Spring 2014

Highstead

Working to conserve the forested landscape of New England through science, sound stewardship, and collaborative conservation

To the Members and Friends of Highstead

How do we advance New England conservation? Since publication of the Wildlands and Woodlands (W&W) report, which envisions the conservation of more than 70 percent of the region, this has been a major goal of Highstead's board and staff. We have sought to identify strategic ways to add measurably to the region's conservation effort and legacy. Our work has been diverse and successful: helping to grow 38 regional conservation partnerships from Fairfield County, Connecticut to the North Woods; developing land use and climate scenarios of the region's future to help policymakers understand the consequences of our land-use decisions; and providing landowners with methods to track changes in their woods.

In December we met at Harvard University with academics from across the region to launch a new effort—ALPINE (Academics for Land Protection In New England). The daylong workshop was motivated by the belief that academic constituencies—faculty, administration, students, and alumni—represent a huge resource of energy, skill, and commitment advancing conservation that could do more through collaboration. We invited faculty from private colleges and universities and regional state universities who are passionate about and successful in conservation. As they discussed regional collaboration they shared intriguing examples:

- Yale's work helping landowners in northeastern Connecticut manage and conserve their land
- Students at Westfield State University working with the National Park Service, Nature Conservancy, and land trusts to protect the watersheds and tributaries of the Connecticut River
- University of Maine's initiative promoting economic development and conservation surrounding the Penobscot River
- Studies at Colby College to promote resilience in the Belgrade Lakes watershed
- The Food and Farm Vision coordinated by Brandeis University to advance New England's ability to produce more of its own food and fiber

Participants committed to engaging all regional academic institutions in a conservation consortium yielding educational lessons, life experience, and benefits to society. ALPINE will begin with an initial collaborative project: students from numerous institutions will work with Harvard scientists and Highstead staff to map the lands and regions of interest to all colleges, universities, and private high schools in New England. With that information we will meet to discuss ways academic institutions can support efforts like the regional conservation partnerships to create a conservation future for New England.

David Foster *is Director of the Harvard Forest at Harvard University and President of the Board of Highstead Foundation.*

From the Conservation Director | **Emily M. Bateson**

Building Momentum for New England Conservation

What a difference three years makes. The last time we published a newsletter map of all the regional conservation partnerships (RCPs) in New England, there were 27 of these collaborative conservation initiatives. Today there are 38, a 40 percent increase. The new map shows that communities and partners are working together on more than half of the New England landscape to increase the pace and scale of conservation and help leave our natural heritage intact for our children and grandchildren.

This groundswell of community-grounded conservation is helping RCPs to achieve success, which continues to be an important Highstead priority. Today, we celebrate key benchmarks of the past three years.

1. **Building a skilled conservation community:**
   When Highstead began talking with different partnerships across the region, many did not know that other RCPs existed. They were all recreating the proverbial wheel. Today, Highstead coordinates a robust RCP Network that has a LinkedIn Group, website resources, and an annual conference that promotes collaborative conservation.

2. **Building a conservation brand and attracting new funding:**
   When Highstead surveyed all the partnerships several years ago, it was clear that lack of funding was a major obstacle to conservation progress. Today, there are promising indications that funders are far more aware of RCPs and their potential to change the conservation landscape of New England. Recent highlights of RCP grants that Highstead played a role in securing include monies from two major foundations and three state and federal agencies totaling nearly one million dollars.

3. **Providing the research and tools necessary for success:**
   Highstead's Bill Labich has spent several years analyzing which RCPs are successful and why, then sharing the results with the RCP community. This important research was published last fall, and is available on the Highstead website: Labich, W.G., E.M. Hamin, and S. Record. 2013. Regional Conservation Partnerships in New England. Journal of Forestry 111(5): 326-334. This year Highstead will release a manual for RCPs that provides an informative and inspirational guide for collaborative conservation.

The growing success of the innovative RCP movement is the work of many dedicated people. We salute and celebrate their work to conserve both local communities and the natural fabric of the entire regional landscape. With such widespread and growing commitment, the future of New England conservation looks increasingly bright.

RCPs are informal and diverse networks of people from organizations and agencies working together to achieve long-term conservation that benefits both their local communities and the greater landscape around them.

Map Key

1 Belknap Range Conservation Coalition
2 Chateauguay Notown Conservation Project
3 Cold Hollow to Canada Forest Link Project
4 Downeast Research and Education Network
5 Fairfield County Regional Conservation Partnership
6 Forest Works!
7 Forever Farmland Initiative
8 Friends of the Silvio O. Conte National Fish and Wildlife Refuge
9 Great Bay Resource Protection Partnership
10 High Peaks Initiative
11 Kennebec Woodland Partnership
12 Litchfield Hills Greenprint Collaborative
13 Lower Penobscot Watershed Coalition
14 MA-VT Woodland Partnership
15 Mahoosuc Initiative
16 Mass-Con Sustainable Forest Partnership
17 Mt. Agamenticus to the Sea Conservation Compact
18 Natchaug River Basin Municipal Conservation Compact
19 Newfound Land Conservation Partnership
20 North Quabbin Regional Landscape Partnership
21 Orange County Headwaters Project
22 Quabbin to Cardigan Partnership
23 Quiet Corner Initiative
24 Rensselaer Plateau Alliance
25 River Link
26 Salmon Falls Watershed Collaborative
27 Sandy Brook Conservation Corridor
28 Southern New England Heritage Forest Partnership
29 Taconics Landscape Partnership
30 Taunton River Coalition
31 The Chittenden County Uplands Conservation Project
32 The Lower Connecticut River and Coastal Region Land Trust Exchange
33 The RI Woodland Partnership
34 Twelve Rivers Collaborative
35 Upland Headwaters Alliance
36 West Suburban Conservation Council
37 Taylor Valley Conservation Project
38 Nashua River Forest Partnership

Highstead Welcomes New Communications Coordinator

Jes Siart, pictured above

Jes Siart joined Highstead as our new Communications Coordinator in March. She will take a lead role in implementing communication strategies, producing publications, creating website content, and managing social media.

Jes has a background in communications and was previously a reporter in New York and Connecticut. She holds a Bachelor of Science in Environmental Studies from the SUNY College of Environmental Science and Forestry in Syracuse, NY. It was there that she developed an interest in the powerful role of communications in informing and inspiring people regarding the complex arena of science and conservation.

"We have the opportunity to protect New England forests to ensure clean air and water, biodiversity, and the many economic and recreational benefits provided by this incredible natural resource. By effectively communicating the importance of this opportunity to landowners and policymakers, we can preserve the economic, cultural, and environmental health of New England, and I am honored to work with the talented staff at Highstead to achieve that goal," Ms. Siart said.

Here at Highstead | **Geordie Elkins** | *Operations Manager*

Landscaping as a Vital Part of Conservation

Every landowner has the opportunity to make important contributions to larger environmental conservation goals. Property owners can contribute to making a cleaner and healthier environment by expanding plant and animal habitat through their landscaping decisions. Southwestern New England is a patchwork of small land parcels that are primarily in private ownership. This makes large-scale land conservation difficult, as land simply is not available for the creation of large, new open spaces that are critical for maintaining our natural landscape. However, our landscape has not been completely urbanized to the point where it no longer offers ecological value.

While Highstead works to facilitate large-scale land conservation throughout New England, here in Redding one of our goals is to use our property for small-scale experiments and research that demonstrate healthy land stewardship practices. These demonstrations help educate and inspire suburban or exurban landowners to employ conservation-minded landscaping practices in their own backyards and communities.

The landscape encompassing Highstead's Barn headquarters includes existing woodlands, native plantings, and a wildflower meadow. It appears relatively natural, as if it has had little influence from human activities – but that wasn't always the case. In the past, this section of the property was the location of a former dwelling, it was later logged destructively, and has also served as a site to deposit dredgings excavated from the man-made pond. Similar scenarios occur when forests are cleared and land is sculpted for the development of suburban and exurban homes.

Conservation-minded landscaping can help restore the environmental functions of a disturbed site and integrate it into the natural surroundings.

Standard development practices of cutting down trees, changing the contour of land, and creating hardscapes can fragment forests, destroy wildlife habitat, facilitate exotic invasive species, and negatively impact hydrology and water quality, all of which degrade the natural beauty, diversity, and ecological functions of a landscape.

At Highstead, our approach to conservation landscaping aims to protect existing woodlands and mitigate some of the negative and unintended consequences of past land use activities. For example, the planted beds around the Barn are shaped and planted naturalistically with native species of differing forms, age, and size. Simulating the structure and species composition of the adjacent woodlands and meadow, these plantings help blend the Barn aesthetically within its natural surroundings. Additionally, they serve to extend the surrounding natural habitat and bring it into the planted landscape, a concept we are all capable of adopting in our own backyards.

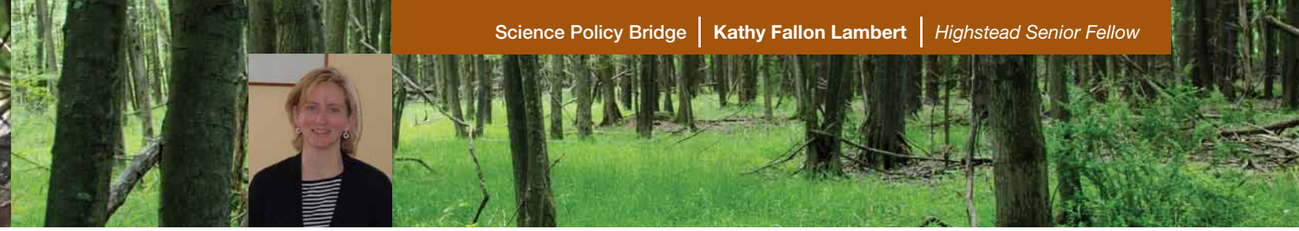
Meadows support a larger diversity of plants, animals, and insects, and also have a greater capacity to absorb and filter runoff than the typical lawn.

Conservation-minded landscaping can serve our practical needs as well as benefit the environment. The purpose for our pond is to provide a magnet for wildlife. Instead of planting a traditional lawn we seeded this area with a mixture of wildflowers and grasses, which has multiple benefits over turf grass. The thicker vegetation of the meadow and buffer along the pond edge absorb and filter water so it flows off our property at a slower rate. This translates into reduced flooding and increased water quality downstream. The meadow also provides habitat for wildlife, including songbirds, butterflies, and other pollinating insects. We only mow the meadow once a year to prevent it from transitioning back to forest. Requiring less mowing than turf, the meadow reduces labor, fossil fuel consumption, and air pollution.

We can also use our landscapes to help create habitats that are declining in Connecticut. As shrubby successional and edge habitats revert to forest, the plants and animals that inhabit them are becoming increasingly rare. To encourage these species on our property we maintain a band of unmowed vegetation between the meadow and adjoining oak woodland, which also provides a smoother visual transition between the two different habitats.

We encourage you to visit Highstead to enjoy the beauty of our property and learn about some of the important ecological functions it serves. You'll be inspired to rethink your own property and find ways that you can get involved with conservation-minded landscaping.

Stewardship Science | **Ed Faison** | *Highstead Ecologist*



Science Policy Bridge | **Kathy Fallon Lambert** | *Highstead Senior Fellow*

Studying the Survival and Sprouting Behavior of Mountain Laurel

For much of the year, austerity characterizes rocky hillsides of southern New England. Columns of grayish-brown oaks stand amidst a muted, evergreen shrub layer, with a few herbs scattered amongst the bare rocks and leaf litter on the forest floor. But come June, those hillsides are scarcely recognizable, transformed into a fairyland of white and pink blossoms: the mountain laurel in bloom. In recent decades that burst of color has become muted at Highstead and other forests across the region. Connecticut's state flower is in decline, and for the past five years at Highstead we have been studying the cause.

Highstead's Kalmia Collection contains more than 70 Kalmia forms and cultivars of three species.

Mountain laurel is an evergreen shrub frequently born out of and sustained by damage to the forest canopy, whether from gypsy moth caterpillars, chestnut blight fungus, or the human saw. Gaps in the leafy canopy allow sunlight to reach the forest floor, fueling the shrub's proliferation. In fact, the average age of Highstead's stand of laurel is about 45 years, which coincides with a devastating gypsy moth outbreak in Redding in 1970-1971. As gypsy moth outbreaks have subsided and logging has dwindled in recent decades, forest understories have grown darker, but more populated by deer, rendering survival and regeneration of the aging laurel (which has a lifespan of 40-60 years) more challenging, particularly on drier slopes.

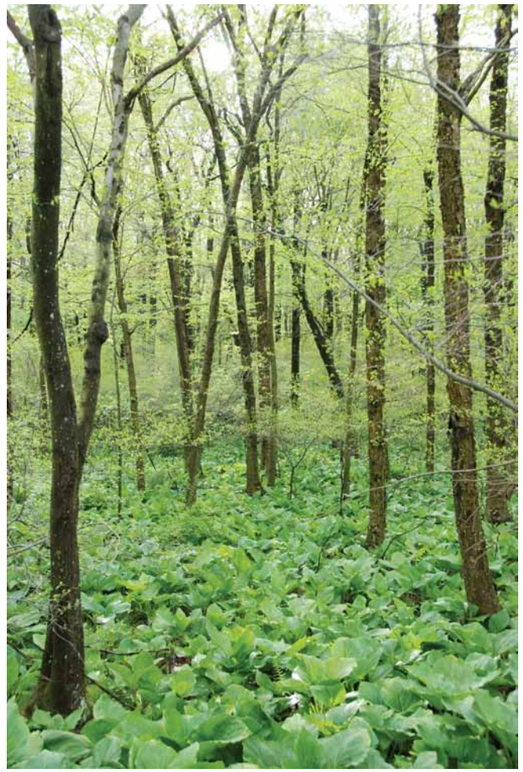
To what extent can we attribute the decline of laurel at Highstead solely to reduced light or has increased deer browsing and soil moisture also played a role in this story?

After five years of monitoring, we found that dry, upper slopes have primarily limited the survival of mountain laurel, whereas deer browsing has limited the growth rates of regenerating sprouts. Small variations in light in Highstead's shady woodland were a less important influence. The good news for laurel is that in larger gaps light does play a role, and that as Highstead's forest ages, the canopy will naturally open and help to rejuvenate the mountain laurel over time.

A paper on this study titled "To sprout or not to sprout: multiple factors determine the vigor of Kalmia latifolia (Ericaceae) in southwestern CT," authored by Edward K. Faison, Peter Del Tredici, and David R. Foster, is published in the New England Botanical Club's journal, Rhodora, this spring.

The Future of Our Forests?

Since its founding, Highstead has been a science-based organization that performs ecological research and long-term monitoring on its own property and across southern New England. Understanding the forested and natural landscapes around us is critically important in making smart management choices that ensure New England's forests are healthy and intact for future generations.



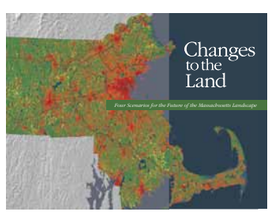
As part of our effort to bring sound science to policymakers and the public, Highstead supports the science-policy work of our Senior Fellow, Harvard Forest Science and Policy Integration Project Director, Kathy Fallon Lambert.

Kathy's recent work includes the December 2013 publication of a groundbreaking study by the Harvard Forest and Smithsonian Conservation Biology Institute that she co-authored, titled Changes to the Land: Four Scenarios for the Future of the Massachusetts Landscape. The study used several computer models to consider four possible scenarios for the future of Massachusetts forests that reflect different levels of conservation, development, agriculture, and wood harvesting.

Researchers found that land-use decisions made today have immediate and profound long-term consequences for the health of our forests, air and water quality, climate mitigation, and the economy. The models showed that left unaddressed, current sprawling development trends will degrade the vital benefits we rely on from our natural landscapes.

Although the study focused on Massachusetts, the implications for Connecticut and beyond are clear: combining smart growth with sound forestry and continued land conservation will help protect our water, woods, and climate while supporting economic development. Researchers have received funding from the National Science Foundation to extend this study throughout New England in collaboration with Highstead and other regional institutions to provide a comprehensive regional picture.

"Forests are more than a collection of trees," Ms. Fallon Lambert said. "They function as natural infrastructure that works 24 hours a day to provide economic, ecological, and social benefits. The scenarios show that accelerating land conservation, smart growth, and sustainable forest management will provide a robust future for people and nature."



The report, a summary, and a video of its major findings can be found at: http://harvardforest.fas.harvard.edu/changes-to-the-land.

Highstead in Bloom

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Printed on recycled paper

Come visit the forest

Saturday June 7, 2014

Spring Open House and Trails Day

11:00 a.m. to 12:30 p.m.

Guided tour with Highstead Ecologist Ed Faison and Operations Manager Geordie Elkins. Enjoy a spring walk around Highstead with staff who will identify and explain the wide range of habitats on the property and discuss the ongoing science and land stewardship projects.

1:00 pm to 2:00 pm:

Jonathan Thompson, Senior Ecologist at the Harvard Forest and lead author of Changes to the Land: Four Scenarios for the Future of the Massachusetts Landscape, will discuss "Land Use Decisions and the Future of New England's Forests." Come learn about this groundbreaking research and what it means for New England.

RSVP as space is limited: 203-938-8809.

Light refreshments will be served at 12:30 p.m.

Highstead trails will also be open from 10:00 a.m. to 3:00 p.m. for self-guided tours and visits to the Laurel Collection in bloom.