



The Friends of the Petawawa Research Forest

# SPRING NEWSLETTER

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Issue # 31



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### Friends of the PRF Board for 2023

As part of the business of the Annual General Meeting held this past November, the Board of the Friends of the PRF was dissolved and new Board was elected. Here is a list of the members of the new Board for 2023, including their positions:

- Robin Cunningham, President/Chair and Treasurer
- Frank Knaapen, Vice President, and Trails Coordinator
- Murray Woods, Secretary
- John Pineau, Communications and Events Coordinator
- Peter Arbour, Director
- Cash Allard, Director
- Wayne Reid, Director
- Cynthia Wolfgram, Director
- Rhys Hoffman, Director
- Debby Barsi, Director
- Sionaid Eggett, Director
- Christina Blaskavitch, Director
- Eric Leger, Algonquin College Student Rep
- Ashley MacRae, Algonquin College Student Rep



# 2022 FRIENDS ANNUAL GENERAL MEETING

The Annual General Meeting of the Friends of the PRF was held virtually by Zoom on the evening of Tuesday, November 15, 2022. The typical business activities of a non-profit-charitable organization including a financial update, a review of past year's activities and events, and a governance review were undertaken successfully during the meeting. In addition, Liz Cobb, Operations Manager with the PRF, updated meeting participants on current operations and research activities at the research forest.

The special guest speaker for the meeting was Kerry McLaven, CEO of the Forest Gene Conservation Association (FGCA). The FGCA is a not for profit organization promoting the conservation, restoration, and sustainable use of the genetic base of the forest- through the lens of climate change. Their interests include the recovery of species at risk in Ontario, such as the endangered Butternut. They have recently partnered with the PRF in the Adaptive Silviculture to Climate Change research project. Kerry provided an excellent overview of the FGCA's important work, including its focus on Butternut protection and restoration.

For more information about the FGCA, please visit: <https://fgca.net/>

## JOIN THE FRIENDS OF THE PRF

The Friends of the PRF is a registered charity (# 88812 3007 RR0001) and membership is free, however donations are welcome. Donations of \$10.00 and more are issued a receipt for tax purposes.



**“IT NEVER CEASES TO AMAZE ME HOW MUCH WE ACCOMPLISH WITH A SMALL BAND OF ENTHUSIASTIC AND ENGAGED VOLUNTEERS.”**

## MESSAGE FROM THE CHAIR

Our newsletters are a wonderful way to take stock of what we have been up to, and to humbly celebrate our successes with a bit of a recap. I know that you, our readers, will certainly agree once you have read-through and digested what follows in this issue... To say that I am proud is an understatement, and although I risk repeating myself, it never ceases to amaze me how much we accomplish with a small band of enthusiastic and engaged volunteers.

I think a big part of what makes the things we do so successful though, is the partnerships and good relationships we have with an array of organizations including the staff at the PRF itself and more broadly the Canadian Wood Fibre Centre and Natural Resources Canada, Algonquin College, the Canadian Institute of Forestry, and other local and regional organizations and groups. The old saying that many hands make light work, is very true for all of us interested in promoting sound forest science, forestry education and creating opportunities for outdoor recreation during all the seasons of the year. We are lucky to have so many good like-minded organizations to work with in these endeavours.

We have some new members of our Board this year, and we welcome them warmly to our team – Sionaid Eggett, Christina Blaskavitch, and Algonquin College student reps Eric Leger and Ashley MacRae. I also want to thank our Board members who have stayed on for another year. This mix of experience with new ideas and energy will no doubt result in us having another productive and enjoyable year, and will help us to continue to connect

with so many who want to learn more about the forest and sustainable forestry practices.

As always, I want to sincerely thank all of you for your support this past year. Please feel free to contact me or any of our Board members if you would like to join the Friends or if you want to help out... Please forward this newsletter to your family, friends, and colleagues. If you want to stay more up to date, please check out our Friends Facebook page. We try to post photos of the Friends activities and events on a weekly basis: [www.facebook.com/FriendsofPRF](http://www.facebook.com/FriendsofPRF)

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# WELCOME TO OUR NEW ALGONQUIN COLLEGE STUDENT REPS

The Friends Board welcomes two new student representatives annually, from the current Forestry Technician class at Algonquin College. Following are short autobiographies from this year's enthusiastic volunteers.

## ERIC LEGER

When I was 30, I decided to change career and move on from being an electro-mechanic. I wanted to do something with my life that was more meaningful than servicing gas turbines and diesel engines. I stumbled on the Forestry Technician (FT) program offered at the Algonquin College. I didn't know that forestry technician was even a profession at the time. I read up on it and realised that FTs are at the frontline of sustainability and renewal of our forests. That's when I decided to be part of the solution of our ongoing crisis. At the end of the day, we need more forests than we do gas turbines. To further my investigations in the betterment of our environment, I am planning on pursuing my education in forestry management. I am hoping to join the University of New Brunswick and achieve a Bachelor of Forestry. With this, I will be qualified to be more impactful in the positive changes to help heal our home.



## ASHLEY MACRAE

I am a Canadian citizen with a Belgian childhood. It was a bit of a culture shock when I moved to Canada on my own at the age of 18 and began my discovery of a whole new world. My creative nature led me to achieving a bachelor's degree in visual arts from the University of Ottawa, but this did not satisfy my need for the outdoors. Although many of my paintings and creative studies were performed in nature, I felt the need for more. I craved a deeper understanding and connection with the living ecosystems forever changing and developing around me. My thirst for knowledge did not conclude at the end of my paint brush but continued through my compassion for all living beings. Every moment of calm, thought, healing, and self-realization can be found in the musical silence of nature. I find this through hiking, exploring, and camping. I find this through living. And, for me, living also meant pursuing the forest and everything she holds. It meant continuing my studies and attending the Forestry Technician program at Algonquin College. And spending the rest of my life observing the cycles of birth, growth, death, and rebirth of our interconnected realities.



# ALGONQUIN COLLEGE





*PRF stand after mechanical site prep treatment.*

## AN UPDATE FROM THE STAFF OF THE PRF

*Submitted by Heidi Erdle, Forest Liaison Tech Transfer Manager*

Forestry Operations- It was a busy summer of silvicultural activities at the PRF as we completed 178 ha of mechanical site prep, 84 ha of chemical site prep, and planted ~100,000 seedlings (predominantly white pine) across 80 ha. These activities are important to ensure the sustainable renewal of recently harvested forest.



*PRF stand being treated with chemical site prep.*



# RESEARCH UPDATE

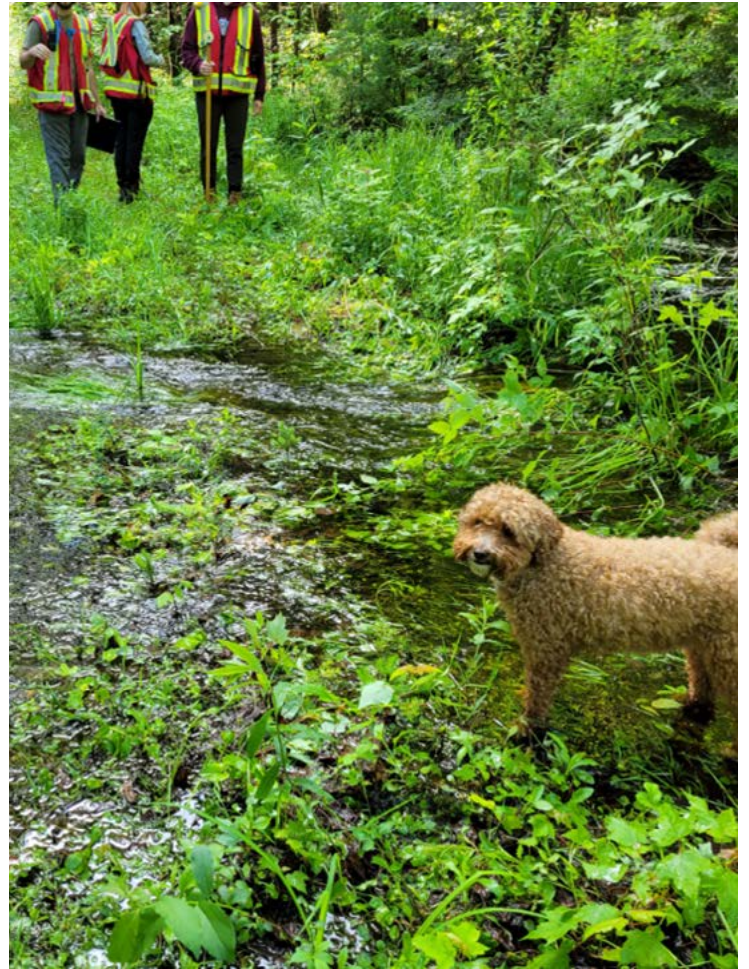
We had a full season of research in the summer of 2022 and thankfully, we had a wonderful crew of summer staff to support it! The Biomass Harvest study underwent its 10-year post-harvest re-measurement with a dedicated crew. This study considers the impacts of traditional shelterwood harvest (where tops, branches, etc. are distributed in the forest) and a 'biomass' harvest (where tops, branches, etc. are taken for biomass fuel). PRF summer staff also re-measured a long-standing black spruce provenance trial, which required measurements for almost

2,000 trees! The results of this study are being used by the Canadian Wood Fibre Centre and the University of Waterloo. We also had other, shorter-term remeasurements or studies happen on-site, including permanent sample plots in the 'Lost Plantation', a Hemlock Woolly Adelgid pesticide study, and a high-intensity lidar-drone flight.

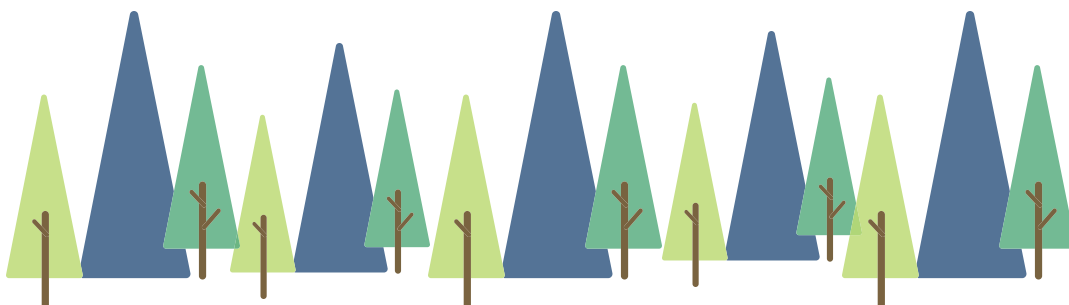
Currently, PRF staff are working away at measuring 200 lidar calibration plots in support of an enhanced forest inventory for Base Petawawa.



*The black spruce provenance trial that was remeasured in summer 2022.*



*Summer students near the PSPs in the 'Lost Plantation'.*



## KNOWLEDGE EXCHANGE

We are finally back into the swing of things with our on the ground knowledge transfer experiences. This past summer the PRF supported 8 tours including, Lakehead University, the CIF Annual Teacher's Tour, the CFS department of Cumulative Effects, and more. Just last month we were fortunate to be visited by the CWFC management team as part of their management planning meetings in Ottawa.



*Management team and PRF staff touring some of the key infrastructure at the PRF (in this picture, the Corry Lake Bridge).*

## INFRASTRUCTURE

The PRF has procured an autonomous Fire Detection Camera System for detecting and alerting staff to potential fire outbreaks on PRF and surrounding forests. This significant investment will be installed this winter and support a state of the art fire detection program at the PRF.

Finally, this winter renovations kick off at the silviculture building. Upgrades to this currently underutilized building will help support tour hosting, provide space for visiting researchers, and house our new fire detection camera system workspace.



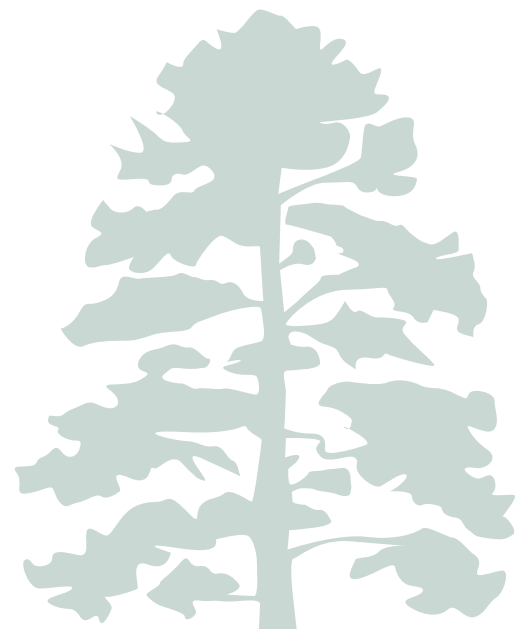
*View of the Silviculture building, historically used as a visiting researcher bunkhouse, dry lab, and storage area. Currently it is only used to store old equipment and files, but with upgrades we intend to utilize this building for tours, as office space, and for our fire detection program.*

## PARTNERSHIPS

Canadian Forces Base (CFB) Petawawa has partnered with the PRF team to create the Base's next forest management plan. Lidar and imagery were re-flown for the PRF and Base properties this past summer and a lidar calibration program is underway to develop an Enhanced Forest Inventory for CFB Petawawa. OMNRF is joining in to support the project by providing photointerpretation of the aerial imagery. The Province benefits from this partnership by using the small federal forests as a pilot study for integrating imagery and lidar while PRF and DND benefit from the partnership by receiving Forest Resource Inventory created for their landbase.



*View from a Griffon helicopter of a range training area on CFB Petawawa as part of a PRF aerial tour of the landbase*





# TRAILS UPDATE

Many thanks to our Board Vice President and Trails Coordinator Frank Knaapen for leading the development and maintenance of the trail system at the PRF. Frank and his volunteer team have done a great job this year, as usual. Following are direct excerpts and photos from Frank's social media posts on the Friends Page, that have provided 'live' updates since the fall.

**NOV. 29, 2022** - *The snowshoe trail network has been cleared of fallen trees and is ready for this year's winter use. A post has been placed at every trail junction with a "You Are Here" on the laminated trail sign. Unfortunately, two laminated signs were stolen last year. The whole trail network now has a new red metal sign going in one direction. It is replacing the older red ribbon signs. Pending donations, the reverse direction will be done next year. Due to beaver activity, two areas have been corduroyed so that the users can cross the wet area. Finally, the black box containing copies of the trail network, has been replaced on the new PRF sign at the museum parking lot.*

**DEC. 15, 2022** - *Snowshoe and Hiking Trail Network at PRF. Each trail junction has a post with a trails map. Trail has red metal signs around 20 meters apart on one side going both directions.*

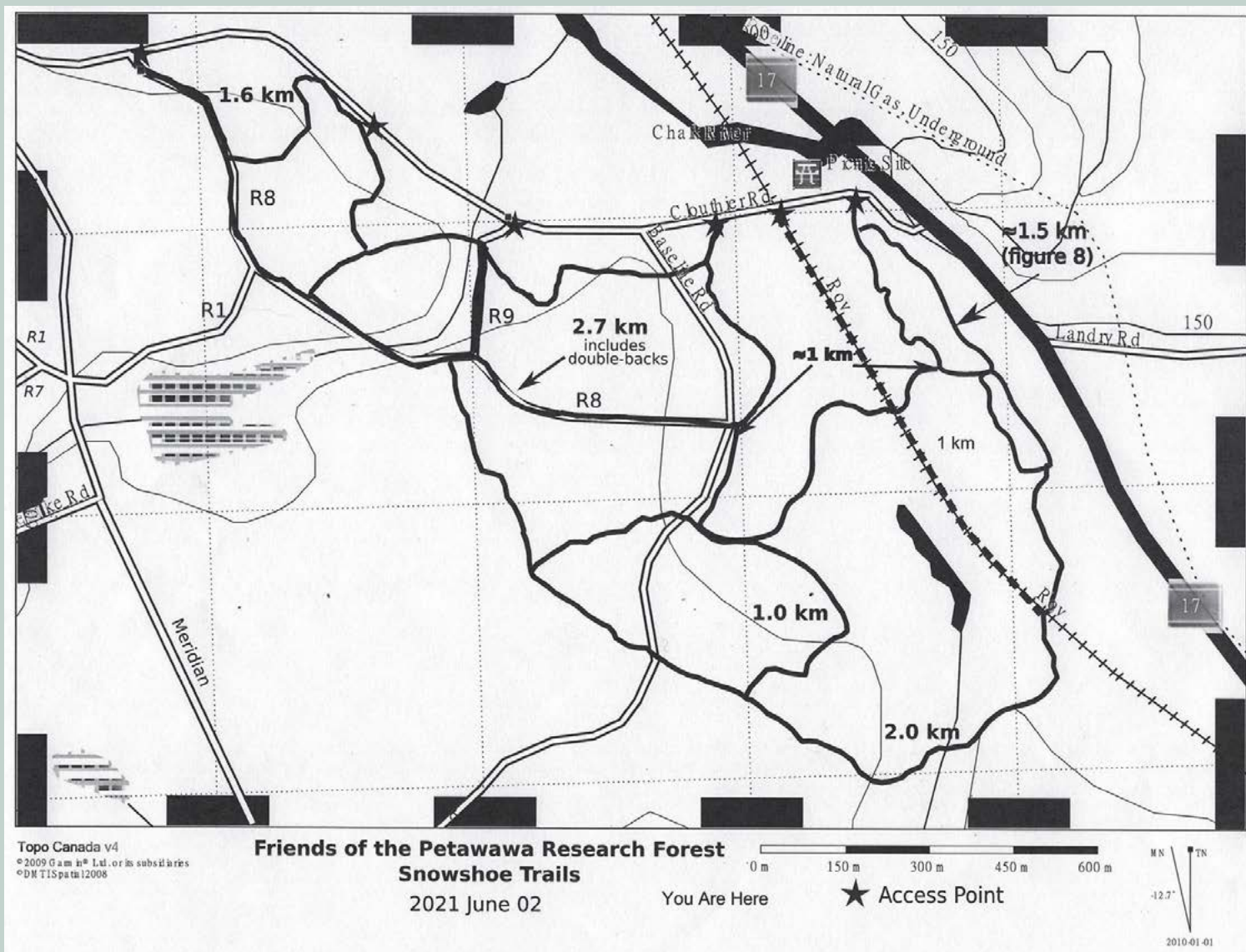
**DEC. 19, 2022** - *The Roads Network in the PRF that allows public access. Rules to be on such roads are posted at the corner of Clouthier and Meridian Road. Please stay on the roads and do not go into the forest nor on any ski trails. Please do not remove any pegs, pins, posts, ribbons, signs, etc.*

**JAN. 9, 2023** - *Aside from the snowshoe trails between Hwy 17 and the old railroad tracks, the following have also been clearer of downed trees / branches and bent over trees / balsams >>> the two most southerly trails between the old RR tracks and Baseline Road and the trail connecting them both in that area. Then both of those trails going west from Baseline where they join up. Then that junction going north to R8. Then from there going to Clouthier Road along R9. The HSA and Acer Loop Ski Trails are open due to the fantastic volunteer work of David, Ed, Helena, May, Mike, Phyllis, Ray, Stuart, and Susan. Hope I did not miss a name here. We are working on getting the Maunsell Trail open soon.*





**JAN. 20, 2023** - All snowshoe trails have been cleared of fallen branches, downed trees, and bent balsams. The R8 road has only been cleared for 1 person to go through the mess. Sometime this summer it will be cleared wider. Thanks to Stuart, Mike, May, Helena and Bruce, the Maunsell and Hawk Loop ski trails are opened. There are only a few trees that require one to easily ski around. Due to distance, they will be taken care of in the summer with a chainsaw.



# THIRTEEN OAKS AND COUNTING — ARBORETUM UPDATE

So far, in our collection at the PRF Arboretum we have 13 species of oak. There are a few more yet we can try (some are currently in Robin's home nursery).

There are only three oak species native here in Renfrew County: Red, Bur, and the less common White Oak. As you go south in Ontario and down in the USA, we encounter many more species.

We have a European oak in the collection—English Oak. We had purchased a 'Vimy Oak', a grafted English Oak tree that originated in the battlefield of Vimy Ridge in France, but unfortunately it didn't survive.

Oaks can be challenging to identify. There is much variation in leaf shape within a species and even within one tree. (Acorns can help with identification, but we are years away from our trees producing acorns.) There is lots of hybridization among oaks which can definitely confuse things.

The white oak group has leaves with rounded lobes (or teeth). Their acorns are produced in one season, and can germinate soon after falling. White, Bur, Swamp White, Chinquapin, Dwarf Chinquapin, Chestnut, and English oaks are in our collection.

The red oak group has leaves with pointed lobes. Acorns are produced in two seasons, and must have a period of winter condition before germinating in spring. We have Red, Black, Pin, Hill's (Northern Pin), Scarlet, and Shumard oaks.

Will the southern oaks be hardy here? We are Zone 4b and we are trying out tree species from Zones 6 & 7. Many are looking fine so far. We might expect that species from farther south may not do well (yet?); we'll try to find out.

Oaks tend to be strong, deep rooted, drought resistant, and long-lived. They are predicted to do well with changing climate and extreme weather events.

Don't worry about most insects feeding on oaks (except perhaps on newly planted trees)—oaks feed a great variety of creatures and are so valuable for this in ecosystems.

With loss of our tree diversity primarily due to introduced insect & disease pests (Chestnut Blight, Dutch Elm Disease, Butternut Canker, Emerald Ash Borer, Beech Bark Disease...) we are considering assisted migration to help restore tree diversity—moving tree species (and seed sources) northwards. Oaks should be prime candidates for this.

## SO, PLANT OAKS.

We know there are several species that can grow well here. You might check out trees in towns or evaluate the trees at the PRF Arboretum. You can collect and grow acorns, or purchase nursery stock. If you wish to experiment with the more southern species, it is probably wise to try a few inexpensive small trees—don't risk a lot of money on large shade tree stock or a quantity of forest nursery stock to fill up a field.

Research their site preferences: there are oak species for dry uplands to swamps, sands to clays, acidic to alkaline soils. Some but not all are slow growing. But the longevity of most is a noble trait.

Birders enjoy travelling, to list as many bird species as they can. They get excited about seeing rare ones. People do this with trees as well. But we can go to an arboretum and find so many kinds in one place. Come out to the PRF Arboretum and appreciate the tree diversity as you learn to identify them.





*Chinquapin Oak (Quercus muehlenbergii) at the PRF Arboretum.*

**“OAKS FEED A GREAT VARIETY  
OF CREATURES AND ARE  
SO VALUABLE FOR THIS IN  
ECOSYSTEMS”**

# BIRDING AT THE PETAWAWA RESEARCH FOREST

By Robin Cunningham

On Saturday morning, May 28, 2022, a few members of the Friends of the PRF and some other keen birders had a walk in the PRF, swatted a few mosquitos, and observed a nice variety of spring birds.

Highlights included Indigo Bunting, Scarlet Tanager, Rose-breasted Grosbeak, and Great Crested Flycatcher, as well as several wood warblers: American Redstart, Ovenbird, Common Yellowthroat, Northern Parula, Nashville, Chestnut-sided, Magnolia, Black-throated Blue, Black-throated Green, Pine, Black & White, and Mourning Warblers.



*Indigo Bunting at the PRF May 28, 2022.*

May is a most productive and favourite time to watch birds. Our tropical migrants arrive as insects are coming out. Male songbirds are in their most colorful plumage and are singing enthusiastically. Some that normally nest out of sight high up in trees or in brush thickets are a little more casual in migration and are more visible, especially where leaves have not fully developed. Local breeders as well as species continuing north to the boreal forest and beyond can be seen.



*Scarlet Tanager at the PRF May 28, 2020.*

**WE LOOK FORWARD TO PACKING THE  
BINOCULARS AND GETTING OUT EVERY  
MAY. WE WILL HAVE ANOTHER BIRD  
OUTING FOR FPRF MEMBERS.**



# WHITE PINE SILVICULTURE TRAIL HIKE

On the morning of Saturday, October 15, 2022, a group comprised of Friends of the Petawawa Research Forest members and Renfrew Chapter Ontario Woodlot Association members hiked the White Pine Demonstration Trail.

A few years back, a Forest Stewardship Committee led by Steve D'Eon (then Operations Manager at the PRF) performed some operations, measured results, constructed a trail, and created signage, to illustrate the processes in the Uniform Shelterwood Silviculture System for harvesting and regenerating white pine.

Frank Knaapen, Friends Vice President & Trails Coordinator, led the group, interpreted the trail, and explained the silviculture.

White pine is mid-successional and doesn't reproduce well underneath itself without disturbance (typically forest fire). Efforts to regenerate it are necessary—a white pine stand, whether harvested or not, would eventually succeed to the more shade-tolerant trees such as maples and balsam fir. The solution, developed in part

from research at the PRF, tries to emulate a natural fire situation. A regeneration cut in a white pine stand involves: marking the best trees to be retained at a controlled spacing to allow an optimum light for seedlings to establish (these larger thick-barked pines would survive if a ground fire occurred); careful harvesting of the remaining trees (that would likely be killed by fire); preparation of a suitable seedbed (fire would have burned the duff and exposed mineral soil); natural seeding (or planting if seed years are poor); and control of competing vegetation--knocking back the faster growing young hardwoods (that fire might have eliminated or reduced). The retained over-story pines grow into more valuable timber and can be harvested later when the young pines are established and needing more light.

Signs describe the steps of these operations well and people can do this trail on their own. But hikers on this nice fall day appreciated the teaching by Frank and enjoyed the woods and good company.



*Frank Knaapen at home with teaching in the woods.*

## FORESTRY TEACHERS' TOUR

Hosted in collaboration with the Canadian Institute of Forestry and the Canadian Ecology Centre (CEC), this year's 21st annual Teachers' Forestry Tour included a variety of in-class and outdoor presentations, hands-on activities, and site visits to the Petawawa Research Forest, and Herb Shaw and Sons lumber mill. The teachers also enjoyed the opportunity to explore the CEC grounds and Samuel de Champlain Provincial Park. Over the course of three days, participating teachers were immersed into the world of forestry and forests, and gained valuable curriculum resources to bring back to their classrooms. Many thanks to members of the Friends who took time to make presentations, lead field activities, and just spend some time on the tour with the teachers.



*Robin Cunningham helps with tree ID at the PRF Arboretum.*

## ALGONQUIN COLLEGE — SKILLS ADVANCE ONTARIO

Students from the Skills Advance Ontario Forestry Program at Algonquin College were at the PRF on several occasions during 2022, using the different sites in the forest as an outdoor classroom. Learning experiences included tree identification, data collection tools and technology use, and navigation using both compass and GPS. Skills Advance Ontario aims to help participants to better understand forestry and the forest sector, so that they will consider careers in natural resources.



*Skills Advance Ontario Algonquin Students Ben, Sharisse, Brooke, Ethan, Mike, and Kyle.*

## U OF T MFC WINTER FIELD CAMP

The annual UofT MFC Winter Field Camp was yet again a huge success, with many members of the Friends helping to lead and providing time and support over the four-days (Feb. 23 to 26). Highlights included visits to Bryson's Forestry in Sundridge, a tour of active harvesting in Tom Clouthier's operation in the Ottawa Valley Forest, a full day at the Petawawa Research Forest (PRF), a snowshoe hike with Dean Assinewe at Green Legacy Farm, and mill tours of Columbia in Rutherglen and Quality Hardwoods in Powassan. Forestry Tech students from Algonquin College joined in at the PRF, helping to demo hands-on data forest collection tools to the 19 students from UofT. Thanks to all of our members and partners who contributed to the successful delivery of this important and fun event!



*UofT and Algonquin students meet up for a day at the PRF.*



# CANADIAN FOREST SERVICE DIRECTORS VISIT PRF

Friends Board Chair Robin Cunningham spoke to Canadian Forest Service (CFS) Directors from across Canada on February 28th at the Petawawa Research Forest. CFS senior management heard about the great partnership between the PRF and the Friends, as well as successful collaboration with a number of other key partners.



*Friends President Robin Cunningham speaking to CFS senior managers at the PRF.*

## VIRTUAL TOUR OF THE PRF

Explore the oldest research forest in Canada from the comfort of your workplace or home!

Since its inception, the PRF has created an irreplaceable legacy of research that has influenced forestry practices both nationally and internationally through some 2000 experiments and demonstrations - continuing to be a living laboratory committed to long-term research.

The PRF Virtual Tour showcases 6 study sites (listed below), each with a wealth of information including: a map tour, previous and current research, 360-degree photos, historical photos, and short audio clips/videos featuring Canadian Forest Service and Canadian Wood Fibre Centre researchers.

1. Adaptive Silviculture for Climate Change
2. Genetics
3. Permanent Sample Plot 1 and 2
4. LiDAR
5. Fire Rating/Weather Station
6. Meridian Road White Pine Shelterwood Study

**[Click here for the virtual tour of the PRF: Petawawa Research Forest Virtual Tour \(arcgis.com\)](https://arcgis.com)**

# Friends of the PRF Swag Available!

Friends of the PRF sweaters and baseball caps are now available! Sweaters featuring the original logo are a heavy blend of cotton/polyester with sizes ranging from S to XL (\$40) and baseball caps featuring the PRF 100 logo (pictured above) are 100% cotton structured caps (\$25).

Contact any members of the Friends if you wish to order any of the items available.



## Petawawa National Forestry Institute (PNFI) Former Employee Social Media (Facebook) Group

Former employees at PNFI are invited to catch up on what is going on with your friends and colleagues and to share what you have been doing, where you are, how your family is... Pass this group link on to others that you are still in touch with, so they can join our little group too.



- Friends of the Petawawa Research Forest
- PNFI Alumni Group

## Donations to the Friends of the Petawawa Research Forest

The Friends of the Petawawa Research Forest welcome your donations. We will be able to continue to lead and support many projects, activities and events - through your generosity.

Please print and detach this form if you would like to make a donation and become a member of the Friends.

Name \_\_\_\_\_

Postal address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone \_\_\_\_\_

Please make your cheque payable to:

"Friends of the Petawawa Research Forest"



Mail to:

Treasurer - Friends of the Petawawa Research Forest,  
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**Want more information on any of the above articles?  
Interested in submitting an article in the next FPRF Newsletter?**

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