Congratulations 2020 NESAF Award Recipients!

Pictured (L to R, top row) Ralph Nyland and Nicole Rogers
(L to R, bottom row) Lloyd Irland and John McNulty

Emerging Science: Abstracts from the 2021 NESAF Annual Meeting

News Quarterly Science Theme -
Dr. Anthony D’Amato, Theme Editor

The NESAF Annual Winter Meeting was held online this year due to Covid-19. Presentations were offered through SAF’s ForestEd Platform. This theme is the compilation of the Flash Talk abstracts presented during the meeting.

We hope the abstracts featured in this issue are as well received as they have been in previous years! Please note that the Flash Talk abstracts are available in the both the print and online versions of the News Quarterly.
The News Quarterly is the official publication of the New England Society of American Foresters. It is published in January, April, July, and October, and is mailed from Berlin, NH under a non-profit organization bulk mail permit.

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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.

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Greetings from the Bay State ~ William Hill

Happy spring NESAF! It’s been quite the 12 months with the COVID pandemic really taking off about this time last year and all of us wondering, where will this take us? With vaccines available and warmer weather heading our way it seems as though we can now see the light at the end of the tunnel.

As I write this column the New England SAF has just completed the 2021 Annual Winter Meeting in a virtual format. Wow, I hope we don’t have to do that again! It was really hard to do and with the exception of a few technological glitches, we managed to host a great meeting. My highest kudos go out to the entire planning committee especially General Chair Adam Moore and Jeff Ward, Program Chair. Special thanks also to Naomi Marcus and Lori Rasor of SAF National Office without whom we would have been lost conducting the virtual meeting. Did I say it’s really hard to host a virtual meeting?

Although we weren’t gathered together for NESAF 2021, the program of speakers and their subjects was excellent. Attendance was outstanding, topping out at around 375 with over 70 students registered. This is fantastic considering the virtual format of the meeting. The meeting theme of “Celebrating the Past - Looking to the Future” was woven seamlessly into the plenary discussions. From Ken Lausten, NESAF Historian recounting our collective NESAF past 101 years, to Karen Bennett and Steve Roberge discussing the current state of forestry, Tony D’Amato’s appeal to us foresters to always be open to new paradigms and the call to action presentations by Adam Moore, Paul Dolan and Terry Baker, SAF CEO. We truly were able celebrate the past and look to the future. I look forward to seeing everyone in person next year at NESAF 2022 in the great state of Maine!

If you’re still reading this, can you tweet? The NESAF Executive Committee is looking for someone knowledgeable and energetic to help develop and maintain a social media program for NESAF. If this is you and you’d like to help, contact me at foresterhill@comcast.net or, Wendy Weisiger at wendy.weisiger@gmail.com.

All my best to each one of you as spring turns to summer and more pleasant woods work returns with mosquitoes, black flies and ticks. May the forest be with you!

District Director’s Update ~ Mariann Johnston

Spring is finally making its way across District 6, complete with snow flurries alternating with 70-degree days. Nothing like the spring weather to remind us of change. And, like all seasons, mine too must come to an end. At the end of 2021, I will complete my term as Director of District 6. Accordingly, a new Director will be sought for the 2022-24 term.

At the National level, SAF consists of 11 districts, each of which elects one representative to serve on the Board of Directors (BOD). The terms are staggered, such that every year, 3 to 4 Directors rotate off, and new members rotate in. Besides the 11 District Directors, the Board also consists of the CEO, the SAF President (also serves as BOD Chair), Vice-President, and Immediate Past President. A number of ex-officio seats include the chairs of several SAF National committees, a Student Executive Committee representative, a Young Professional representative, and the Chair of the House of Society Delegates.

In non-COVID times, the BOD meets in person 3 times per year, for approximately 2-3 days each, and between those dates, meets by conference call 3 times per year, for approximately 2 hours per call. A travel allowance is provided to each Board member to cover travel expenses to the in-person BOD meetings. District Directors are also expected to participate in their in-district meetings wherever possible. In our case, this means attending meetings such as the NYSAF annual meeting in January, NESAF annual meeting in March, and state society meetings where possible. Additional travel monies are available for travel to meetings outside of the Director’s local district. So, for example, as a NYSAF member, I would not claim travel expenses to attend NYSAF meetings, but I may claim expenses to travel to NESAF meetings. If the District Director is unable to attend meetings in person, a written board report is helpful.

As a BOD member, you will participate in SAF governance at the national level. Each Director serves on one of three committees, including Governance, Finance, and Audit. Each committee has a specific charge, which may change each year depending on organizational priorities. Committee assignments often require time and effort outside of the regular meeting times. In addition to fulfilling standing Committee assignments, BOD members may also take on special assignments or serve on ad-hoc committees at any time. Thus, potential candidates for this role should carefully consider their other time commitments, and be prepared to commit the necessary time to effectively serve SAF.

Serving as District Director is an honor, as well as a significant commitment and important responsibility. It’s also a great opportunity to build leadership skills and provide guidance at the highest levels of our organization. Anyone interested in serving SAF in this role may contact me (mjohnston@esf.edu) or refer to the website to learn more about the position and process (https://www.eforester.org/Main/Community/National_Elections.aspx). Nominations are due no later than June 1, 2021.
2020 NESAF Award Recipients

John W. McNulty
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.

John has enjoyed an admirable and enviable record of service to the profession and to SAF since 1988, when he was elected Vice Chair of the Maine Division. His SAF activities range from MESAF, to NESAF, and onto National where he served on several committees and recently stepped off as Immediate Past President in 2020.

This service has not gone unrecognized. He was awarded the 1995 Austin Cary Practicing Professional Award, in 2001 was recognized by the University of Maine, School of Forestry as a “Distinguished Alumni,” elected as a SAF Fellow in 2003, and in 2019 was honored by the Maine Forest Products Council with the Albert D. Nutting Distinguished Service Award.

Following his graduation from the Univ. of ME in 1978, with a B.S. in Forest Management, he began a 40+ year career with Seven Islands Land Co. (SILC), starting as a field forester in 1978, and leaving in 2019 as President and CEO. In that career, an endorsement noted that he promoted good forestry, forest certification, and the benefits of land conservation.

In the nomination letter, “John was instrumental in initiating forest certification in the early 1990s, when SILC decided to go green and had its nearly 1 million acres of Maine forestland certified by Scientific Certification Systems. This provided a boost to the public image of forestry and counter to the push to legislate and regulate harvest practices during the ‘Maine Clear-cut Wars’.”

A past SAF president commented in their endorsement, “I think of John McNulty as a forester’s forester. He has an impressive resume starting as a field forester with SILC and rising through the company ranks to become its president, founding another forestry company (Orion) along the way. Throughout his career he has promoted good forestry, forest certification, and the benefits of permanent land conservation.”

“I also want to say John has always had a consistent attitude regarding forestry - specifically the Acadian forest that he called the ‘magic forest.’ He was completely confident in this forest’s ability to regenerate, grow productively, and be sustainable for future generations. So long as we paid attention to the forest, listened to the forest, utilized our learnings while managing the forest, and be able to serve distinguishably in the promotion of the forest to others, who would do the same,” was the conclusion from a third endorsement.

Lloyd C. Irland
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 memorial “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.”

The nomination letter noted that the amount of technical and scholarly contributions amassed to an 83-page CV. This includes authoring 11 books and monographs, 19 book chapters, over 30 major reports, and over 40 peer-reviewed publications. The CV does not include scores of other articles in various popular outlets that advance the social conversation about, and appreciation of, forests. It is fair to say that as a writer, Lloyd is unparalleled in our New England region. He has a voracious appetite for hard data and an unparalleled ability to synthesize and make sense of disparate sources of information. Because of his laser-focused devotion to data, he accepted the moniker of “Dr. Doom” within the forest industry.

Lloyd has a 1967 B.S. degree in Forestry from Michigan State Univ., a 1968 M. S. in Watershed Management from the Univ. of Arizona, and a Ph.D. in Forest Economics and Policy from Yale in 1973. He was employed by the Chicago Board of Trade, an Assistant Professor at Yale, Forest Insect Manager with the Maine Forest Service, Director of the Maine Bureau of Parks and Lands, and the State Economist for the Maine State Planning Office. In 1987, he founded the well-known forestry, economics, and marketing consulting firm, The Irland Group. He is a licensed ME forester and has served on several SAF National Task Forces and Committees. He has played a role in the planning, convening, and presentation of NESAF and SAF meetings for the last 35 years.

An endorsement letter stated, “Perhaps Dr. Irland’s most notable service has been in providing clarity on the subject of ethics. He has tackled this exceedingly difficult and transient topic through writings (2 books) and discussion. While a majority of foresters feel that they are doing the right thing, Lloyd’s writings and workshops provide a framework of understanding of what the right thing is and how foresters come to recognize it. How many of us have heard Dr. Irland’s Law Number 9 - explaining a particular decision to your second-grader.”

“Ethics is neither flashy nor tech-savvy, but foresters require a grounding in it. It is important for all foresters as they go about their business. A proper understanding of the standards of professional practice is essential because it can keep you out of some serious trouble,” noted another endorsement.
Nicole S. Rogers

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.

Nicole is currently the Assistant Professor of Forestry at the Univ. of Maine Fort Kent, where she has been a faculty member since 2018. She received a B.S. degree in Forest Ecosystem Science and Conservation from the Univ. of ME in 2010, a M.S. in Sustainable Forest Management, Forest Biometrics and Geomatics from Oregon State Univ. in 2013, and a Ph.D. in Natural Resources and Forest Sciences from the Univ. of VT in 2018. Her professional forestry experience includes serving as a Field Technician at the Holt Research Forest in Maine, a Conservation Assistant for the Coastal Mountains Land Trust, and a Research Data and Records Archive Manager in the School of Forest Resources, Univ. of ME.

She has been Search Committee Member and a Graduate Student Representative at UVM, a Journal Reviewer for Forest Science, and an abstract reviewer for the 2016 National Convention. While for SAF she has served a Forest Science Journal Reviewer and a National Convention abstract reviewer. For MESAF, Nicole served as a member at large in 2019, Vice Chair in 2020, and is currently the MESAF Chair. For NESAF, she is the current Silviculture Working Group Chair.

In the nomination letter, it noted Nicole’s leadership last year while serving as Vice Chair of MESAF. She led the required review and revision of the Division Bylaws, assisted in the review and revision of the Division Manager contract, interviewed prospective candidates for that position, and served as a moderator for the first-ever MESAF virtual fall meeting.

An endorsement noted, “She serves as a mentor and role model to the next generation of foresters, all the while building her own career.” “I would be remiss if I did not mention the high regard that Nicole’s forestry peers have for her and the positive effect she has on students, particularly women in forestry. There are, unfortunately, still many fewer women than men in forestry and even fewer women teaching the applied aspects of forestry science to students. She embodies the best of forestry - capable, thoughtful, and inclusive.”

“She has inspired the faculty to rethink the focus of the forestry program from one that focuses on industrial forestry to one that looks at forestry in a broader context. This is not only important to give the students a more holistic view of forestry but will hopefully help to boost enrollment. She has worked to increase diversity in the program, and serves as a role model to female forestry students and is recruiting opportunities to recruit women into the program,” notes another endorsement letter. “Although she has been at UMFK for less than three years, the faculty and administration recognize her a future leader on this campus.”

Ralph Nyland

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 nominator noted that Ralph’s 1992 paper, Exploitation and Greed in Eastern Hardwood Forests (Journal of Forestry, v90:1, p33-37), and subtitled “Will foresters get another chance?” was provocative and influential to their career. While this paper is foundational to our understanding of the effects of 20th century harvesting practices in many parts of New England, it is only one part of a career-long effort by Ralph to study, document, and communicate negative outcomes of high-grading and to motivate the use of silvicultural practices.

Ralph’s background includes a B.S. in Forestry (1958) and a M.S. in Silviculture (1959) from the State University College of Forestry at Syracuse, and a Ph.D. in Silviculture and Forest Management from Michigan State University in 1966. He worked as a forester in the NY Conservation Dept. (1959-1964) and then as a Senior Research Associate at SUNY (1967-1977). He became a member of the SUNY faculty for a 40-year period (1977-2017), retiring as the Distinguished Service Professor of Silviculture. Ralph is the author of one of the leading silviculture textbooks, that is still in current use, Silviculture: Concepts and Applications, Third Edition, 2016. His long-term research, which began in the 1970s, contributes importantly to our understanding of regeneration processes in northern hardwood forests, interfering plants including American Beech, exploitative harvesting practices, rehabilitation of degraded forests, and even uneven aged silvicultural systems. He is a SAF Fellow and the recipient of the SAF National Barrington Moore Award. He has published more than 150 scientific and technical papers, as well as practitioner reports in regional, national, and international journals.

An endorsement letter comments, “At a time when we are revisiting conversations of ethics in forestry, it is powerful to reflect on Dr. Nyland’s work, which always used the SAF Code of Ethics as a central pillar to the silvicultural research and teaching he conducted. His relentless commitment to upholding a high standard for our profession, particularly in relation to the silviculture we practice, has served as an outstanding model for so many foresters and educators in this region.”

“He has truly championed the need for sustainable silvicultural practices that run counter to harvesting approaches focused on short-term economic gains. Although this has not been a popular message to deliver, Dr. Nyland’s commitment to ensuring our profession upholds its pledge to manage forests for current and future generations has served as a powerful force of change across the region.”

“I credit Ralph for really “stirring the pot” with respect to the pervasive problem of exploitive harvesting. Not only did he help sound the alarm on the issue, but in true Ralph fashion contributed to the solution by offering silvicultural strategies for rehabilitating stands. For him, it’s always been about influencing on-the-ground silvicultural practices - particularly as it relates to discouraging diameter limit cutting and high-grading.
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A Note of Thanks! ~ Adam Moore

I remember my first NESAF Meeting. It was in Burlington, Vermont, and I went with my young family. I remember being stunned by the view across beautiful Lake Champlain, where I could see the snow-capped peaks of the Adirondacks in the distance. And I remember one fascinating educational session after another. They got me really excited to be in the field of forestry!

I remember a buzzing exhibit room. There was a room full of posters, displaying the latest research in forest science. There were exhibit booths featuring new technologies like GPS, and others featuring maps from conservation organizations like the New England Forestry Foundation. There were vendors offering racks of wool shirts for sale, and vendors selling Pulaskis, Biltmore sticks and calipers.

There was a continental breakfast, and box lunches, and a huge awards banquet, and happy icebreakers and alumni socials at the end of the day, and endless vats of coffee. Most of all, there was the conviviality of gathering together with you, our fellow members of NESAF. I left the conference filled with enthusiasm for forestry, this exciting, invigorating, inspiring profession that I had chosen.

Even though we could not meet in person this year, I hope you embraced this virtual conference with enthusiasm. I think we had a great conference and would like to thank all of the members of our planning committee. I wish to give special thanks to our program chair Jeff Ward. This committee has been working hard to plan this meeting for not just one year, but two! I also wish to thank NESAF Chair Bill Hill, past-chair Jake Metzler, and Yankee Division Chair Larry Rousseau for their leadership and service. And I want to give a very special thanks to Naomi Marcus and Lori Rasor for all of their help. The ability to hold an entirely virtual conference for hundreds of people depends entirely on the skill, professionalism, and patience - of Naomi and Lori. Thank you, Naomi and Lori, and thank you, Terry Baker and the National SAF office.

Finally, this conference would not have been possible without the support of all our speakers and moderators who worked tirelessly and rehearsed in preparation for this event. I would also like to give a special thank you to all of the students who attended, and hope your first in-person conference is as exciting as mine was for me!

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Flash Talk Abstracts Presented at the 2021 NESAF Annual Meeting

Plant Your Way Out of Climate Change? Examining Initial Outcomes of Climate-Adapted Plantings for Adapting Northern Forests to Global Change

Pete Clark, University of Vermont, Rubenstein School for Environment and Natural Resources
Anthony D’Amato, University of Vermont, Rubenstein School for Environment and Natural Resources
Chris Woodall, USDA Forest Service Northern Research Station
Kevin Evans, Director of Woodlands, Dartmouth College

Abstract: Climate-adaptive forest management strategies are needed in the face of global change. Tree species habitats are changing but migration rates fail to track those of climate change, leading some to suggest the assisted movement of species to augment or deliberately transition composition. Empirical evaluations of locally-calibrated adaptation measures are needed to examine the performance of adaptive plantings employed as part of operational-scale “transitional silvicultural” strategies. Here we present on the initial outcomes of climate-adapted plantings from regional experiments including the New England Adaptive Silviculture for Climate Change (ASCC) installation at the Second College Grant in northern New Hampshire. Over 5,000 seedlings from nine species were planted in 0.1 and 0.4ha harvest gaps, selected from a suite of functional traits and adaptive planting types (i.e., local population enrichment vs. assisted range expansion). Three-year mean survival was 55.8%. Cox proportional hazard regression at the ASCC revealed variable probabilities of survival by species, although rank order differed across regional sites: *Picea rubens* (79%) > *Quercus rubra* (79%) > *Pinus strobus* (71%) > *Carya cordiformis* (58%) > *Tsuga canadensis* (55%) > *Betula lenta* (52%) > *Populus grandidentata* (49%) > *Castanea dentata* B3F3 (45%) > *Prunus serotina* (43%), There is a weak tradeoff between growth-survivorship (p<0.05), yet the most important biophysical factors for both response variables were initial size, species (e.g., functional traits), and vegetative competition. Compared to locally adapted enrichment plantings, species planted outside range limits had lower survival (59% ±2 vs. 49% ±3, p < 0.000 respectively) and relative annual growth (biomass: 2.5 ±0.03 g g⁻¹ yr⁻¹ vs. 2 ±0.05 g g⁻¹ yr⁻¹, p < 0.000 respectively) suggesting maladaptation. The strength of ecological memory in the form of natural regeneration negatively influenced the performance of adaptation plantings, potentially reducing the efficacy of stand-level compositional transitions. However, strategically placed mixed-species adaptation plantings may promote complex multiscale functional linkages (e.g., dispersal) between different landscape elements to ensure strength and redundancy in forest compositional diversity during a time of shifting species habitats.

Initial steps towards a browse impact assessment for forests of the Northeast

Pia Ruisi-Besares, University of Vermont, Rubenstein School for Environment and Natural Resources, Forest Ecosystem Monitoring Cooperative
James Duncan, University of Vermont, Rubenstein School for Environment and Natural Resources, Forest Ecosystem Monitoring Cooperative
Josephine Roberston, Forest Ecosystem Monitoring Cooperative
Jenn Pontius, University of Vermont, Rubenstein School for Environment and Natural Resources, Forest Ecosystem Monitoring Cooperative

Abstract: The intensity of ungulate browse on saplings and seedings is considered an important determinant of forest regeneration, however, there are limited and disparate resources for assessing these impacts in the Northeast. In 2019, the Forest Ecosystem Monitoring Cooperative (FEMC) developed the Northeastern Forest Regeneration Data Network, a regional data and methodology portal to explore how research and monitoring organizations are collecting data on forest regeneration in the Northeast. This project focused on identifying datasets related to several aspects of regeneration analysis including factors such as density, mortality and biomass of seedlings and saplings. However, through this process, we identified that consistent information across the region about the impacts of deer browse on regeneration is lacking. In order to address this gap, the FEMC is working with its partners to aggregate existing data and information about browse, provide suggestions for possible browse assessments methodologies and how to better integrate efforts, and fill in gaps in knowledge and data collection with new browse impact assessments. The literature suggests that there are several possible approaches to assessing browse with varying sampling intensities based on the goals of the investigator. We hope to explore these options further and seek input from regional experts to develop an assessment tool that can be used across the Northeast. In this presentation, we will highlight the main holdings of the Northeast Feature Regeneration Data Network, what these tell us about browse monitoring and assessment in the region, and initial findings in comparing browse methodology and data availability.
Assessing the role of timing in drought and defoliation-related tree mortality

Danielle Tanzer, University of Connecticut
Robert Bagchi, University of Connecticut
Audrey Barker Plotkin, Harvard Forest and University of Massachusetts Amherst
James Hurd, University of Connecticut
James Mickley, University of Connecticut
Keenan Rivers, University of Connecticut
Chandi Witharana, University of Connecticut
Robert Fahey, University of Connecticut

Abstract: Climate change has the potential to increase the frequency and severity of forest disturbances, which may result in an increase in disturbance interactions. These interactions can intensify effects on factors such as tree mortality rates and future forest resilience, but more research is needed to understand the influence of timing on these outcomes. This study assesses how timing and severity of the interaction between recent (2016-2018) drought and gypsy moth defoliation in southern New England influenced patterns of tree mortality and tests the ability of remotely sensed data to accurately predict tree mortality outcomes from interacting disturbances with varying timing. We conducted vegetation and gypsy moth surveys at 37 sites in eastern Connecticut and central Massachusetts. Remote sensing data was used to assess site-level patterns of defoliation timing (none, single year – 2017 or 2018, two years – 2016 and 2017; 2017 and 2018, or all three years). Preliminary results show overall and oak-specific mortality rates vary significantly with patterns of defoliation (p = 0.024 and p = 0.002, respectively) with greater mortality rates in sites experiencing multiple years of defoliation. Ongoing analysis includes both a statistical assessment of how the timing and severity of the disturbances contributed to tree mortality and refoliation patterns and the training and validation of random forest algorithms to assess how accurately algorithms informed by remotely sensed data can predict tree mortality outcomes. Results will further our understanding of the role of timing in interacting forest disturbances and support future monitoring efforts related to disturbance interactions and tree mortality events.
Physiological Evidence of Thinning Shock in Red Spruce

Kelly French, University of Maine
Shawn Fraver, University of Maine
Laura Kenefic, University of Maine, USDA Forest Service Northern Research Station
Heidi Asbjornsen, University of New Hampshire
Matthew Vadeboncoeur, University of New Hampshire
David Moore, University of New Hampshire
Jay Wason, University of Maine

Abstract: Forest density reduction through thinning trees is a common practice to reduce competition. However, thinning also causes a rapid increase in canopy exposure that may have negative impacts (thinning shock). Furthermore, increased temperatures and vapor pressure deficit (VPD) driven by climate change may lead to more extreme changes in microclimate during thinning. In this study, we examined the immediate physiological responses of repressed mature red spruce (*Picea rubens*) (breast height diameters 16-26 cm) after removing all crown-touching competition. We measured thinning impacts on microclimate, daily tree water use, shoot water potential, and photosynthetic efficiency from June through November 2020. Despite increasing temperature and VPD, thinning did not impact whole-tree water use. We did find, however that midday shoot water potentials (ψMD) were 0.55 MPa lower in thinned trees and surpassing important physiological thresholds (ex. turgor loss point). Importantly, exposing shade grown leaves to high-light conditions during thinning significantly reduced photosynthetic efficiency (Fv/Fm) by 6.1 - 53.1% for the entire growing season. The large benefits of thinning on tree growth are clear. However, we have identified immediate negative effects of rapid changes in environmental conditions that may explain common multi-year lags in growth responses to thinning. These negative effects may be exacerbated with larger changes in microclimate, therefore these findings will be important to consider when planning management practices for red spruce in future climates.

Adapting Adaptive Silviculture to the Exurban Landscape

Amanda Bunce, University of Connecticut, Department of Natural Resources and the Environment
Robert Fahey, University of Connecticut, Department of Natural Resources and the Environment
Maria Janowiak, USDA Northern Research Station, Northern Institute of Applied Climate Science
Anita Morzillo, University of Connecticut, Department of Natural Resources and the Environment
Courtney Peterson, USDA Northern Research Station, Northern Institute of Applied Climate Science, Colorado State University, Forest and Rangeland Stewardship Department

Abstract: Climate Change has the potential to impact forests more rapidly than they can adapt, degrading biodiversity and ecosystem functionality. Adaptive silvicultural improves capacity of a forest to be resilient to those impacts. Centuries of forest management practice coupled with recent ecological science provides excellent strategies to manage adaptively. Motivation to adapt the forest to climate challenges is generally high. However, in southern New England, a heavily forested and densely populated exurban landscape, little adaptive management is taking place.

Exurban forests are socio-ecological systems. To improve implementation of adaptive practices, the research questions underlying this study address both the ecological and social dimensions:

1. What adaptive treatments improve resilience in exurban oak-hickory forests?
2. What factors impact forestry decision-making on the exurban landscape?

We are collaborating with the Adaptive Silviculture for Climate Change (ASCC) network, composed of silvicultural trials in different forest types throughout the US and Canada, to look at adaptive practices locally. The treatments will work with existing canopy gaps from recent disturbances to regenerate trees, and introduce novel specimens. A monitoring program consistent with other ASCC sites will be implemented. ASCC treatment plans are co-developed in a workshop with forest scientists and local stakeholders. Studying workshop proceedings with grounded theory - a qualitative method to examine data for emergent themes - we identify barriers and opportunities for adaptive silviculture, and different conceptualizations of “forest health.”

Through this project we hope to better understand both ecological and social responses to adaptive forest management, and improve forest management strategies in our region.

A New Forestry Investment Vehicle

Alec Giffen; New England Forestry Foundation

Abstract: This talk will describe a new investment vehicle—the Exemplary Forestry Investment Fund—that leverages the increasing interest in impact and socially responsible investing to implement New England Forestry Foundation’s forest management approach in the Mountains of the Dawn (a nationally significant ecological and recreational region in western Maine). The fund seeks to marry philanthropic support and private capital provided by investors who have a long-term outlook and want their dollars put to work to create a forest that, in time, produces more timber while providing important ecological benefits from improved wildlife habitats to increased carbon storage.
Life in the cold - another challenge for American elm restoration?

Paul G. Schaberg, Forest Service, U.S. Department of Agriculture, Northern Research Station
Paula F. Murakami, Forest Service, U.S. Department of Agriculture, Northern Research Station
Christopher F. Hansen, The University of Vermont, Rubenstein School of Environment and Natural Resources
Gary J. Hawley, The University of Vermont, Rubenstein School of Environment and Natural Resources
Christian O. Marks, The Nature Conservancy, Connecticut River Program
James M. Slavicek, Forest Service, U.S. Department of Agriculture, Northern Research Station

Abstract: Dutch elm disease (DED) is the primary threat to American elm (Ulmus americana L.) populations in North America. However, observations in restoration plantings suggest that shoot freezing injury may also limit tree productivity and survival in the north. To evaluate this possibility, we assessed shoot cold tolerance and field winter injury for current-year shoots of American elm bred for DED tolerance that were established in a restoration planting in Lemington, VT. Differences in cold tolerance associated with date (December, February and April), maternal DED tolerance source (R18-2 and Valley Forge), paternal sources from three USDA Plant Hardiness Zones (5a, 6a and 6b), and the interactions of these were evaluated. Cold tolerance was greatest in the winter, followed by fall and then spring. For all dates, cold tolerance never differed significantly between maternal sources of DED tolerance. However, cold tolerance did differ among paternal sources from different hardiness zones in winter. At this time, crosses with paternal sources from zone 5a (coldest zone) were significantly more cold tolerant than sources from zone 6b (warmest zone), and sources from zone 6a were intermediate in cold tolerance. The difference between zone 5a and zone 6b cold tolerance means was ~7.4°C, which is <1°C than the differences in 30-year average annual minimum temperatures for these zones. Freezing injury in the field confirmed that shoots were only marginally cold tolerant relative to ambient temperature lows. Results suggest that it may be helpful for breeding efforts to include sources from colder hardiness zones to better assure local adaptation to low temperatures.
Management and Climate Change Impacts on the Sustainability of Lowland Northern White-Cedar

Katlyn Schulz, University of Maine
Jay Wason, University of Maine, USDA Forest Service Northern Research Station
Laura Kenefic, University of Maine, USDA Forest Service Northern Research Station

Abstract: Lowland northern white-cedar (Thuja occidentalis) is a slow-growing, shade-tolerant, and long-lived tree species often found in nutrient-rich, forested wetlands. Although it is one of the least studied commercial tree species in North America, it is highly desired for use as building materials due to its decay resistance. Unfortunately, abundance of northern white-cedar is declining in some parts of its range due to factors such as excessive browsing and harvesting, and sustainable management has been complicated by the tree’s specific site requirements, slow growth rate, and vulnerability to browse. Another major challenge to the species is its competition with balsam fir, which is faster growing and more prolific. Furthermore, it is unclear how climate change and extreme events like drought may impact the competitive dynamics between white-cedar and fir.

For this study, pre- and post-harvest measurements were conducted to assess the impact of partial harvesting on stand conditions, and temperature and humidity sensors were deployed in field to measure environmental gradients. We will also test the impact of harvesting on microclimate conditions (temperature, vapor pressure deficit) that may impact the physiology and competitive dynamics of cedar and competing species. Preliminary results suggest that partial harvesting may be an effective treatment for lowland cedar stands, although there is some concern about the ability of this technique to promote the establishment and recruitment of cedar seedlings. Additionally, in order to determine how extreme climate events such as drought impact the growth, survival, and physiology of established northern white-cedar and balsam fir regeneration we will quantify drought-mortality thresholds in a greenhouse-study. These findings will be used to findings to consider sustainability of northern white-cedar within the context of forest management, climate change, and the interaction of the two.

A Forest Carbon Works provides carbon market access to private woodland owners in New England

Sean Hart, Forest Carbon Works
Mary Kallock, Forest Carbon Works
Sarah Ford, Forest Carbon Works

Abstract: Forest Carbon Works (FCW) is a Public Benefit Company working to distill the complex processes for developing a carbon project into a simple membership service, creating easy access to the carbon market for private woodland owners throughout the US. An offshoot of EP Carbon—a carbon-project development firm that has been working globally for the past ten years—FCW is rapidly expanding operations across the country, with New England as a priority. In fact, we just hired our first Regional Forester for New England and have multiple carbon projects throughout the Northeast in various stages of development.

FCW brings carbon projects to market under the Compliance Offset Protocol for US Forest Projects established by the California Air Resources Board (ARB) as part of California’s cap-and-trade legislation. While the ARB program is complex, in this Flash Talk we walk the audience through our process—from landowner application to carbon-offset credit generation—using a current FCW member’s project as an example: the 120-acre Raincloud Tree Farm near Portland, Oregon. Owned by the Stewart Family since 1892, Raincloud Tree Farm now has a verified carbon project that will generate carbon revenues for at least the next 25 years.

We have multiple carbon projects registered in Oregon and many more projects across numerous states in the inventory and analysis stages of development. FCW is growing rapidly and providing carbon market access and, most importantly, economically viable, long-term forest conservation to private woodland owners throughout the US with as few as 40 acres. Our expansion into New England has created exciting opportunities for both private woodland owners and forestry professionals that we want to highlight and share with your NESAF members!

What in the world are offsets - an introduction to the forest carbon market

Reid H. Lewis, The Forest School at Yale School of the Environment

Abstract: Climate change is driving society to increasingly value forests for an abstract good: carbon. Organizations and individuals are looking to forests as an opportunity to offset their climate impact in pursuit of carbon neutrality. This demand is resulting in a growth of the forest carbon offset market, while new technologies and approaches are making it possible for smaller landowners to get involved. However, the forest offset market is complex and frequently convoluted, limiting understanding and access. This talk gives an introduction to the structure and function of the forest carbon market in the United States, with a focus upon the Northeast. Drawing from primary protocol documents and offset project data, we introduce the forest carbon market by looking at key components that fall outside of typical forestry knowledge: carbon additionality, protocols and registries, offset project developers, critiques of the current market, and recent innovations in small landholder access.

Knowledge of how forest offsets are created, and the parties involved, will enable foresters to help shape the dialogue of forest carbon in the Northeast. By doing so, foresters can ensure regional forest offsets are created for real and additional climate benefits, empowering landowners with another forest product to pursue their stewardship goals.
Rule-based classification to optimize forest carbon sequestration following an eastern spruce budworm outbreak

Lisa N. Scott, University of New Hampshire, Department of Natural Resources and the Environment
Sean M. Smith, University of New Hampshire, Department of Mathematics and Statistics
Marek Petrik, University of New Hampshire, Department of Computer Science
John S. Gunn, University of New Hampshire, Department of Natural Resources and the Environment
Ethan P. Belair, The Nature Conservancy, Portland, ME
Mark J. Ducey, University of New Hampshire, Department of Natural Resources and the Environment

Abstract: Forest disturbance, such as an eastern spruce budworm (Choristoneura fumiferana) outbreak, impacts the strength and persistence of forest carbon sinks. Salvage harvests are a typical management response to widespread tree mortality, but our prior research has shown that the decision to salvage mortality has large implications for the fate of carbon stocks (including forest carbon and harvested wood products) in the near and long terms. We used a range of economic discounting rates and applied decision tree machine learning methods as an interpretable rule-based classification technique to develop a more refined knowledge of which forest stand conditions and management regimes should salvaging be encouraged by policy-makers to support emissions reduction and carbon sequestration objectives. We derived carbon sequestration outcomes from growth and harvest simulation models that incorporated a life cycle assessment of the fate of harvested material in comparative “salvage” vs. “no salvage” scenarios using US Forest Service Forest Inventory and Analysis plot data for the northeastern United States. We found that long-term carbon sequestration is negatively impacted by salvage logging when the volume of mortality is high. But interpretable rule-based classification methods can be used to determine specific forest stand characteristics where salvaging is likely to lead to more beneficial sequestration outcomes. Applying economic discount rates to future carbon stocks further affects rule-based classification model utility, where higher discount rate scenarios suggest more carbon storage can be achieved from using classification model decision-making compared to lower discount rate scenarios. Our findings provide important considerations for forest managers and policy-makers to optimize carbon sinks following major disturbances.
A Re-Definition of Sustainable Forestry

Alec Giffen, New England Forestry Foundation
Bob Perschel, New England Forestry Foundation
Frank Lowenstein, New England Forestry Foundation
Chris Pryor, New England Forestry Foundation
Carla Fenner, New England Forestry Foundation
Jennifer Shakun, New England Forestry Foundation

Abstract: In the face of a climate emergency that requires transformational change in the next two decades, we must demonstrate how forestry can address the needs of the 21st century by meeting society’s growing demand for both climate mitigation and renewable raw materials. To be truly sustainable, forestry must retain recognized values from past concepts of sustainable forestry, such as sustained yield, protection of ecosystem services, and maintenance of biodiversity. In light of the climate crisis, it must also encourage maintaining or increasing forest carbon stocks. All while maintaining or increasing the supply of wood to substitute for more carbon-intensive building materials. We present a new definition of sustainable forestry that meets these criteria and examples of its application in New England.

Climate Action through Forestry and Wood Products

Connor Rockett, New England Forestry Foundation
Jennifer Shakun, New England Forestry Foundation
Bob Perschel, New England Forestry Foundation
Frank Lowenstein, New England Forestry Foundation
Alec Giffen, New England Forestry Foundation
Carla Fenner, New England Forestry Foundation
Lisa Hayden, New England Forestry Foundation

Abstract: Maximizing the contribution of our forests to climate change mitigation means more than simply considering the amount of carbon in the forest. This talk will describe the significant carbon savings that could be achieved in New England by taking a more holistic approach that combines land conservation, forest management, and the use of wood products in place of more energy-intensive materials. We will outline how this approach can be implemented at scale through development and implementation of climate-smart forestry standards, public outreach, partnerships, and well-crafted regional and federal policy platforms.

Perspective of foresters towards forest management certification programs

Alex K. George, School of Forest Resources, University of Maine
Anil Raj Kizha, School of Forest Resources, University of Maine

Abstract: Forest certification programs were initially devised in North America to ensure the sustainable management of forests by entrusting environmental, social, and economic values. Consequently, the forest managers were assured of financial and reputational incentives in the form of price premiums and increased market access. But in reality, forest certification programs couldn’t assure the guarantee; furthermore, increased the financial and bureaucratic burden on them. The study assessed the key drivers behind the decision to get certified by surveying 167 foresters from the New England states of Maine, Vermont, and New Hampshire. The survey was distributed using online mode (Qualtrics) for two months (July to August 2020). About 60% of the respondents had or have certified their management unit where leading certification programs were Forest Stewardship Council (35%), followed by Sustainable Forestry Initiative (32%) and American Tree Farm System (23%). As reasons for getting certified, the respondents strongly agreed on market entry/access, and social license; whereas they strongly disagreed on market price premium and improved staff morale. Chi-square tests on the same showed a significant difference between consulting foresters and foresters working with land management companies. The majority of the respondents agreed on reduced frequency of surveillance audits (once in two or three years) for management units that are continuously certified. Respondents were satisfied with the auditors and believed logger certification made auditing more convenient. The study helped understand the perception of forest certification programs among foresters and reasons for discontinuation. Respondents embraced the adoption of region-specific and stakeholder-specific certification standards. The study expects strengthening the forest certification programs can help in mitigating the impacts of climate change by the dynamic involvement of stakeholders.
Response of dead wood to weather and forest management: Emerging results from an adaptive silviculture experiment in NH

Christopher Woodall, U.S. Forest Service, Northern Research Station
Mark Green, Case Western Reserve University
Shawn Fraver, University of Maine
David Lutz, Dartmouth College
Dan Evans, Plymouth State University
Anthony D’Amato, University of Vermont

Abstract: The attributes of dead wood (DW) following forest management operations is an important determinant of numerous forest ecosystem functions, ranging from wildlife habitat to carbon cycling, particularly within an adaptation to climate change framework. In order to estimate the effect of weather and silvicultural treatments on the critical attribute of volumetric moisture content (VMC) of DW, time domain reflectometers and data/communication technology was developed and applied as sensor arrays to a series of logs by silvicultural treatment within an Adaptive Silviculture to Climate Change experiment in a northern hardwood forest (NH). It was found that VMC and associated log/soil/site attributes (e.g., matric potential, temperature, and photosynthetically active radiation) could be efficiently recorded at 15-minute intervals throughout a growing season within this forest management experiment. Results suggest that the moisture of DW is highly dynamic with significant soil interactions, while the stage of DW decay substantially affected results. Responses of DW moisture to precipitation events appears to vary by silvicultural treatment, with DW in untreated controls and 1-acre gaps drying out the most during the 2020 moderate drought, while DW in quarter acre gaps and thinned matrix dried the least. In contrast, during minor to moderate precipitation events, DW in the 1-acre gap rewetted with the highest levels of moisture among all treatments. Overall, initial results suggest precipitation attributes (i.e., minor to heavy) in combination with stand canopy cover have varying effects on DW moisture with important implications for forest carbon cycling and wildfire hazards.

Voluntary Market Forest Carbon Projects in the Northeast

Maggie Baker, Colby College
Lloyd C. Irland, The Irland Group

Abstract: Northeastern states have adopted ambitious CO2 emission reduction goals and all are grappling with ways to employ forest management to sequester more carbon. Low prices for carbon credits in compliance markets, plus costly project development and long commitment times have limited landowner interest in engaging with the compliance “carbon markets”. New approaches are under development in the voluntary space

What Do Family Forest Owners in the New York City Watershed Know About Conservation Options for Their Land?

Kristopher R. Brown, Watershed Agricultural Council Forestry Program

Abstract: The Conservation Awareness Index (CAI) survey estimates landowner preparedness to make informed conservation decisions about their land when big decisions arise related to harvesting timber, paying taxes, and planning for the long-term future of the land after the landowner passes away. Survey responses can be used to represent the likelihood that landowners make informed decisions about their forest over time and have the necessary awareness to consider making a pro-conservation decision. The Watershed Agricultural Council (WAC) Forestry Program mailed the CAI survey to 3000 New York City (NYC) Watershed landowners owning more than 10 woodland acres in 2015 and 2020. This was a novel research project in that no other study had repeated such a large-scale CAI deployment to evaluate awareness change over time.

Based on a sample size of 793 NYC Watershed landowners, the average CAI total score in 2020 was 16.5, which is slightly higher than in 2015 (average = 15.8). This suggests that relatively little has changed in terms of landowner conservation awareness. The exception was that Forest Tax Law Program (480-a) scores increased in 2020. CAI scores by subject area were highest for estate planning and timber harvesting and lowest for 480-a and conservation easements.

While CAI scores in the NYC Watershed are lower than in Massachusetts (Van Fleet et al. 2012, Kittredge et al. 2015), our findings related to second-hand experience suggest that a focus on fostering peer-to-peer relationships may be a viable option for increasing CAI scores in the Watershed. Specifically, we found that when landowners knew someone else that had considered or completed a forest conservation option (e.g., 480-a enrolment, conservation easement, timber harvest, or estate plan), it improved their familiarity, knowledge, first-hand experience and ability to connect with forest conservation professionals related to those subject areas.
Substituting low value, local species for white oak in cask production

Andy Fast,
Forest Industry Specialist,
UNH Cooperative Extension

In 2018, Granite State Division Society of American Foresters (GSD-SAF) put forward a grant application to New England Society of American Foresters (NESAF) to support exploring cask production with local non-white oak species.

Multiple types of alcohol, i.e. spirits, wine, cider and beer, can use casks in the production process for different purposes. Over the last couple of decades, we have seen the expansion of micro-breweries, and other small alcohol producers throughout New England - many of which are creative, looking to differentiate their products, and lead the next consumer trend. Over the same period, there is a strong buy local movement where a segment of consumers have demonstrated a willingness to pay a price premium for sustainable, or local, products.

New England cooperages were not afforded the opportunity to access this new demand for local products. Regional commercial cooperages were shuttered as new and cheaper storage preferences for dry and wet goods emerged throughout the 20th century, and other market and production factors made them unsustainable businesses. New England only has a few cooperages, and they tend to be very small with approximately 300 new casks produced annually. In New Hampshire, the last commercial cooperage closed in 1999. New England is also outside the procurement radius of cooperages in the midwest and south so the region does not benefit from the explosive cooperage market growth observed over the last number of years in that region.

GSD-SAF wanted to revisit opportunities around cooperage and explore whether there are unique [flavor] attributes related to species in New England that could help carve out a market niche based on what the northeast has to offer. Moreover, if there are unique flavors attributes associated with certain species, will casks from the species hold liquid? The research we found on this was sparse and often anecdotal; in talking with wood scientists, there were different perspectives on whether non-white oak species could hold liquid. The cooperage industry is driven by big players - the large wineries in California and the European market as well as the distilleries in the south. However, GSD-SAF still questioned “in this expansive industry is there something unique, that New England can offer to ‘revive’ some commercial cooperage in the region?” That starts with something that is hard to replicate. As an example, the range map provided here (reproduced from Silvics of North American Volume 2: Hardwoods, USDA Forest Service, 1990), shows the distribution of black birch, one of the species evaluated. If barrels were made from black birch, manufacturers would likely need to procure casks or lumber from the northeast.

The grant to NESAF had 3 components: 1) beer brewing research, 2) market research, and 3) cask manufacturing. Beer was used as a proxy for the alcoholic beverage industry because the product is relatively cheap and production is quick relative to wine, cider, and spirits.

**Beer brewing research:** Steve Eisenhaure of UNH Woodlands and Mike Simmons, UNH faculty who runs the UNH sawmill, harvested, milled, and helped produce uniform cubes from 5 different species: aspen, white pine, red maple, American beech, and yellow birch. Students at the UNH Brewery designed an experiment under the guidance of Cheryl Parker, UNH Brewing faculty, where they added cubes of different toasts to a “base beer” to test flavor profiles. Head brewers from local breweries were brought in to participate in a sensory panel, i.e. test the beer, identify different flavor characteristics, and provide feedback on how species would complement different styles of beer. Based on the results, red maple, yellow birch and American beech all showed some promise.
Steve Eisenhaure, Mike Simmons and UNH students harvested these species, quartersawed them at the UNH sawmill and they began the drying process. Coopers use air-dried lumber that has dried for 12-18 months minimum. Jon Nute was another individual who generously contributed to the project by donating a couple of beech trees and quartersawing them on his sawmill.

**Market research:** As the wood was drying, Cheryl Parker and Andy Fast conducted market research with over 70 alcohol manufacturers in the state to gauge how they use wood in alcohol production. Results showed there was tremendous interest in local white oak casks among these producers and moderate interest in other species.

**Cask manufacturing:** Ron Raiselis of R.P. Raiselis Cooperage took cuttings from air dried black birch and American beech lumber and manufacturer 4 casks (3 beech and 1 black birch). The casks were approximately 20 gallons each. The wood was challenging to work with but challenges could be adequately addressed through steaming.

Northwood Brewing company was the industry partner that was going to produce and distribute the beer. Unfortunately, the beech casks would not hold liquid despite a number of strategies to contain the liquid. White oak heartwood is used to construct casks; because of the loss of yield and the impracticality of using only heartwood in red maple, black birch and American beech, we opted to construct barrels from staves that included both sapwood and heartwood. Given the cost disadvantage of producing casks at small scale in the northeast, there was an interest in using heartwood and sapwood to get greater yield and help reduce the input costs.

As noted, beech ended up leaking through the sapwood and this was a consistent issue among multiple casks. Black birch, on the other hand, held liquid well with almost no leakage despite the presence of sapwood and heartwood in the staves.

**Outreach:** Northwoods Brewing Company intended to showcase the beer at a festival and conduct outreach to the public illustrating the connection between managed forests, forest products, and beer - however, as COVID-19 impacted gatherings, we had to adjust outreach plans and conducted a zoom beer tasting webinar for the public instead. During this webinar, we discussed how to taste beer, cooperage in New England, and the connection between wood and beer.

**Next Steps:** The project has encouraged some additional activity. Northwoods Brewing Company would like to continue using the black birch cask, get more black birch casks produced, and more deliberately craft recipes around the flavors. We expect to do additional outreach with Northwoods Brewing Company in the future despite the end of the NESAF grant. Cornell has received significant funding to emulate a project based off GSD-SAF and NESAF’s project. UNH plans to continue promoting this niche market to the extent funding can be secured to do so. One of the greatest issues is working out supply chain challenges - that is a lack of trained coopers and air-dried lumber. UNH, with partners, hopes to continue working to address these issues to support a more viable market scaled to the region.

This project was completed with only $1,500 from GSD-SAF (through NESAF) and similar support from National Science Foundation i-Corps. It would not have been possible without the flexibility, generosity and goodwill of the GSD-SAF EC, NESAF EC, and a host of individuals such as Jon Nute, Steve Eisenhaure, local NH Brewers, Tim Fleury, Mike Simmons, Karen Bennett, and numerous others.

Questions can be directed to: Andy Fast, andrew.fast@unh.edu; 603-841-6544.

Portions of this article were reproduced from: Fast, Andrew and Cheryl Parker. [in press] Substituting low value, local species for white oak in cask production. University of New Hampshire Cooperative Extension, Durham, N.H.
MESAF Summer Field Tours 2021
We are happy to announce plans for three summer events, which will be conducted following State of Maine and landowner guidelines for Covid-19 safe practices. Stay tuned to MESAF.org for details.

Thursday June 3rd: Virtual Tour of Forestry Applications Using UAVs
Join us via zoom for a video presentation and discussion of how one Maine company is using UAVs in field applications, as well as other contemporary technologies, such as ArcCollector and Avenza maps to improve forest management.

Mid-late-July: Baskahegan Company Silviculture
Long known for its dedicated commitment to long-term stewardship through developing the natural potential of its forest to produce high-value timber products while protecting ecological integrity and aesthetic and recreational values, Baskahegan foresters will host a tour of its eastern Maine lands to showcase thinning operations, both commercial and pre-commercial. Tour stops will be located close to paved roads.

Wednesday, August 18th: Maine Adaptive Silviculture Network (MASN)
The MASN is a network of operational research installations across Maine representing low, medium, and high site productivities across hardwood, mixed-wood, and softwood stand types to provide the basis for new research in the areas of growth and yield, wildlife habitat, harvest productivity, regeneration dynamics, remote sensing of inventory, forest health, and others. Join us to learn about the network, as we visit the installations on Seven Islands Land Company managed lands in Nashville Plantation. Tour stops will be located close to Route 11.

Maine Board of Licensure of Foresters
At the August 2020 board meeting concerns regarding changes in practices within the industry and concerns about proper disclosures to landowners were presented by Association of Consulting Foresters (ACF) members. Concerns centered on the ethical and fiduciary obligations of Procurement Foresters to private landowners while simultaneously serving as paid employees of forest industries engaged in buying stumpage. Items discussed included: the possibility of a two-tiered licensing format; possible amendments to existing rules; different requirements for disclosures to landowners; and requiring continuing education about ethics. A subcommittee was formed to review Chapter 100: Code of Ethics of the Board’s Rules to develop updated language. Invited members to the subcommittee are: Rene Noel, Consulting Forester; Dave Schaible, Consulting Forester; Jeremy Stultz, Procurement/Stumpage Forester; Don Mansius, Maine Forest Service; Jack Wadsworth, Landowner; Josiah Pierce, Landowner. The subcommittee and Board discussed potential revisions to Chapter 100 at the Board’s October 22, 2020 and January 28 and March 25, 2021 meetings. The subcommittee will research definitions and standards of conduct language in forester licensing language of other states and present specific suggestions for changes at the next meeting currently scheduled for May 27, 2021. Those interested can find more information about Board meetings at https://tinyurl.com/yx6h96a2.

Student Chapter News
The University of Maine’s student SAF chapter spent an afternoon at the Thomas J. Corcoran Sugar House in early March. Students joined UMaine’s Keith Kanoti and Charlie Kolch for a demonstration at the sugar house followed by tree tapping on the University Forest sugarbush. Each spring, the School of Forest Resources and University Forest Staff tap upwards of 400 trees. Ashley Martone, chapter President, said the event was one of their most engaging of the year. Student gatherings have been limited this year to comply with UMaine’s COVID-19 safety protocols.
 Quarterly update
If you have news that you feel is relevant to share with our community, please forward on to the NESAF quarterly correspondent, Steve Eisenhaure, at woodlands@unh.edu

Granite State Division Annual Winter Meeting
Thanks to past Chair Matt Chagnon and welcome to new Chair, Gabe Roxby. Gabe is a field forester for the Society for Protection of New Hampshire’s Forests and served previously as treasurer on the executive committee. New executive committee members also include Ethan Belair as Chair elect and Geoff Jones as the Tree Farm representative.

From our new chair:
In February, GSD/SAF hosted our annual winter meeting, this one a shortened business meeting held virtually. Close to 70 people participated. At the meeting, we presented Outstanding Student awards to four UNH students - Norman Gagnon (Thompson School), Jonathan Swett (Undergraduate Student), Jack Hastings (Graduate Student co-awardee), and David Moore (Graduate Student co-awardee). These awards come with a $1000 scholarship, to celebrate and encourage the best students in the forestry field. Meeting attendees were also treated to a slideshow of pictures from Charlie and Mabel Neibling’s Outstanding Tree Farm of the Year. During the meeting, GSD/SAF members voted on this year’s budget, which includes $3,000 for a grant program we’ve run for many years. The money is available to NH forestry businesses and entities that hire forestry students or recent graduates from an SAF accredited school. We encourage all eligible entities who plan to hire a summer intern this year to apply by the due date of May 7th. GSD/SAF has long believed that this money is well spent to support the development of young professionals in the forestry field, and the businesses that provide them early job opportunities. For more information on how to apply, please contact anyone on the Executive Committee.

News and Online resources
Our State Forest Health office has been busy! For a summary of the health of NH’s forests and a look at what is to come, the 2020 NH Forest Health newsletter is an excellent resource and can be found here. If you haven’t made up your mind yet about what to do with ash, make sure you check out the featured article.

On February 18th there was an online NH forestry markets update. This excellent program gathers representatives from all the major sectors of the NH (and regional) forest products industry. The recorded program can be found at this link. Sponsorship was provided by the NH Division of Forests and Lands, NH Timberland Owners Association (NHTOA), NH Sustainable Forestry Initiative State Implementation Committee and UNH Cooperative Extension with support from the USDA Forest Service.

Andy Fast, the Extension State Specialist for Forest Industry, advertises the market update webinars through the UNH Extension website, www.nhwoods.org and his NH Forest Industry News e-newsletter. You can sign up for the newsletter through the following hyperlink - NH Forest Industry News sign-up. Please share this sign-up link with others who may want to receive the e-newsletter.

For other upcoming UNH extension sponsored programs for professionals and landowners, forestry or otherwise, go their events page here.

NH Jobs
New Hampshire forestry jobs are often advertised on the NESAF jobs board website. Currently New Hampshire has a number of different open positions for individuals with different skills sets including seasonal forestry positions, career consulting forester positions, broader forest stewardship positions and Forest Technology Lecturer Faculty position at UNH.
Green Mtn SAF Annual Meeting
Zooms Into Carbon Markets
The GMD annual meeting held via Zoom March 11 examined carbon markets for its educational topic. Dr. Caitlin Littlefield of UVM's Rubenstein School gave an overview of the carbon offset marketplace, its major registries and how they operate and determine pricing. A panel of partners gave their perspective for initiating a carbon offset project with multiple landowners in the “Cold Hollow to Canada” group in Franklin County. This was presented by panelists Charlie Hancock, Northwoods Forestry, Everett McGinley, landowner participant and Nancy Patch, Franklin -Grand Isle County Forester. The unique project gained the VT Land Trust as a principal organizer/aggregator for 11 landowners with 12 parcels totaling 8600 acres. The cash benefits for the offsets were provided by Amazon as part of their goal to reduce and offset company carbon emissions. Robert Turner, a Vermont consulting forester who has worked on verification for active carbon projects for about ten years, was also on the panel to provide a broader perspective on carbon projects in the region and around the country. Nearly 60 participants logged into this interesting presentation.

Updated Green Mountain Executive Committee
Tony D’Amato, Chair
Addison Kasmarek, Past Chair

Newly elected officers:
-Alexandria Kosiba, Vice Chair
-Jas Smith, NESAF Representative
-Ginger Anderson, Secretary
-Treasurer: TBD

Also joining the Executive Committee are students Matt Rourke and Lukas Kopacki who will tag team meetings around their studies and leading the UVM Forestry Club.

Thanks to outgoing Executive Committee members Jason Nerenberg, Mike White and Ed O’Leary for their service.

GMD Membership News
At its winter meeting on March 11, 2021, the Green Mountain Division recognized two 50-year members, Bill Kropelin and David Mance. That’s 100 years of great work in forestry! The Division reports 115 members including nine new members in 2021.

First Emerald Ash Borer-Caused Power Outage in Vermont
On Christmas Day, 2020, about 600 customers of the Washington Electric Cooperative (WEC) in Central Vermont lost their electric service. The outage was caused when a large ash snapped off about 30 feet above the ground onto a three-phase power line. This occurred near where the first Vermont emerald ash borer infestation had been identified in 2018. Jon Cherico, Protection Forester for the Dept. of Forests, Parks & Recreation (and GMSAF member) examined the broken tree. It contained live EAB larvae. Nearby ash had ample signs of EAB infestation as well, prompting WEC to decide to remove ash trees in a mile long corridor in the area. Several other Vermont utilities are implementing ash removal activities along their power lines.

Vermont Congressman Reintroduces Invasive Species Bill
On March 11, Representative Peter Welch re-introduced the “Invasive Species Prevention and Forest Restoration Act.” The Act intends to update the federal Plant Protection program with funding for research, planning and grants to combat invasive species. This Act is strongly supported by many resource organizations including the Vermont Woodland Association.

Green Mountain National Forest Reviews Existing Management Plan
The Green Mountain National Forest announced it is reviewing its 2006 Land and Resource Management Plan in light of new information. The Plan and its EIS may be out of alignment with forest road construction goals and activities. The Forest Service will prepare a draft Supplemental Informational Report (SIR) for public comment this spring.

Kopacki Selected for Wilkinson Award
Lukas Kopacki, a junior at UVM was awarded the 2020 James E. Wilkinson Jr. Student Award. This award honors the memory of long-term GMD member Jim Wilkinson. Congratulations Lukas!

UVM Forestry Club Grows
The Forestry Club at the University of Vermont has experienced an uptick in membership in part due to COVID. The club has remained engaged within the parameters of the restrictions due to the virus. This meant outdoor excursions to the Jericho Research Forest where members perform stand management activities and provide training sessions for Game of Logging. The Club hosts speakers in socially-distanced spaces, and have had to implement caps on meeting attendance as participant numbers grew from under 20 to about 40 members. The newcomers include non-forestry students so we may all be able to learn from their success! Part of this success is also due to another initiative. Daria Etchings, Olivia Lopez, Brooke McIntire, and Eliza Orne, senior leaders in the UVM Forestry Program, have established the Femmes in Forestry Club as a way to support women in forestry at UVM. This group has been active in sponsoring speakers.
Report on Yankee SAF Outreach: Forest Management and Climate Change mferrucci@iforest.com

One year ago, mostly in response to a movement that had been making selective use of forest science to promote unrealistic and even harmful notions about forest management regarding carbon storage, a committee was formed to develop a Yankee Division Position Statement. This was approved at by Yankee Division, New England SAF, and National SAF in June, 2020: Southern New England Forest Management in an Era of Climate Change: A Position of the Yankee Division of the Society of American Foresters

The committee then shifted emphasis to outreach. The work is based on the position statement, and directed towards the central premises of SAF, and indeed our profession:

• “active forest management, grounded in science, is essential to maintaining and promoting forest resilience and ecosystem services from forests...”

• “Climate change, coupled with New England’s land use history and increasing human population, has heightened the need to responsibly manage (our) forests for multiple uses including sequestration and storage of atmospheric carbon.”

The position includes a well-crafted summary of forest carbon dynamics, based on the science, and of the role of forest management in terms of climate change. Its value to guide forestry decisions is in no small part due to the work of Tim Hawley. Tim led the drafting of the document. He did a masterful job of collaborating with a large team, considering and incorporating the relevant science, and writing and editing to the satisfaction of all. Yankee SAF owes Tim an enormous “thank you”!

Other Accomplishments:

• Website soon to released; to include compelling forest management stories, and a Toolbox of information, https://www.forestersforforests.com/

• Active “Website/Media and Content” team led by Amanda Bunce, incl. social media;

• Significant changes in the Connecticut Governor’s Council on Climate Change (GC3) report relative to forest policy and global warming, blunting the anti-forestry activists who had seeded the draft reports with unscientific proposals

• Many contacts with Connecticut Department of Energy and Environmental Protection officials, culminating with a meeting with the Commissioner Katie Dykes and her staff.

• Follow up meetings with the DEEP Deputy Commissioner Mason Trimble and others

• Established an ongoing partnership with NEFF. I thank Bob Perschel, Executive Director of New England Forestry Foundation for his leadership, support, and wisdom.

• Outreach to legislators, with a core strategy of creating relationships, primarily through forest walks, based on the approach long taken by Joan Nichols, who also deserves our thanks. Every forester should know their legislator; every legislator should know a forester and others who work in, care for, and manage our forests.

• A partnership with the CT DEEP Forestry on outreach ideas and efforts, coordinating with Andrea Urbano.

• Support for Tom Worthley in the revived SPUFAC, a great learning opportunity that is underway for foresters.

The outreach work is migrating to smaller teams, as we find this a more effective way to advance the work. There are 8 teams:

1. Website/Media and Content
2. SPUFAC: Forester’s Learning Opportunities
3. GC3: Process and Opportunities
4. SAF Outreach to Connecticut Legislators
5. Forestry Messages and Regional Collaborations
6. Research and Projections, Forestry and Carbon Dynamics
7. Support Forestry on Public Lands, Aligned with Carbon Science
8. Outreach to Partner Organizations

The work has a Connecticut focus because the activism has been recently strong here, and because Connecticut-based members comprise a large majority of the committee’s active members. We believe that what we are doing is scalable to other nearby states, provided members there are interested. I ask every member of Yankee SAF to pick one or more of these outreach efforts, join us, and get involved.

I end with a call to all foresters to strive to use the relevant science in all aspects of your forestry work. Some of our fellow citizens don’t trust us, our profession, or even the notion of enlightened, carbon-aware forest management. Prove them wrong!
Massachusetts DCR and DFW Retirements and Replacements

John Scanlon retired from MassWildlife as the Habitat Program Supervisor in January 2021, after 35 years with the agency. John received his B.S. in Wildlife and Wildlands Science and Management from UMaine Orono in 1977 and his M.S. in Wildlife, Fish and Wildlands Science and Management in 1981 from Virginia Tech. John began his career with MassWildlife as a Forest Planner in 1985. In 2010, his title was changed to Habitat Program Supervisor to better represent the myriad of habitat management responsibilities he managed. John is well respected in Massachusetts for his advocacy for responsible forestry to benefit all wildlife species. As of February 17, 2021, Brian Hawthorne has succeeded John Scanlon in the role of Habitat Program Supervisor. Brian has worked for MassWildlife for 18 years, most recently as the Habitat Planning Coordinator, and received his M.S. in Forest Resources from UMass Amherst in 2004.

After 12 years as DCR’s State Forest Lands Manager, William (Bill) Hill retired in August 2020. Bill Hill received a degree in Forestry and Land Surveying from Paul Smith’s College in 1978 and completed his degree in Forest Management from the University of Idaho in 1981. A native of Massachusetts, Bill spent much of his career in Idaho and South Dakota before returning to Massachusetts to become DCR’s State Forest Lands Manager. In Bill’s tenure, his most notable accomplishments were creating the standards, procedures, and guidance for forest management and silvicultural operations that withstood the scrutiny of the Massachusetts demographic. In addition, Bill helped to maintain and improve the 60 year old CFI program (long term monitoring) in Massachusetts. He will be succeeded by Tom Brule, beginning on April 11, 2021. Tom received his A.A.S. in Forestry Technology in 1988 and a B.S. in Wildlife Management from UNH in 1990.

In November 2020, Joe Perry, DCR Service Forester retired after over 40 years of service. Joe began his career with the Gardner, MA Young Adult Conservation Corps camp in the late 1970’s until the closing of the camp in the early 1980’s. He worked as a supervisor at Myles Standish State Forest before becoming the Bristol County Service Forester in the mid 1980’s. In addition to being a Service Forester, Joe was an environmental educator, being the Forest Station leader at the Massachusetts Envirothon since 1998 as well as being actively involved with the Junior Conservation Camp. He is a UMASS Amherst alum and has taught tree ID to students there. Joe has shared his passion and enthusiasm with forestry to many young students, colleagues, landowners, consulting foresters, and loggers. As of March 15, 2021, he has been succeeded by James Rassman. James received a B.S. in Forestry from Colorado State University in 1990 and an M.S. in Natural Resource Management from Colorado State University in 1993.

Legislation Update

Chris Egan, Executive Director of the Massachusetts Forest Alliance, provides the following:

“The Massachusetts Forest Alliance reports that numerous anti-forestry bills were filed this legislative session, including bills that would remove wood from renewable energy programs, eliminate forest management on state-owned lands, place 30% of WMAs in permanent reserves, restrict tree cutting on hillsides or ridgelines, ban mass timber construction over five stories, and more. To follow these legislative issues, subscribe to MFA’s free e-newsletter, the Forest Update, on their website at massforestalliance.org.”
Greetings friends,

There was some extra space in this issue, and I just can’t stand the thought of blank space in a magazine. So, for those of you may have stepped away from your computer during the NESAF Annual Business Meeting and missed my amazing speech- read on and catch up with these highlights!

It’s been my pleasure to continue serving you and NESAF as editor of the NESAF News Quarterly, and it is great to work with so many talented individuals across our region. It’s a quality publication that compiles current forestry issues, regional scientific and informative content, and read by professionals who appreciate the effort that goes into its production. I think can all agree (and be proud to know) that we have the best forestry newsletter in New England!

Please also allow me to also acknowledge our awesome advertisers! LandVest, Northern Woodlands, Forest Metrix, Landmark Spatial Solutions, and the L. E. Caldwell Company, as all have been great supporters of our newsletter. Please thank them the next time you talk to them. We always have space for new advertisers and are looking to expand our reach. So here is my pitch: Your company or organization can increase its visibility by sponsoring our magazine, and we have incredibly attractive rates. They are on listed on page two of the News Quarterly.

And now a shout out to you- the News Quarterly exists because of your support. There are dedicated news correspondents from each State in New England, current and former executive committee members, guest columnists, and theme editors who have helped to grow our publication. We are always looking for new ideas, so please reach out if you have an idea for a column. I also have an email distribution list and am not afraid to put you on it if you would like a reminder! Finally, there are now several ways in which to enjoy this publication, as it is available in print, email, on the NESAF website, and on issuu.com. See you in July!

-J.P.

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*Member Categories: S = Student, G = Golden, F = Full (including Silver, Gold, Platinum), T = Transitional*
University of Maine Student SAF Chapter members recently helped tap sugar maples on the University Sugarbush.