New England Society of American Foresters

News Quarterly

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Extra, Extra! Lead all about it!

No folks, that was not a typo! We have a great opportunity for several motivated individuals to attend an upcoming Regional Leadership Academy!

Beginning last year, the state societies of Allegheny, Maine, and New York have been planning for a regional leadership academy to be held in 2018. The academy is scheduled for November 14 - 16, 2018 and will be held at the Grey Towers National Historic Site, located in Milford, PA. This is an opportunity for each of 12 states to obtain targeted leadership training for foresters, and allow attendees to share in some awesome networking.

Each local unit within NESAF will be encouraged to identify and recommend a candidate, ideally an early-career forester and SAF member, who could become a future leader in New England. To that goal, NESAF has awarded a grant to provide $300 for one candidate from each of the 6 New England states. NESAF has a total of 11 slots allocated, so multiple candidates are possible.

The planning committee feels very strongly that that this will be a worthwhile opportunity, benefiting the attendee, their employer, the local SAF unit, and their community. The agenda will provide training in leadership concepts and practical exercises of those skills.

Anticipated costs per attendee are $1,000 for registration, travel, lodging, and meals. Additional underwriting is being explored and is also encouraged from the respective local SAF units. Because the attendee and their employer will also be beneficiaries of the training, the planning committee believes that they should also share in the overall expense.

For more information, contact Ken Laustsen (207.287.3135 or ken.laustsen@maine.gov) or your local SAF Unit.

Emerging Science: abstracts from the 2018 NESAF Annual Meeting

News Quarterly science theme- Dr. Anthony D’Amato, theme editor

This theme continues the concept started a couple years ago in the News Quarterly, a compilation of scientific and technical abstracts presented at the Annual Winter Meeting in Nashua. The focus is to highlight research projects currently underway at our universities and institutions, while also allowing the next generation of foresters an opportunity to establish themselves. The abstracts span a variety of topics, so it’s likely that something will catch your attention. I hope the abstracts featured in this theme are as well received as they have been in previous years!

(Articles begins on page 10)
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<table>
<thead>
<tr>
<th>Issue</th>
<th>Submission Deadline</th>
<th>Publication Date</th>
<th>Advertising Size</th>
<th>Advertising Rate</th>
</tr>
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<tbody>
<tr>
<td>Winter</td>
<td>22-Dec</td>
<td>15-Jan</td>
<td>1/2 page</td>
<td>$90/issue</td>
</tr>
<tr>
<td>Spring</td>
<td>22-Mar</td>
<td>15-Apr</td>
<td>1/3 page</td>
<td>$70/issue</td>
</tr>
<tr>
<td>Summer</td>
<td>22-Sept</td>
<td>15-Oct</td>
<td>1/4 page</td>
<td>$50/issue</td>
</tr>
<tr>
<td>Autumn</td>
<td>22-Oct</td>
<td>15-Oct</td>
<td>1/8 page</td>
<td>$30/issue</td>
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**Greetings from the Granite State! ~ Kevin Evans, NESAF Chair**

“A good time was had by all”: These were the sentiments I heard about our recent Winter Meeting in Nashua New Hampshire. I do hope it is true!

I would like to thank each of our sponsors, exhibitors, committee members, and students, who helped make this year’s winter meeting a success! A special thanks to Susan Francher, who in her capacity as General Chair, successfully coordinated a year’s worth of planning and volunteers, and all the behind the scenes work that we at the conference never see. Thanks to Senator Shaheen for taking the time to stop by and spend some time with us. Thanks to a great program committee that coordinated 45 speakers in 20 concurrent sessions, 1 workshop and 3 field trips to contribute to the theme New England Forest Stories: The People - The Management - The Technical Knowledge. I also don’t think I have ever seen as many raffle and silent auction items; a special thanks to Harold Cook for his coordination there. Congratulations to all who received awards and recognition for your service or contributions to forestry and SAF.

As always, it was great to see old friends and colleagues at the many evening events. Congratulations to the University of Vermont students who took a very closely contested Quiz Bowl trophy home. It was fun to see all of us older folks trying to remember all that details of our forestry knowledge. Thanks to those members who sponsored a student, as was said many times, it is the youth that will take over this organization when all of us in the big bar graph are gone. Early engagement is the key!

As we look forward to the summer and fall I hope to see you at events around New England. It seems we are in a time of transition and we need to be engaged in that change so we can inform the outcomes. I think we have good leadership at national SAF: Thanks to John McNulty for stepping up and serving as Vice President, to Si Balch for serving as our District 6 representative, and Jas Smith for serving on the National SAF Forest Policy Board. It is good that we in New England will have a voice in the national discussions.

All state societies should be thinking about a representative who might attend the Leadership Academy at Grey Towers in Pennsylvania in the fall. People wanting more information should contact myself or Ken Laustsen.

Finally, thanks for being a member of SAF. Enjoy the spring!

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**Council Update ~ Si Balch, CF**

**Forrester Inventory 2018**

How many foresters do you think there are? Good question.

Well, we have decided to take an inventory (a good estimate). I am heading up a task group at SAF to find out how many foresters, forest techs and other qualifying professionals are out there that are eligible to be SAF members.

It is an interesting challenge since it covers everyone; all the likely federal agencies, state, colleges, private employers, consultants, cities, counties, NGO’s et al. Twelve states have licensing and four states have voluntary registration.

We are making good progress and plan to be done by December. You will be hearing more about this, as we analyze the information we gather.
2018 NESAF Award Recipients

Ronald Lemin

**Distinguished Service Award**

The Distinguished Service Award is the highest award given by the New England SAF, recognizing professional achievement in forestry, irrespective of age or tenure, by a New England SAF member.

It was noted in the nomination letter, “Ron did. Ron will. Ron has shown time and again, that he will step up, will be present, will make a difference. And he will be happy to do it.”

In 1993, even before he became a member of SAF, Ron volunteered to serve on the arrangements committee, providing a sustained and dedicated effort to making the 1995 National Convention in Maine a success. Starting in 1999, he worked his way through all elected offices within the ME Division, then in 2003 he worked his way through all elected offices on the NESAF Committee, and served as the Membership Committee Chair for several years, ending in 2012. Not finished yet, he is again back at the ME Division as a Member-at-Large, where his energy, experiences, and leadership is admired and most welcomed. Over the 2001 – 2017 period, he served 5 times as General or Arrangements Chair for the NESAF Annual Winter Meetings held in Maine.

Ron has been a professional colleague and friend for over 18 years and his nickname for me is “Boss.” Well if I am his SAF Boss, then I am equally glad that Ron was my right-hand man for the same period, a person you could count on to be there and doing their share.

Carol Redelsheimer

**James W. Toumey Outstanding Service Award**

The James W. Toumey Award is given for outstanding achievement in service to the New England Society of American Foresters. Toumey was one of the founding fathers of the New England Section in 1920, author of *Seeding and Planting* and *Foundations of Silviculture*, one of the first two regular staff members at the Yale School of Forestry. Henry S. Graves noted in a memoriam “Almost at once he took a prominent place in the forestry movement and throughout his career was in the foremost ranks of the leaders of the profession.”

Carol has an extensive background when it comes to service to NESAF. For the Maine Division (MESAF), she served as co-chair/chair in 1992-1993, general chair for the 1993 NESAF annual meeting, a 1994-1995 member of the Forest Practices Task Force, returning as the Program Chair for the 2017 NESAF annual meeting. For 1997-1998 she was the MESAF state representative to the NESAF Executive Committee. Her service then extended to the national level, where she was a member and Chair of the SAF Certification Review Board (CRB) committee, co-chair of the 2000 SAF National and Centennial Convention, and a District 6 Council representative.

Her professional accomplishments and reputation for strong personal ethics and sound stewardship have been recognized with a variety of awards and honors, including 1993 ME PLT Stewardship, 1995 NESAF Mollie Beattie Young Forester, 2008 SAF Fellow, 2010 Univ. of ME School of Forest Resources Distinguished Alumnus, and the 2011 NESAF Austin Cary Practicing Forester.

One endorsement noted, “She has always believed in the value and relevance of our professional society and has worked at every level to maintain its strength.” In addition to the previous noted service on CRB, there was an 11-year stint on the Maine Board of Licensure of Foresters as member and chair, and her strong support that the SAF Certified Forester exam should also become the de facto exam for a ME license.

One endorser is proud that they were part of the interview team that hired her in 1983, for a summer position measuring CFI plots, that then morphed into a full-time position with Great Northern Paper. “Carol has done well and gone far, but her heart and service has stayed strong to NESAF.” He also believes that she played a major role in convincing SAF to allow NESAF to host the 2020 National Convention, recognizing the 100th anniversary of the State Society.
Elizabeth (Betsy) Lesnikoski  
**Austin Cary Practicing Professional Award**

The Austin Cary Award recognizes New England SAF members who have shown exceptional achievement as practicing forest managers. Austin Cary (1865–1936) graduated from Bowdoin College and introduced northern landowners to forest sampling, growth estimation, and simple silvicultural techniques. Cary’s Woodsman’s Manual, written in 1909, continued to be used as a textbook until the 1960’s.

In the nomination letter, a logging contractor was quoted, “She doesn’t just deal with contractors, she must keep peace among environmental groups, NY and VT state agencies, large landownerships, all the while keeping the fiber moving to the Burlington Electric McNeil Generating Station in VT.” Since more than half of Burlington Electric’s fuel supply comes from NY, her most outstanding achievement, noted by her former supervisor, was securing an Emerald Ash Borer Compliance Agreement from USDA APHIS involving the movement of biomass chips from NY (an infested area) to VT (a non-infested area). This required educating every harvesting and trucking contractor in meeting the compliance terms, with continuing follow-up to this day.

A Tree Farm Inspector since 1983, and recently elected to Board of Directors of the Empire State Forest Product Association, she also served a 10-year stint (1987-1997) as the Green Mountain Division News Correspondent for the NESAF News Quarterly. Her professional credentials include being a SAF Certified Forester and is licensed in both NH and VT.

A co-worker noted, “Betsy has always been cool and levelheaded in decision making and can bring people, who are on different sides of an issue, together easily to get to common ground. The most common situation involved getting suppliers to comply with Burlington Electric’s harvesting guidelines or the State regulations that may cost the suppliers both in time and money. Betsy’s low-key, inclusive nature garners compliance and seldom results in hard feelings of a grudge.”

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Thomas Worthley  
**Ernest M. Gould Jr. Technology Transfer Award**

The Ernest M. Gould Jr. Technology Transfer Award is given for outstanding contributions to natural resource science and management through education, extension, or youth service. Gould achieved wide acclaim for his expertise in analyzing and resolving forest resource policy issues while on the faculty of Harvard University. He was a graduate of the University of New Hampshire.

Tom began his extension career in 1996, when he was hired as the Forest Stewardship Program Coordinator for the University of Connecticut (UConn). Prior to that he had an 18-year career in private forestry working for Perma-Treat Corporation and as a consulting forester. In 2008 he was promoted to be the State Forestry Extension Specialist. Besides his extension duties, he teaches several forestry courses at UConn and oversees the forest management of the 1,300+ acre University Forest.

Tom has literally taught and presented over a thousand workshops, short courses, lectures, seminars to forest landowners, professional foresters, loggers, municipal land use boards, and certified arborists. Since 2009, he had directed the CT Coverts Project. He has teaming with other colleagues to teach workshops on invasive species ID and control. His most recent collaborative effort, for which he is the de facto spokesman, is “Stormwise”; a comprehensive approach to managing forested roadside environments to reduce storm related tree damage and to minimize power outages. This private/public/NGO collaborative effort received the CT Urban Forest Council’s 2016 award for an Outstanding Urban Forest Project. One endorsement quoted, “Tom has a true passion for educating everyone about quality forest and natural resource management – and everyone extends from students to other educators, from the lay public to practicing professionals, from municipal officers to state agency personnel, to the governor.”
Eric Hansen

Mollie H. Beattie Young Forester Leadership Award

The Mollie H. Beattie Young Forester Leadership Award is presented to a member of NESAF less than 40 years old who has shown leadership in a program or project benefiting the practice of forestry. Beattie was Vermont Commissioner of Forests, Parks, and Recreation, Deputy Secretary of the Agency of Natural Resources, and ultimately became Director of the U.S. Fish and Wildlife Service. Beattie was active in SAF. She co-authored *Working with Your Woodland*; she is remembered for her tireless devotion to conservation, integrity, and quiet courage.

Eric graduated from the University of Massachusetts with a B.S. in Forestry in 2002. For the first three years of his career he worked several short-term positions as a technician and inventory crew leader in CT, MA, and NH. In September 2005, he was hired as a Forester I to work on the state forest lands in VT. In March 2007, he was promoted to Forest II, and for the next 5 years was the Rutland County Forester. In this position, he is a resource to loggers, landowners, and consulting foresters on a variety of projects, and was responsible for administering VT’s Use Value Appraisal Program on over 1,000 properties. He also contributed to an update of VT’s BMP standards, known as Acceptable Management Practices for Maintaining Water Quality of Logging Jobs (AMP’s), and a forester’s guide to managing forests with EAB in mind.

In July, 2012 Eric joined Ferrucci & Walicki (F&W), LLC in Middlefield, CT as a Senior Forester, and has since become a partner and a managing partner for the firm. F&W assists its clients in strategically managing their respective landbases for various outcomes. In 2014, the Forests for the Birds project was introduced to CT through a grant awarded to Audubon CT. Eric was hired to assist and adapt the program to the demographics and economics of CT. Through his leadership efforts the project has engaged over 80 forested landowners, on over 26,000 acres, finishing well above the initial target goals. As one endorsement quoted, “If not for Eric’s assistance, leadership, and expert advice in adapting and implementing the program, there is no way that the program would have been the success that it is.”

Kevin Evans

David M. Smith Award

The David M. Smith award recognizes a New England SAF member engaged in research, teaching, or the field application of silviculture, whose work reflects Dave’s advice that “we should observe and analyze the patterns of stand development first, and devise silvicultural treatments to fit or modify them afterwards.”

“Kevin has served as the primary steward for the 42,000 acres of timberland owned by Dartmouth College for over twenty years, and to visit these areas is a silviculturist’s paradise. Although amazing research scientists and educators have traditionally received this award, I am honored to have the opportunity to nominate a field forester whose career applying silviculture in the field is truly exemplary, and a model for anyone fortunate enough to spend a day in the woods with Kevin.” Early in his career as the Dartmouth College forester, he fostered a long partnership in technical assistance with the NH Fish & Game Department. “He developed a strong commitment to monitoring wildlife populations as an indicator of how the forest was functioning, and adapting his silvicultural approaches to ensure positive management impacts,” was noted in another endorsement. The latest example of this is Kevin’s participation in the Adaptive Silviculture for Climate Change project. Due to unknown future conditions, innovative silvicultural strategies are being employed to ensure forest health and function over time. Kevin, other managers, and a group of scientists co-developed a range of strategies from variable density thinning to continuous cover irregular shelterwood. In a 5-month period, Kevin not only marked these treatments on a four-hundred-acre experiment site, but also completed the harvest.

One endorser noted, “He and Kevin have served together on numerous committees that have addressed NH forestry issues, and that Kevin has never been one to shy away from controversy and has always upheld his strong beliefs in how a forest should be managed sustainably with an eye to all resources and not just the wood pile! Kevin says it like it is and stands behind his principles.”
Society for the Protection of New Hampshire Forests

Integrity in Conservation Award

The Integrity in Conservation Award recognizes an individual or organization working with natural resources who demonstrates adherence to principles and high standards in the face of adversity.

The Northern Pass (NP), a 192-mile high-voltage transmission line from Canada through New Hampshire, was first proposed in 2010, and the Society for the Protection of New Hampshire Forests (SPNHF) took notice. This project has become one of the most controversial energy proposals that the state has seen. The Northern Pass issue is far from settled, and SPNHF is far from giving up the good fight.

Since 1902, four core positions have been the foundation of the SPNHF mission:

1. We must defend conservation lands - the proposal for the largest-ever power line will cross and have detrimental impacts on thousands of acres of protected conservation lands both fee owned and covered with permanent easements by the Forest Society. We have both an ethical and legal obligation to defend these lands, held in public trust, from unnecessary commercial development and degradation.

2. We must protect NH’s scenic values - “places with special scenic beauty” attract millions of tourists to our state and represent the second-largest industry.

3. We must safeguard our forests - the power line corridor will permanently alter the landscape, fragmenting forests, disrupting wildlife habitat, disfiguring communities, and lowering property values, and

4. We must fight for the NH advantage - there is no clear long-term public benefit to NH from the NP project. As proposed, NH will sacrifice our natural assets.

The nomination letter further noted that, “The Forest Society has represented the issues and possible solutions with respect and professionalism. They have been a consistent voice for ensuring that protected lands remain protected.”
Thank you to all the great sponsors of the 2018 NESAF Annual Winter Meeting!
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Prescribed burn associations in the United States: the potential application to family forest landowners in fire dependent forest types

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Reintroducing fire through prescribed burning can restore fire dependent species, such as oak, hickory, and hard pines; decrease the threat of wildfires to human communities; and provide for unique and novel wildlife habitats. However, major barriers exist to its implementation. Family forest (FF) landowners own the majority of forestland in the eastern United States (42.7%). Prescribed fire has the potential to meet the diverse goals of such landowners, yet the aforementioned barriers to implementation are exacerbated by increasing parcelization and fragmentation of FF landholdings. Prescribed burn associations (PBAs) are cooperative units of FF landowners that pool resources and labor to achieve scale that allows them to overcome barriers. While currently most common among ranchers in the Great Plains region, there is growing interest in replicating this model to other regions. This study utilized the Delphi process and a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis to identify major structural themes associated with PBAs and provide useful insight on their management and replication to FF landowners in the eastern United States. A panel of 17 experts participated in three rounds of iterative surveys. Results suggest that PBAs effectively increase landowner access to resources and commitment to burning, yet have an overdependence on volunteer labor and dependence on high levels of motivation among an aging population. Possible opportunities for PBAs include external financial support, coordination support, and national growth trajectories, yet land fragmentation, narrow burn windows, and urbanization threaten their longevity. These themes are likely consistent with FF landowners in the United States, where the same internal and external factors exist. If PBAs are going to successfully establish and maintain themselves in new regions, they must utilize existing strengths and opportunities to overcome weaknesses and threats.

The Northeastern Forest Health Atlas - making a century of mapped damage to forests easy to understand and access

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For over a century, state and federal agencies have been conducting aerial surveys to detect, map and quantify disturbances to northeastern forests caused by insects, disease, weather and other disturbance agents. Access to this mapped information has improved in recent years, as has the standardization of the collection and coding. However, standardization and integration of historical detection data has been a persistent gap. To address this need, we developed the Northeastern Forest Health Atlas – an easy-to-use online mapping portal providing access to nearly a century of aerial detection and insect and disease surveys in Maine, Massachusetts, New Hampshire, New York and Vermont. Working with professionals from state forestry agencies and the USDA Forest Service, we assembled disparate historical spatial datasets, recoded the damage agent and damage type information to modern standards, and assessed broad spatial and temporal patterns of disturbance in the region. The result is an integrated, standardized dataset of nearly 100,000 polygons mapping forest damage from 223 damage causing agents extending as far back in time as 1918 in Maine and 1936 in Massachusetts. These data are hosted on an online mapping platform that allows the user to filter quickly down to the damage agents, damage types, years, and/or states of interest; download customized datasets; produce charts and tables of summary statistics; and even explore data from related field-based research datasets. We will provide a tour of the Northeastern Forest Health Atlas, highlighting some of the most useful features for foresters and land manager, and present interesting temporal and spatial patterns, including ‘hotspots’ of repeated damage and trends in key forest pests that emerge from this enriched dataset.

Sustainable management of northern hardwoods: an 80-year perspective

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Recent assessments of forest management in northern hardwoods of New England and the Lakes States reveal that traditionally recommended silvicultural systems such as the selection system are uncommon. Instead, partial cutting often involves removal of only the largest trees, without adherence to residual stand structural goals. Though forest managers frequently desire outcomes attributed to selection cutting, i.e., sustained sawtimber
production, vertical structural diversity, and large trees for habitat, complexities of structural control using a reverse-J diameter distribution are obstacles to widespread application. In addition, long-term sustainability of the selection structure is largely unproven; observations from studies in the Northeast suggest compositions and structures may deviate from the target over multiple cutting cycles. In order to assess sustainability of the traditionally recommended (reverse-J) structure, as well as the potential for other forms of partial cutting to produce similar outcomes, we analyzed 80 years of data from the Dukes Experimental Forest in Michigan where single-tree and group selection, improvement, and diameter-limit cutting have been applied. Our findings indicate that the traditional reverse-J structure is sustainable over the long-term, and does provide structural diversity and large tree habitat. However, other partial cutting alternatives, such as group selection and some forms of improvement cutting, result in similar structural outcomes, though vary in terms of tree species composition and quality.

Influence of canopy openness on understory plant diversity in managed and unmanaged stands in Maine
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Single-tree selection cutting is used to promote vertically and horizontally diverse stand structures through creation of small gaps in the canopy. Resulting structural and compositional heterogeneity have implications for understory species diversity and microsite resources at varying spatial scales. To address potential influences from single-tree selection cutting, this study quantifies the relationship between canopy openness and understory species diversity on a 10-year single-tree selection cutting study and an unharvested reference within the Penobscot Experimental Forest in Maine. Overall, lower species diversity was found with greater cover of softwood litter and lower canopy openness. However, the effect of canopy openness on species diversity differed between the single-tree selection and unharvested reference treatments. Species diversity was lower in the unharvested reference until approximately 0.12 (proportion) canopy openness, then was greater than that in the single-tree selection stands. Differences in canopy openness and species diversity between unharvested reference and single-tree selection stands are likely due to the effects of silvicultural treatment, including widespread disturbances of light to moderate severity occurring at short-term intervals and resulting stratification. These findings suggest that lower canopy openness in the single-tree selection stands, as influenced by management and site condition, result in minimal increases in diversity relative to an unharvested reference.

Influence of severe soil disturbance on crop tree growth and species composition 32 years following harvesting in a Maine spruce-fir stand
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Mechanized harvesting can produce a wide range of soil disturbances, which include mineral soil exposure, soil compaction, organic matter removal, mounding, and rutting. Previous research indicates that these disturbances can subsequently influence forest composition, structure, or growth, but conclusions regarding effects of soil disturbance on future forest productivity have been mixed. We used a long-term experiment in northern Maine, Weymouth Point, to quantify stand and tree productivity 32 years following clearcut harvesting using a whole-tree harvest system (WT). This site in Piscataquis County is dominated by red spruce and balsam fir and characterized by coarse loamy soils. We used historic soil disturbance measurements made on 100 transects that were installed immediately after the site was harvested in 1981 as our baseline estimates of soil disturbance. We revisited these transects in 2013, measuring all crop trees (>6.35 cm DBH) located within 0.5 m of the transect and quantifying species and DBH of all neighboring trees for each crop tree (within a 0.004-ha fixed-area sample plot). We found no influence of soil disturbance on tree- and stand-level variables, including basal area, density, percent hardwood, volume, DBH, and height. We also examined annual radial growth rates using tree cores from a subset of balsam fir crop trees (>6.35 cm DBH, N = 72 trees) that had grown in the most disturbed and in the least disturbed soil conditions, and found no differences in growth rates over the entire growth period. Despite extensive soil rutting and mineral soil exposure documented at this study site following WT harvesting, we were unable to detect any differences in subsequent forest composition, structure, or growth from soil disturbance at the Weymouth Point study site 32 years following the harvest. These conclusions may be limited to the resilient loamy soils that characterize this forest type.
Crop tree growth response and quality after silvicultural rehabilitation of cutover stands

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Rehabilitation of cutover stands is often a management objective of landowners who desire improved stand conditions and increased value from future harvest revenues. We evaluated the growth response and quality of individual crop trees following precommercial rehabilitation treatments in mixedwood (hardwood - softwood) stands degraded through repeated exploitive cutting in Maine, USA. Treatments included control (no rehabilitation), moderate rehabilitation (crop tree release), and intensive rehabilitation (crop tree release plus timber stand improvement, TSI). Paper birch (Betula papyrifera), red spruce (Picea rubens), and eastern hemlock (Tsuga canadensis) crop tree diameter increment 0 to 9 years posttreatment was greater following rehabilitation than in the control; no differences were observed for red maple (Acer rubrum). White spruce (Picea abies) and eastern white pine (Pinus strobus) diameter increment differed between intensive rehabilitation and control only. Crop tree diameter increment did not differ between intensities of rehabilitation for any species, suggesting that additional reductions in stand density associated with more intensive rehabilitation (i.e., release plus TSI) did not result in a greater crop tree growth response. For conifers in lower strata, height growth and change in crown length were negatively correlated with basal area in larger trees. The occurrence of epicormic branches on paper birch crop trees was greater in the rehabilitation treatments than the control, and on trees of relatively small diameter. However, most epicormics occurred above the height corresponding to the first sawlog. Our findings indicate that rehabilitation of mixedwood stands with similar species composition and structure can result in improved growth of crop trees without jeopardizing the quality of the lower bole in hardwoods.

Seventy years of northern hardwood silviculture: long-term regeneration dynamics after repeated group selection
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Group selection is a commonly applied silvicultural system used to meet a multitude of management objectives in northern hardwood forests of North America. Previous work has demonstrated that repeated application of group selection can provide diverse forest structure and composition, particularly an increased component of mid-tolerant species, relative to single-tree selection; however, the sustainability of this approach, like many others, relies almost exclusively on abundant natural regeneration from ecologically and economically desirable species. Outcomes from group selection have generally been discussed at the stand level and over short time frames. As such, there is limited understanding of within group regeneration dynamics and development over time. Continuous application of group selection has occurred since the late 1930s at the US Forest Service Bartlett Experimental Forest in the White Mountains of New Hampshire providing a unique opportunity to explore long-term impacts of group selection on recruitment dynamics as well as regeneration success of desired species. Using a chronosequence, approach we will review the influence of time on stocking and abundance of sugar maple (Acer saccharum) and yellow birch (Betula alleghaniensis) relative to American beech (Fagus grandifolia), as well as emergent stand structural and composition attributes. Results will be framed in the context of long-term forest development as it relates to uncertain future environmental and management conditions.

Too Many Deer - A Threat to Vermont’s Forests
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In 2017, foresters in Vermont were asked the question, “Which towns that you work in have deer that are above the carrying capacity of the land?” The result was that 2/3 of the towns were listed. The 2015 preliminary findings of FIA concurred. Clearly, we need to reduce the population of deer and Nick Fortin, the Vermont Deer Project Leader, has stated that the only way to do that is to reduce the number of antlerless deer. Unfortunately, the Vermont Fish and Wildlife Board, which is composed of one volunteer member per county, do not seem to agree that there are too many deer They are the decision makers as to how many hunting permits are issued for bucks and antlerless deer. Many of the Board members base their judgement on how many deer they see rather than the forester’s way, which is to study the extent of deer browse. It is critical that Vermonter’s, including hunters, understand that the future of Vermont’s recreational, maple syrup and timber industries are at risk in many parts of Vermont. Lynn will show a brief new educational video and share one method that foresters could use to successfully reach members of the general public.
The effects of legacy trees on regeneration in irregular shelterwood harvests over 25 year chronosequence of Oak-Hickory Forest

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Forest managers are faced with meeting a broad variety of societal demands such as wildlife habitat and aesthetic considerations while still providing monetary value to landowners through harvesting timber. Strategies such as irregular shelterwoods can offer alternatives to traditional regeneration methods that help to meet these goals. These techniques often involve diversifying age-class and leaving more standing structure in the form of legacy trees. This study examines a 25-year chronosequence of 34 irregular shelterwoods, ranging in amount of structure and on a variety of soil types, all designed to regenerate oak in southern New England. In each shelterwood we measured all legacy trees in a 50 m radius overstory plot, and measured seedling and sapling regeneration in 18 subplots. We focused on analyzing regeneration of the four most common species: red maple (Acer rubrum), black birch (Betula lenta), white pine (Pinus strobus), and red oak (Quercus rubra). We used ANOVA to compare the differences across age classes, both in total and relative growth, as well as to compare differences in regeneration growth based on variation in overstory basal area and soil type. Over time, regeneration followed known stand dynamics patterns, with self-thinning occurring in the regeneration of all focus species. Black birch self-thinned the most through time, with the saplings that survived retaining a high and more discretely defined position in the canopy as compared to the other species. Red oak self-thinned most slowly, and by its third decade, it was increasing its growth rate compared to the other species. As overstory basal area increased, relative growth of red oak slowed, with 5 m²/ha of overstory basal area as a limiting threshold. Resource managers should consider the tradeoff between increasing legacy trees and decreases in growth of oak regeneration, as well as long term effects of increased structure post-timber harvest.

Drought and the 1947 Maine fires: context based on 112 years of weather data for Bar Harbor.

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Drought is a major factor influencing the intensity of wildland fires in late summer through autumn. The 1947 Maine Fires burned more than 230,000 acres - mostly in October. On Mt. Desert Island in Hancock County, more than 17,000 acres burned during a ten-day period in late October. 7,000 acres of Acadia National Park forest land burned, as did nearly one-third of the town of Bar Harbor. The Fire occurred during what was then recognized as a period of extraordinary late-season drought. I used daily records of maximum temperature and total precipitation for the Bar Harbor weather station to calculate Keetch Byram Drought Index (KBDI) values for April through October for 1893 to 2017 (12 years missing). A color-coded chart for all days/year provides context for evaluating the 1947 drought on the Island. Years with high late-season drought (yellow/orange/red) are interspersed among years of low drought (blue/green). In addition to 1947, two years - 1930 and 2001 - had exceptionally high drought values late into autumn. For several years, high KBDI values in early October were mitigated by subsequent rainfall. Calculating fire hazard for a given day requires wind speed data which are not available from historic records. Drought, however, is more important than wind as a precursor to fire. High winds often occur during rain storms, but precipitation reduces KBDI at the rate of 100 units/inch of rain.

Effects of buckthorn control on post-harvest tree recruitment at Casalis State Forest, Peterborough, NH

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Invasive species represent a growing obstacle to forest management by presenting direct competition to regeneration of desired native species following forest management activities. Beginning in 2008 a study to assess the efficacy of a single pre-harvest herbicide treatment of existing glossy buckthorn stems in the establishment of desired species regeneration was initiated at Casalis State Forest in Peterborough, New Hampshire. The study followed seedling establishment, and as seedling and sapling and growth of both invasive plants and native species for eight years post-harvest. Casalis State Forest occupies old agricultural land and falls within largely disturbed landscapes (both agriculture and residential). The study area boarders NH Route 123; invasive plants including glossy buckthorn, honeysuckle and oriental bittersweet are obvious along the road in spring, when they green up before the native trees and shrubs. During prescription cruising in advance of a timber harvest, it was obvious that invasive plants (predominantly glossy buckthorn) both established on the State Forest and in the surrounding area, would be and ongoing concern for forest management. Stand 1 (an 11 acre small saw-timber red oak stand) offered an opportunity to try out pre-harvest herbicide treatment of invasive plants as an option when managing for quality native tree species in the face of invasive plants.
**Sustainable northern conifer forest management: new findings and outreach tools**

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If landowners are aware of long-term outcomes from different kinds of active forest management, we believe they may be more likely to choose sustainable practices over exploitation. For almost 70 years, silvicultural treatments, including selection and shelterwood approaches, have been applied alongside exploitive practices, namely diameter-limit cutting and commercial clearcutting, by the U.S. Forest Service in the Penobscot Experimental Forest in central Maine. We are utilizing the unique long-term dataset from these treatments to demonstrate outcomes of forest management alternatives and inform decision making across the northern conifer forest region. Treatment effects on a number of silvicultural, ecological, and economic variables—including volume growth, species composition, carbon storage, habitat suitability, and net present value—are being summarized and analyzed to demonstrate management outcomes across a range of potential objectives. In order to reach a broad, non-technical audience, we are using this information to develop and distribute a booklet and film in addition to more traditional scientific outlets, such as refereed publications. The booklet will communicate key findings using graphics and photos to show change over time. The film will allow viewers literally to see differences created by different management actions over decades, such as outcomes from repeated commercial clearcutting compared to those from selection silviculture. This unique approach, combining a long-term study with multimedia presentation, will reduce landowner and manager uncertainty about outcomes from silvicultural activities, improve social acceptance of forest management, and ultimately lead to more sustainable forest management on the landscape.

**Vulnerability of Forest Ecosystems in New England and New York to Climate Change**

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Forests are a defining landscape feature across New England and northern New York, covering more than 40 million acres from the coast of the Atlantic Ocean to the peaks of the Appalachian Mountains. The changing climate is altering the region’s forests, and the foresters and other natural resource professionals working to keep the region’s forest ecosystems healthy and productive are increasingly considering climate change in their work. The New England Climate Change Response Framework, a collective effort among dozens of scientists and natural resource professionals, has produced a new report that summarizes the best available information about climate change and regional forests based on published research, ecosystem models, and manager expertise. New projections of forest change from three forest impacts models—the Climate Change Tree Atlas, Linkages, and LANDIS PRO—were combined with a review of recent literature to understand the potential for forest change during the next century under different climate scenarios. An expert panel of research scientists and forest practitioners then worked together to consider this information, as well as their personal experience and expertise on local ecosystems, to assess the vulnerability of eight forest communities present across the region. Montane spruce-fir, low-elevation spruce-fir, and lowland mixed conifer forests were determined to be the most vulnerable to climate change. Lowland hardwood and riparian forests were assessed as being moderately vulnerable. Northern hardwood, transition hardwood, central hardwood-pine, and pitch-pine scrub oak forests were rated as having lower vulnerability to projected changes in climate. Projected changes in climate and their associated impacts and vulnerabilities will have important implications for ecologically and economically valuable forest types, forest-dependent wildlife and plants, recreation, and long-term natural resource planning.
Extending the benefits of urban trees

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In order to study and describe the many public benefits of urban trees, this project examined the beneficial contributions made during its lifetime by an individual tree located in Bushnell Park in the city of Hartford that had died and was scheduled for removal. Various benefits were calculated using a tool developed for the purpose (the Davey Tree benefit calculator). From this information general conclusions can be drawn about the entire urban forest resource. An attempt is also made to show how certain urban tree benefits, particularly carbon sequestration, can be extended even after the tree has died.
The goal of this project was to show that urban trees provide significant ecological and monetary benefits and show that when it is time to take down diseased and dead trees, instead of dumping the trees we take down we can make them a benefit to the urban community from which they were taken.

New tools for assessing and communicating forest health information

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Working with collaborators in the Forest Ecosystem Monitoring Cooperative, we have constructed a number of data-driven tools and resources intended for wide utility by foresters, land managers, students, and researchers. Following input from regional partners and using data collected by state and federal agencies, academic institutions, and other groups, we have created a range of websites, mapping tools, and data portals for easier access of information relating to forests and the threats they face. These include:
The Northeastern Forest Health Atlas- a region wide mapping tool to explore forest damage collected through aerial state insect and disease surveys. Many decades of data are available, along with pre-made occurrence maps for locating areas of repeated damage.
Forest Indicators Dashboard- a user friendly index of forest condition, structure, stressors and services. This dashboard summarizes trends in dozens of datasets to explore and access including annual growth, regeneration, timber extracts, maple syrup production, and weather.
Dendroecological Database- a repository and search engine for tree ring data linked to ecological data, like DBH, BAF, crown class and condition, soils, and other factors, along with decades of tree ring growth across species.
FragNet- a one-stop portal for all forest fragmentation and parcelization information and data about Northeastern forests, including reports, websites, maps, datasets, and other sources.

These tools together provide a number of ways that forest planners and managers can assess important trends and conditions in our forests, and products that make it easier to communicate with key stakeholders about the opportunities and challenges facing our region’s forests.

Your Land, Your Legacy

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New England’s forests are at a critical turning point. Families and individuals own 60% of forested land in the region, and about 50% of these landowners are older than 65. This means that a large amount forested land in the region will likely go through a change of ownership soon. Changing ownership poses a serious threat to forests, as land is more likely to be parcellized or converted to non-forest uses during an ownership transition. To mitigate the threat that changing ownership poses, a group from the Universities of Massachusetts, Maine, New Hampshire, Vermont, and Cornell are conducting a combined research and outreach project to first learn about landowners and their goals for their land, and to then develop outreach and extension programs to help them make informed decisions. We found that most landowners want to keep their forest intact, and many plan to take action to determine the future of their land in the next 5 years. After analyzing the data from the surveys, we developed a publication for landowners called “Your Land, Your Legacy,” which was adapted by 10 states and provides landowners with resources to help them decide the future of their land. Foresters play an important role in helping landowners make decisions about the future of their land. We created a publication for foresters and others who work with landowners entitled “Their Land, Their Legacy” which contains information about helping to inform landowner decisions about the future of their land.
Influence of crop tree release on black birch growth

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Black birch (Betula lenta L.) is a largely unrecognized, yet increasingly important component across 6.8 million acres of forests in southern New England. It is the fifth most numerous species in the sapling (1.0-4.9") and small sawtimber (11.0-14.9") size classes, and third most numerous species in the pole size class (5.0-10.9"). In 1996-97, plots were established in five stands ranging from 20-99 years-old to examine diameter and volume growth response of black birch to crop-tree release. The 318 trees in the study had initial diameters that ranged from 3.4-18.7 inches. Growth of unreleased control and completely released crop-trees was monitored over twenty growing seasons. Over the twenty year period, diameter and volume growth of completely released crop tree saplings and poles was greater than for unreleased trees. The single crop tree release increased individual tree diameter growth by approximately 1.8 inches and volume growth by two cubic-feet over a twenty year period relative to unreleased trees. However, the treatment did not stimulate volume growth of small sawtimber because the increased diameter growth exhibited following crop tree release was offset by depressed pulpwod height growth. For medium sawtimber, crop tree release also depressed pulpwod height growth, but without an increase of diameter growth. Crop tree release increased the proportion of codominants, and especially intermediates, that were found in the upper canopy twenty years later. If crop-tree management was initiated in young stands of large sapling black birch (mean diameter of upper canopy trees of four inches) and again twenty years later, the time required to grow those trees to diameters of 13.5 inches could be reduced by 40% from 80 years for unreleased trees to only 50 years for those released twice.

Evaluation of Alternative Approaches for Landscape-scale Biomass Estimation in a Mixed-Species Northern Forest

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There is growing interest in estimating and mapping biomass and carbon content of forests across large landscapes. LiDAR-based inventory methods are increasingly common and have been successfully implemented in multiple forest types. Asner et al. (2011) developed a simple universal forest carbon estimation method for tropical forests that reduces the amount of required field measurements. We tested this approach, along with standard regression and Random Forest modeling techniques, in a northern hardwood-dominated watershed in the White Mountains of New Hampshire. Additional objectives included assessing the effects of different inventory plot designs and GPS accuracy.

Although the universal model was developed in tropical forests, it performed well when used with field-collected basal area data. However, when implemented with LiDAR-derived variables, the universal model performed poorly in this forested landscape due to the lack of a clear relationship between canopy height and stand basal area. Simple regression modeling also produced poor model fits; the Random Forest models produced somewhat better biomass predictions than either the universal or regression models, and had low predictive power as measured by R² but root mean squared errors were comparable to those from other studies in complex forests. Effects of positional accuracy from survey vs. resource grade GPS units were slight, as were the effects of varying plot designs, although errors generally increased when larger basal area factors were used. Although the fundamental relationship described by Asner et al. (2011) appears to be sound, the LiDAR-based inventory approach is not appropriate for this forested landscape due to the absence of a relationship between canopy height and stand basal area. However, the canopy height and density metrics are still useful for evaluation and planning purposes.

Dynamic properties of trees in the roadside forests of southern New England

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Trees are the most common cause of utility damage and power outages during storms in the northeastern United States. Previous studies on tree sway and risk-of-throw have largely been conducted in heavily managed coniferous stands, while relatively little is known for northeastern mixed temperate deciduous forests, especially in roadside conditions. The objective of this study is to look the dynamic properties of trees (sway frequency and amplitude) in northeastern roadside forests and observe how they change with a crown thinning. To this end, we monitored the sway of 41 trees representing nine different tree species on 3 sites in Connecticut over one year. We compared sway to potentially predictive variables describing weather, environment, tree and stand. We then thinned these stands and continue to monitor them today.

Results to date show that only three predictors are significant across all sites and species for sway frequency.
Tree slenderness, defined as diameter-at-breast height divided by tree height squared (DBH H^2), was significant, which agrees with previous studies on coniferous trees. The other two predictors accounted for seasonal loss of foliage, and temperatures below freezing. These findings highlight the relationship of tree shape and frequency in closed canopy situations.

Analysis of sway amplitude (distance) is expected to be more closely tied to the wind. Thinning should increase wind exposure and temporarily increase the amplitude of tree sway, but we expect that over time the trees will adapt to the new wind regime and the changes will be reflected in lesser amplitude and greater frequency, which equate to greater wind-firmness. The time it takes, and the extent to which we can drive these changes with forest management, remain to be seen. However, results to date suggest that forest management has the potential to increase wind-firmness and reduce tree-related storm damage.

**Understory response to gap-based multi-aged silviculture**

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A long history of timber harvesting has simplified the structure of New England forests, which may have adverse effects on native biodiversity. The ubiquity of managed forests has created the need for management practices that maintain biodiversity within these forests, as well as within reserve lands. Ecological forestry was designed in response to this need. By using silviculture techniques to emulate the outcomes of natural disturbance, managers assume they create conditions that enhance native species survival; however, this assumption has rarely been assessed with long-term empirical data. We will explicitly test this assumption by examining the understory plant community, which despite its relatively low biomass, has a disproportionately large influence on forest biodiversity and ecosystem function. The Acadian Forest Ecosystem Research Project (AFERP) was designed to study the ecological responses of two silvicultural treatments that emulate the process of expanding canopy gaps, which are typical of wind disturbance and species-specific insect outbreaks in this region. AFERP is a large-scale, replicated study established in 1995 on the Penobscoit Experimental Forest, Maine. We will explore the understory plant community response to 20 years of treatment, providing one of the first long-term studies of understory response to ecological forestry. We will examine the species richness, diversity and abundance of non-native and rare species among the two treatments and the untreated control, and we will explore community level changes among treatments using multivariate analyses. Results of this study will help guide managers to better meet conservation and production goals by providing insight into the effects of ecological forestry on the understory.

**New Results on growth of exotic larches in central Maine**

David I., Maass, et al.

For several decades, exotic larch plantations have been growing in Maine. Recent re-measurements have supplied further documentation showing that their growth rates are superior to native species by a wide margin. As these are unmanaged stands, measured growth rates likely underestimate growth potential. This poster reports remeasurements of full and partial sibling progeny tests that document performance by a range of different seed sources. Growth rates at this first generation test of hybrid larches illustrate the growth potential with tree improvement.

**Benefits, Costs, and Decision-Making in the Residential Forest**

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The residential forest provides many benefits to communities, including stress relief, air quality improvement, and increased property values. However, the residential forest may also contribute human-perceived problems or costs, including allergens, leaf debris, infrastructure damage, and maintenance costs. Few studies have explored the impact of those costs on resident decision-making. Management by utility companies along power lines is one process shaping the residential forest that may be influenced by perceptions of benefits and costs of the forest. Our first objective is to investigate the benefits and costs of trees as identified by residents, and the connection of benefits and costs to residents’ values. Our second objective is to explore how connections among benefits, costs, and values differ among people making decisions about tree management in the context of utility tree removals. The study area will span several towns in eastern Connecticut representing a spectrum of urban to rural
residential areas. We will conduct one-on-one qualitative interviews with resident-homeowners who have made decisions regarding utility tree management on their property between 2014 and 2017. Applying the Means End Chain theory, we will use a laddering interview technique to explore benefits and costs that residents identify with trees and the values that they connect to identified benefits and costs. Additional interview topics will include recent experience with the utility company’s vegetation management team, other tree management activities undertaken, and the resident’s ideal front yard. We expect that these interviews will contribute to improved understanding of residents’ decision-making about the roadside forest.

The impact of forest management on understory edge effects in roadside forests
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Stormwise is a forest management program that aims to decrease the risk of tree-related power outages by creating space for healthy trees to grow in roadside forests. However, opening the forest canopy in roadside forests has the potential to increase edge effects into the forest, changing the abiotic environment and the structure and composition of the plant communities in these forests. The objective of our study was to quantify the magnitude and depth of road edge effects on plant communities and environmental conditions in Stormwise treatments compared to control treatments throughout Connecticut. Specifically, we were interested in potential differences among invasive and native species, and plant community structure and composition with increasing distance from the road. As such, we established transects perpendicular to the road at eight Stormwise sites and their paired control forests across Connecticut. Along these transects, we estimated percent cover of invasive and native woody plants, and measured the light environment via hemispherical photographs and a ceptometer. Our results confirmed that there was greater light availability in Stormwise sites relative to control sites (Kruskal-Wallis Test, $p < 0.0001$). Additionally, there was no detected edge influence in control sites, but in Stormwise sites, the edge influence extended as far as 15m into the forest. In Stormwise sites, the depth of edge influence for light extended only to 2.5m, but reached to 15m for woody species richness and diversity. The percent cover of invasive plants showed a slightly smaller edge influence, only extending to 10m, with higher percent cover of invasive plants from 0-10m, than from 10-30m. The enhanced edge effects in Stormwise forests indicates there is the potential for decreased seedling regeneration, which may have implications for future forest composition.

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Maine Division News ~ Anthony Filauro

Future of the PEF
The USFS Northern Research Station (NRS) will not fill a forestry position that was vacated by a recent retirement. Dr. Laura Kenefic remains the only permanent USFS employee on the Penobscot Experimental Forest. This decision does not bode well for continuation of the PEF or for several northern silvicultural studies located on the forest, which began operating in 1950. The forestry position that’s now vacant assisted with the collection of research data and with oversight of part-time personnel assigned to the PEF.

MESAF members are urged to contact members of Maine’s congressional delegation to encourage their support to fund this USFS position, to maintain the established research studies that compromise more that 60 years of research data and to encourage continued research that’s needed to help the forest industry.

New Hope for Old Town
OTM Holdings LLC recently purchased the pulp and paper mill in Old Town that was previously owned by MFGR LLC, a liquidation company located in Enfield, Connecticut. The mill has the potential to produce bio-fuels, chemicals and wood products. The facility is slated to house several tenant companies and have upwards of 100 employees. Currently, the Technology Research Center of the University of Maine Bioproducts Research Institute operates in a 40K sq. ft. facility located on the mill property.

Project Learning Tree
Project Learning Tree is sponsoring two teachers’ tours in 2018. During July 10-13, a tour will be held at Poland Spring Resort in southern Maine. During July 24-27 a second tour will be held at Leen’s Lodge at Grand Lake Stream. This is the 21st year that teacher’s tours have been offered through The Maine Tree Foundation. The tours inform teachers, students and the public about the forestlands of Maine and how they are managed.

MESAF members are encouraged to attend these programs to share their knowledge of Maine’s forest resources and to interact with teachers in the education profession. Information about the tours is available at www.mainetreefoundation.org or call 207-621-9872.

Health & Safety Study
The Northeast Center for Occupational Health and Safety will conduct a five-year study to document health and safety issues affecting Maine’s loggers. Due to Maine’s aging workforce, physical trauma to the body and the occurrence of chronic diseases are likely taking its toll on forestry workers that goes beyond the inherent dangers and physical demands of the occupation.

The study will recruit 300 loggers who will receive an initial physical exam and then be monitored quarterly over a five year period. The data that’s collected will be aggregated to maintain confidentiality. The summarized data will identify health and safety risks that confront the workforce and possible solutions to avoid injury and maintain proper health. More information can be found at www.necenter.org Click on “Forestry” and then “Current Research”.

Katahdin Woods and Waters National Monument
Individuals in the Katahdin area have met during the past months to develop a management plan for winter recreation activities within the KWW National Monument. Discussions have focused on camping, cross-country skiing, snowshoeing, skijoring, dog sledding and snowmobiling. Currently there are 30 miles of groomed cross-country ski trails within the monument and snowmobiling is permitted on lands east of the East Branch of the Penobscot River.

The management plan is to be completed by 2019. Comments about the plan can be submitted to Superintendent Tim Hudson at: kaww_superintendent@nps.gov

Cross Laminated Timber
In February, it was announced that LignaCLT Maine, LLC would construct a cross-laminated timber manufacturing facility on 35 acres of land where the Great Northern Paper Company mill was located in Millinocket. The CLT facility will be 300K sq. ft. in size and employ as many as 100 workers. The CLT facility will capitalize on off-highway access to the expansive North Woods and its softwood forest resource. Construction of the facility is to commence this summer and be operational within twelve months.

Also announced in February, was construction of a CLT facility to be operated by SmartLam of Montana. The location of the facility will be announced this spring, with operations to commence in 2019. The facility is expected to have 100 employees. SmartLam received a $3 million grant from the Maine Technology Institute to allow advancement of this project.
Emerald Ash Borer Confirmed in Vermont

Emerald ash borer was confirmed in Vermont in early March. An alert consulting forester saw suspect trees while working in central Vermont and posted a photo to the VT Invasives web site. Investigators confirmed the pest. State and federal experts are working on a delimiting survey to determine the extent of the infestation to inform recommendations on quarantine actions. A public meeting held jointly by The Departments of Forests, Parks and Recreation and Agriculture, Food and Markets on March 15 attracted a concerned audience of loggers, forests and landowners. People can post photos and site information on trees they think are infested on the website https://vtinvasives.org. This site also has links to public information on EAB and the history of the pest in North America.

Log Truckers in Vermont receive Good News

Vermont’s log haulers will receive a 24 per cent reduction in workers’ compensation. While most reductions in workers’ comp rates are due to a reduction in claims, this decrease was spurred in part by a review of the Vermont rates which had been significantly higher than those for log haulers in nearby states. The VT Department of Financial Regulation ordered that National Council on Compensation to remove a surcharge that had been applied to log haulers and to combine log haul truckers with the general contract trucking class, which also helped bring the rates down. Taken altogether, these actions will save $10 million dollars for the woods products industry in the state.

An opportunity to give and your help is needed!
Ed O’Leary, Green Mountain Division Representative to NESAF

The Green Mountain Division is in desperate need of some of its members to step up! I just returned from a fantastic NESAF winter meeting hosted by the Granite State Division and 2019 is the Green Mountain Division’s (GMD) turn to host this annual event. Unfortunately, the Green Mountain Division is somewhat dormant at this point. During the last election, no one ran for Vice Chair, Secretary or Representative to NESAF. Mike White, who had been Chair, has remained in a “fill-in” capacity, as there was no Vice Chair prior to the election to step into Mike’s position when his term had ended. Jay Nerenberg has remained as the de-facto Treasurer watching over our finances. I volunteered to be appointed by the GMD’s Executive Committee to serve as its Representative to NESAF for 2017 and 2018 so that our Division could participate at the State Society’s level. As you are all well aware, there was no GMD summer meeting in 2017 and we also did not have our traditional winter meeting in early 2018. This is most unfortunate, but that can certainly change in the future with the right folks.

I am very concerned that we currently have these Executive Committee vacancies, especially in light of the fact that we now have just 12 months to pull together the NESAF winter meeting in Vermont. The last few times the Green Mountain Division hosted this meeting, at the Lake Morey Resort, it was a great success, but until we have folks volunteering to plan and carry out the 2019 meeting, its success is questionable.

It has been said over and over, that an organization is only as good as its members, and that organizations are run by those members who “show up”. It is now time for members to show their commitment to SAF, NESAF and the Green Mountain Division in particular, and give Mike White or myself a call or email us, letting either of us know that you are ready, willing, able and happy to pitch in and do your part. Mike and I will be anxiously waiting to hearing from a number of you.
Annual Meeting
Over 150 foresters joined us at the Grappone Center in Concord for our Winter Meeting this year. We honored Peter Farrell, NEFCO consulting forester and Alton, NH resident, as our Forester of the Year. We also celebrated NH Forestry students of the year, Christian Eaton of the Thompson School, Kensley Hammond from the Baccalaureate program, and Masters’ student Ben Fraser. We welcomed new leadership: chair, Maggie Machinist, Regional Forester with NH’s Division of Forests and Lands, and Vice Chair Steve Roberge, Country Forester with Cooperative Extension.

Subcommittees of the Granite State Executive Committee have been addressing some of the more concerning issues touched on at Winter meeting, including the Timber Tax here in NH and deforestation across the region. Members of the EC and general membership alike have been advocating for forestry at public hearings, most recently to address potential DES Wetland rule changes. If you are interested in being involved or learning more about these issues, please contact Director of Policy, Hunter Carbee, at hcarbee30@gmail.com.

Emerald Ash Borer
A newly discovered outbreak of Emerald Ash Borer in Vermont makes it the 32nd state with an infestation. Although it’s too early to say what this means to NH and the region, according to Kyle Lombard, State Forest Health Specialist, there are some successes to focus on in NH: “Like the situation in Vermont, small infestations will continue to pop up regionally. We’ve been able to rely on Best Management Practices, which include successful bio-controls, regulations, and conscientious land owners to keep the number of satellite outbreaks to a minimum. Patience, cooperation and dedication will see this through but it will be a decade’s long process.”

Forest Markets
This crazy winter has had an impact on our forest product markets in NH. The coincidence of persistent and unusual cold temperatures and our annual road posting, has put NH biomass plants, according to one buyer, in a need of chips. From the New Hampshire Timberland Owners Association Program, Coordinator Steve Gaines: “Difficult winter conditions have had an impact on timber circulation and pricing, but markets remain fairly stable, with similar prices as last quarter. Softwood markets appear to be steady, with current prices for white pine, hemlock, spruce/fir, and red pine comparable to last quarter (no mention of quota limitations at this time). Hardwood sawmills are strong, enjoying high sawlog prices both domestically and internationally. Low grade wood markets continue to struggle. Low whole-sale prices for electricity continue to strain chip markets, which are down slightly from last quarter (between $23-$27 per ton delivered - varies regionally). Pulpwood prices show some signs of improvement thanks in part to increased capacities of Maine mills.”

There is a silver lining however, as these ups and downs have led to good early season conditions for making maple syrup. According to Steve Roberge, Cheshire County Extension Forester and maple specialist, up until this last week sugar content and sap flow have been good. Hopes are that this late season snow pack combined with a return of our usual spring weather pattern will help to finish off the season on a high note.

Black Fly Breakfast
Lastly, another important item we are looking forward to this Spring, is the 20th Annual Black Fly Breakfast, is coming up on April 17, 2018. The program will feature forestry updates from Karen Bennett of Cooperative Extension, Brad Simpkins our State Forester and Mike Lynch of NRCS. Stephen Long, co-founder of Northern Woodlands magazine will also be a featured presenter. He’ll talk about his book, Thirty-Eight: The Hurricane that Transformed New England. An optional hands-on lunch workshop is available that looks at a newly developed tool, the Dirt to Trees to Wildlife (DTW) online mapper. Brendan Prussik will be the facilitator.

More information and registration can be found at: https://extension.unh.edu/events/20th-annual-black-fly-breakfast.
Connecticut Chapter News ~ Mel Harder

CTSAF
Roughly 40 CTSAF members attended the annual business meeting held at the CT Forest & Park Association on February 13, 2018. The educational program included a presentation by Mark Ashton (Yale), re-interpreting soils in relation to land form and surficial geology, which was followed by a presentation by Aaron Lefland (Yale) discussing stand dynamics and distribution of hickory.

Dr. Ashton told the story of the development of our local soils going back to the earth’s ancient geology, starting before Pangia. He discussed the relationship of continental drift and glaciation to our present day soils. He brought us up to the present day with topographic, aerial and LIDAR images.

Pizza was served during a break, and CEU certificates were handed out at the completion of the meeting.

TIMPRO
60+ CT forest practitioners attended a winter field meeting sponsored by the CT Professional Timber Producers Association on March 5, 2018. The morning session was a tour of forester Jim Gillespie’s tree farm in Sharon CT. Over many years Jim has conducted timber harvests, clearcuts, deer exclosures, wildlife habitat improvement, crop tree release, invasive control. He also discussed SIP, EQUIP and WHIP programs used in the management of the tree farm. After an extensive walk through and discussion of the various stands, a catered barbecued lunch was served before moving on to the afternoon program. The afternoon program consisted of a tour through a biomass energy facility at the Hotchkiss school in Lakeville. CEU certificates were handed out at the end of the program.

Notice to Connecticut ash timber producers and haulers
Christopher R. Martin, State Forester
Canada has expanded its Emerald ash borer (EAB) regulated area in Quebec to the Maine and New Hampshire United States’ borders. Some Canadian mills may be advertising their ability to accept US derived ash year round. Please be aware that the United States EAB quarantine and movement restrictions have not changed. The United States has emerald ash borer regulations that restrict transport of ash logs.

It is illegal to move regulated ash logs harvested within an emerald ash borer quarantine area through a non-EAB quarantine area (Maine, Vermont, and New Hampshire’s non-quarantined counties) during the flight period (May 1 – September 30).

If you plan to sell or transport ash logs to Canada, please contact USDA APHIS PPQ (203) 741-5641 to assure you are in compliance with federal interstate transport regulations.
Rhode Island Chapter News ~ Chris Modisette

Renewable Energy Siting and Rhode Island’s Woodlands

The siting of renewable-energy projects is an issue being debated statewide.

Spurred by renewable energy incentives passed by the General Assembly over the past five or six years, developers are seeking out large tracts of land for ever-larger solar projects.

In the absence of state programs that prioritize the reuse of dormant gravel pits, capped landfills, contaminated brownfields or other industrial sites, many projects are being proposed in rural parts of the state, on underutilized farm fields and in unprotected woodlands.

These projects are reigniting an age-old debate in places like Coventry, Exeter and Hopkinton about how to preserve the rural character of a community while still allowing revenue-generating development. Neighbors, municipal planners and environmental groups are questioning the wisdom of allowing the use of fields and forests for renewable energy in a state with increasingly fragmented corridors of undeveloped land.

The state’s green-space energy rush began in earnest in March 2016, when Gov. Gina Raimondo signed an executive order that encourages the state to attain 1,000 megawatts of renewable energy by 2020. The action increased the number of renewable-energy applications being filed in cities and towns that haven’t yet adopted regulations that adequately address the impacts of this fast-growing industry.

Scott Millar with GrowSmart RI noted that Rhode Island - “currently with about 230 megawatts of renewable energy - will need between 3,000 and 4,600 acres of space to host the remaining 770 or so megawatts of energy the governor desires”. One megawatt of solar development requires 4-6 acres, according to Millar’s calculations.

If 75 percent of those 770 megawatts are sited on greenfields, 2,300 to 3,400 acres of farmland and/or forest could be lost, according to Millar’s math. At 50 percent, between 1,500 and 2,300 acres of greenfields could be lost.” On March 8, the House Environment and Natural Resources Committee held a hearing on the Rhode Island Energy Resources Act, to establish statewide renewable-energy siting ordinances. (Sources. GrowSmartRI, The Providence Journal. EcoRI)

RIDEM - Division of Forest Environment - New Hire

Nancy Stairs - Cooperative Forestry Program Supervisor
Nancy comes to Rhode Island from North Carolina, where she was the Urban Forestry Program Coordinator for the North Carolina Forest Service. She has a Bachelor of Science degree in Forestry from the University of New Brunswick, Canada. Nancy will be overseeing the federal cooperative programs: Forest Health, Forest Stewardship, Urban Forestry and Fire in the state.

RIFCO Woodland Owner’s Workshop
The R.I. Forest Conservator’s Organization held its 2018 series of workshops on woodland management topics on Saturday mornings in February and March.

Massachusetts Chapter News ~ William Hill

Southern New England Stumpage Survey is moving online!

Starting with the first quarter of 2018, the Southern New England stumpage price survey is transitioning to a completely online format. Links will be emailed to timber harvesters, foresters, and mill owners using licensing lists and forest products directories. To be sure you receive a link, email paulcat@umass.edu.

Surveys and stumpage data can be found at www.MassWoods.org. Please help us continue to generate these important values by submitting your stumpage prices through the online survey when the link is emailed to you!

UMass Forestry Alumni Needed

The UMass Forestry Program is being forced to discontinue SAF accreditation due to a lack of faculty capacity. If you are interested in supporting the continuation of this storied and historic forestry program please contact us at massachusettssaf@gmail.com.
Thousands have downloaded *About My Woods*. Have you?

Here’s what *Northern Woodlands* magazine had to say about *About My Woods*:

“There are more than 1.3 million apps available today. Exactly one of these has been designed specifically to help educate and inform woodland owners in the northeastern U.S. Want to know the soil type, get watershed information, or see a satellite view of any precise point on your property? Need help identifying a tree, animal, or invasive plant? The app can help you with that, and also help you find foresters, landowner organizations, and other forest resources in your area.”

*About My Woods*, a free smartphone app, is now available for download. Woodland owners in New York, Vermont, New Hampshire, Maine, Connecticut, Massachusetts and Rhode Island now have a new tool to help learn about their woods. Foresters, loggers and others who work in the woods will find it useful too. The app has just been completely updated.

Get it Today

Download the app and start using it today. We think you’ll find it a great resource, and as an early user we ask a few things:

- Please share this with anyone who might have an interest in woodland stewardship and forestry. While designed for landowners, the app has value for foresters, loggers, hikers, teachers and students... anyone that wants to know more about the forest.
- Let us know what you think. *About My Woods* is on track to go national in the next 2 years and we welcome your questions and feedback at aboutmywoods@inrsllc.com. If you find the app useful, please consider leaving a positive review at the App Store or Play Store - good reviews help us reach more users. Also let us know ways you believe can improve the app.
In Memoriam

George Croney Kiefer Jr. of Salisbury, CT passed away on February 10th, 2018 at the age of 96. George was born on December 15th, 1921 in Hamden Connecticut. George attended Hamden Hall and the Salisbury School, and received a master's degree in forestry from Duke University. In 1942 he interrupted his studies to serve in the Navy during World War II. He was a 2nd Lieutenant in the Pacific Theatre before returning to Duke to finish his degree.

He was a forester by trade, and a true naturalist with a passion for agriculture and land. He served on the Board of Selectmen, the Planning and Zoning Commission and as Town Tree Warden for over forty years. He was an active member of the Housatonic River Commission. He was a volunteer at the Salisbury Winter Sports Association for six decades. He was a cross-country skiing and rowing coach, and also worked as a land title researcher. He tapped maple trees, raised cows, cut hay and harvested wood. He grew Christmas trees on his land. He took great pride in his forestry skills, and found meaning and happiness in the natural world.

He was a voracious reader and a constant learner. He was knowledgeable on a vast range of subjects, and interested particularly in the timber and iron industries, military history, agriculture, early Americans, Native Americans, ecology, ornithology, geology, and the Northwest Corner. He was well-versed in the use and history of early farm and forestry hand tools. He loved trees above all, and kept his kitchen very snug with a woodstove. He believed in simplicity, environmental sustainability, and community.

The family will hold a celebration of his life on Saturday, May 26th, 2018 at 4pm. The celebration will take place in the pasture on Selleck Hill, where George spent many happy and productive hours. All who loved this remarkable man are encouraged to attend.
<table>
<thead>
<tr>
<th>DATE</th>
<th>TITLE</th>
<th>LOCATION</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-Nov</td>
<td>Business Skills for Logging Professionals</td>
<td>Chester, VT</td>
<td>6.0/II</td>
</tr>
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<td>9-Nov</td>
<td>Business Skills for Logging Professionals</td>
<td>Hardwick, VT</td>
<td>6.0/II</td>
</tr>
<tr>
<td>19-Jan</td>
<td>2018 Stream Restoration Workshop</td>
<td>Bangor, ME</td>
<td>6.0/II</td>
</tr>
<tr>
<td>23-Jan</td>
<td>Historical Land Use Change and the Wildlife of Vermont</td>
<td>Rutland, VT</td>
<td>1.0/II</td>
</tr>
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<td>24-Jan</td>
<td>Leaving a Land Legacy</td>
<td>Dummerston, VT</td>
<td>1.5/II</td>
</tr>
<tr>
<td>27-Jan</td>
<td>Mosquitoes and Non-biting Midge</td>
<td>Augusta, ME</td>
<td>4.5/II</td>
</tr>
<tr>
<td>30-Jan</td>
<td>Forester Institutes on Maine’s Tree Growth Tax Law</td>
<td>Ellsworth, ME</td>
<td>3.5/II</td>
</tr>
<tr>
<td>31-Jan</td>
<td>Igniting Exchange (Day1)</td>
<td>Portland, ME</td>
<td>4.5/II, 1.5/II</td>
</tr>
<tr>
<td>1-Feb</td>
<td>Igniting Exchange (Day2)</td>
<td>Portland, ME</td>
<td>6.5/II</td>
</tr>
<tr>
<td>2-Feb</td>
<td>Tracking Workshop</td>
<td>Bennington, VT</td>
<td>3.0/II</td>
</tr>
<tr>
<td>6-Feb</td>
<td>Landscape Safety Conference - 2018</td>
<td>Milford, MA</td>
<td>5.0/II</td>
</tr>
<tr>
<td>7-Feb</td>
<td>Winter Wildlife Tracking Workshop</td>
<td>Barrington, NH</td>
<td>4.0/II</td>
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<td>GSD-SAF Winter Meeting New England State Society (undefined)</td>
<td>Concord, NH</td>
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<td>10-Feb</td>
<td>Walk in the Woods: Tracks and Trees</td>
<td>Dummerston, VT</td>
<td>3.0/II</td>
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<tr>
<td>10-Feb</td>
<td>Hemlock Workshop</td>
<td>Durham, NH</td>
<td>3.0/II</td>
</tr>
<tr>
<td>13-Feb</td>
<td>CT Chapter SAF Annual Business Meeting New England SAF - State Society</td>
<td>Rockfall, CT</td>
<td>1.5/II</td>
</tr>
<tr>
<td>17-Feb</td>
<td>Forestry Tour with Vermont Woodlands Association</td>
<td>East Charleston, VT</td>
<td>2.5/II</td>
</tr>
<tr>
<td>21-Feb</td>
<td>Supervisory Registration Certificate - General Use: Forest Training</td>
<td>Concord, NH</td>
<td>7.5/II</td>
</tr>
<tr>
<td>24-Feb</td>
<td>Diversified Management Timber Sale Tour</td>
<td>Topsham, VT</td>
<td>3.0/II</td>
</tr>
<tr>
<td>24-Feb</td>
<td>Hemlock Woolly Adelgid Monitoring Working Woodlands Workshop</td>
<td>Woodstock, VT</td>
<td>3.0/II</td>
</tr>
<tr>
<td>24-Feb</td>
<td>Dealing with Beech Bark Disease in Maine Woodlands</td>
<td>Augusta, ME</td>
<td>3.5/II</td>
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<td>24-Feb</td>
<td>Walk in the Woods: Wildlife Benefits of a Timber Harvest</td>
<td>Wallingford, VT</td>
<td>3.0/II</td>
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<tr>
<td>3-Mar</td>
<td>Climate Change Working Woodlands Workshop</td>
<td>Woodstock, VT</td>
<td>2.0/II</td>
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<tr>
<td>6-Mar</td>
<td>Community Tree Conference</td>
<td>Amherst, MA</td>
<td>4.5/II</td>
</tr>
<tr>
<td>7-Mar</td>
<td>2018 TSP Update Training</td>
<td>Bangor, ME</td>
<td>4.0/II</td>
</tr>
<tr>
<td>10-Mar</td>
<td>The Emerald Ash Borer &amp; What it Means for You</td>
<td>Warner, NH</td>
<td>1.0/II</td>
</tr>
<tr>
<td>10-Mar</td>
<td>Timber Harvest Tour</td>
<td>Charlestown, NH</td>
<td>1.5/II</td>
</tr>
<tr>
<td>10-Mar</td>
<td>Who Goes There: a Tracking Workshop with Ed Sharron of the NPS</td>
<td>Shrewsbury, VT</td>
<td>3.0/II</td>
</tr>
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<td>12-Mar</td>
<td>Markets and Forest Industry</td>
<td>Orono, ME</td>
<td>2.0/II, 1.0/II</td>
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<tr>
<td>13-Mar</td>
<td>Soils and Forest Management</td>
<td>Orono, ME</td>
<td>3.0/II</td>
</tr>
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<td>13-Mar</td>
<td>Intro to Avenza Maps</td>
<td>Orono, ME</td>
<td>2.0/II</td>
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<tr>
<td>14-Mar</td>
<td>3D Point Clouds for Beginners</td>
<td>Orono, ME</td>
<td>1.5/II</td>
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<td>14-Mar</td>
<td>2018 TSP Update Training</td>
<td>Augusta, ME</td>
<td>4.0/II</td>
</tr>
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<td>16-Mar</td>
<td>Maine Forest Stewardship Coordinating Committee</td>
<td>Lyman, ME</td>
<td>4.5/II</td>
</tr>
<tr>
<td>16-Mar</td>
<td>8th Maine Invasive Species Network Annual Meeting</td>
<td>Hallowell, ME</td>
<td>5.5/II</td>
</tr>
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<td>16-Mar</td>
<td>Yankee Division SAF Annual Meeting New England SAF - State Society</td>
<td>Sturbridge, MA</td>
<td>6.5/II</td>
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<td>VCS Pesticide Applicator’s Safety and Application Training</td>
<td>West Gardner, ME</td>
<td>6.0/II</td>
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<tr>
<td>20-Mar</td>
<td>Wildflowers of New England</td>
<td>Hillsborough, NH</td>
<td>1.5/II</td>
</tr>
<tr>
<td>20-Mar</td>
<td>2018 NHAA Spring Meeting</td>
<td>Concord, NH</td>
<td>3.0/II 2.0/II</td>
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<td>22-Mar</td>
<td>The Real Eastern Coyote</td>
<td>Hillsborough, NH</td>
<td>1.5/II</td>
</tr>
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<td>27-Mar</td>
<td>NESAF Annual Winter Meeting (Day 1) New England SAF - State Society</td>
<td>Nashua, NH</td>
<td>4.0/II</td>
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<td>NESAF Annual Winter Meeting (Day 2) New England SAF - State Society</td>
<td>Nashua, NH</td>
<td>5.0/II</td>
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<td>NESAF Annual Winter Meeting (Day 3) New England SAF - State Society</td>
<td>Nashua, NH</td>
<td>3.0/II</td>
</tr>
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<td>29-Mar</td>
<td>Forestry Night 2018</td>
<td>Houlton, ME</td>
<td>2.5/II</td>
</tr>
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<td>3-Apr</td>
<td>Log Drives of the Connecticut River Valley</td>
<td>Hillsborough, NH</td>
<td>1.5/II</td>
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<td>4-Apr</td>
<td>Safe and Efficient Trucking</td>
<td>Lancaster, NH</td>
<td>6.0/II</td>
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<td>Forestry Night 2018</td>
<td>Houlton, ME</td>
<td>2.5/II</td>
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<td>5-Apr</td>
<td>Forest Soils in the Hogback Ecoregion (lecture 1)</td>
<td>Bristol, VT</td>
<td>1.5/II</td>
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<tr>
<td>5-Apr</td>
<td>Garage Safety</td>
<td>Winchester, NH</td>
<td>6.0/II</td>
</tr>
<tr>
<td>7-Apr</td>
<td>Forest Soils in the Hogback Ecoregion (field trip 1)</td>
<td>Bristol, VT</td>
<td>3.0/II</td>
</tr>
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Our mission as foresters is to be responsible stewards of the earth’s forests while meeting society’s vital needs. The challenge of our mission lies in keeping forest ecosystems healthy and intact while concurrently drawing on their resources. We will meet this challenge by carefully monitoring and managing the effects of natural and human forces on the forest. Our decisions will be guided by our professional knowledge, our compassion for all living things, our desire to improve citizens’ lives, and our respect and concern for the entire forest ecosystem. By advancing forestry science, education, technology, and the practice of forestry, NE SAF will provide the leadership to achieve its mission.