

The Ontario Woodlander



A publication of the Ontario Woodlot Association

Issue 103, June 2021

Promoting Forest Stewardship

Woodlot Business and Legal Interests



*Get the Most
from Your
Woodlot*

*A Commercial
Woodlot is
a Farm*

*Trespassing &
Liability 101
for Woodlot
Owners*

*So You want
a Severance*

*Teas and
Bees... and
Now the Trees!*



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Cover Photo: Al Stinson (left) of Near North Chapter provides some advice to Cyril Cook of Huronia Chapter, during a recent visit to Cyril's dad's woodlot near Tottenham. Cyril is currently a student in the Algonquin College Forestry Technician program.

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President's Message

By Paul Robertson, Niagara Chapter



Hats-off to the Communications Committee for once again assembling excellent and relevant content for our members! As a farmer and a Forest Stewardship Council (FSC) certified woodlot owner, I am particularly excited by this issue of *The Ontario Woodlander*.

Many of us already run or perhaps want to start some kind of woodlot related business; and communicating information that helps us to learn and get better at it, is tremendously beneficial! The business and legal aspects of woodlot ownership and related commercial activities can be complicated and sometimes difficult to fully comprehend. As always, we can learn much from each other to minimize and mitigate much of the confusion.

The theme of this issue also meshes well with the current activities of the OWA as a whole. In my mind, although we are and will remain a not-for-profit organization, collectively we are thinking and acting much more like a business lately. We are merging with the Eastern Ontario Model Forest (EOMF), engaged in a number new and exciting projects, adapting our existing programs, diversifying revenues, strengthening our human resources capacity, and much more proactively promoting and marketing the OWA to garner new members and partners. This is the first issue of *The Woodlander* to feature our new logo, and future issues will be even more distinctively produced using our universally popular new branding scheme!

I know there is much interest with respect to our on-going merger with the EOMF. It is definitely bringing us a number of positive opportunities, the foremost of which is the FSC (Forest Stewardship Council) Certification Program. There is already a healthy participation of woodlot owners, and privately owned and managed forests across Ontario enrolled in the program. However, the potential for us to grow that number, and also to include and integrate carbon offsets as an integral part of the certification process, is truly significant. The FSC program also has many important synergies with the MFTIP that we can and will explore. The bottom line is that we will be able to promote and support better managed and healthier woodlots in Ontario, and also realize increased revenues beyond our membership dues.

One of our on-going projects – Woodlot Economics

and Private Land Forest Inventory in the United Counties of Prescott and Russell is highly relevant to many of our business-minded members, and has garnered significant funding from both the Centre for Research and Innovation in the Bio Economy (CRIBE) and the Forestry Futures Trust. This project is also complementary to our Community Forest Owners Cooperative Pilot Project in Fleetwood (Kawartha) and Huronia. Through Eco Canada funding, we have been able to hire two summer interns for these projects, both from the University of Toronto Master of Forest Conservation Program. We have also received funding for the Cooperative Pilot Project from Ontario Power Generation (OPG) and CRIBE. Our many partners definitely like what we are doing!

I will close by saying that while the OWA and our business model are evolving and developing, we are still, and will remain, very much a pragmatic grassroots organization with a core of dedicated and passionate members and volunteers. The changes we are making are all good and positive and should be embraced. They will make us a stronger, adaptable, nimble, and viable organization, now and in the future.

There are great days ahead!

TEST YOUR KNOWLEDGE

Quiz #27

1. What provincial tax benefit does a woodlot owner receive by enrolling in the Managed Forest Tax Incentive Program (MFTIP)?
2. How much area does a woodlot have to have for the owner to qualify for MFTIP?
3. What are a property owner's liabilities with respect to people entering or using their property for the purpose of hunting or other activities?

Executive Director's Note

By John Pineau, Near North Chapter



I have always admired that raw entrepreneurial spirit that some people seem to intrinsically possess, and have further transformed into successful and enjoyable business ventures. I also have enormous respect for those who sometimes fail at it, but take the risk and give it a try nonetheless; and often they will try again and again...

Our grandson Ian, who is just shy of nine years old as I write this piece, definitely has that spirit. It is evident in a number of ways including already sharp negotiation skills, occasionally manipulation is a better word. However, a real manifestation of his business moxie was his impromptu Christmas Tree business this past year. Using our small woodlot, he scouted out several suitable conifers. He lined up a number of customers – mostly family including us, and sold trees in a price range based on their size. He harvested and hauled the

trees using his own muscle power and ended up making a nice little profit in the end. I am confident that there will be much more woodlot business activity in Ian's future!

This issue of *The Woodlander* focuses on some of the business and legal aspects of owning woodlots and effectively harnessing that precious entrepreneurial spirit to make some tangible revenues. It seems to me to be an ideal situation to use something that you have a passion for in some way, to help make a living. Furthermore, you do it in a way that is fully sustainable and in a conscientious manner. As I meet and greet more of our members either virtually or in person (outside and at a distance of course), I am in awe of the business savvy I see, and of the variety of different small and medium sized woodlot enterprises I encounter.

Business ventures can certainly be fun at a small scale, and supplementary income is always helpful to many of us. However, businesses become demanding and complex as they grow, and a woodlot business owner needs to be well informed of a myriad of rules, regulations and opportunities that relate to their ventures. The Managed Forest Tax Incentive Program (MFTIP), for example, is an excellent opportunity that many more woodlot owners should pursue.

I feel this issue catalyzes that discussion and exchange of ideas, and opens the gates to what I anticipate will be significant dialogue on woodlot business and legal matters. The theme of this issue presents another great opportunity for us to learn from each other by sharing knowledge and experiences, something our Association is very good at doing because really, we are just scratching the surface with the thoughtful content within...

I will finish this message on a personal note. I just recently passed one-year as our Executive Director on May 4th. I would like to thank the Executive, Board, Membership, and our Staff for what has been for me a very enjoyable and interesting tenure to date. Collectively we are doing a lot of great work, and also having real fun at the same time. I believe it is the same situation if you run some kind of a woodlot business. If you like what you are doing, it does not seem like work!



Ian scouting out candidate Christmas Trees in our woodlot

Your OWA at Work

Communications Committee

Although there is much to report, the really big news is our on-going merger with the Eastern Ontario Model Forest (EOMF). During a meeting of our Board on March 17th, 2021, it was unanimously decided to proceed with a merger, with the intent to complete the process by December 31st, 2021. The Board of the EOMF has passed a similar resolution. It was also agreed that the business and accounting firm MNP would help advise and guide the transition.

During our parallel histories, the EOMF and the OWA have shared a strong commitment to best management practices and sustainable forestry. Earlier this year, there was a collective realization that an opportunity to formally come together for the greater good was timely, and that we could create and maintain a new combined legacy that will also help to reduce administration costs.

In the recent past, the OWA Lanark and District Chapter started out as Eastern Ontario Certified Forest Owners before taking the step to become a chapter. It is clear that the connections and commonalities of the organizations are certainly natural and offer interesting possibilities as we move forward. There is no doubt that the merger of our collective products and services will bring benefit to our combined memberships.

Detailed discussions have been underway to determine how we move forward to our mutual benefit. Martin Streit, Vice President of the EOMF has become part of the OWA Board of Directors. Martin will represent the interests of the EOMF. Initially the EOMF will continue with its present Board, and during this year we will develop an appropriate model of governance. We want to have a governance structure that meets the needs of both organizations, and that recognizes the diversity of all of our partners collectively, including the Mohawks of Akwesasne, a founding partner of the EOMF.

We are also implementing an Advisory Committee to help provide guidance with the transition process and merger during 2021. OWA Executive Director John Pineau is acting as interim General Manager of the EOMF, and will work to keep things running smoothly and efficiently. An important task was to find a new FSC Coordinator as the result of the recent retirement of Jim Hendry. Although Jim leaves big shoes to fill, we have hired a capable and talented replacement – Glen Prevost (see biography below). The FSC Program has wonderful potential for growth. There are almost 80 OWA members across four of our chapters who are already participants.

The combined energy and efforts, and products and services of the two organizations will create a very strong value proposition for all EOMF and OWA members, and contribute significantly to our collective goal to ensure healthy, productive woodlots across Ontario, as well as to our efficiency. EOMF administration, finances and funds will be merged into those of the OWA – i.e., one set of books managed by OWA Office Manager, Joanne Dudka.

Key EOMF Projects and Programs that will Continue after the Merger

1. FSC Certification for Woodlot Owners (includes new Carbon Offset Program with Blue Source) Please see: <https://www.eomf.on.ca/programs/certification>
2. Winter Woodlot Conference (Kemptonville)
3. December Forest Seminar (Kemptonville)
4. Forest Health Network (to be managed by the Rideau Valley Conservation Authority)

Welcome to Glen Prevost, RPF & P.Eng



The Eastern Ontario Model Forest – Ontario Woodlot Association are pleased to announce that Glen Prevost, RPF & P.Eng is our new Forest Certification Coordinator. Glen has started as of May 17th, 2021.

Glen is both a Registered Professional Forester and a Professional Engineer. He has a Master in Forest Conservation degree from the University of Toronto, and a Master of Applied Science degree in Civil Engineering from McMaster University. Glen is a Managed Forest Plan Approver under the Managed Forest Tax Incentive Program (MFTIP). He has also completed the Ontario Tree Marking Course (certification pending). Glen's professional career includes experience in consulting, research, and academia in both the private and public sectors.

He is a member of the Ontario Woodlot Association's Near North Chapter, and is currently the Chair of the Canadian Institute of Forestry's Algonquin Section. Glen and his wife Ali, who is a physiotherapist, reside in North Bay with their two young sons Malcolm and Jude.

Please join in welcoming Glen to his new role with us!



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Get the Most from Your Woodlot

By Rick Wismer, CPA, CA, CAFA, PAg, LPA



The forest on your land benefits all Ontarians, providing wildlife habitat, carbon storage, and perhaps recreational and traditional land uses. You may not be planning to get rich off your woodlot, but you could make enough to make a difference in your retirement plans. There is no reason why you shouldn't enjoy the financial benefits of ownership.

The Ontario Managed Forest Tax Incentive Program (MFTIP) recognizes the importance of your woodlot and values forestland according to its current use while working to increase landowner awareness about forest stewardship.

MFTIP should be the number one item on your priority list to consider in getting the most from your woodlot. This is true whether you are thinking of it as a business or simply as a recreational property.

Every landowner who applies and qualifies for the program will have the eligible portion of their property classified and assessed as managed forest and can pay municipal property taxes at 25% of the regular residential rate. For larger properties or properties with high assessed values, the savings could be considerable.

The second priority will be determining whether you have enough acreage and timber volume to consider qualifying as a business. Dick Lalande wrote a great article for the OWA that has been updated and included in this issue outlining key issues related to operating your woodlot as a business and taking the matter one step further to see if your operation might qualify as a farming operation, which gives you the greatest income tax advantages.

Whether the woodlot is a simple business or meets the higher standard to be a farm operation, developing a business plan is the key to future success.

Remember that size matters – if you only have a couple of acres of trees, you're going to have a harder time building a business case. If, however, you have 100 acres or more, it's going to be much easier meeting the test of operating a business. When it comes to forestry management, time is on your side. Results do not have to be instant. Losses can be claimed in the short term if you expect that there will be profitability at some point.

How to Benefit

Treat your woodlot as a business. This means keeping good records, tracking receipts and possibly registering for the harmonized sales tax (HST). You'll also have to be willing to learn about good forest management and how you can help your woodlot thrive and bring additional benefit associated with ownership. Becoming a member of the Ontario Woodlot Association (OWA) is a great way to stay abreast of activities and developments in the industry.

Establishing yourself as a regular business or as a farm operation may allow you to deduct your ongoing expenses against other sources of income that you may be reporting for personal income tax purposes. These losses would reduce your income taxes each year and offer a savings over many years.

Registering for HST and filing the necessary form would similarly allow you to recover 13% of your expenses, representing a further net savings annually.

Yet another potential benefit is the possible long-term tax savings around succession planning. Proper structuring of your business affairs may allow you to take advantage of the \$1 million lifetime capital gains exemption on a future sale or do a tax-free transfer of eligible farm property to the next generation.

The When and What

- Start today. There is an old Chinese proverb that asks the question, when is the best time to plant a tree? The correct response is 20 years ago. It is rarely too early to start.
- Types of business activity that may qualify:
 - o Planting trees
 - o Sugar bush operation
 - o Periodic harvest of standing timber
 - o Tree farm (including Christmas trees)
 - o Firewood sales
 - o Ancillary to any compatible agricultural activity

The Process in Summary

- Join OWA.
- Employ a forestry professional to prepare a managed forest tax incentive plan (before June 30th of any given year).

MEMBER PROFILE

Stan Wortner

South West Chapter

Stan Wortner, pictured here with his wife Clara, is a long-time tree enthusiast and OWA member. Stan, now in his early nineties, had an early schooling in tree appreciation. The neighbouring farm where he grew up north of Chatham, Ontario had a 50-acre woodlot that had never been pastured and had maples with four-to-five-foot diameters. Stan's family also burned wood for heat and cooking until 1939, so trees and wood were a part of everyday life. On top of all this, Arbor Day was celebrated each May in the Chatham area and it provided Stan with the inspiration to learn to identify trees.



Stan and Clara Wortner

In 1959 Stan had the opportunity to purchase a 94-acre property near Bothwell, Ontario. The land had been used for pasture and had sandy soil with a variety of scattered trees. Before long the Wortners were experimenting with a wide variety of plantings, including a white pine/walnut plantation, scots pine, spruce, and mixed plantings. The woodland was soon thriving and now has large walnuts, even larger tulip trees, and a variety of hardwood trees that have been planted or returned on their own. The Wortners operate or have operated a number of businesses related to their forest including Christmas trees, a 700-tap maple syrup operation, lumber from their own sawmill, custom sawing and a campground. Although they use firewood to heat their home, they leave cavity trees, standing dead trees and downed woody debris for wildlife. The Wortners still have a few American Sweet Chestnut on the property and are members of the Canadian Chestnut Council.

Stan's involvement with woodlot associations began with the Lambton Chapter in the 1990s which became the South West Chapter of the OWA. Stan reports that he enjoys the fellowship of people who like trees, birds, and conservation. Stan also enjoys receiving his copy of *The Ontario Woodlander* and especially enjoys the technical articles. The South West Chapter has honoured someone annually since 2007 with their Woodlot Management Award for management of their own forests or contributing to the management of other people's forests. The Wortners were presented with that award in 2010.

- Develop your business plan using MFTIP as a starting point.
- Register for HST (if cost and potential recovery warrant).
Note: if buying a property, investigate this before buying the property to recover HST on the purchase price of land or equipment.
- Set up your books and retain all receipts.
- Talk to your accountant.
- Work your plan and enjoy your woodlot.

For more information, contact Rick Wismer, CPA, CA, CAFA, PAg, LPA, Regional Agricultural, Food and Beverage Leader for MNP, at rick.wismer@mnp.ca or 905-225-1302.

About Rick Wismer

Rick is a member of the Niagara Chapter of OWA. In addition to his professional career, he is a vineyard and tender fruit farm owner. He also owns and actively manages and logs several Carolinian woodlots and woodlands in northern Ontario. On many a sunny day, Rick can be found on a sawmill cutting lumber for any one of many building projects.

Quiz 27 ANSWERS

1. The woodlot owner will receive a 75-percent reduction in provincial property taxes for as long as they stay in the MFTIP program.
2. A property's forest cover must be at least four hectares (9.88 acres) excluding residence on one municipal roll number, for the owner to qualify for MFTIP.
3. The Ontario Occupiers Liability Act states that a property owner has a "duty of care" to take reasonable measures to ensure that persons entering their property are safe. Unless there is some obvious hazard that could be considered as deliberate (e.g., creating a trap or hazard) or negligence (e.g., not covering an abandoned well), property owners have little to worry about. There is a greater duty of care if an occupier charges a fee for access.

Trespassing & Liability 101 for Woodlot Owners

By Matt DeMille, Upper Trent Valley Chapter and Kerry Coleman, Lower Ottawa Valley Chapter

One of the greatest annoyances for many landowners is unauthorized trespass. The term trespassing seems simple enough, but the rules and landowner responsibilities are not always well understood. This article describes some basics of what you should know about trespassing, liability, and what you can do to prevent issues on your property. It does not, however, offer any legal advice related to liability and trespassing.

What is trespassing in Ontario

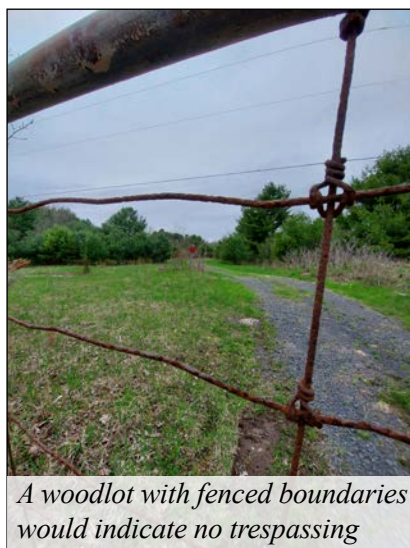
The Trespass to Property Act (<https://www.ontario.ca/laws/statute/90t21>) is the legislation that sets out the laws dealing with illegal entry into private land. Under the Act a property owner is described as the “occupier”. An occupier also includes a person who is renting or leasing a property. Anyone who enters private property without the occupier’s permission is trespassing. If the individual does not leave when told to do so, they can be found guilty of an offence under the Trespass to Property Act.

Section 10 of the Fish and Wildlife Conservation Act could also apply if trespassing occurs for the purpose of hunting or fishing.

There are some exceptions for surveyors, utility meter readers, building inspectors, public health inspectors, Conservation Officers, and conservation authority staff to enter a property without permission for the specific purpose of carrying out their duties.

When trespassing ‘notice’ is required

Trespass is prohibited without notice on a garden, field or other land that is under cultivation, including a lawn, orchard, vineyard, and premises on which trees have been planted and have not attained an average height of more than two metres. Notice is also not required for woodlots on land used primarily for agricultural purposes; or land that is enclosed in a manner that indicates



A woodlot with fenced boundaries would indicate no trespassing

the occupier’s intention to keep persons off the premises or to keep animals on the premises. A woodlot with fenced boundaries would indicate no trespassing. However, if a gate is left open or a section of fence is down or missing, then notice would have to be given to indicate no trespassing. Woodlots used primarily for agricultural purposes can include such activities as Christmas tree growing, maple syrup production and beekeeping. If in doubt, then it is best to provide notice.

Trespass is prohibited with notice on lands not included above. The best example is woodlands that are not used for agricultural purposes and are not fenced.

What is trespassing ‘notice’

Notice to restrict trespassing can be achieved through verbal communications or in writing directly to the individual(s) for whom trespass is restricted.

Notice can also be given through signage. The occupier must use signs that clearly communicate his or her intentions. If you post a “No Hunting” sign, it means that you are only closing your property to hunters, and you are perfectly OK with other forms of trespass such as ATVs and

snowmobilers using your property. If you want to keep everyone off, use “No Trespassing” signs or a red marking system. The red marks, must be of such a size that a circle ten cm in diameter can be contained wholly within it. Even if you post “No Trespassing” signs, you can still give permission to friends, neighbours, etc. to hunt, hike, or ride on your property.



A red marking system can be used to indicate no trespassing



No Trespassing sign along a property boundary

Where to post notice

Lastly, when you post signs, they should be at every normal point of access to the property, including laneways and field entrances. Posting signs all along your property boundaries is even better; ideally, when you are standing between two signs, you should be able to see both during daylight.

What to do when you find someone trespassing

The first thing you should do is to ask them to leave. If they refuse to leave your property, then contact the police for assistance. In addition to a police officer, the occupier of premises or a person authorized by the occupier may arrest without warrant any person he or she believes on reasonable and probable grounds to be trespassing. Although the occupier has the authority to arrest, for safety reasons it is advisable to avoid potential conflict. Take as much information as possible and contact the police.

Liability as a landowner

Some property owners have concerns about liability when allowing access to their property for the purpose of hunting or other activities. The Ontario Occupiers Liability Act <https://www.ontario.ca/laws/statute/90o02> states that a property owner has a “duty of care” to take reasonable measures to ensure that persons entering their property are safe. Unless there is some obvious hazard that could be considered as deliberate (e.g., creating a trap or hazard) or

negligence (e.g., not covering an abandoned well), property owners have little to worry about. There is a greater duty of care if an occupier charges a fee for access.

Having adequate insurance is always a good idea. A homeowner’s policy for a residence or building that is on the same property as your woodlot should have you covered, but it is always good to contact your insurance provider to ensure you have the coverage you need. A woodlot on vacant land (with no structures) can be insured through a homeowner’s policy (even if the policy is for a separate property), but make sure to find out what is covered and ask for a note to be made in your file.

Establishing a mutual understanding of what permission is

Although not necessary, some landowners establish a written agreement with any individuals who are permitted access. The agreement can be as simple as written permission, or it can outline a more detailed mutual understanding of the landowner’s rules and expectations of individuals who are accessing their property.

Liability for individuals permitted access to your property

What about liability for the actions of people using your property? It is certainly appropriate to ask a person given access to your property what liability coverage they have. For example, hunting is one of the most common activities that landowners provide permission to do. While hunting is safer than many other sporting activities, all hunters who are members of the Ontario Federation of Anglers and Hunters have \$5 million personal public liability insurance coverage when hunting, which gives a landowner additional peace of mind. Trappers who are members of the Ontario Fur Managers Federation have similar liability insurance.

The bottom line

Always remember that you, the occupier have the right to decide who uses your property and what conditions, if any, you place on any access you give, provided it is legal. You do not give up that right in any way simply because you have allowed someone access.

A Commercial Woodlot is a Farm

By Dick Lalande, Tay River Algonquian Community, Lower Ottawa Valley Chapter

Editor's Note: This article has been updated by the author; it was originally published on the OWA website several years ago.

Few woodlot owners take advantage of operating a commercial woodlot as a farm, and each owner and their own situation is unique. This article will focus on a theoretical woodlot, Harry's Commercial Woodlot, which is a forested, 400-acre mixed forest, some planted trees, swamp, and field mix, situated in eastern Ontario.

Harry is passionate about managing his woodlot in order to leave it as a better place for the future. Harry also wishes to run his woodlot as a business so it will grow in value and become profitable. Once it has positive income, it becomes a much more valuable property and can be sold as an investment or passed on without burden to others. Therefore, he is treating his woodlot as a business venture and wishes to take full advantage of the provincial and federal incentives that are available to him.



Dick Lalande at his Sugar Shack in April 2013.
Photo Credit: Chris Lalande

Provincial Program: Managed Forest Tax Incentive Program

The Ontario Woodlot Association (OWA), Forests Ontario, and the Ministry of Natural Resources and Forestry (MNR) have made substantial inroads to promote the Managed Forest Tax Incentive Program (MFTIP). Currently, some 18,000+ woodlot owners participate in the MFTIP. The main benefit of participating in MFTIP is that the woodlot owner receives a 75-percent reduction in provincial property taxes for as long as the owner stays in the program. The owner can opt out or stay in the program as long as he owns the property. The next owner can decide to apply for MFTIP or not.

Harry found that joining MFTIP was straightforward. First, Harry joined a woodlot association, such as the OWA. He obtained information on MFTIP and received assistance in finding a forester to help him prepare a stewardship managed forest plan that met his personal needs. Once that was done, Harry had the forestry professional sign the plan and then he submitted it for approval.

Harry received his 10-year approved plan from the MNR; MNR also notified the Ontario Assessment Office (MPAC) to reclassify his property as a managed forest. On the next property tax bill, Harry noticed the new managed forest classification and significant tax savings.

Example of cost savings:	
Prior to applying for MFTIP, Harry's 400 acres was classed as rural residential rate (.00039) on assessment His annual property tax bill was	\$4,000
Harry received his MFTIP approval, and his 400 acres is classified at the managed forest rate (0001) on assessment. His property tax bill is now	\$1,000
Harry's annual property tax savings is	\$3,000

It is important to note that MFTIP was introduced to achieve objectives of the government, by encouraging private woodlot owners of Ontario to become involved with managing their woodlots in a sustainable manner. It is not a free gift, and each woodlot owner is responsible to provide good stewardship practices in their woodlots.

Federal Programs: Tax incentives

Harry took the time and effort to obtain a provincial MFTIP stewardship forest management plan. He had already developed a business plan as part of his forest management plan with a 10-year budget forecast of revenues and expenditures. He knew that he would be losing money for several years, but that the property would grow in value and that he would receive income in the future from activities on the woodlot.

Harry studied federal income tax bulletins and became very familiar with the tax system. He found that the Canada Revenue Agency's (CRA) view was that if the main focus of the woodlot business plan is not lumbering or logging, but is planting, nurturing, and harvesting trees pursuant to a forest management plan, and significant attention is put into the growth, health, quality, and composition of the forest, it is then generally considered a farming business and called a commercial farm woodlot.

Harry also found that farming businesses included such activities as tree farming, Christmas tree growing, sugar bush, firewood, forest products, fruit growing and beekeeping, among others that qualified as accepted business activities allowed on a commercial farm woodlot.

He also discovered that he was not a full-time farmer since his principal source of income was not from farming activity. He was a part-time farmer and was allowed only a restricted loss of \$17,500 per year for several years; in the case of new tree plantings on his property, it would take some 30 to 40 years

for the trees to reach full market revenues. Harry also realized that his maximum allowable loss could be claimed against his other yearly income to reduce his taxable income amount, similar to how an RRSP contribution reduces taxable income.

Harry was excited about the fact that he could save federal income tax dollars. However, in digging deeper he realized that this was the acid test – the result being that his woodlot business plan did in fact have a reasonable expectation of profit in the future.

Harry was able to find the following criteria to determine that his woodlot business plan would satisfy CRA's requirements:

1. His planting trees allowed him a lengthy start-up period of several years.
2. His plan would indicate movement from losses to revenues over a reasonable time.
3. The plan would show how the woodlot is to grow and develop over time.
4. Time spent on the woodlot would be acceptable to eventually produce a profit.
5. He would join a woodlot association and spend time to educate himself on sustainable managed woodlot practices.
6. He would keep appropriate accounting and business records.

Example of tax savings:	
Harry's yearly income from woodlot	\$2000
Harry's yearly expense from woodlot	\$34,500
Total Loss	(\$32,500)

Allowance for Tax Calculations:	
100% on first \$2,500.00 loss	(\$2,500)
50% on balance \$30,000 loss	(\$15,000)
Total allowable farming loss on line 141 of the T-1 General	(\$17,500)

Based on Harry's net marginal tax rate	40%
Harry's federal tax savings was	\$7,000
50% restricted farm loss not used can be carried back 3 years or forward up to 20 years on woodlot revenues or may be added to adjusted cost base of the woodlot to reduce future capital gains upon disposition.	\$6,250

Harry also found that only expenses that were used in any normal business activity for the purpose of producing income for the business or woodlot were expenses such as

property taxes, interest on loans, insurance (woodlot and equipment), equipment (ATV, tractors, trailers, etc.), tools (chainsaws, pruners, wood splitter, etc.), electricity, fuel, and travel and lodging costs.

Harry was able to deduct \$17,500 against his yearly personal income and saved \$7,000 in income tax because he qualifies as a commercial woodlot as a farm. He also could use his unused restricted loss in the future.

Harry realized that there are also other potential benefits of being a commercial woodlot as a farm:

1. The ability to roll over the commercial woodlot to children; however, this may prove to be difficult.
2. The ability to access \$500,000 of capital gain exemption on disposition of the commercial woodlot.
3. HST paid on commercial woodlot expenses can be offset against HST charged on other HST personal income received by Harry.

Each woodlot owner has very specific objectives, goals, and different accounting circumstances. The above article using Harry's situation was a simplified theoretical example. If any woodlot owner is interested in their property becoming a commercial woodlot as a farm, discuss it with an accounting professional first.



A successful hunt in Dick Lalande's woodlot.

Photo Credit: Chris Lalande

So You want a Severance

Communications Committee

All you want to do is sever a parcel of land from your property, perhaps to create a building lot for a family member or maybe you want to sell your current house and downsize to a smaller house. Straight forward and simple – well not necessarily.

A land severance is commonly known as a consent. Most municipalities with an approved official plan have specific policies and requirements for land severances. In addition to the division of land, rights-of-way, easements, and any change to your existing property boundaries also require land severance approval.

The approval of severance can rest with one of a number of different governing bodies. Depending on the area, an upper-tier (large urban municipality) or single-tier (smaller rural) municipal council may grant consents. An upper-tier municipality may then delegate the function to a committee of council or an appointed officer. Alternatively, it may delegate the authority to a lower-tier municipality, a land division committee or to a municipal planning authority.

To determine the consent-granting authority in your area, contact your municipal clerk, the secretary-treasurer of the planning board or your nearest Municipal Services Office. A simple search on the internet also works.

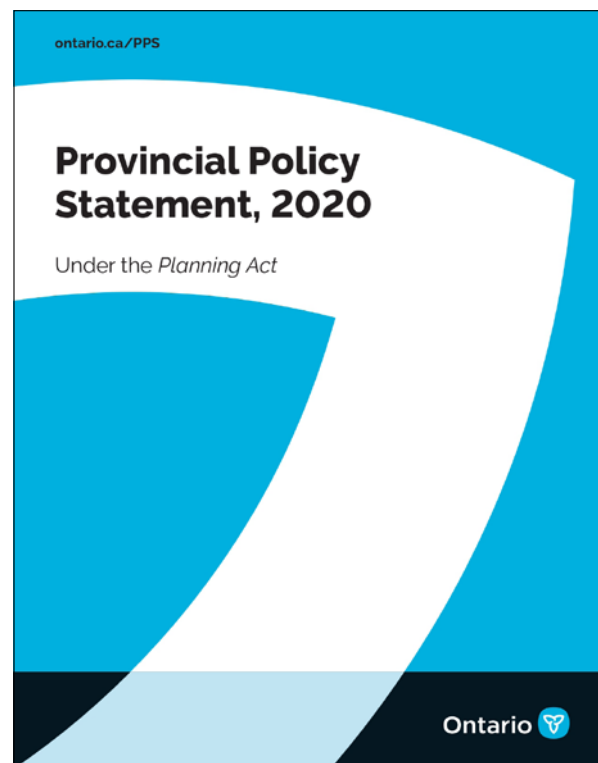
Before you apply for a land severance, you should consult with municipal staff and/or the consent-granting authority in your area. They will be able to tell you how to apply, what supporting material you must submit (e.g. sketches, plans), if there are any special land severance requirements set out in the official plan and what other permits and approvals (e.g. a septic system permit) may be required. This can save you a lot of time and money by ensuring you have a complete application package. They can also advise you if there is any reason why you are unlikely to get approval for a severance such as flood plain mapping, hazard designation, aggregate reserve, or a natural heritage feature such as provincially significant wetland.

In considering each application for land severance, the consent-granting authority evaluates the merits of each proposal against criteria such as:

- Conformity with the official plan and compatibility with adjacent uses of land
- Compliance with local zoning bylaws
- Suitability of the land for the proposed purpose, including the size and shape of the lot(s) being created

- Adequacy of vehicular access, water supply, sewage disposal
- The need to ensure protection from potential flooding

A consent granting authority's decision with respect to a severance must be consistent with the Ontario Provincial Policy Statement (PPS) <https://files.ontario.ca/mmah-provincial-policy-statement-2020-accessible-final-en-2020-02-14.pdf>. The PPS describes policies related to natural heritage features (e.g. provincially significant wetlands), protection of water quality, prime agriculture land, minerals and petroleum resources, aggregate resources, cultural heritage and archaeology and natural hazards.



The basic process for applying for a severance is fairly standard. However, in terms of getting approval what does differ from municipality to municipality and sometimes quite dramatically are the Official Plans and local zoning by-laws. The Official Plan is a legal document under the Planning Act that contains the goals, objectives and policies which guide development in the municipality for twenty years into the future. An Official Plan describes provincial requirements for land use and the municipality's policies on how land in the municipality should be used. An Official Plan deals mainly with issues such as:

- Where new housing, industry, and commercial areas will be located;

- What services like roads, community halls and parks will be needed;
- When, and in what order, parts of the community will grow; and
- Community improvement initiatives
- Environmental protection (e.g. tree cutting by-laws, site alteration, etc.)

The Official Plan policies in some of the smaller rural municipalities can be straight forward and the conditions for severance approval relatively easy to meet. In contrast, the official plan policies in some of the large, more urban oriented municipalities can be very complex, time consuming, expensive, and frustrating.

Then there are the costs. These also vary from municipality to municipality. Not only is there the severance application fee, but there can also be fees for Environmental Impact Studies (EIS), conservation authority inspections, septic approvals and in some cases parkland, development charges, consultants, and lawyers' fees and so on... There may also be a requirement for public consultation.

At some point your severance application will be either approved or denied. Approval may also be granted with conditions such as requirement for road widening, proof of a viable well or a minor variance. A minor variance allows for a minor change from the requirements of a zoning by-law

Appeals to the The Local Planning Appeal Tribunal (LPAT) or a local appeal body if established by the municipality, can be made in three different ways:

1. Any person or public body may appeal a consent-granting authority's decision and any condition within 20 days of the notice of decision
2. The applicant may appeal if no decision is made by the consent-granting authority within 90 days from the date of receipt of the application containing the prescribed information
3. Any person or public body may appeal any changed conditions imposed by the consent-granting authority within 20 days after the notice of changed conditions has been given

If you are considering a severance, then do your homework and meet the requirements for your municipality, and in most cases the process goes smoothly and the severance gets approved. Unfortunately, a few municipalities have an overly complex process, and the path to approval seems to be a maze of detours and dead ends. All we can say is patience is a virtue.

LETTER TO THE EDITOR

Regarding your recent article – *A Beginner Guide to Making Maple Syrup* in the March 2021 issue of *The Ontario Woodlander*: I began tapping a few trees three years ago (only making five or six litres of syrup) and following the old established practice of a seasoned maple-syrup-maker friend of mine. I use egg white to remove the impurities in the final finishing. One egg white will suffice for approximately two litres of final product. Add it to the almost finished product after it has cooled somewhat (to prevent the egg from cooking too soon) and blend it thoroughly, but do not overdo it! I use a plunge blender. Heat to a boil, but be careful because it will reach a point where it will **suddenly** boil over. Reduce heat accordingly. Let it boil gently, leaving the slurry to accumulate somewhat before skimming and transferring to an unscented tea towel over a bowl. Some almost ready useable syrup should drain through. Do not remove all the slurry because it will continue to gather impurities, as the desired temperature nears do the final skimming. I then pour the hot syrup through a tea towel draped over a bowl and transfer the syrup to jars.

John Snow
Algoma Chapter



So, You Bought your Dream Property and now the Taxes are Killing You!

By Greg Greer, Elgin-Middlesex Chapter

In these times of changes and COVID, suddenly, dollars have become tight and high taxes are not something you can easily deal with...

Have you ever heard of the Managed Forest Tax Incentive Program (MFTIP)?

The Managed Forest Tax Incentive Program was introduced in 1996 by the Progressive Conservative Government as part of their election platform; its consideration was lobbied by the Ontario Woodlot Association and the Ontario Forestry Association (now Forests Ontario). Previously there had been the Managed Forest Tax Rebate Program which was initiated in the early 1970's to assist landowners who were paying an unfair portion of taxes for education and municipal service. Due to fiscal reasons this program was cancelled in the early 1990's.

However, the MFTIP came with new rules. The Rebate program had reimbursed the landowner 75% on their forest land without requiring anything to improve their resources or increase their knowledge of forest management.

Some of the new requirements for private landowners to qualify were as follows:

- Woodland is Canadian owned
- Forest cover of at least 4 hectares (9.88 acres) excluding residence on one municipal roll number.
- Minimum number of trees per acre based on average diameter of trees.
- A management plan must be prepared by either the landowner or MFPA (Managed Forest Plan Approver) following the minimal guidelines in the Stewardship Planning for Natural Areas. However, I find 99% of the landowners would prefer a MFPA such as myself, to complete it as they do not have the time, and it normally costs the same price as I must still field-assess their information, to ensure it is accurate.
- Approved plan submitted to MNRF by the pre-determined deadline.
- Manage your property according to your plan and keep records.
- Submit a 5-year Progress Report.
- Submit a new renewal plan at the end of a 10-year period to continue with the program.

"Ok, that is good to know, but what do I need to do to enroll into the program"?

Being a forestry consultant and MFPA, I have my own procedures. When a call comes in from a private landowner, the following questions are asked:

1. How large is the woodland? *(does it meet the 9.88 acre minimum?)*
2. Where is the property located? *(some MFPA only service certain areas)*
3. Presently how is your property being taxed? *(i.e., farmland, residential, conservation land or rural residential)?*
4. Is there a tenant farmer working the land? *(important to know)*
5. What are your objectives for the property?

Managed Forest Plan Approvers help landowners to qualify for MFTIP



Can government staff inspect my property without my permission? Will they look for things such as endangered species?

When you sign a MFTIP application, you agree to allow MNRF staff to inspect your property while it is in the MFTIP program. Their only purpose is to confirm the eligibility of your property for MFTIP. However, this can be determined much more effectively and with less cost using high resolution air photography and satellite imagery, so a site visit is very unlikely.

Usually, the next question is how much will it cost and what is the savings?

I tell them my cost to do everything; from site visit through to submitting an approved plan to MNRF, online. Regarding the savings, I advise them to check with their local Municipal Property Assessment Corporation (MPAC) who do the tax assessment in Ontario. *(I do remind them the plan is good for 10 years).*

Another good question is “What do we have to do to qualify”?

I explain that the purpose of the program besides a tax savings is getting to know your woodland better by:

- Learning tree and shrub species.
- Making walking trails for maintenance and recreational purposes.
- Improving the health of the woodland either by conducting a harvesting operation under “good forestry practices” or learning to identify invasive species and other pests and what steps to take to control.
- What can be done to improve wildlife habitat, such as planting food producing trees, maintaining cavity habitat and shelter
- Improve any stream crossings.
- Utilize the woodland as a place to improve your mental health *(a place to relax)*



Cavity trees provide important wildlife habitat

At this point if they want to proceed, I will gather all their contact information and send them an email requesting the following:

- A recent copy of the Property Assessment Notice or a Tax Bill *(note; not all tax bills show the acres which is a mandatory requirement).*
- Send them a blank copy of Section 3 of the plan which is the history of the property and ask them to provide all they know as this can be the beginnings of the legacy of their property.
- Send them a blank copy of Section 5 which is the landowner objectives. *(What is the reason for buying the property? what are your future plans with it? What are your interests in it, etc.)?*

I like to have this information before a site visit as it helps me understand the landowners’ intentions and the layout of their property. The next step is to set up an appointment to meet at the property *(this is mandatory as I want to ensure the landowner is genuinely interested in their woodland).*

With an aerial photo in hand, I meet the landowner and (in some cases) part or the entire family. I believe in the more people, the better to help educate, especially younger family members.

I normally allow them to lead since most landowners normally go directly to their favourite area. From the aerial photo, I normally have an idea how many different stands they have. I will never collect data on this initial walk around as I want to use the time for the passing of technical information and get a better read on their interest, knowledge, and objectives. Once everyone is satisfied with the walkabout, then I will go back to the woodland and collect the data for each distinct woodland.

Utilizing the data, I have collected plus the information I have received from landowner (and family), I will develop a draft MFTIP plan according to the standards laid out in the MFTIP guide *(my company has its own format)*. This draft plan along with the application is then forwarded to the landowner to review and submit any changes, corrections, additional information, etc. back to us for revisions.

Once everything has been completed to the satisfaction of all parties, the plan is then submitted electronically through the Stewardship Portal.

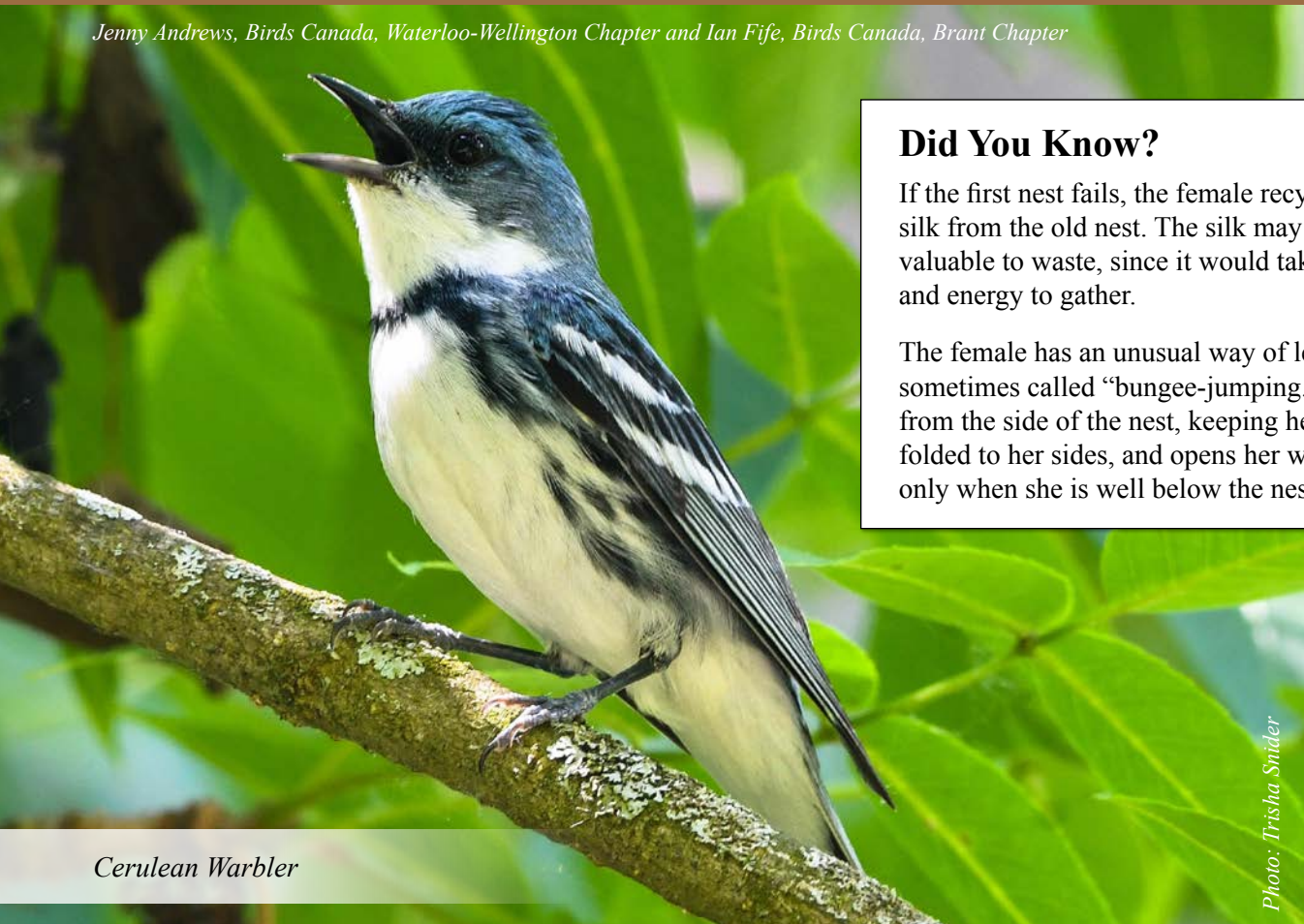
In summary, this program is a great opportunity, but not if your only interest is tax savings! **However**, if you want to become more knowledgeable about your property (MFPA’s have experiences in different resources), you want to leave a positive legacy in the form of a healthier and more productive forest to future landowners, and you are concerned about the environment, **it is a good option for you to consider!!**



Red Pine plantation thinning on a MFTIP property

Birds Canada Featured Bird: Cerulean Warbler

Jenny Andrews, *Birds Canada, Waterloo-Wellington Chapter* and Ian Fife, *Birds Canada, Brant Chapter*



Did You Know?

If the first nest fails, the female recycles insect silk from the old nest. The silk may be too valuable to waste, since it would take extra time and energy to gather.

The female has an unusual way of leaving a nest, sometimes called “bungee-jumping.” She drops from the side of the nest, keeping her wings folded to her sides, and opens her wings to fly only when she is well below the nest.

Photo: Trisha Snider

Cerulean Warbler

Identification

A small wood-warbler with a short tail and relatively long, pointed wings. The adult males have a deep cerulean blue head and back, a white belly, and a blue-black band across upper breast. Adult females have bluish-green upperparts, whitish-yellow underparts and a white to yellow eyebrow. Overall, juveniles look similar to adult females.

Conservation Status

Cerulean Warblers are “Endangered” in Canada as populations throughout their entire North American range have declined significantly. Ontario contains about 95% of their entire Canadian population (<2500 individuals). There are two subpopulations in Ontario: one in the Frontenac region and the other in the Carolinian region.

Breeding Biology

Males arrive in Ontario in late May and breeding begins when the females arrive about a week later. Males help

with nest site selection but the females build the nest, incubate eggs and rear young on their own. Nests are made of fine plant fibre and woven together with spider and caterpillar silk.

Diet

Cerulean Warblers glean insects from leaves in the forest canopy. Insects are their main food items with homopterans (e.g., aphids, cicadas) and caterpillars favoured during the breeding season.

Management Guidelines

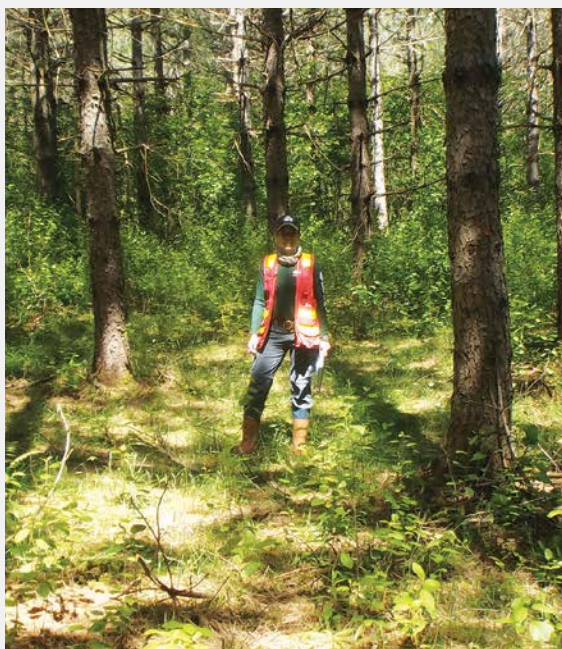
The most significant threats to this species are climate change and forest fragmentation. They require large, unmanaged tracts of mature deciduous forests. Silvicultural practices that involve long rotations to produce large mature trees with tall canopies and an extensive vertical diversity are preferred breeding habitat. Stands with high densities of Cerulean Warblers should not be disturbed. Birds Canada is working on a Beneficial Management Practice report to identify forest composition for Cerulean Warblers.

LALCIDE CHONDRO

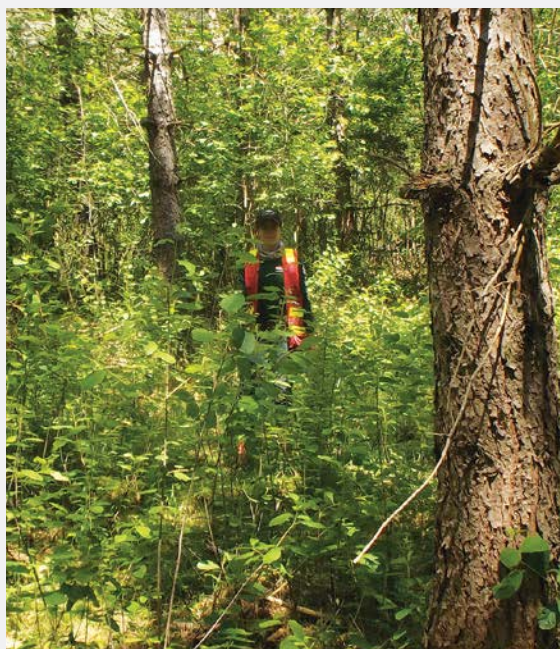


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Confessions of a Custom Sawyer

Part Two: What Harold Taught Me

By the Late Dave Sexsmith, Limestone Chapter

Editor's Note: This little gem of an article by Dave reminds us all what a good writer he was, and of how much we miss him. We thought it fitting to include it in this issue, with its subtle and personal business themes and nuances. Enjoy!

I did not come into this world wanting to be a sawmill owner, but life has a funny way of nudging you in unforeseen directions. It all started when I traded a load of firewood for some cherry logs.

A local man, Roy Hannah, owned a portable sawmill, so I hired him to saw the cherry. That was the first time I saw a bandsaw mill. Roy told me it was the second or third mill made by a fabricator in Marmora. He sawed the logs, and I came home with a pile of rough sawn lumber and woodworking dreams dancing in my head.

Months later, I noticed an ad in the paper “portable sawmill for sale.” The owner’s name: Roy Hannah!

Now, Lois and I have a good system for making major decisions. One of us comes up with the idea, and the other lists all the arguments against it. Over the years, we have avoided many bad moves that way. This time however, she said, “Well, if you want it, why don’t you buy it?” I picked up the phone before she could change her mind.



Dave Sexsmith's portable sawmill

While showing me how to put on the blade, Roy said, “After 100,000 board feet, you’ll be pretty good.” and I was a sawyer. He offered to give me the names of folks who wanted sawing done, but I told him I was only going to saw for myself. If you are thinking of buying a sawmill, do not waste time telling yourself you will not do custom work. Even if you hide your mill deep in the woods, people will find out and ask you to “saw a couple logs” for them. Worse if you do that first favour for free, you will

just ensure the queue is even longer.

Harold was my first client. He sold cedar posts, poles, and lumber, and had used Roy in the past. As he lived nearby, and I needed the money, I thought why not...

One of the first things a sawyer has to decide is whether to charge by the hour or the board foot. Since Harold had never seen me saw, he wanted to pay for the finished volume of wood rather than the time I took. I agreed to start with this method and see how it worked out.

Now, to be clear, much of my skill as a sawyer can be traced back to my time spent with Harold. He worked with cedar most of his life and knew instinctively what each log would yield; inch boards, studs and joists, or carving blanks for duck decoys. He was a patient teacher and became a good friend, but he was also a canny negotiator.



Dave making some adjustments to the mill

Harold’s logs were kept in a yard near a few buildings at an old farm. We would set up the mill beside a log pile, throw one on, and start sawing. My mill was an “all-manual” unit, so we literally did throw the logs. Harold was a senior citizen, but used to hard work, and I was just able to keep up if I had the small end.

I sawed for Harold many times that first year, and gradually began to get a feel for what he wanted, but I also began to notice changes in the process.

Now, instead of sawing each log as we came to it, we would sort through the piles, finding those that would best fill a specific material list Harold had in his pocket. This routine evolved so that my visits to his yard would involve more and more pre-sorting and re-piling. On one hot spring day, with black flies in full force, we worked for two hours before starting the sawmill.

The other change I noticed was that Harold was becoming more particular. For most customers, a bit of wane edge usually does not matter, because you can trim it later on a table saw. Harold, however, would try to get a 1x6 board, and when it had too much wane, would put it back on the mill for further trimming. Since he was paying me by the board foot, his bill would be reduced even though my workload increased.

The final straw was reached on the day he produced logs that had been lying around so long that the sap wood was rotting away. What would have produced 8" wide boards, would now yield 6" (maybe). After trying to get 6" boards, Harold then put several back on the mill to be trimmed to 4". The end result was twice as much work for half the volume of lumber. That was the day I told Harold I was going to have to charge by the hour.

On my next visit I found the logs had already been sorted and Harold had an assistant there to help load them and carry away the slab wood and boards. All I had to do was operate the mill. It was amazing how much we could saw in an hour.

Once the first pile of logs had been processed, Harold opened the door of a nearby shed and out came a beautiful Massey Ferguson tractor with loader and log forks. He could pick up several logs and bring them over, instead of having me move the mill to the next pile. It turned out that the tractor had been in that shed all the time!

That was when I learned the importance of telling the client up front that I run the mill; handling the logs, slabs and lumber is up to them. As for Harold, he was content to pay by the hour, because he had, by that time, trained me to his satisfaction. This relationship would work well for many more years until his health forced him to retire.

To this day, whenever I see a really great cedar log, I think of Harold's expression. "Nice stick!"



Dave and some of his custom-made wood products



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How the OWA is Using LiDAR to Help Woodlot

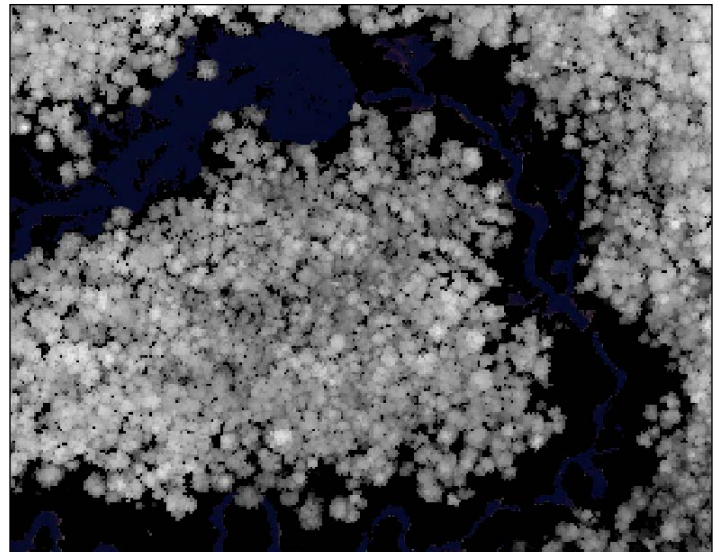
Owners Make Decisions

By Ben Gwilliam, Master of Forest Conservation Candidate, University of Toronto, York-Durham Chapter

Woodlots provide us with fuel, timber, wildlife habitat, and ecosystem services that will help us to mitigate climate change, but how can landowners measure these to get a sense of their value? Traditional methods of forest mensuration involve cruising a stand on foot and analyzing aerial imagery to glean data on tree height, timber volume, and species. But over the past two decades in forestry, significant advances have been made in developing aerial laser technology, or LiDAR, that can measure vast forest areas from the air with precise three-dimensional detail. LiDAR has been proven to provide an unparalleled degree of information to help manage our natural resources, prompting the Ontario government to invest \$84.5 million in its use over the next ten years¹. That same degree of information is now being leveraged by the OWA to support an economic analysis of private forests that will give members the decision support tools to realize the financial benefits of good forestry practices on their property. For now, this LiDAR economic valuation pilot is being conducted in only one county. But the lessons learned may contribute to a project encompassing all of Southern Ontario with the ability to incorporate the forest inventory attributes of private lands and non-timber values, such as habitat quality and carbon sequestration.

What is LiDAR?

LiDAR stands for Light Detection and Ranging and uses laser light to capture information on the distance and shape of objects. A sensor attached to the bottom of an airplane emits billions of laser pulses that bounce off objects and return to the sensor with information on the x, y, z coordinates of where that bounce took place. The airplane has an ultra-sensitive GPS and accelerometer, making it so the precise locations of these bounce points can be located in space. And by using the speed of light, the exact distances of these points from the ground and to the airplane can be calculated. This means that from billions of these points in space, 3D images--or point clouds--are formed, which can be used to survey topography, archeological sites, and forest vegetation with a level of accuracy measured in centimetres. In forestry, the benefit comes from the laser's ability to penetrate the canopy down to the forest floor, providing continuous vertical measurements of trees from the bole to the canopy's apex. And unlike a timber cruise which often uses a sample to measure large areas, LiDAR is a complete census of every stem and crown in the forest and can be done over thousands of kilometres in hours.



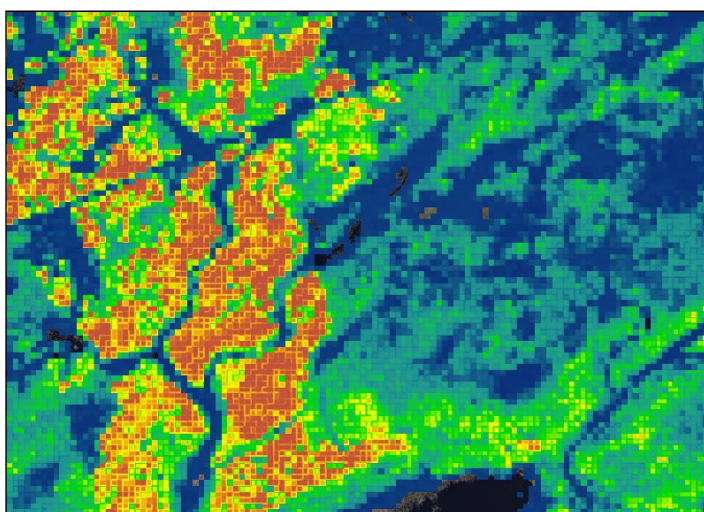
Individual tree canopies can be detected from LiDAR

How is the OWA using LiDAR?

1979 was the last year the forests of Southern Ontario were inventoried. Since then, the patchwork of harvest reports, maps, and MFTIP plans are all that exist to gain insight into the current state of Southern Ontario's forest resources. The OWA has advocated for access to better information for its members to help make decisions for managing their property. This economic analysis with LiDAR data will provide an unprecedented examination of the availability and value of wood products on private lands in the province. It will also be the first step to inventorying the rest of Southern Ontario.

The pilot project is being run within the United Counties of Prescott and Russell (UCPR), a municipality a half-hour east of Ottawa. UCPR flew LiDAR over their 2000 km² county area as part of a watershed study in 2014. This project uses that LiDAR data to model forest inventory attributes across all forested regions of the county, providing such attributes as: merchantable volume, stand height, stems per ha, and total above-ground biomass. The next step will investigate species classifications using multispectral satellite imagery and apply growth and yield models. And from this, analyze different silviculture treatment scenarios that will provide the greatest return on tree growth. This approach will also be connected to six individual case studies of FSC certified woodlots in the Prescott and Russell region that will allow a more detailed analysis of the economic value of good management.

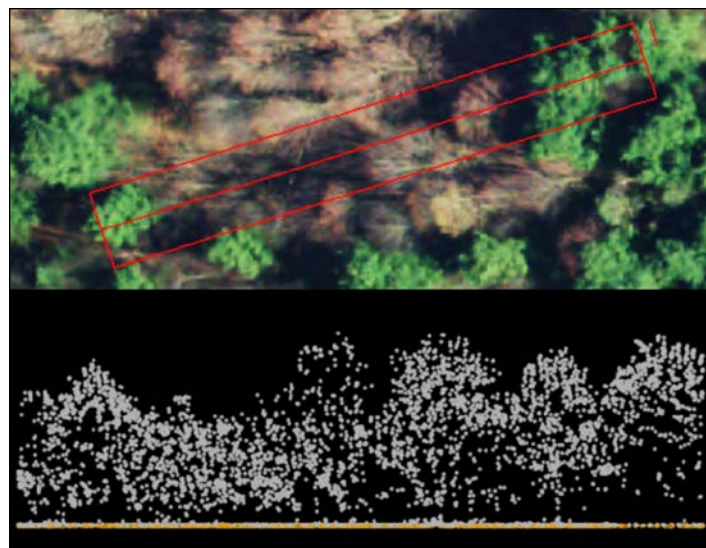
So far, the project has been an extensive undertaking across institutions and disciplines. It has included former MNRF remote-sensing specialist Murray Woods, myself – a Masters of Forest Conservation student from the University of Toronto, Dr. Kym Snarr, York University Professor of Geomatics Engineering Dr. Baoxin Hu, Professor Ben Kuttner (UofT), with many others offering their wisdom and resources. Other partners include the Center for Research & Innovation in the Bioeconomy (CRIBE), the Forestry Futures Trust (FFT), Cascades Inc., and the Eastern Ontario Model Forest (EOMF).



Merchantable volume of timber (m3) calculated using LiDAR (red denotes higher volume)

What are the benefits?

There is an adage which states that “you can’t manage what you can’t measure,” and good forest management starts with good measurement tools that can aid in decision-making. For the woodlot owner, LiDAR provides insight into the location, size, quantity, and with the economic model, the value of their timber before hiring a professional to develop a management plan. Additionally, property owners can use the information from a LiDAR analysis to identify habitat structures for mammals or nesting birds, plan recreation trails or roads, or estimate the amount of carbon your property sequesters. The OWA’s goal is to make this information accessible to all members across the province so that they can investigate how actively managing their forests through harvesting or thinning will benefit multiple values and promote good stewardship of



2D cross section of LiDAR data below from the sample immediately above

natural resources.

Could LiDAR ever replace “dirt forestry”? Absolutely not. Much still cannot be seen with LiDAR, such as forest and tree condition, for example, what trees may be deemed acceptable and unacceptable growing stock in deciding what trees to harvest and what trees to retain to add high-value growth. The trained eye and counsel of a forester will always provide a more holistic solution to forest management. LiDAR simply adds one more tool to the toolbox, and the OWA will continue to collaborate in making this technology more accessible and provide OWA members with the best decision support tools that will maximize the values of their forests.

The economic analysis of UCPR is anticipated to be released by the OWA in the fall of 2021.

References

- [1] <https://www.woodbusiness.ca/ontario-releases-final-forest-sector-strategy-including-84-5m-to-enhance-forest-inventory/>

All About CRD Services

By Chris Delage, Limestone Chapter

Who or what is CRD Services? Well I am a multifaceted, single person operation with years of experience in the environmental field, construction, and carpentry. So you are now asking... why are you writing in *The Ontario Woodlander*? Well, most of my experiences in life have come from landowners, woodlots, and folks like you who are interested in their properties and also materials growing in your woodlot and mine. We own 150 acres of mix hardwood/softwood bush with an intermix of wetlands and ephemeral ponds in South Frontenac, Ontario.



CRD Services signage

For 10 years I worked for Ducks Unlimited Canada (DUC) doing landowner outreach, wetland restoration, and project management and maintenance. During my time with DUC, I met many landowners and walked hundreds of properties. I gained valuable knowledge from landowners who were invested in their properties and who had interests ranging from income development, hobby creations and just pure enjoyment. I am now a contractor for DUC doing much of the same type of activities, but with more focus on project maintenance and inspections. Part of my business is beaver management in which harvested beavers from properties like yours and mine are consumed for food (humans and animals) and the fur is tanned and sold by me for various things like Muskoka chair butt- warmers or tractor seat covers.

Another aspect of my work is being a sub-contractor for a local solar business – *Downunder Solar*, whose main

market is off-the-grid living. Since we live off grid and had our system installed by Downunder Solar, it only made sense for me to involve myself more in that line of work having a sustainable living mindset and lower impact on our property. Conversing with other folks who live off grid provides me more insight on what others are doing out there, and I can provide insight on what I have learned from my experiences.

Sustainable, low impact trail maintenance is something we try to focus on in our woodlot and is another aspect of my business interest. Yes, we have a tractor and ATV, but only use them when appropriate as we prefer to walk. Much of our trail maintenance is done with a forestry clearing saw (Stihl 460) which is essentially a weed-wacker on steroids and chainsaw combined.

Since we heat mainly with wood, best forestry practices are in place when cutting and thinning areas within our woodlot. So again, since we are already cutting for ourselves why not cut a little more for firewood sales... And why not have a sawmill too, so that the nice larger logs are sawn up for sale or used by us; thanks to my father-in-law who had the foresight to buy it soon after we bought the property! As you can imagine, sawmill off-cuts can build up quick so we cut them up into campfire wood that is sold at the gate, and the good hardwood is kept for our own kindling use. Another product made on mass by the sawmill is sawdust that is collected and used by us in the outhouse, compost toilet and mixed into the chicken coop.



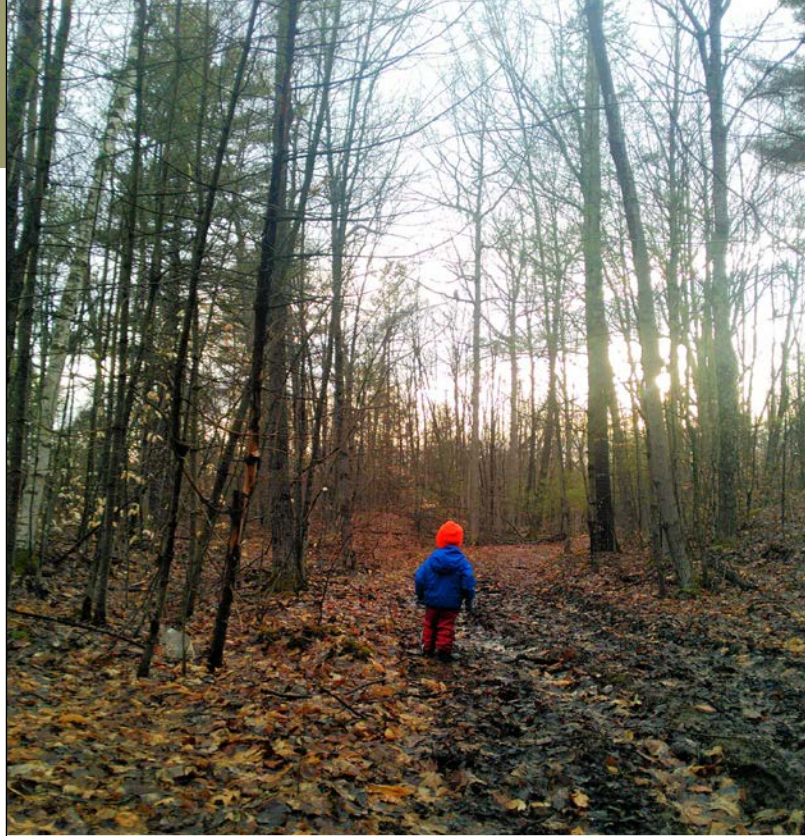
A bit of sawmilling is added to the CRD mix...

On our property and something I see on many other properties across eastern Ontario is neglected Red Pine plantations. Our plantation is small – only about 10 to 12 acres, but that still does not make it so easy to manage yourself. However it is possible to do with some basic equipment and felling techniques. At some point along with the trail and property maintenance, I would like to incorporate some small-scale plantation management into the business model.

We have free range chickens that provide us, our immediate family members, and some other folks eggs on a weekly basis. This year we are getting meat chickens to be consumed by us and our immediate family as well.

I think that one aspect of our woodlot is that it provides a place of serenity and peace. From a business and personal perspective, our lives can be stressful and having your own place of solitude at the end of the day makes a huge difference for folks who find themselves in stressful situations; I know my partner Jessica certainly looks forward to a walk after a day at work.

From the financial aspect, I can tell you from my first year of business our woodlot generated the following gross revenue reflected below; expenses are not factored in...



The serenity a woodlot provides is indeed priceless

- Firewood sales (campfire and stove): \$1,000
- Sawmill Services and lumber sales: \$2,000
- Red Pine thinning: \$2,400
- Serenity - Priceless

A Visit to Bruemmer's Boarding

By Susie Bruemmer, Renfrew County Chapter

I have always been passionate about dogs. Any kind, big or small, it does not matter. Must be that unconditional love they give you; they are always happy to see you. So when my husband George suggested we build a kennel, I was very excited!



The Bruemmers' Kennel. Well done George!

We have the perfect spot for one with acreage along the Bonnechere River in Horton Township, Renfrew County. The property has some history for us. George's parents bought it in 1974. In 1972, about 12 acres of the abandoned fields were planted under a Woodlands Improvement Act (WIA) agreement. Since then, it has been a place for us to watch the trees grow and for family to visit and gather for special holidays. George is a forester by training, and has since his retirement returned to his "roots", thinning, pruning, and preening the woodlot. He loves his trees!

And I love my kennel! When people first arrive here, they like what they see. We are about a quarter mile back from the road. The house & kennel sit in an open field. Years ago, cows used to graze in the field, and now it provides a place where the dogs can run free, chase balls, and have a great time. People tell me their dogs get really excited

continued

when they drive in. The owners are happy to leave their pets here. Friends even come to walk their dogs with me, even if their dogs are not staying.



An enjoyable walk through the Woodlot

What the dogs love most though is to be able to run free, sniff everything, and walk along the trails George has made. He has spent hours clearing brush, hauling gravel, building bridges over creeks, and maintaining the trails. In the winter he packs them with our snowmobile so we can continue to walk. I liken it to a four-season playground. We are lucky to see the seasons change as we walk; the fall colours, the beautiful bluebird winter days, the stars and the full moons, the spring peepers. On hot days the dogs can swim in the river. Almost every day we walk past the hugging tree – anyone with me has to stop and hug it. The dogs watch and wait.

The kennel opened in October 2013. It is small with a maximum capacity of about 10 dogs. I did not want it to get so big that I could not manage it on my own. My first customer was a retired Ministry of Natural Resources employee, who had three Rhodesian Ridgebacks. He still brings his dogs here. Since then, I have had close to 300 different dogs stay. There have been a few fights, but most of the time it is very harmonious. I also take in rescue dogs who need a place to stay until they are fostered out. One rescue dog Jesse arrived with nine four-day-old puppies. They stayed for almost two months – such fun!!!! Jesse and one of her pups still come to board.

I take notes on all the dogs. I post their pictures on the wall of the kennel and on Facebook. I ask the owners all kinds of questions about their pets; how much do they eat, are they good off leash, do they like other dogs? The regulars are just as excited to see me as I am to see them. The dogs bark at me, I bark back. At times, it can be very noisy, but that just adds to the fun. Bedtime is the best time of the



Getting everyone organized for the day!

day. After they are settled in after their last walk, I give each of them a milkbone, a few pats, a scratch under the chin and I tell them to go to sleep. They listen to me. The next morning we start all over again. Dogs need routine, and they like structure.

Since COVID, I have started doggy day care twice a week. I walk up to six dogs in a pack for two to three hours each day they are here. This has been great since no one is travelling I still can play and walk the dogs. My motto is to send them home happy, dirty, and tired. In the spring they go home really muddy! But no one cares. It is all part of being a dog.

I get up early in the morning to feed and walk the dogs. George goes to the woods. He plays in his woodlot and I play with the dogs. It is a perfect combination of using our property for things we both love to do!



Susie and George Bruemmer with their own canines

Teas and Bees... And now the Trees!

By Marian Petelycky, *Quinte Chapter*

Teas and Bees was started by OWA members, Peter and Marian, as many small success stories start, with a personal passion! With Peter's love of beekeeping and my love of learning about the medicinal uses of plants, knowledge passed down from my mother, the two concepts came together, and *Teas and Bees* was formed.



As the idea and passions grew so did our desire to purchase a homestead where we could fulfill our ideas. In 2013, we purchased a small hobby farm outside of Roblin, Ontario and moved out of the city taking our bees and seeds with us.

We fell in love with the farm, not for its pastures, but for its trees and its creek. We walk through the forest many times of days, amazed by the trees, their size, beauty, and the wildlife species they attract.



A honeybee at work

And then came the hard work...

In the early days, we only made gifts for our friends and family and as word got out, we would get questions about purchasing our products. We would always say no, we did not sell our products as we did not produce enough to sell. But as we acquired more hives and grew more tea ingredients, we started to have more than we could give away. We attended quality workshops on maple syrup production and honey and started offering our products for sale. We now have a selection of honey products (honey, honey blended soaps, candles, and bees wax wraps) and blended herbal tea products available for sale.



Beekeepers are busy too!

And now the trees come into our story...

About this time, we started to become more interested in the type of trees we had on the farm. We found and marked our sugar maples to see if we could make maple syrup as gifts. Also, I needed to solve a problem with the garden. We had many large black walnut trees lining the gardening plot. The juglans excreted by the roots were killing some of the plants. A decision had to be made, either move the garden or cut down the trees. Neither choice appealed to me as moving the garden would set me back several years to get another plot ready; and cutting down perfectly good trees was not an option for us. So, I decided that the garden would stay with some modifications (raised beds for all the susceptible plants) and the trees would have to contribute to the business.

After doing some research and trial and error such as harvesting walnuts (way too much work for not a lot to show for it), I came upon a couple of articles about making black walnut syrup. We were already making maple syrup, so we tried a couple of walnut trees. The first year was not a success as very little syrup was made. There were issues around filtering and overall it was considered a failure. But after more research, knowledge, and experimentation, we have found a formula that works. The walnut trees give a fraction of the sap that maples do, and the sugar content is not as high, but the flavour of the syrup is delectable – a sweet mild slightly buttery nut flavour. Mixing the walnut with the maple syrup gives it a maple butternut flavour that some people describe as butter pecan or butterscotch. The walnut trees have made their contribution and the squirrels are ecstatic that they can have their walnuts back!

In an effort to try to maximize the resources that are available to us, we use any trees that come down during storms or are cut due to hazards to buildings or infrastructure. The logs and large branches are used as the heat source for our maple syrup production, the wood burning furnace in the house and the branches and small brush are chipped for mulch on our beds and garden. Any ash from the burning of the wood is then moved to the compost to be used as a soil conditioner and as pest control for the plants that we grow. In addition, we are developing some prototypes of wooden soap dishes made from the limbs of the fallen trees to sell along with our honey soaps. And that completes the circle of life of the tree.



Peter at work in the woodlot



Teas and Bees taps both maple and walnut trees for syrup

The addition of the maple products (syrup and sugars) and the maple walnut syrup has greatly increased our offerings to sell. We look forward to researching more tree products for *Teas and Bees*.

Our interest in trees has spawned an interest into some of the life under them, namely mushrooms. We have found many types including morels. It seems that morels are elusive and do not see fit to appear in the same place every year! While not likely to add to our products offering with *Teas and Bees*, they do provide us with new adventures. In fact, after a Quinte chapter mushroom course, we have ventured into spawning mushroom varieties using wood logs and chips. It is not as easy as it sounds as the perfect growing spots are like the Goldilocks

of the forest: not too wet, not too dry, not too much sun, not too much shade. We know there is a place somewhere in the forest out there... Hopefully we will be able to find it every year.

So maybe in a couple of years our name will change from *Teas and Bees* to *Teas, Bees, and the Trees*!



Mushrooms!



Unique products from *Teas and Bees*



Marian and Peter, proud proprietors of *Teas and Bees*

The Future of Tourism is Regenerative

By Ghazal Niknazar (she/her) & Valentine Makhouleen (he/him), Huron and Perth Counties Chapter

“Thank you for another life-changing stay. My last stay back in 2018 was one I’ll never forget. I stepped outside my comfort zone, challenged not only my beliefs, but the beliefs and fears of others. I came to the forest a terrified young man, and discovered its beauty and safety. It’s something one needs to witness for themselves. No matter how many pictures and videos I take in an attempt to capture the beauty of my surroundings, it’s never enough. I’ve never felt so safe and at ease. With all that’s going on in the world, it’s easy to witness the darkness and forget the beauty of the world... I am once again reminded of its beauty.”

— Freija Guest, June 2020

Can we use the regenerative power of nature to heal ourselves, our environment, and the economy? Don’t we all wish we could recover from the harm our collective lifestyle has done to the natural world? Could we somehow restore local habitats, encourage old-growth forests, rebuild great marshes, and create conditions for life to flourish in our backyards? Can exploring the world outside our homes feel good again?

Leading tourism organizations in countries like New Zealand, Iceland, Costa Rica, Ireland are attempting to do just that. Measure the impact of travel and tourism against the well-being of the country as a whole, including human health, nature and local communities, alongside economic growth in a ‘circular economy’. Regenerative tourism is founded on the concept of sustainable travel and goes a step beyond, focusing on restoring natural environments and then building on the ability to live in a new relationship with our planet.

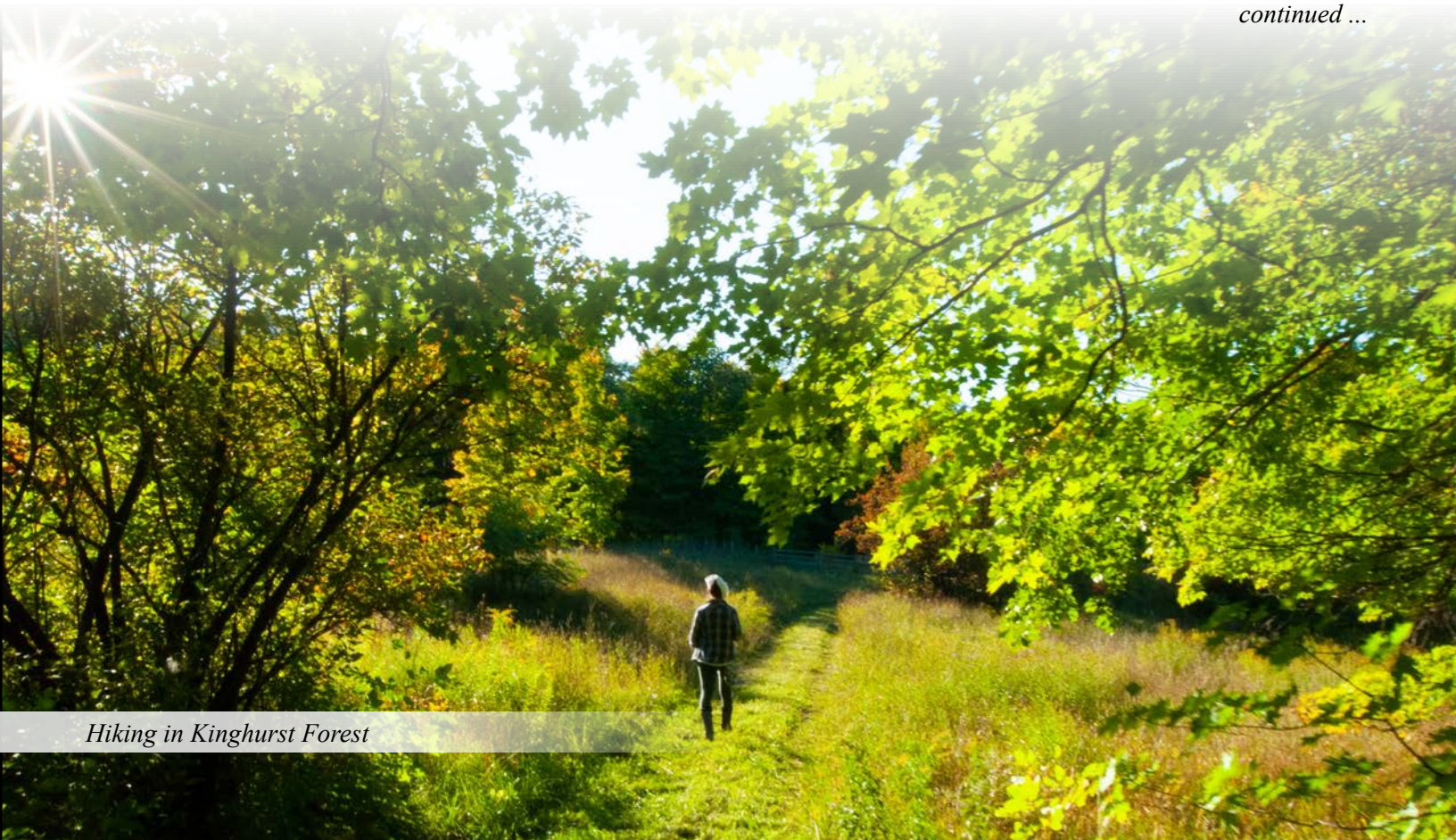
Ghazal and Valentine – proprietors of Freija



Two urban immigrant kids, Ghazal and Valentine, met in Toronto in 2006. We were married in 2007, and instead of an elaborate wedding and honeymoon, we rented a cottage in Grey County where we fell in love with the nature of Kinghurst Forest. At the time, we were both busy with our careers, and took every weekend or vacation we could to travel and explore every corner of the province and our world.

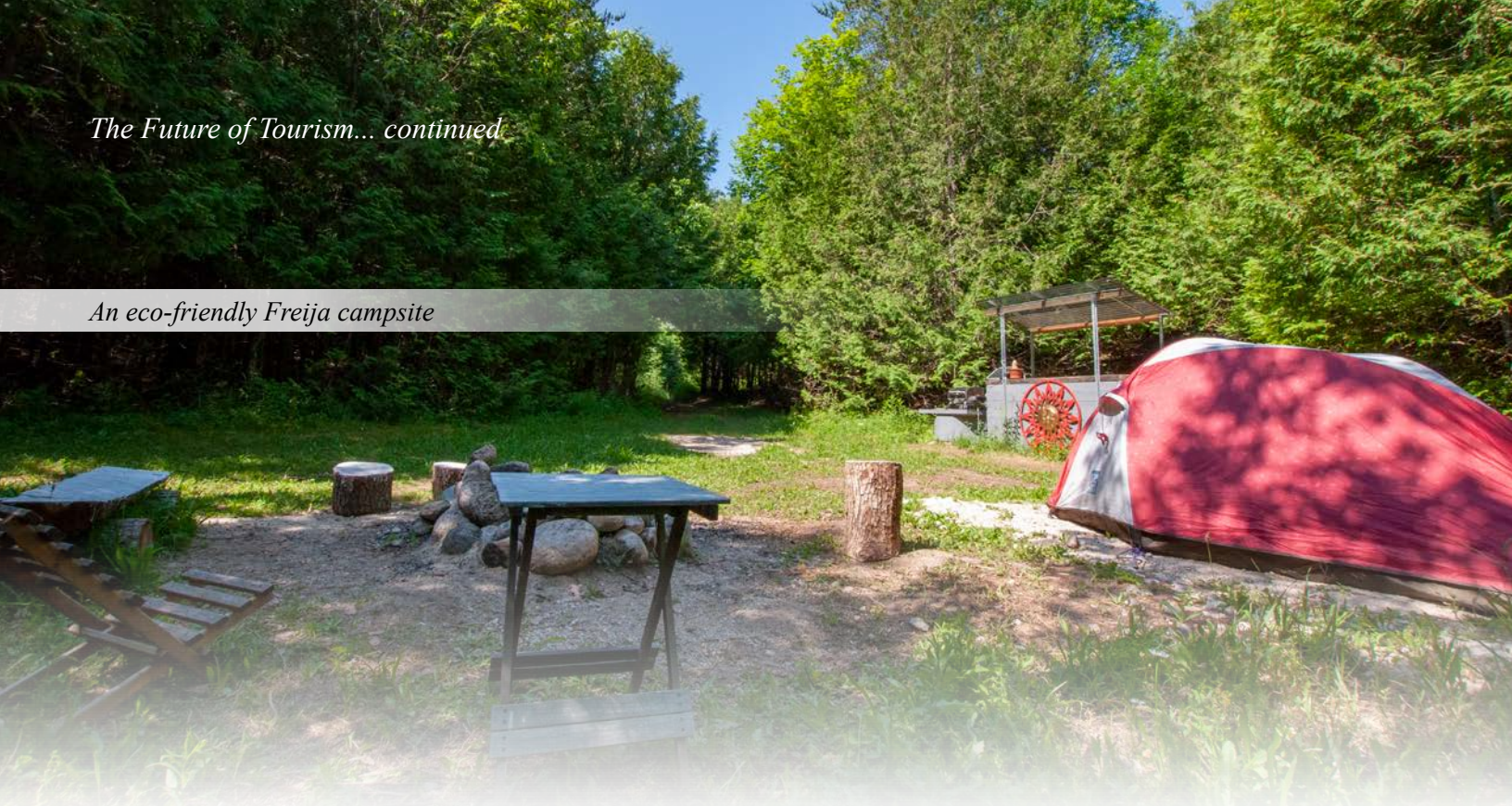
On our many adventures, we were lucky to visit successful environmental projects in destinations like Ecuador, Namibia, Iceland, Italy, China, and others. We saw an opportunity to bring similar experiences to our own backyard in Canada.

continued ...



Hiking in Kinghurst Forest

An eco-friendly Freija campsite



In 2016, after an exhaustive four-year search, we were very lucky to become stewards of a 100-acre woodlot adjacent to Kinghurst Forest Nature Reserve, just down the road from our honeymoon cottage. One of the few remaining old-growth forests in Ontario, Kinghurst Forest is a unique and virtually unknown gem.

Endless trails on varying terrain in Kinghurst Forest offer plentiful opportunities for birdwatching, hiking, and seeing some of the most striking trees and vernal pools in the province. Designated as an Area of Natural and Scientific Interest (ANSI), it is a special place that offers a rare glimpse into Ontario's natural past - and its future potential. Kinghurst Forest is located on the traditional territory of Anishinaabe. In 1836, the Chippewas and Ottawas of the Anishinaabe people of Canada surrendered their Sauking territory as a result of a treaty signed in their name and were relocated to the part of their territory north of Owen Sound.

Here, we founded Freija /'freɪ.ə/, a Canadian adventure company specializing in personalized retreats and unique experiences with emphasis on science education and nature conservation. Our goal was to create a business that reconnects people with the natural world of Ontario through unique personal experiences.

The eco-friendly amenities at Freija provide a comfortable base to explore the old growth forest for adventurers of all skill levels. Most of the building materials in our amenities and decor are salvaged, upcycled, or locally sourced and produced. The Forest Loft is decorated with fallen trees, Amish mill off-cuts and a hay hoist chandelier. All of the

food and human waste at Freija is composted with the help of waterless Separett composting toilets. Our campsites are comfortable, and all of the camping amenities and structures are impermanent.

Each stay or experience at Freija directly contributes to community projects in Kinghurst Forest Nature Reserve. Working closely with volunteers of Saugeen Nature, we have identified several focus areas for our educational experiences and conservation projects: pollinators, amphibians, birds, old-growth restoration, invasive species control and the impact of climate change.

Pollinators are a cornerstone of natural ecosystems and Kinghurst Forest is home to a variety of native pollinators, including bees, bats (Hoary bat, Eastern red bat, Silver-haired bat) and hummingbirds (Ruby-throated hummingbird). They are all threatened by habitat loss, pesticide exposure, and climate change. Our popular beekeeping experience is a great opportunity to inspect the hives with a group and



Ruby-throated hummingbird

learn about non-native honeybees and native pollinators (including over 400 native bee species in Ontario alone). We also provide tips on re-introducing the native meadow habitat, building, and installing bat boxes, protecting quality dead standing and cavity trees, as well as introducing habitat species and landscape features for native bees.



A young Painted Turtle

All turtle species in Ontario are also at risk and the biggest threats to their survival are habitat loss and roads that interrupt their natural territories. Kinghurst Forest and Freija ponds are home to both Painted and Snapping turtles, which can often be found basking in the sun on our pond logs during the warm months. We help protect the turtles by rewilding the pond habitat, maintaining gravel breeding grounds, protecting nesting sites, monitoring water quality, and recording observations. Our guests love basking alongside them on the beach!

Kinghurst Forest is also home to many resident and migratory bird species such as Blue Jay, Cardinal, Turkey Ovenbird, Scarlet Tanager, Wood Thrush, Pileated Woodpecker, and Wood Peewee. We help protect the bird species by:

- Tracking and monitoring those at risk
- Providing nest boxes to compensate for lack of cavity trees in new growth areas (close to 100 installed so far)
- Establishing nesting sites on the ponds for fowl species
- Surveying and protecting quality nesting sites in cavity trees
- Restoring the native meadow habitat.

Since 2016, we have seeded over 6 million native

wildflowers in the meadows at Freija.

Many of the trees in Kinghurst Forest are 250 to 300 years old, tower over 30 meters high, and show the vertical stratification characteristic of a true, old-growth forest. With a conservation-focused MFTIP forest management plan in place, we are helping:

- Expand the old growth area by converting red pine plantation area (5 acres) to native white pine and maple
- Convert forestry clearings to oak savannah
- Remove non-native and poor performing species planted in poor soils (Scotts Pine, Apple)
- Protect existing hardwoods and encouraging a healthy forest by monitoring mass
- Control for invasive species such as Colt's-Foot, Mouse-eared Hawkweed, and others
- Maintain recreational trails in the heart of Kinghurst Forest by volunteering our time and equipment to Ontario Nature.

Anyone can renew their connection with nature by planning a visit to Freija and the adjacent Kinghurst Forest Nature Reserve.

Having hosted thousands of guests from all over the world, we have seen firsthand the positive life-changing impact these forest experiences have on people (and their pets!). We hope that reconnecting people with the great natural wonders in our backyards will bring about greater change needed to help the planet.

You can learn more about Kinghurst Forest or book your stay and experience at Freija at freija.ca.



Kicking back and taking it easy at Freija

Twenty Years of the EOMF Forest Certification Program

*By Martin Streit, Vice President of the Eastern Ontario Model Forest, Stormont, Dundas and Glengarry Chapter
Reprinted from the Eastern Ontario Model Forest Annual Report 2020.*

As you may have heard, our Certification Coordinator Jim Hendry has decided to “semi-retire” from the Eastern Ontario Model Forest (EOMF). Jim has been a stalwart of the program for five years, and brought a new level of organization to this very complex partnership. Jim’s involvement in certification actually dates back to his days with SDG Stewardship. In 2005, Jim contacted the private landowners that had been part of Domtar’s Forest Stewardship Council (FSC) Certified woodlot management program and reformed the group into the SD&G (United Counties of Stormont, Dundas and Glengarry) Certified Forest Owners. This group lives on today as a chapter of the Ontario Woodlot Association (OWA). Thank you, Jim.



Jim Hendry with a Cottonwood at SD&G 56 ‘yellow marked’ to retain (November 2010)

As co-chair of the eastern Certification Working Group, with Jim’s departure I am writing the certification summary this year. I was going to summarize the 2020 program activities, but realized that 2020 marks the

20th anniversary of the formal creation of the EOMF Certification Working Group. So I am taking the fork in the road and will instead reflect on the genesis of this program. There have been so many contributors over the years that I have decided to avoid naming names for fear of missing someone.

The initial EOMF discussions around certification for private land were held by a group representing EOMF, Ministry of Natural Resources, OWA, World Wildlife Fund and the Canadian Forestry Service on September 17, 1999. This led to the creation of a new Working Group for forest certification in the EOMF in 2000. Interestingly enough, the life span of the Working Group was to conclude in 24 months! It is important to recognize that OWA was one of the program founders. I’ll revisit that later.

The EOMF also prepared its foundational program document in 2000, “Information Report 49: Introduction to Sustainable Forest Certification.” The document outlined the concept of

an “umbrella” organization to hold a certificate on behalf of a number of individual landowners organized into clusters, a goal which was achieved in 2003 with the Eastern Ontario Certified Forest Owners. We also hired our first Certification Coordinator in 2000, Scott Davis.

Our original indigenous partners were the Mohawks of Akwesasne and the Algonquins. I still remember Henry Lickers’ answer to our first FSC auditor’s question regarding the protection of indigenous values in SDG during forest management. Henry responded, “I work with these people and they are my friends, I trust them to know what is significant and tell me.”

Program growth leading to financial self-sufficiency was a key goal from the beginning. To that end, the first two community forests, South Nation Conservation Authority and SDG, joined in 2005.



SD&G 11-13 Warwick Forest Thinned Norway Spruce (January 2021)

To quote Jim Hendry, “Working with dedicated private and community forest owners has always been at the heart of building an affordable, efficient, and supportive forest certification program. Our Group certification (FSC® C018800), received in January 2003 from the Forest Stewardship Council® (FSC®), continues 17 years later because of their commitment to the principles and practices of sustainable forest management. Collectively, our efforts are making a difference in the growth and awareness of forest certification across Canada. The EOMF Forest Certification Program represents over 75,000 hectares of certified forests, including 13 community forest owners, 110 private forest owners, two commercial forest owners, three independent forest managers and five maple syrup producers.”

Which brings us to 2021. What is next for the Certification Program? While the community forests will always be the financial backbone, the merger with the OWA will create new opportunities to bring private landowners into the certificate. One of the key reasons the EOMF chose to join forces with the OWA was their role in the founding of the certification program. With renewed enthusiasm, we have recruited our third Certification Coordinator and are looking forward to continued growth across southern Ontario.

I will finish with one more quote from Jim. “We are incredibly grateful for the guidance provided by our two Certification Working Groups (CWG), one in eastern Ontario and the other in southern Ontario. The CWG’s provide an opportunity to share information, knowledge, experiences, and guidance in continuing to build a strong resilient certification program. Membership includes Model Forest staff and Board members and representatives

for private landowner groups, forest industry, community forest owners, and maple syrup producers. The meetings are also open to anyone interested in learning more about the Model Forest - Forest Certification Program.”

Eastern Ontario Certification Working Group

Martin Streit, Co-chair. Steve Hunter, Co-chair. Brian Anderson, Tony Bull, Chris Craig, Bernard Fillion, Nicolas Gauthier, Dorothy Hamilton, Jean-Claude Havard, Fred Huszarik, Mike Johns, Elaine Kennedy, Pieter Leenhouts, Geoff McVey, Gaelen Murray, Pat Piitz, Lacey Rose. EOMF Staff member: Certification Coordinator.

Southwestern Ontario Certification Working Group

Kevin Predon, Chair. Ryan Adams, Todd Farrell, Jessie Henrich, Judy Maxwell, Curtis Marcoux, Ron Reinholt, Debbie Thain, Lee Thurston, Tim Trustham. EOMF Staff member: Certification Coordinator.

The Search for Healthy Butternut

By Heather Zurbrigg, Manager of Species Conservation, Forest Gene Conservation Association, Lower Ottawa Valley Chapter

Butternut (*Juglans cinerea*) is an endangered species in Ontario that is threatened by Butternut canker (*Ophiognomonia clavigignenti-juglandacearum*), a fungal disease that can significantly impact the tree’s ability to function in its natural habitat. Some trees when infected by the fungus will ‘fight’ and callus over wounds created by the fungus, while other individuals may succumb to the effects of the fungus within only a few years. Due to impacts of the fungus, in addition to tree cutting, habitat loss and hybridization with exotic walnut species, Butternut is



Figure 1. Pure Butternut Tree in a Southern Ontario Woodlot. G. Bales 2009.

protected under Ontario’s Endangered Species Act (ESA, 2007).

The Forest Gene Conservation Association (FGCA) has worked in Butternut recovery for almost 30 years to achieve two primary objectives. The first is to conserve what we have; find pure individuals on the landscape and encourage

landowners to conserve and manage their Butternut to minimize the potential impact of the fungus and improve the tree’s ability to propagate naturally. Our second goal is to collect genetic material from pure Butternut trees showing tolerance to the canker to archive and maintain in seed orchards to meet broader recovery objectives.

In partnership with organizations and experts from across the province, the FGCA executes our province-wide Butternut Archiving Program which includes the management and maintenance of pure Butternut grafts located at five sites across Ontario (Figure 2). These sites are heavily managed to produce seed for reintroduction on the landscape. This is a decades long endeavor, and to date we have archived almost 150 putatively tolerant trees from across the Butternut range in Ontario, but there is still more work to do!

The FGCA’s Butternut Program is guided by the National Recovery Strategy for Butternut which set a short-term archiving target of at least 10 trees from each EcoDistrict in Butternut’s native range (there are about 20 such areas). Although we are almost halfway there, we are looking to woodlot owners and professionals to help meet this national target of archiving enough trees from every applicable EcoDistrict.

continued ...

Figure 2 is a map showing how many archivable trees have been found in each EcoDistrict. Red stars on the map indicate the location of the FGCA managed seed orchards. Dark green EcoDistricts are areas that have greater numbers of Butternut represented in the orchards. Light green areas require additional work and our greatest need for pure Butternut representation are areas indicated in grey. This includes Huron, Perth, and Grey Bruce counties as well as regions bordering the north end of Lake Ontario.

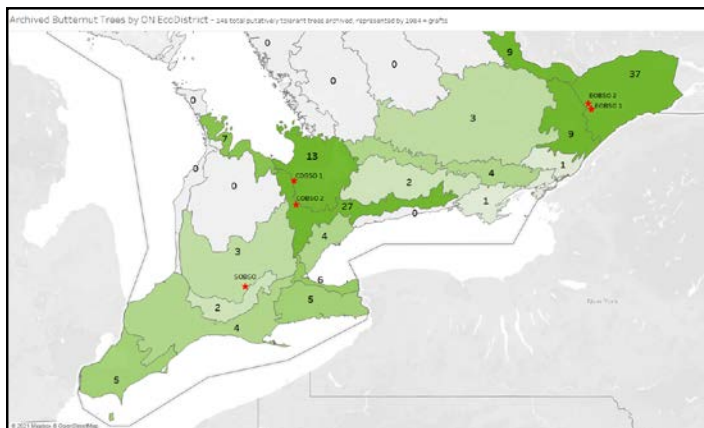


Figure 2. A map of the southern Ontario EcoDistricts and archived material and locations of FGCA's Butternut Archives.

We bet you are wondering, what can you do to help our search? Private woodlots in Ontario are some of the best sources of pure, putatively tolerant Butternut. Determining if a Butternut is pure or is a hybrid is not always an easy task, not only that, determining the health of a pure Butternut requires a detailed assessment process. This is the time of year that we begin to search and assess trees for the FGCA recovery program!

The FGCA has trained, and currently works with Butternut Health Assessors to help us determine whether a tree can be archived. We can also help determine management recommendations for local managers and landowners. DNA testing is also conducted as it sometimes can be challenging to observe hybridity, however even before completing DNA testing on the tree, we want to be almost certain that the tree we will be assessing is a pure Butternut.

What we are looking for:

- Sites that have at least 5 Butternut greater than 15 cm dbh (diameter at breast height) – we know this can be hard in some areas of Ontario, so this target number is not an absolute requirement.
- At least one Butternut that:
 - o Has a healthy crown (greater than 80 % live crown)

- o Has few to no sooty stem cankers and no open cankers.
- o Is growing within 50 meters of cankered trees of any size (showing its 'fighting' qualities).
- Pure Butternut trees that are not within 100 meters of any hybrid trees that may cross pollinate. If they are, opportunities for management recommendations are still available for future recovery and seed collection purposes.
- Landowner permission to have a professional come take a look at your Butternut tree(s).

If you think your woodlot contains some or any of the above, we encourage you as a landowner to contact us, and as a professional to obtain permission from the landowner to discuss how they can contribute to provincial recovery efforts here in Ontario.

Once a tree is assessed and determined to be pure Butternut, the FGCA and its local partners work with the local landowner or land manager to promote seed collection from these trees, to add them to an archiving candidates list, and to potentially identify the site as a suitable outplanting site for seedlings that are grown from seed from the FGCA Butternut Seed Orchards (Figure 3).



Figure 3. Image of seed set on a Butternut graft in eastern Ontario. R. Fleguel 2015

We appreciate your help in our search for healthy Butternut to contribute to Butternut Recovery efforts here in Ontario!

If you can help or have questions, please contact Heather Zurbrigg, Manager of Species Conservation heather@fgca.net. For more information on Butternut please visit our website www.fgca.net



Death in Cottage Country:

Early Days of Aerial Spraying in Ontario

By Mark Kuhlberg, Past Chair of the Forest History Society of Ontario and Jim Farrell, Chair of the Forest History Society of Ontario, Lower Ottawa Valley Chapter

It is hard to imagine today that the Muskoka Lakes region of Ontario, home to some of the most exclusive and pricey vacation properties in Canada, is the site of early pioneering experiments of dumping harsh insecticides from airplanes to kill hungry pests eating the foliage of mature hemlock, spruce, and hardwood trees, much prized by their wealthy owners.

After World War I many highly trained flyers returned from Europe with well-honed skills, hard-earned courage and confidence and a sense of adventure. That, along with a fast-developing aircraft industry, combined to create a new business opportunity, aerial crop dusting. First utilized in agriculture in the U.S. as a lower cost method to protect valuable fruit trees and other crops like cotton (from pests like the Boll weevil), it was the forest pest outbreaks in eastern, central, and western Canada around 1925-1930 that prompted a few innovative Canadians to figure that this could also work on forests. One of those outbreaks was of Hemlock Looper (*Lambdina fiscellaria*) in the Muskoka region of Ontario in 1927-1929.

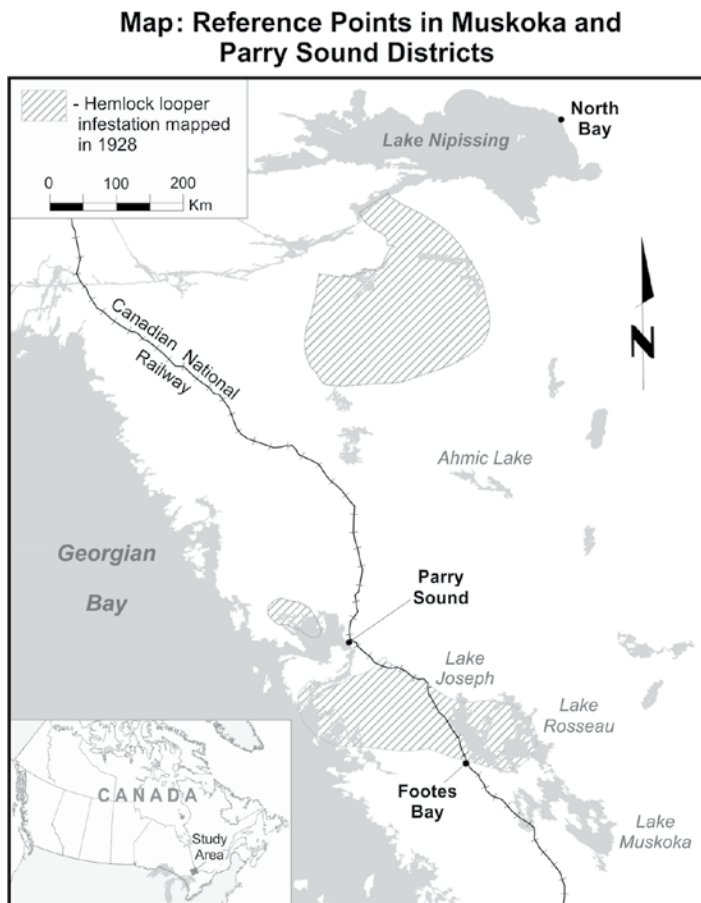
Even back as far as the 1880s, effective rail and steamship service was making Muskoka accessible and into an exclusive vacation retreat for wealthy and influential city dwellers (Toronto, New York, Boston) who sought summer refuge from the crowded, dirty, and poorly serviced cities. At that time, reliable and safe sewage and clean drinking water infrastructure were almost non-existent, creating ongoing waves of cholera, typhoid, and influenza (to name a few). Muskoka's natural wilderness, with its pristine lakes, healthy rivers, and towering forests, provided the ideal escape and respite for those who could afford it.

This ideal portrait of nature's perfection was suddenly under threat in mid-summer 1927 when local cottage owners observed the needles on some of their treasured hemlock were turning brown and falling off. Complaints to the Ontario Department of Lands and Forests revealed that the cause was a pest called the Hemlock Looper. It is a native insect whose presence occurs with 'lightning speed' and continues at acute intensity for some years; it somewhat mysteriously dissipates as quickly as it comes. In the process, these pests eat a lot of foliage and cause extensive mortality after repeated attacks. While the insect was identified, little was known as to how to stop or even control it.

Local landowners, primarily cottagers, became increasingly alarmed and demands for action grew. For example, Albert A Wilks, a cottage owner at the north end of Lake Joseph, assured Ontario's forestry officials that, "if you could see the fine Hemlocks dying by the hundreds on Chiefs Island, as I can from our dock, you would be filled with regret as I am" and added "it would be a calamity if our trees should be killed by the hundreds as they are over on Chiefs Island." The local District Forester confessed that "fighting insect plagues is something new to me" and he believed "it would be impossible to stop [the Looper] on so large a scale".

Since the mid-1800s, the Canadian science community was expanding its research on insects, but it was primarily related to food crops. In 1886, the Canadian government put a sharper focus on the issue with the establishment of a Division of Entomology in the Department of Agriculture, which included experts who specialized in forest insects. Understandably though, the key driver was securing food production and protecting those crops from insect damage and losses over large areas as food production was becoming big business. By the early 1900s, Dominion

continued ...



Source: Information about the looper infestations transcribed from AO, RG1-256, 1, Hemlock Looper (2), loose map in file.

entomologists were exploring new means of insect control. Agricultural crops tended to be grown on flat terrain in well-developed areas, and they grew close to the ground (even fruit trees); they were also of relatively high value. Perfect candidates for a pioneering technique...spraying/dusting from aircraft flying low to the ground. By the 1920s evidence from projects in Niagara, Nova Scotia and BC suggested that it seemed to work. This encouraged the development of more powerful sprayers, use of more suitable aircraft and mixing more effective chemical cocktails with arsenic and sulphur bases.

Translating this success to controlling forest pests was not straightforward given that trees tended to grow very tall on often rugged sites in generally inaccessible locations. The plane developed and modified in the U.S. for agriculture dusting was called the Keystone Puffer. It was well suited to flying the requisite 15-20 feet above the crop it was treating, however, it was slow and cumbersome. It also suffered the unfortunate failing of stalling on turns, not too serious in flat farm country crisscrossed with empty dirt roads. Nonetheless, intrepid Canadian entomologists were determined to try this new technology on forest pest outbreaks in Canada. First attempts were made on Cape Breton Island with applications of calcium arsenate dust to battle the ubiquitous Spruce Budworm. The following year, Dominion entomologists aerially dusted in Westree, north of Sudbury, Ontario on the licence of the Spanish River Pulp and Paper Mills. In spite of the mixed results, the increasingly impatient cottagers of Muskoka were getting more vocal, lobbying the Government of Ontario to get those planes in the air to “save” their trees.

A sample of some of the influential voices that owned Muskoka properties included E.R.C. Clarkson, the founder of accounting giant Clarkson Gordon (now merged with Ernst and Young), who argued that the loss of the local hemlock would “of course, make Muskoka a desert waste”. These views were echoed by Sir Thomas White, former federal Tory Finance Minister (who interestingly introduced income tax as a temporary measure to finance the war effort in 1917) and President of the Muskoka Lakes Association, and William H. Finlayson. Although he was not a local landowner, he was the Ontario Minister of Lands and Forests with his riding in nearby Midland.

With this level of political volume and heft, the scientifically inclined Dominion entomologists were not keen to get directly involved, but were willing to facilitate an operation if Ontario decided to proceed. It should be mentioned that the efforts to date elsewhere had all been on public land and arguably could warrant government led

efforts at control. These forests were all privately owned... by some of the wealthiest families in Ontario and the northern United States.

Unsurprisingly, Ontario acquiesced and allocated \$20,000 (over \$300,000 in 2021 dollars) to acquire a suitable aircraft, buy the dust and apply it to the forests of Muskoka. While the Puffer worked well enough in the extensive, flat expanses of U.S. cotton fields, even the most experienced (especially the most experienced) pilots at the Department of National Defense (DND...the source of pilots for this project) wanted nothing to do with the single engine, underpowered Puffer.

The question became, what plane was most suitable for the roadless, difficult terrain of the southern Canadian Shield? The De Havilland DH61, manufactured in England, was chosen and even though it too had a single engine, it was much more powerful, so did not stall in the turns, and could carry a larger payload. The troublesome detail of getting the aircraft from overseas to northern Ontario in time for the spray season (mid-June 1928) was the next problem to solve. Starting the month-long project any later meant that the larvae would be too big and would have stopped eating; they would not ingest sufficient toxic dust to kill them. The anxious cottage owners, who by this time could almost taste victory, had no patience for these logistical details and demanded action, as they were promised. The fact that the DH61 finally arrived in Canada mid-June, but damaged in transit requiring extensive repairs, did not placate the unhappy local folks who were anxiously watching the voracious Loopers eating their hemlock.

Despite all earlier advice to the contrary, but facing unrelenting pressure from the cottage community and a potentially lost spray season, provincial officials requested that the DND loan them their Keystone Puffer plane to get the job done. Ottawa reluctantly agreed, but made it clear that no DND pilots would be provided and the “you break it, you fix it” clause was spelled out clearly in the response. Urgently needing flyers, Ontario dragooned two pilots from their base in Northern Ontario with vague instruction to ‘get down here’. Even though by then it was well into July 1928, the dusting got underway. One can only imagine the truly awful job of flying this grossly underpowered aircraft over lakes and forests manually, opening the hopper filled with arsenic laced dust that up drafted into the cockpit with every release, thereby covering the pilot’s entire body including eyes, ears, and nostrils, in spite of rudimentary protection. Quite legitimately, they explained these extremely hazardous conditions to Toronto-based superiors only to be told to ‘get the job done’.

Image 4.7: The Keystone “Puffer” That Was Initially Used to Dust Canada’s Forests, ca. 1928



This photograph vividly captures why it was so dangerous to use the Puffer for dusting Canada’s forests. Note the stains of poison dust on the lower fuselage and the position of the cockpit. When the dust was released from the hopper near the plane’s nose, it created a toxic cloud that both blinded and sickened the pilot (National Aviation Museum (Ottawa), Negative No. 6103).

One pilot wrote “the dust pours in from it to the cockpit, and the famous “Luxor” goggles are useless to keep it from my eyes. My word how it stings, and it gives me a headache every day. It had the same effect on Flying Officer Bath when he commenced dusting, but he has since got used to it. Holy Mackerel what a rotten machine the Puffer is. The floats are absolutely wrong ... She stalls at about 75 mph and loses speed horribly on turns”. Both pilots, knowing they could be faced with losing their jobs, flatly refused to fly that plane again, but by this time, it was late July, and any dusting would have been completely ineffective. While the Ontario government could do nothing else during 1928, it fulfilled its pledge to take significant action the following year.

During the summer of 1929, it dumped nearly 40,000 pounds of calcium arsenate over roughly 1,700 acres (688 hectares) in Muskoka [mainly around Foote’s Bay], Georgian Bay and Ahmic Lake. In spite of a number of operational difficulties, the Ontario government could declare that it delivered on its commitment to the cottagers of Muskoka. The reality was though, the outbreak was

already in decline and the Looper population would probably have crashed within a year, as was the advice of some of the entomologists of the day.

Some lessons (obvious and more subtle) from this story include the age old one of the power and influence of wealthy persons on public policy decision making. Since aerial dusting projects in forests continued, and improved, it put Canada at the forefront of early innovation in forest protection and served to expand investment by governments in entomology research and forest operations. Perhaps more subtly, it revealed a strong bias and perception that big, beautiful trees should always look that way and any change (i.e.: decline or damage) was unnatural and warranted dumping a cocktail of lethal chemicals, known to be toxic to a spectrum of forest creatures, to preserve those beautiful summer views.

Taken from Mark Kuhlberg, “Killing Bugs for Business and Beauty: Canada’s Aerial War Against Forest Pests” (forthcoming in 2021 with University of Toronto Press) Professor, History Department, Laurentian University, and Past Chair of the Forest History Society of Ontario.



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- Preserve forest and forest conservation history;
- Encourage and further the development and recognition of forest history;
- Support research and studies of forest history;
- Support the archival preservation of records and materials relating to forest history, and
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Reflections After Four Decades as a Forest Manager

By Dave Pridham, OWA member since the 1990's, Kawartha Chapter, Associate Member of the OPFA, Central Ontario Forest Consulting

"No matter how intently one studies the hundred little dramas of the woods and meadows, one can never learn all the salient facts about any one of them.", Aldo Leopold, 1887 – 1948: Ecologist, forester, conservationist, philosopher, former professor at the University of Wisconsin and author of 'Sand County Almanac'.

Since my start in the early 1970's, I have been greatly supported by conversations, accumulated wisdom and experience of countless peers, landowners and forest operators. Another important source of inspiration and second thought is an itch behind my right ear. Whenever I feel the need to scratch this itch, I realize my mind has been turning things over and it is time to look around and ponder factors that would benefit from greater thought.

It has been my good fortune to work in Ontario's woodlands for well over 40 years now – starting in the Sudbury and Sault Ste Marie Ministry of Natural Resources (MNR) districts, north and east of Georgian Bay and up along Lake Superior. Since the 1980s, I've lived and worked in and around the Kawartha Lakes region – I travel south to small woodlands in an increasingly developed GTA landscape and to more remote woodlands in the near north. In earlier years, I assumed that by now I would be so knowledgeable this itch would disappear. But the opposite has happened – it comes more frequently. Forest and land management has become much more complicated in a little over one generation, with serious challenges barely considered in the 1970's:

- It seems we are losing a major tree species close to every decade. When I first started, two tree species – the American chestnut and American elm, had been decimated by introduced tree diseases. At that time, American beech was often an overly abundant upland species, not especially valuable for commercial sale although we marked significant beech volume to provide growing space for other species. Since then, we have almost lost the American beech – both as a critical wildlife food producer and commercial species. All ash species are in poor shape across their range, and butternut is now a "Species at Risk". On the horizon, oak wilt and the hemlock adelgid seem destined to impact our woodlands.
- In certain areas, invasive plant and shrub species are rapidly dominating the understory of many woodlands and natural grasslands – displacing species such as trilliums, ferns, and milkweed, while dominating the natural regeneration of native tree species. If you have no invasive species on your property, be watchful, it is

just a matter of time.

- Climate change is an imminent concern and, I believe already impacting forest health on certain sites.
- Ongoing urban sprawl and development – although not a new challenge – and factors such as COVID-19 will accelerate movement from the urban areas, leading to greater fragmentation of woodlands and natural areas.

I spend much of my time from mid-summer to early winter tree marking. I have marked trees for well over 30 years now and am keenly aware my decisions have long-lasting effect

– and can be judged after the harvest, even if only by myself. Tree selection for harvest has multiple objectives: improve crown spacing to enhance health and growth of trees remaining after harvest; create openings for regeneration of a diversity of species; reduce the proportion of diseased and defective trees; and maintain habitat and other natural features – each of these considerations potentially affecting

revenue levels for both landowner and timber buyer. I no longer want to keep up with other tree markers and prefer the solitude of working on my own. The primary objective should not be a number of acres marked any day. I work shorter days and feel no guilt in pausing to look around when I feel this itch, argue with myself and ask questions with no simple answer. To elaborate:

- Where I mostly work, upland hardwood woodlands have historically been comprised of species that are moderately to extremely tolerant of shade – primarily sugar maple, American beech and white ash, with basswood more common north of the Kawartha's. Each of these species – especially maple and beech – regenerate quite readily with single tree or small group

continued ...



Bear claw marks on an American Beech. The bear had climbed the tree to harvest beech nuts

harvest, with other species often a minor component and not likely to regenerate in shade conditions. With American beech disappearing and the impact of the emerald ash borer, small woodlands are often evolving towards a hard maple monoculture with few other species.

- Following up on this concern with the decline in species diversity. Black cherry, white birch, aspen, bitternut hickory, white pine, red and white oak, and basswood are often in limited numbers within the typical upland woodland, common only on specific sites – often following a significant disturbance some decades ago. Each of these are, to one degree or another, minor species intolerant of shade. To successfully regenerate and maintain growth to maturity, they typically require moderate to large crown openings (100 feet across – or greater).
- If I mark to create these larger openings, are there nearby seed trees for these minor species; what if the openings become buckthorn or blackberry brambles; how many such openings are feasible in an 8–10-acre woodlot? How will other factors affect the result – soil type, tree genetics, competition, drought, and factors related to the forest harvest? If black cherry or red oak are the species I hope will regenerate the large openings – what if they have poor seed crops for the next 2-3 years?
- In my pessimistic moments, I believe we are witnessing the early stages of a deteriorating (certainly evolving) upland woodland ecosystem. As this trend seems almost inevitable to continue, which tree species will be threatened next? Will there be long-term effects of wildlife species focussing their forage activities on a diminishing number of mast tree species? Any woodland is a complex community of trees, forest floor plants, birds and animals, amphibians, insects, fungi, living and decaying plants and other organisms. Species that have evolved and co-existed for thousands of years will almost certainly have developed symbiotic relationships – providing mutual benefits - we are not even aware of. What happens when one tree species disappears from a forest community; what happens when two or three disappear – will there be a cascading effect? How will invasive plants and shrubs further impact this community? Considering all of this causes this itch behind my right ear.

For decades, *single tree selection* with small areas of *group selection* has been the accepted norm for tree marking in upland hardwood. And *diameter limit harvest* is not acceptable, with good reason. But 8-10 years ago, I participated with others on a Tree Marker Certification

refresher course, visiting a nice woodlot with a healthy diversity of species. Another forest manager – one I had known for 20 years and have great respect for – and I had a side conversation. He speculated that 40-50 years ago this woodlot had been harvested heavily, perhaps according to a type of diameter limit. I am not advocating diameter limit harvest, but forest management is not black and white – I think on that conversation often when developing a harvest prescription and tree marking.

I was fortunate to work with MNR when there was an active forestry program – tree marking and forest harvest planning, tree planting, tree genetics and improvement, four provincial tree nurseries in southern Ontario and a large Agreement Forests program. But in the late 1980's, with a diminishing forestry budget, we started to hear about the increasing role woodlot landowner associations must take. At that time, we all realized our duties with MNR were going to change and wondered just how an association could work. But now, 30+ years later, the Ontario Woodlot Association has accomplished steadily increasing leadership as a landowner organization – local chapter development, woodlot conferences, landowner field tours, respected advocacy, partnerships with other organizations and an integral role with the Managed Forest Tax Incentive Program. Something all OWA members can be proud of.

If you spend time in woodlands and are observant, you have noted these gradual changes I have attempted to describe. Be aware of and monitor the minor species in your woodland. Manage them to be healthy seed trees by maintaining their crown space – remove certain adjacent trees for firewood or even to provide large woody debris; retain healthy specimens when planning a commercial harvest. None of us have a complete answer to increasingly complex and evolving situations, but if you regularly read *The Ontario Woodlander* or attend local OWA chapter events, then you are gathering information that can help you be part of the solution within your own woodland.

"I am glad I will not be young in a future without wilderness.", Aldo Leopold.



A bear nest – i.e., where a bear sat in the fall and pulled in the branches to reach the nuts

'Beautiful companions'

Growing mushrooms brings life to lockdown

By Laura Brehaut

Phuong Tran first saw signs of life in her oyster mushroom grow kit on Day 7. It was a growth, reminiscent of a spiky massage ball – bubbly, rubbery and soft grey. “It’s super exciting because this is a rectangular box of what looks like just soil and all of a sudden... you’re like, ‘Oh my god, it’s coming to life,’” says the Toronto food blogger.

Once the mushrooms started emerging from the X that Tran had snipped in the plastic covering and spritzed with water a few times each day, growth was explosive. She thought of their tremendous overnight spurt on Day 9 as a kind of puberty: “I would joke, ‘Oh look, it’s becoming like a little teenager.’” Unlike awkward teenage years, which feel as though they could last forever, she didn’t have to wait long for her fledgling fungi to be ready for harvest.

Within the space of two weeks, Tran was eating homegrown oyster mushrooms for breakfast, sautéed, with toast and eggs. The “huge pride” she felt in her first foray into growing food of any kind made the rewards all the sweeter.

“They felt a little different but it’s probably because I was really proud because I grew them. If I were to blind taste test it against the mushrooms I buy, I don’t know if there would be a difference,” says Tran, laughing.



Cluster of oyster mushrooms growing from ready to fruit kit.
Photo Credit: Grow Mushrooms Canada

Since she’s been working from home during the pandemic, Tran was able to chase the indirect sunlight in her living room, relocating the kit to prime positions throughout the day. It spent its mornings beside her on a west-facing work desk and was moved next to the couch for the afternoons. Wherever it was, it was always in her line of sight.

Originally from Montreal, Tran is a self-described city person: “I’ve never

lived out in any kind of remote area. I’ve never been very close to farming.” Like so many Canadians, she made the most of lockdown by trying her hand at food cultivation – developing a new awareness of the ways it can get to the plate in the process.

More than half of Canadians grew their own food last year,

according to an October 2020 study by Dalhousie University’s Agri-Food Analytics Lab; nearly one in five (17.4 per cent) for the first time. Seed suppliers and nurseries fielded extraordinary demand due to this record number of pandemic gardeners, and this year is shaping up to be similar.

Interest in growing mushrooms has been increasing “big time,” says Willoughby Arevalo, Vancouver-based mycologist, artist and author of *DIY Mushroom Cultivation* (New Society Publishers, 2019).

Arevalo took an interest in mushrooms when he was four years old, according to his parents, and has been sharing his skills and knowledge for more than a decade. Along with parenting, making art and playing music, he considers it one of the most rewarding aspects of his life.

“It was always this weirdo thing to do and now it’s really hip all of a sudden,” he says, laughing. “So it’s a strange shift but I welcome it because fungi are so wonderful and so underappreciated and so poorly understood by the general public that the more we can understand them and connect with them, relate with them, the greater our interactions can be and we can really thrive together.”

While in *DIY Mushroom Cultivation* Arevalo outlines his philosophy and process from start to finish – including workspaces, tools and equipment, how to start and maintain cultures, outdoor growing and mushroom gardening, harvest, processing and use – he sees ready-to-fruit kits, such as the one Tran used to grow her oyster mushrooms, as an excellent first step.

“It’s relatively low-barrier. They’re more expensive than making your own once you have the system set up to do so, but they’re not that expensive,” says Arevalo (they typically range from \$25-\$35). “And it can really bring a sense of amazement to be able to share space with these mushrooms as they fruit. Actually witnessing their growth, getting bigger every single day, can be really dramatic at times and very inspiring.”

Grow kits piqued Andrew Langevin’s interest in mushroom cultivation several years ago. After he lost his long-held job in the film industry at the outset of the pandemic, he started growing mushrooms professionally to sell at farmers’ markets. Following a successful crowdfunding campaign in June, he launched his company, Nature Lion, and started offering black oyster grow kits. He has since added a lion’s mane version, with plans to add a few more strains this year,

continued ...

including pink and golden oyster mushrooms.

Sales have been strong, Langevin says, and with significant interest from garden centres, he's anticipating a busy spring and summer. "We expect to grow a lot more in the next six to 12 months. We've leased a 3,000-square-foot facility in Brantford (Ont.) and we're going to be building it out and building a laboratory and different growing rooms."

Unlike gardening, which generally requires an investment of space and time, kits offer the best of both worlds, he adds: "Even if you're working a busy schedule or if you live in an apartment and you can't have a garden on your balcony, you can still do it."

Jessica Snider, co-owner of Grow Mushrooms Canada, an online mycological supply store based in Sayward, B.C., says demand for grow kits has been especially high during the pandemic. "Last spring, when the lockdowns and



Jessica Snider harvesting wild oyster mushrooms which can also be cultivated. Photo Credit: Grow Mushrooms Canada

— are a year-round staple. In addition to continued demand for their grow kits, people are now looking towards outdoor cultivation, Snider says. They recently put their wine cap mushroom kits back in stock, which are popular for planting in garden beds and pathways, and had "a huge influx of people" waiting to buy them.

They also sell plug spawn — inoculated dowels that can be tapped into logs — and liquid culture (mycelium, the fungal network mushrooms grow from, suspended in broth), which comes in a syringe that people can inject into a bag of rye grain to start their own culture and expand their cultivation into pasteurized straw or wood chips.

Grow kits are essentially mycelium growing in its substrate: a material it eats and is housed in, which can range from hardwood sawdust supplemented with wheat bran and rye grains to spent coffee grounds from a local café. Maintaining



Paul Gurszki harvesting shiitake grown on logs. Photo Credit: Grow Mushrooms Canada

high humidity is key, which is why misting regularly is critical. "The main ingredient for mushrooms is they need a humid environment," says Snider. "So you can do it all year round in your home. It's very simple. You don't need lots of equipment for that."

A biologist with a background in wild mushrooms, Snider cites the health benefits of certain types for their increased popularity, as well as the mystique surrounding them in general. "If you get that mushroom fever, you're gone," she says, laughing. "There's this allure to mushrooms that pulls people in and it definitely captivated me many years ago. And now it's like I'm working for the mushrooms and propagating them."



Basket of Wine Cap mushrooms grown outdoors in straw and woodchips garden. Photo Credit: Grow Mushrooms Canada

If you spend any time online exploring #mushroomcultivation, you'll likely come across some novel setups, such as grow kits kept on nightstands and otherwise in close proximity to their caretakers. Arevalo cautions that mushrooms produce many tiny spores, which can irritate the lungs. Resilient, easy-to-grow oysters — which are popular with beginners for good reason — are especially prolific spore producers.

"There's a condition called mushroom worker's lung, which is basically an accumulation of mushroom spores in the lungs that causes irritation. And I have felt it," says Arevalo. He once worked at a mushroom farm, and although he was mainly stationed in the lab, whenever he would walk into the oyster fruiting room, he would feel it almost instantly in his lungs.

The best way for home growers to manage this, he adds, is to pick the mushrooms when they're in their prime. "The caps of oysters start with edges curved in a little bit and as they open up, they'll start to flare upward. And when they get really mature, they'll flare upward and be wavy," explains Arevalo. "You want to pick them when the mushrooms are decent-sized, but the edges of the cap are still a little bit curled under, and before they're flaring upward in order to prevent them putting literally millions to billions of spores into your indoor space."

In *DIY Mushroom Cultivation*, Arevalo dispels the assumptions that you need to have specialized laboratory equipment, dedicated spaces and wooded land in order to grow mushrooms without the aid of a kit. His one-bedroom basement suite in East Vancouver – which he shares with his partner, fellow artist and educator Isabelle Kirouac, their four-year-old daughter, Uma, mycelium for art projects and fruiting mushrooms for them to eat – is proof.

When we spoke, Arevalo was growing spawn for a high school garden labyrinth based on the one set in the floor of the nave in France's Chartres Cathedral. The mushroom shape is filled with wood chips and bordered with pathways defined by little log rounds inoculated with mushrooms. "That's growing here on the shelf in our living room," he says. "We've got eight bags of sawdust growing through with their white mycelium making beautiful fans."

Arevalo's relationship with cultivated mushrooms – which he considers "beautiful companions" – is reciprocal. His book may be called *DIY Mushroom Cultivation*, but the truth, he writes, "is that we Do It Together."

One of his photos in the book illustrates this interspecies community perfectly: a bag filled with blush-pink oyster mushrooms and their substrate hanging from a shower caddy, a rubber duckie, loofah and rubber toy snake as neighbours. Growing mushrooms at home is more than a means to an end: It's a relationship that can thrive in even the smallest of living spaces.

"Part of that is recognizing the fungi as living beings with their own awareness, their own sensitivity, their own intelligence and consciousness, and their own intention. And I don't think it's at all a stretch to say that," says Arevalo. "And recognizing that in growing mushrooms in our home, we are cohabitating with these beings, finding ways to share space in ways that can be mutually agreeable and mutually beneficial – ways that we can care for them and in exchange, receive their gifts."

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Climate Change and Biodiversity focus of

December 2020 Forest Seminar (Part 2)

By Tony Bull, President of the Eastern Ontario Model Forest, and Renfrew County Chapter

In the last issue of *The Ontario Woodlander*, I gave a summary of the December Seminar, jointly put on by the Eastern Ontario Model Forest (EOMF) and the Canadian Institute of Forestry (CIF), Ottawa Valley Section. The event featured three speakers addressing these two urgent environmental challenges; planetary threats due to human induced climate change and the serious loss of biodiversity.

According to the Intergovernmental Panel on Climate Change (IPCC): “There is alarming evidence that important tipping points, leading to irreversible changes in major ecosystems and the planetary climate system, may already have been reached or passed. Ecosystems as diverse as the Amazon rainforest and the Arctic tundra, may be approaching thresholds of dramatic change through warming and drying.”

And, according to the United Nations Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), “The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.”

Famed naturalist David Attenborough has recently written of this crisis. “It is no accident that the stability of our planet’s climate is wavering at the very moment the extraordinary richness of life on our fragile planet is in sharp decline. The two things are bound together.”

“Restoring biodiversity on Earth is the only way out of the crisis we have created. And that, in turn, means ‘re-wilding’ the world, re-establishing the balance between the human world and the rest of nature.”

He ends on an optimistic note with these words “We humans have come as far as we have because we are the cleverest creatures to have ever lived on Earth.”

“But if we are to continue to exist, we will require more than intelligence. We will require wisdom.”

“Homo sapiens, the wise human being, must now learn from its mistakes and live up to its name. We who are alive today have the formidable task of making sure that our species does so. We must not give up hope.”

“We can yet make amends, change direction and once again become a species in harmony with nature. All we require is the will.”

In a similar vein, the Stockholm Institute of Resilience observes “the fascinating paradox that the innovative capacity

that has put us in the current environmental predicament can also be used to push us out of it. Resilience thinking embraces learning, diversity and how to adapt to a wide range of complex challenges.” It fundamentally makes the case that our challenge is to better connect people to nature in order to have everybody commit to the environmental challenges that we face and must solve.

Experiences Leading to Commitment to Conservation

The Food and Agriculture Organization (FAO) of the United Nations’ report on the State of the World’s Forests echoes the Stockholm Institute of Resilience observation about the importance of learning to better connect people to the environment: “Environmental literacy can provide a foundation for achieving biodiversity conservation and sustainable forest management. Environmental literacy is often built through first-hand experience of nature, including involvement in outdoor activities that have an ecological focus and engagement in adaptive management.”

For example, at the Haliburton Forest a number of experiences are offered; many of a recreational nature, but others such as forestry tours, sustainable wood tours and nature/ecology hikes can be arranged as well, specifically tailored to increase people’s awareness of the importance of natural environments. In addition, the forest has hosted ecosystem conservation and biodiversity field camps for students from the University of Toronto’s former Faculty of Forestry (now merged into the Daniels Faculty of Architecture, Landscape and Design).

Bob Dobson, at his transformed farm, has hosted tours from overseas as well as locally to help people interested in farming “sustainably” see how he has done it over the years.

The EOMF has three formal events per year, in the same educational vein. In addition, it dispenses a steady stream of information via a monthly newsletter, periodic forest health information updates and regular meetings of FSC forest managers to share information about each other’s activities and challenges. The EOMF has also sponsored a two-part video series “Trees, Youth, our Future” that “celebrates the stewardship of forests in Eastern Ontario and elsewhere”.

Other organizations that create learning experiences leading to a greater environmental consciousness are the Ontario Woodlot Association with 20 chapters holding information events for their members, and Forests Ontario featuring its Envirothon program of forest related events aimed at young people.



Learning how to use an increment borer to age a tree

Another example, in Renfrew County, is the Shaw Woods Outdoor Education Centre which hosts thousands of school children and staff every year offering educational trails and programs in order to “connect” them to the forest. Also, there is the Canadian Ecology Centre (CEC) near Mattawa, which focuses on experiential outdoor learning and the environment, with particular emphasis on forest science and sustainable resource management. The CEC’s annual Teachers’ Forestry Tour has been a very popular professional development program with Ontario’s educators.

Concluding Remarks on Biodiversity Applicable to both Farming and Forested Landscapes

Environment Canada, in its report “How Much Habitat is Enough” with respect to forests, focusing on southern Ontario, estimates that it would be ideal to have 50% terrestrial habitat cover at the watershed scale to provide for all the life

continued ...



Teachers’ Forestry Tour at the Canadian Ecology Centre

requirements of naturally occurring species of flora and fauna. Below 30%, there will be an impact on the ability of the environment to support the full range of natural life. Even at the minimum of 30%, a significant number of species will not be provided with their life requirements to thrive. 40% cover will provide for more than half the species needs.

Within these criteria, a number of forest patches should be 200 hectares in size and not be more than two km distant from other patches. Forest corridors capable of facilitating species movement should be between 50 and 100 metres in width.

In much of southern Ontario, there are only small patches of forested land; in the southwest, perhaps only 5%. This percentage rises towards the northern edge of the southern area; in the northern Niagara peninsula, Lanark and Renfrew County, the Frontenac Axis, the percentage is in excess of 50%. The Haliburton Forest and Wildlife Reserve, on the south edge of Algonquin Park, would be 100% forest cover, for instance.

Australia's Commonwealth Scientific and Industrial Research Organization (CSIRO) report *Science and Solutions for Australia; Biodiversity* recommends a higher threshold; habitat covering two-thirds of the landscape is fully connected for all the species dependent on it, including all those that are totally restricted to the habitat.

In Australia, it is recognized that legislation is necessary, but should not be a dominant tool in protecting the environment; it could lead to land managers not reporting on species at risk, or worse, deliberately destroying habitat as has reportedly happened due to Ontario's dominant regulatory approach for endangered species. Instead, Australia's strategy features

a number of cooperative approaches such as the Land Care movement, coupled with incentives and rewards in order to create a landowner/manager supportive approach to conservation.

A summary thought regarding the approach in Australia: "Native species will survive best in farming and forestry landscapes when activities that continue to create positive long-term attitudes to biodiversity conservation are designed and implemented. Success depends upon continuing to find a balance between community values and involvement and individual decision-making, and appropriate levels of government intervention without leading to a reliance on it."

And these similar insights from the FAO State of the World's Forest Report: "Environmental literacy can provide a foundation for achieving biodiversity conservation and sustainable forest management and can be promoted through education and evidence-based communication. A new approach to education for sustainability must emphasize critical thinking, integrated principles, and the use of acquired skills to turn knowledge into action. Environmental literacy is often built through first-hand experience of nature, including involvement in outdoor activities that have an ecological focus and engagement in adaptive management."



Something for the Woodlot Techies

Using Avenza and Google Earth Pro for your Woodlot Mapping Needs

By John Pineau, Near North Chapter

I have been using the Avenza app for about a year now and have made it a component of the remote sensing course I help to teach at Algonquin College in the forest technician program. It is a useful mapping and navigation tool that integrates with your phone or tablet's GPS, and also provides a digital map store. Many of the maps are free, but some cost a few dollars. There is a limit on the number of maps you can load and use, before an annual fee is required. Avenza allows you to locate yourself

without the Internet or network connections; other than downloading the app itself and the maps you need, it does not use up data from your plan... And there are indeed all kinds of uses for it including hiking, biking, camping or anywhere you might need a map outdoors. It certainly has a practical use for our woodlots, and I have seen many forestry workers using Avenza as part of their day-to-day routine. It is great for marking a special location, doing individual tree inventories, mapping trails, navigating

through the bush, and marking boundaries.

Following is a very concise primer to get folks started:

1. Install the Avenza App on your phone or tablet:
<https://www.avenza.com/avenza-maps/> (fig. 1)
2. To learn the basics of the Avenza App, watch this short tutorial, and then try it yourself to become familiar with its basic functionality.
<https://www.youtube.com/watch?v=CzGFYSPwKDo>
3. Within the Avenza App and its map store, search for and download a free map for your property; use the search function in the map store to find one.
4. Open the local map and tap where the coordinates are displayed and set to UTM (a standard map projection for Ontario). (fig. 2 & 3)
5. Zoom in and out of the map and get oriented.
6. See where the GPS places you on the map and set a placemark; you can walk around your location a bit and set other placemarks with names; you can also take photos at each placemark, and they will be linked.

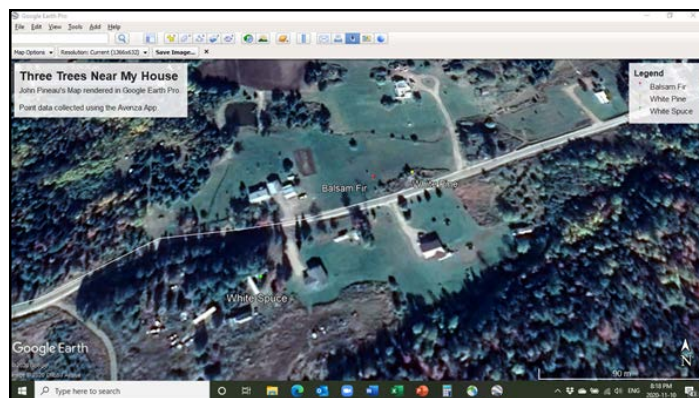
(fig. 4 & 5)

Avenza data can be easily exported and used in Google Earth Pro, another free software that I have on my laptop. To download Google Earth Pro: <https://www.google.com/earth/download/gep/agree.html?hl=en-GB>

7. Export the layer you have created of these various placemarks as a KML file and email it to yourself; you

can then open that file in google earth, and it will zoom into your location and display the placemarks within a few metres. (fig. 6 & 7)

Like any app or software, both Avenza and Google Earth Pro require some time and effort for the user to become proficient and confident; both are worth that effort! I hope this short piece at least helps you to have a positive first experience using them. The rest is up to your persistence and patience. They actually are very useful, and a lot of fun too!



Example of a simple map from Google Earth Pro with some imported Avenza data (the first one we did).

If you give Avenza or Google Earth Pro a try, but get stuck, please feel free to reach out to me by email, and I can set up a Zoom to help walk you through it: john.pineau@ontariowoodlot.com



fig. 1

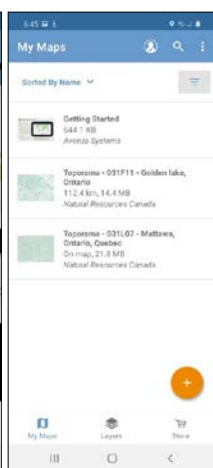


fig. 2



fig. 3



fig. 4

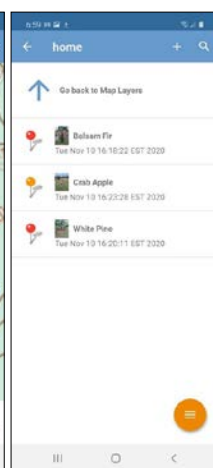


fig. 5

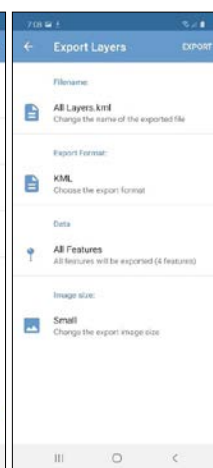


fig. 6



fig. 7

Thank You to the OWA Communications Committee

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- Neil Dunning, Brant Chapter
- Tedd Wood, Lower Ottawa Valley Chapter (Assistant Editor)
- Kerry Coleman, Lower Ottawa Valley Chapter
- Erica Dixon, York-Durham Chapter
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The Source

The Ontario Woodlander is published expressly to promote the wise and profitable use of Ontario's private forest resource by OWA. The newsletter is published quarterly. Subscription to The Ontario Woodlander is through membership in the Ontario Woodlot Association. Membership rates are \$56.50 (HST included) per year. Opinions expressed are those of the contributing authors, and do not necessarily reflect the policy of OWA. Questions and comments are welcomed. No part of this newsletter may be reproduced without expressed written permission from the OWA.

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