Institut de recherche sur les feuillus nordiques Inc.
Northern Hardwoods Research Institute Inc.

THE LEAFLET
NHRI's Monthly Newsletter
June 2019
Volume 1, Issue 2

MAKING KNOWLEDGE USEFUL
NHRI's role as a knowledge mobilizer

One of our key operating principles at NHRI is: "no research for the sake of research". Put in a positive way it essentially means that any and all research that is conducted within our walls must be useful and have a well-defined end user. In order to achieve this, we've had to spend considerable energy and resources to the task of flipping the traditional research center model on its head. Instead of having a highly qualified research team sit in a lab and think of interesting research questions; we work with various stakeholders to identify the real issues happening in the forest and turn them into applied research projects. We essentially took a top down model and flipped it into a bottom up approach. Instead of going in the field to answer questions developed in an office; we take questions from the field and bring them into our board room and labs.

The NHRI was created with very specific objectives which can be boiled down to working with our academic, government and industry partners to develop, or improve, knowledge, methods and harvesting techniques aimed at increasing volume and value of the northern hardwoods resource. In a nutshell the NHRI was created to bring immediate, applicable and field-tested solutions for foresters, contractors, woodlot owners and forest workers with boots on the ground and eyes on the canopy.

For our team this means that all research and filed work must be focused exclusively on that end. With that in mind we initially set out to produce the required knowledge and tools needed to begin the process of continuous improvement as quickly as possible. We began with the basics and developed the NHRI tree classification system and our flagship silvicultural prescription system (SPS). This allowed everyone involved to standardize approaches and speak the same language.

Our boots on the ground approach to research and our close relationship with the stakeholders has allowed us to position ourselves not only as knowledge producers, but more importantly as knowledge mobilizers. Knowledge transfer and practical on the field training is an important component of our work at NHRI. Knowledge mobilization is at the forefront of our mandate and it revolves around four key approaches.

- **IMPROVING** our partners' forest management capacity through consultancy and the development and implementation of management and decision support systems.
- **ENABLING** better management and decision making by developing best management practices, models, tools, APPs and analysis capacity.
- **TRAINING** staff and professionals through workshops, videos and courses.
- **INFORMING** the scientific/professional community and the public at large by publishing papers, reports, conferences, social media, newsletters and presentations.

Our team is constantly working to improve our knowledge mobilization capacity. Based on the results we have seen, and our partners' comments, we are convinced we are on the right track. The objective now is quite simply more and better knowledge mobilization.

POINTS OF INTEREST INSIDE THIS ISSUE

SUBSCRIBE Click here!

KNOWLEDGE TRANSFER
A look back at last month's workshops

Bucking for Value
Strategies for optimizing saw log recovery

On Thursday, May 23rd the NHRI team animated a full day workshop organised jointly by the Madawaska Forest Products Marketing Board (MFPMB) and the UMCE School of forestry (École de foresterie de l'UMCE). The workshop was aimed at woodlot owners and contractors and the main objective was to showcase strategies to optimize the bucking of hardwood for higher saw log recovery. Attendees also learned bout tree classification and how to recognize external defects and predict the impact on wood quality.

The workshop was a major success with over 50 participants - contractors, veneer buyers, woodlot owners, mill operators, government agencies and various stakeholders. The sun was shinning and the people were enthusiastic. Hardwood buyers from different companies and looking for different types of products chimed in to discuss their respective expectations which made it all the more informative and useful. It was a great day and a true privilege for our team!

NHRI Silviculture Prescription System
Implementation -NB Crown Licenses #1 & #8

On Wednesday, May 15th the NHRI team delivered a workshop for employees of AV Group, Groupe Savoie and the New Brunswick Department of Energy and Resource Development. Approximately 25 people (foresters, technicians and managers) showed up for this full day workshop. Attendees learned about the Silviculture Prescription System and how to apply it operationally.

The weather proved a challenge as it snowed and rained all day, but as wisely noted by one of the participants: "a bad day in the forest will still always better than a good day in the office." The workshop led to some very interesting discussions and recommendations from our government and industry partners. Among the most pertinent to the implementation of our SPS were the effects of equipment size, operator visibility and training. The general consensus was that the next phase of training should be in the field exercises aimed at contractors and operators. Our team is already on it and we are planning the first deliveries in late summer or early fall.

VIDEO

PEOPLE IN THE SPOTLIGHT
New faces at NHRI

The NHRI team recently grew with the recruitment of two new foresters. They will both be working for our Precision Silviculture Team (PST) under the supervision of Pamela Hurley Poitras. Both are recent graduates of the forestry program at Université de Moncton Campus d'Edmundston — one of our founding partners. According to Gaetan Pelletier, Executive Director of the NHRI, they are a very welcomed addition to the team: "We are constantly looking for talent at NHRI. Having bright young minds join our team always brings fresh ideas and new ways of doing things." On top of working in the field as part of our PST they will also be improving the NHRI's silviculture prescription system (SPS) as well as our tree classification system and gathering and analyzing data on the regeneration of hardwoods following the application of cut to length harvesting systems.

Rémi Couturier (left) is originaly from Saint-Hilaire, New Brunswick. He graduated with a bachelor's degree in forest management from l'Université de Moncton campus d'Edmundston in 2019. Even though he is only 21 years old he's had the opportunity to hone his forestry skills by working for Acadian Timber for 3 summers before joining our team. Rémi is an avid hunter and thoroughly enjoys working outdoors. Rémi's "can do attitude" and solid work ethic make him a valued member in the NHRI team.

Alexis Couturier (right) graduated with a bachelor's degree in forest management from l'Université de Moncton campus d'Edmundston in 2018. He is a double threat since he also holds a certificate in business management from Laval University. Alexis may only be 22 years young but he has many years' experience working in the forest as his father's right hand man in the family forestry business. He is also from Saint-Hilaire, New-Brunswick. Alexis' entrepreneurial spirit and his passion for both forestry and business is an interesting mix that brings much value to our team.

WELCOME TO THE TEAM!

"We are constantly looking for talent at NHRI. Having bright young minds join our team always brings fresh ideas and new ways of doing things".

SUBSCRIBE
Click here!

FROM THE PRESS
NHRI Publication

RECRUITMENT DRIVE
Hardwood management must reverse encroachment by low-value species

Publcation: Atlantic Forestry Review

Citation: Atlantic Forestry Review, January 2019, p.17-19

Published: January 2019

Author: Gaetan Pelletier (gaetan.pelletier@hardwoodsnb.ca). – Northern Hardwoods Research Institute Inc. (NHRI)

Abstract:

Hardwood-dominated forests continue to be an important part of Eastern Canada's economy, providing saw logs and pulpwood, as well as non-timber forest products. They also play an important role in terms of wildlife habitat and biodiversity, as well as carbon sequestration and climate-change mitigation.

Managing hardwoods requires well-planned treatments that not only tend and improve existing trees but also regenerate desirable species. The successful recruitment of new cohorts of key tree species is vital to sustain our resource. It is generally accepted that, for hardwoods, timber value is driven by the proportion of high-grade products, such as veneer logs and prime or select saw logs. The value differential between these products and hardwood pulpwood or biomass can be almost ten-fold.

Just how well are our hardwood dominated forests doing in the Atlantic region? Well, from a timber standpoint, not that great. Species composition, stocking, tree quality, vigour, health, and growth rates are some of the factors we consider critical to the production of timber. Careful examination of the attributes of hardwood-dominated stands reveals some challenges for land owners and managers. However, the good news is that through silviculture, these problems can be controlled, mitigated, and even eliminated.

READ MORE

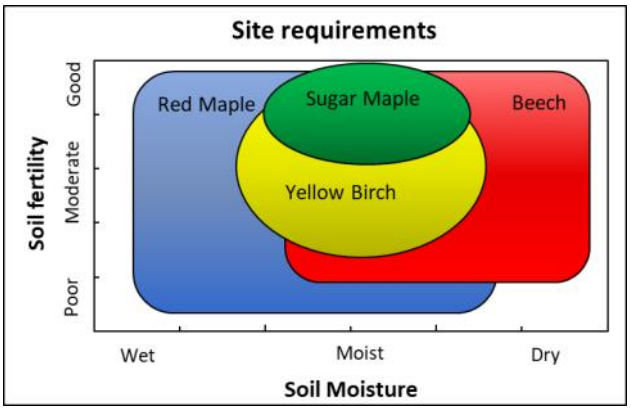
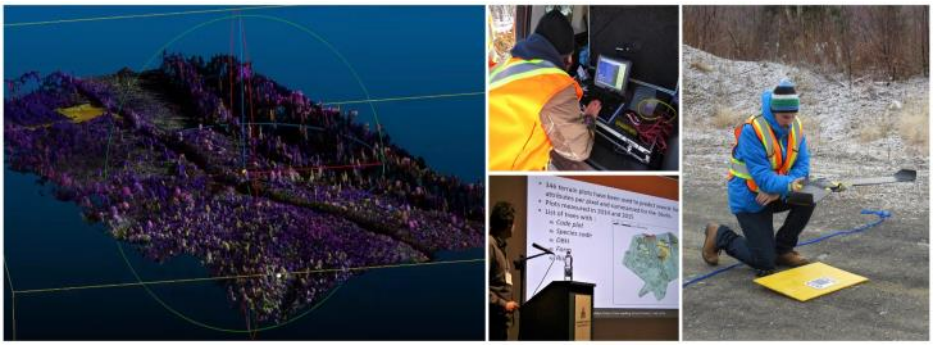


Figure 1. Site requirements for key hardwood species (adapted from Lee Allen, 2013)

Figure 2. Prolific beech stump sprouts resulting from a partial harvest. In the dormant season (fall and winter), resources are stored in the root system, awaiting the next growing season.

PROMISING PARTNERSHIP

University of British Columbia Forestry Faculty
Integrated Remote Sensing Studio (IRSS)



Since 2017 the NHRI team as been collaborating on projects with the Integrated Remote Sensing Studio (IRSS), a research group at UBC forestry faculty. The IRSS team studies the use of remote sensing and geospatial information for forest productivity and conservation. Imagery acquired at a wide range of scales allows them to assess a broad range of factors, including; leaf chemistry characteristics, forest structure and dynamics, biodiversity, carbon accumulation, disturbance and change.

The IRSS team, lead by Dr. Nicholas Coops, faculty member in the Department of forestry at UBC and holder of a Canada Research Chair (CRC) in remote sensing, also focuses on the development of instruments and applications that assess forest ecosystems and resources in innovative ways. The team's mandate is essentially applying satellite and airborne remote-sensing technology to provide cost-effective and accurate solutions for sustainable forest management and conservation.

From 2012 to 2017 multiple imagery acquisition were undertaken by the NHRI's Precision Forestry Unit in the McCoy brook research and training forest area of New Brunswick. Based on those images, and by using a promotion algorithm, the researchers at the IRSS were able to generate three dimensional recreations of these forests. This line of research can help us better understand how forests are structured and create useful geospatial data, like digital terrain models. The research has found that terrain models based on acquisition in spring, late fall and early winter proved to be most accurate and that tree dimension accuracy and tree height measurements fluctuate with acquisition timing.

The collaboration between NHRI and IRSS has led to two peer reviewed academic articles—written by graduate students Tristan Goodbody and Rik Nuijten. More importantly, it has already had an impact on how foresters should consider data when making important decision regarding forest management. According to Dr. Coops "remote sensing technology, such as drones are continuing to facilitate a data driven revolution in forest inventory management". We could not agree more and can only hope that our partnership with the IRSS team helps bring momentum to this very important revolution.

IRSS WEBSITE

VIDEO

" Remote sensing technology, such as drones are continuing to facilitate a data driven revolution in forest inventory management."

SUBSCRIBE Click here!

NHRI-IRFN

165, boulevard Hébert
Edmundston, N.-B.
E3V-2S8

Phone: 1-506-737-4736
Fax: 1-506-737-5373
E-mail: info@hardwoodsnb.ca

www.hardwoodsnb.ca

UPCOMING EVENTS

Workshop: CFRU - University of Maine
High Resolution Wet Areas Mapping (WAM) for Maine

The University of Maines' Collaborative Forestry Unit in collaboration with the Forest Watershed Research Center at the University of New Brunswick - Fredericton, the Barbara Wheatland Geospatial Analysis Laboratory at the University of Maine, and the Geospatial Information Technology Center at the University of Maine Presque Isle will be hosting a workshop and field tour on high resolution wet areas mapping. The workshop will be held in two locations - Orono, Maine (June 11th) and Presque Isle, Maine (June 12th).

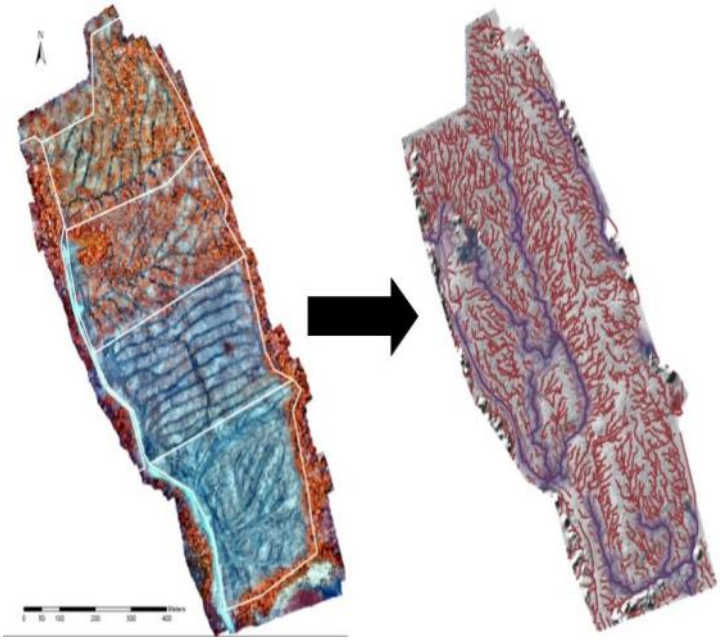
Orono Workshop (includes Lowland N. White Cedar Study Tour):

When: Tuesday, June 11th, 8:00 a.m. - 5:00 p.m.
Where: Barbara Wheatland Geospatial Analysis Laboratory, Orono, Maine and the Penobscot Experimental Forest, Bradley, Maine.

Presque Isle Workshop:

When: Wednesday, June 12th, 8:00 a.m. - 5:00 p.m.
Where: Geospatial Information Technology Center, Presque Isle, Maine and Irving Woodlands harvest site, T16R4, Maine.

MORE INFO



SUBSCRIBE
Click here!