIRE FORESTS**
54 Portsmouth Street
Concord, NH 03301-5400
Address Service Requested

Nonprofit
Organization
US Postage Paid
Manchester, NH
Permit No. 0494

THE MANY FACES OF CONSERVATION

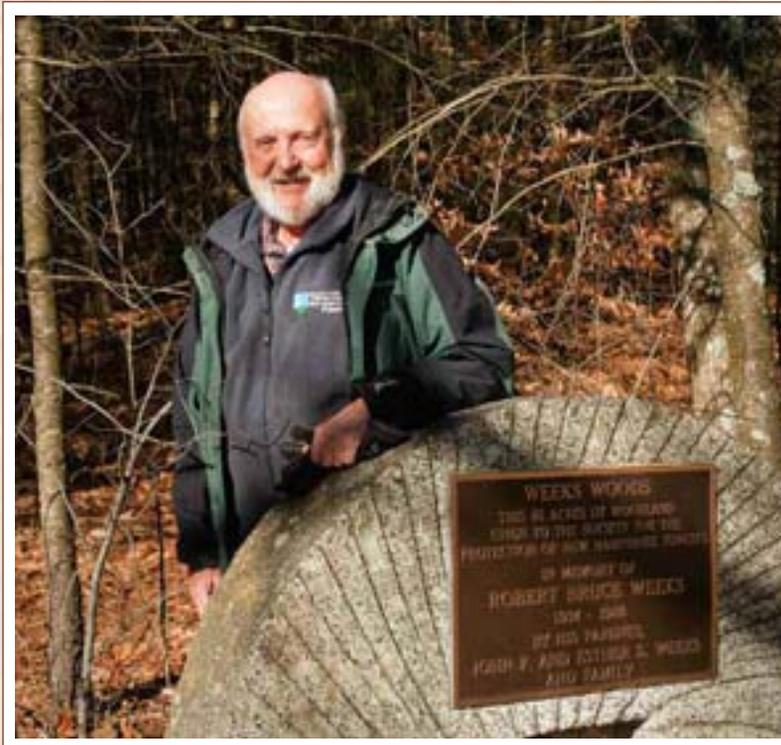


Photo by Al Karevy.

MEMBERS MAKE THE DIFFERENCE!

Hal Busch is among the 10,000 members who helped the Forest Society protect more than one million acres in New Hampshire. To join him, use the envelope in this issue or contact Margaret Liszka at 603-224-9945.

Hal Busch

Gilford, N.H.

Member since 1991

“**D**uring my earlier adult life, I enjoyed hiking and camping in New Hampshire. The hiking was focused on reaching the peak and appreciating the exercise and environment. With maturity I came to have more of an interest in forest ecology,

silviculture, and wildlife, which led to my membership in the Forest Society, a leader in conservation education and advocacy.

When retirement neared, I had time to be more directly involved. I became a volunteer land steward on the Forest

Society’s Weeks Woods reservation, which has been a rewarding experience. Associating with the professional staff and taking advantage of educational programs has led to a meaningful change of paths in my retirement years.” ♪