Greenleaves

ISSUE #4, 2023 — Member Newsletter of **Bruce Grey Woodlands Association**

IN THIS ISSUE:

BGWA.CA

Would you like to host a member tour of your woodland property?

Contact Jim Coles
jcoles@gbtel.ca
519-477-4539

Upcoming Board Meetings

January 9th

Members Welcome!

Contact secretary@bgwa.ca to confirm format (virtual, in-person, hybrid) and location or zoom link.

Greenleaves is published by Bruce Grey Woodlands Association (BGWA) and distributed to members to provide information, guidance, instruction, ideas and opinions related to trees, woodland ecosystems, forest management, and recreation in forest settings in or relevant to Bruce and Grey counties.

BGWA's vision: Promoting healthy forests and ecosystems in Bruce and Grey Counties through education, recreation and sustainable management practices.

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President's Message

By Jim White

Dear BGWA members,

What amazing weather we have been blessed with. We joined some old friends for a week in Algonquin Provincial Park and witnessed spectacular colour on our arrival with about 50 percent leaf drop over the week we were there. Terrific hiking and even a little canoeing. We came home and got to see the leaf colour changes at our woodlot for our part of the province.

Friday after Remembrance Day we did our final parasite treatment for the fall on our bee hives, left the "girls" some extra food, and wrapped up the hives without having to dust any snow off them.

BGWA's Events and Education committee has been extremely active for our members this fall. The committee is comprised of: Donna Lacey, Anne Lennox, Gary Kenny, Susan McGowan, Scott McGregor, Ron Stewart, and co-chairs Lloyd Holbrook and Jim Coles.

Recently, as I was driving home from the Association's first Chainsaw Safety Awareness Course, I thought about how fortunate BGWA is to have such an excellent team of volunteers. These individuals are all busy with their personal lives, many work full-time, and yet they are so generous with their commitment to volunteering for our Association. I am also gratified to witness members who reach out with questions on woodland topics. *Greenleaves* and the BGWA membership also benefit directly when a volunteer member authors an article or makes another contribution to the newsletter.

In this president's message I will reflect on the importance of volunteers both to BGWA and generally.

Volunteers are the unsung heroes of communities and certainly our organization. Their selfless dedication, time, and efforts play a pivotal role in BGWA. The Association is a community of individuals/families that share an interest in and promote healthy forests and ecosystems in Bruce and Grey Counties, through education, recreation, and sustainable management practices. Not-for-profit organizations like BGWA exist because volunteers are their backbone. Volunteers often serve as a catalyst for positive change.

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Jim and partner having just wrapped their bee hives for winter.

The active members in our organization, with their diverse skills and backgrounds, contribute to the development and implementation of effective solutions to woodland-related challenges primarily through a focus on member education.

Why would someone consider volunteering? From the few years I have been on the BGWA board, volunteering is a powerful avenue for personal and professional growth. Individuals who volunteer often acquire new skills, gain valuable experience, and broaden their perspectives. Volunteering serves as a platform for networking, building new relationships, and enhancing both personal and professional development. The experience gained through volunteering can be a stepping-stone for individuals to explore new career paths, develop new expertise, and develop leadership skills.

Clearly one of the huge advantages that BGWA has is the number of professionally trained individuals it has among members and directors, people who contribute significantly to the Association's educational initiatives. These may include identifying and organizing educational events, mentoring members, and participating in educational outreach programs. The involvement of volunteers enhances the learning experience for all members. Volunteers, no matter how busy, are consistently dedicated, passionate, and willing to contribute time and skills that make them indispensable. As we recognize the importance of volunteers, it becomes clear that their impact extends far beyond the immediate tasks they undertake.

Will you consider volunteering with the BGWA?

This Fall issue of *Greenleaves* includes several articles about events we have held this fall. Many of you have participated in one or several of them. Of particular note we have tried a couple of events that included a modest fee so that we could deliver even more impactful learning experiences. Your participation and post-event comments reinforced that these changes in subject area and user fees are valuable.

If it has been a while since you joined us for an event, I encourage you to come to some of our planned winter events and learn and even make new friends. Bring a friend of your own.

We have an updated brochure available to promote membership in BGWA, thanks to director Becky Bouwmeester who navigated us to its completion! If you have any neighbours with forested properties, invite them to join our Association! A copy of the new brochure is included in this issue.

Last quarter I informed you that our BGWA *Greenleaves* editor, Gary Kenny, and his partner were relocating. Gary will continue on an interim basis for 2023 as our editor. I am very pleased to inform you that our BGWA secretary, Kevin Predon, has offered to assume the role of *Greenleaves* editor. We look forward to continuing to work with Kevin in his new role. He will vacate his duties as Secretary with the start of our new fiscal year and with the election of the new executive committee.

I trust that you will recognize the importance of volunteers in my message. Please give volunteering for the BGWA some serious thought and reach out if you have any questions.

I truly hope that you enjoy reading this edition of *Greenleaves*. Every aspect of this production hinges on the skills and capabilities of volunteers. The number of articles and photographs and variety of topics relies on our local members for contributions. Longer newsletters reflect more contributions received from you, our members. We had several new contributors join the "authors" list last year. We hope you will find time to contribute again this year. For our regular contributors – simply thank you for taking the time and energy to share your insights and perspectives with us.

Please send your contributions to: newsletter@bgwa.ca

I hope to see many of you out enjoying the learning experiences offered with our BGWA-sponsored events.

30,000 Condors

By BGWA member, Marshall Byle

I'm certain most woodlot owners are familiar with the graceful soaring Turkey Vultures that are such a common sight during spring, summer, and fall. Of course, by the time this newsletter is published, they all will have left for warmer climes.

About a century ago, these birds were sparsely populated in Southern Ontario, and their breeding range was pretty much restricted to the Carolinian zone along the north shore of Lake Erie. I remember seeing my first ones near Belfountain on the Niagara Escarpment about 60 years ago. Many birders traveled there to see them.

Since then, Turkey Vultures have proliferated in Ontario and several hundred thousand now nest here. Why the change over the last 50 years? Climate change likely factors in as well as more cars on the highways causing more roadkill. There are a few hawkwatch stations along the migration route, where dedicated birders count all raptors that pass by during spring and fall migration. The stations are strategically located. The Niagara Peninsula Hawkwatch on the escarpment above Grimsby, Holiday Beach at the mouth of the Detroit River on Lake Erie, and Hawk Cliff at Port Stanley are just a few. On October 17th this fall, 30,000 Turkey Vultures flew by on the Detroit River in about one hour. Apparently it was a sight to behold.

Here are some interesting facts: Turkey Vultures nest on the ground along the edge of woodlots. If you come across some fledglings, they will hiss at you and as a last resort will projectile vomit at you. And they actually poop on their feet to help stay cool in hot weather.

It has been long disputed that they find their food by sight or by a highly developed sense of smell. In the 1800s, Audubon conducted experiments and concluded that they use sight only. Later experiments have indicated that they can use smell.

Even though their food habits are repugnant to people, Turkey Vultures play an important role in nature. All have featherless heads which aids in sanitation allowing the ultraviolet rays of the sun to kill bacteria.

Turkey Vultures were so named because of their featherless heads and resemblance to domestic and wild turkeys. In actual fact, they are not related to vultures of Europe or Africa. Their closest relative here would be the California Condor, so a much more fitting name would be the Northern Condor.

BGWA Event: A Forest and Conservation History of Hanover and West Grey October 14, 2023

In August BGWA members were treated to a guided tour of some of Hanover and West Grey County's historical and cultural forest features. The guide for the day was Registered Forest Professional (retired), Terry Schwan, and the event was hosted by Forest History Ontario with support from Bruce Grey Woodlands Association, Saugeen Valley Conservation Authority, Grey County, and Bruce County Forestry. Donna Lacey, Lee Thurston, and Jim Eccles participated in leadership. Following are some notes of the tour prepared by Terry.

Background

Grey and Bruce Counties were among the last areas surveyed and the last settled (by non-Indigenous peoples) in what was then referred to as "Old Ontario." Although coastal areas of these Counties were settled by fur traders from the 1820's, the interior area was only being occupied from the 1840's and 1850's after the surveyors marked out lots and concessions. Land clearing occurred at a fast rate until farms resembled those settled in more southerly parts 50 years earlier.

Landscapes were laid bare, springs dried up, and rivers and creeks flooded regularly. The only serious blow sands in the area were in Bruce County near Hepworth and the Sauble area. Till soils were rich and excellent for agriculture, but pity the poor settler who had swampy or hilly stone-infested properties that in hindsight should never have been cleared - they should have been left in forest.

Participants in the Forest History Tour gather roadside on one of their tour stops.

In the early 1900's, it was widely recognized that clearing the forest for agriculture and the agriculture practices themselves caused great damage to landscapes and economic loss to all. From 1909, the Department of Lands and Forests provided trees to farmers and supported private land and municipally-owned demonstration woodlots and plantations. The significance of the damaged landscape caused the government to establish two nurseries in 1922, in Midhurst and Orono, to support the St. Williams nursery already in operation since 1909.

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The Tour

Our first stop was Wilder Lake Plantation approximately five miles east of Durham. The reforestation included a mix of hardwoods and softwoods and has been under professional forest management since 1940.

The second stop was Grey Main Tract and Camp Oliver. The forest is a mix of pine, spruce, and mixed hardwoods planted so that, with silviculture treatments, the result would be commercial harvests in the early 2000's. Camp Oliver was established as a Reform Camp as part of the Reforms Institute of Guelph with 40 residents. The Camp became a major producer of Christmas trees and firewood. Grey County has marked the beautiful recreational trails on the property.

The third stop was Knechtel Forest, one of the many properties that supplied raw materials for the third-oldest furniture manufacturing company in Ontario before its closure. We even saw part of a red cedar plantation planted to source wood for cedar chests.

The fourth stop was downtown Hanover at Heritage Square. It was the original site of the sprawling Knechtel Furniture Company. The park hosts a variety of local cultural events for the town.

The fifth stop was Ruhl Lake, which was and remains the primary source of drinking water for the town of Hanover.

The pump house and water line date from 1901. The properties surrounding the lake have been planted in mixed forest and are now under a forest management plan. Because this area is not open to the public, we were escorted by a knowledgeable guide from the Town of Hanover.

The sixth stop was the 150 year-old Oak that was planted by the first pastor in the parish of St. Francis Zavier Roman Catholic Church in Carlsruhe. The church design was based on the Munster Kerk in Roermund, Holland. The oak measures 171 cm at breast height – an impressive monster!

The seventh stop was at the former Dierlamm property where the owner built an impressive stone gate at the farm lane. Near the farm buildings he built a 75-foot long wall and gateway using stones collected from the area and his travels. The property includes a demonstration woodlot.

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The eighth stop was also our lunch meeting point at Sulphur Springs Conservation Area. The Saugeen Valley Conservation Authority (SVCA) purchased the property from Mr. Metzger and converted the buildings and area into the original Authority's office and workshop. As the name of the area suggests, a "warm" sulphur spring provides a strong flow of water. Numerous hiking and picnic areas make this a worthwhile visit at any time of the year.

Terry Schwan, Donna Lacey, Lee Thurston, and Jim Eccles each provided interesting historical information to our group about demonstration forests and demonstration woodlots as well as various points of cultural interest. The foresight of environmentalists from the 1920-1930's was pivotal in educating local residents about the importance in stabilizing the land originally cleared and replanted into productive forests.

The impressive stone gate at the former Dierlamm property on Grey Road 10.

BGWA Event: Guided Forest Hike at Neyaashiinigmiing

By BGWA member, Donna Lacey

In September BGWA members participated in a guided forest hike led by Lenore Keeshig of the Chippewas of Nawash Unceded First Nation at Neyaashiinigmiing (Cape Croker) on the Saugeen (Bruce) Peninsula. BGWA member Donna Lacey was among the hikers and wrote this article about her experience for Rural Voice *magazine. It is reprinted here with permission.*

I recently had the great fortune of taking a hike guided by a member of the Anishinaabek Nation at Cape Crocker or Neyaashiinigmiing. The theme of the hike was that it was to be an interpretive hike. I was really looking forward to this hike to learn about nature through a different lens.

The week prior to our hike was a very hot and humid week which started to make me lose enthusiasm for this adventure. Luckily the weather turned out to be quite favorable to take a hike. We met at the roadside and casually chatted about sweet peas and chokecherries. Sweet peas are a flower from my childhood that I have always enjoyed seeing in ditches.

Our discussion evolved into the establishment of sweet peas and whether they were native or invasive or other. It turns out that like many plants, the more you want sweet peas to grow, the harder they may fight you. Yet those neglected roadside plants flower away for at least a month with no assistance. Plant a sweet pea or a group of sweet peas and you will need to do a little bit of research to ensure establishment. Sweet peas are not native and they may be quite aggressive with their vine like growth, but they are not invasive.

We were admiring the heavy crop of choke cherries in the tree behind the sweet peas. Apparently, there has been an abundance of choke cherries in the Cape Croker area as the bird population drastically declined in recent years due to avian flu. These cherries will now be available for other species to enjoy until the bird populations rebuild themselves.

Prior to heading out for our hike, we are welcomed by our guide and informed about the area we were about to visit. A surprise to me, as I had never had the term unceded explained to me, we were gathered in the west side of the road which was in Canada. On the east side of the road was Neyaashiinigmiing, a land outside of Canada. Unceded means that the lands were never ceded to become part of Canada. I found it odd that I have heard the term, Unceded First Nation, many times over the last number of decades, but never inquired to learn its meaning.

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Our guide led us across the road, out of Canada, and into an old field or meadow. We walked a fair distance, our vehicles were out of sight, and stopped to look at our first plant species. Our first plant was bedstraw, bedstraw is said to have properties that make items more attractive to people. As the group spread out a little to look at nearby vegetation, a pile of bear droppings was noticed, then another. Quickly my mind has me scanning our group for the slowest member, the member that will be bear bait. As we wander through the meadow to a patch of yummy blackberries, I am really starting to wonder if we were being led to feed the bears. Truly, my worries were more of the snakes that like to live in meadows, but it is more fun to joke about the bears.

Not too far from the blackberry bushes was a patch of milkweeds. One of the people on the tour noticed a very tiny monarch caterpillar. This caterpillar couldn't have been very old as it was only about a half inch in length, but there was no mistaking its unique white, yellow, and black striping. I have never seen such a young monarch caterpillar.

We enter the forest and all remark about the temperature change in the shade of the forest. Not too far into the forest we arrive at a patch of wild ginger and some baneberry plants. We are shown the tubers of ginger and discuss the uses of ginger tea to ease gastric upset. We all sampled a bit of ginger that was just pulled from the ground. It had a taste that resembled that of Thrills gum. Quite the opposite with the baneberries, while both white and red baneberry were present, neither of these plants can be consumed, all parts of these plants are poisonous. The red baneberries do look a little appealing, the white baneberries resemble dolls eyes as they are mainly white with black dots in the center and do not entice me at all.

Ontario Wild Ginger

As we follow the trail through the forest we arrive at a patch of stinging nettle. Our guide informs us that she intends to make nettle rope out of this rather nasty plant. Stinging nettle is aptly named as when you come into contact with the small spines or hairs on the leaves and stem, they may pierce your skin. When your skin is pierced by the spines it may feel a lot like a bee or wasp sting. To make rope out of nettle you need to wear gloves to collect it and then place it out to dry for a few days.

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I think that everyone was quite happy to see the chanterelle mushrooms that looked ready to enjoy. Such a colourful fungus, adding a brightness to the otherwise dull forest floor browns. We left them to grow and produce spores for more mushrooms next year. We stroll along to some yellow birch. A small branch is cut from the tree, and we are all given a small piece of twig to chew on. Everyone remarked about the minty flavour, some tasting spearmint others tasting wintergreen or cool mint flavours.

When we stopped for lunch, our guide gave us each some ginger tea, wow it was good. Finally, something that is good for you and tastes good too. Once we had finished our lunch, we were treated to some maple syrup, quite possibly the best edible product of the forest.

We were shown a marker tree and learned how such trees were formed. As the thunder started, our trip was rerouted a little for safety and to beat the rain. I look forward to the next opportunity to learn from this amazing guide.

Chanterelle Mushrooms

BGWA Event: Chainsaw Safety Awareness Course

By Jim White

BGWA has delivered a few novel learning events this year. From my perspective, the Chainsaw Safety Awareness Course led by Gerald Guenkel, Registered Professional Forester, moved us to a new level of professional education.

The one day course conducted at the head offices of Saugeen Valley Conservation Authority and one of their plantations was a full class. Participants were introduced to such topics as personal protective gear, the safety features built into quality chainsaws, the merits of battery and gas saws, assessing the cutting site and escape routes, dealing with chicots (dry or rotten trees), three different styles of notching for felling, and safe bucking and limbing techniques. We worked in small groups for activities both in the classroom and, in the afternoon, a hands-on session in the plantation.

The afternoon session was an occasion to learn about the tools and how to use them including saw sharpening and saw maintenance. The rest of the afternoon was spent with our saws practicing the theory we talked about in the morning. In the accompanying photo is the stump where we reviewed the proper techniques to keep in mind when chainsawing in the forest. The key message is the importance of understanding why and how one should “be safe out there in the bush.”

Donna Lacey, Manager of Forests and Lands at Saugeen Valley Conservation Authority, deserves special thanks for generously hosting the course, complete with coffee and muffins, and providing us with a pine plantation where we could gain experience with our new skills. Thanks so much, Donna!

As the sun was setting and temperature getting cooler we gathered up our gear and shared closing observations from an information-crammed and very exciting day.

Do you want to learn more? If you would like to pre-register for the next course please contact Jim Coles at jcoles@gbtel.ca. Details to follow.

Demonstrating key points in saw sharpening

Sandy Bunker, Brian Rogers and Jim White, partners in learning

Gerald leading the classroom discussion

Gerald's stump-side post mortem of felling technique from saw cuts

Several classmates shared their impressions:

Donna:

"*From my perspective, everyone that buys a chainsaw should have to take similar training. Gerald offered a very impressive safety training to those that attended. All of the important aspects were covered with each safety concern having its rationale explained so that those in the session could see the importance - lots of real world examples. These examples make it harder for people to ignore the importance of safety.*

I wish everyone would take the training. I hope all in attendance found value in the workshop and will spread the word."

Brian:

"*Yes, a great day yesterday! Thanks! Probably the biggest safety consideration for me is to be constantly mindful of the location of the chainsaw bar and to use the chain brake if my feet are moving! The Course offered us a more complete understanding of both safety and practicality, both with a chainsaw and while working in the woodlot. The reference book, The Cutting Edge, will be my "go-to" reference guide, near at hand for any chainsaw adventure. It references all of the listed topics and more in an easy to understand format. With the knowledge offered by the course and the book, I realized I have habits that need/demand improvement! The course has increased my awareness, and therefore comfort, while working in the woodlot. I wish it had been offered years ago!*

Gerald is a first-rate teacher who combines practical advice with vivid stories and the underlying thinking behind it. He doesn't just tell you, he shows you. Even after many years of modest chainsaw use, I found there were bad habits to drop and new techniques to use every time I pick up a saw."

Don:

"*Jim, I want to thank you and the entire board for making this special day possible. I have participated in an average of two or three events put on by the association every year since I joined about 12 years ago. This was by far my favourite event. I can guarantee that if you put it on again I will pay for my son-in-law to participate so that he can help us manage our forest better as my wife and I get older. Who knows, I might even take the course again myself, especially if there is a two-day course so Gerald has time to correct my so far inept filing.*

My only regret is that I was not aware of any course like this 30 years ago when I started working in the forest. I would have done so much better if I had known the things that I learned in just eight hours yesterday."

BGWA Event: Invasive Species Tour in Grey County

By BGWA member, Jim Coles

On Saturday, September 30th, Grey County forester Lee Thurston led a group of BGWA members on a hike around the Derby Tract in Georgian Bluffs to view and discuss invasive species - particularly buckthorn (Rhamnus cathartica). The Derby Tract is a mix of conifer plantations and upland hardwood forest. The plantations have recently been harvested so the bush was a bit of a mess, but once the slash breaks down and the hardwood regeneration takes hold, it will be in fine shape. There are good hiking trails throughout the 99ha Tract.

Lee focused the invasive species discussion on buckthorn, which was fairly prevalent throughout the Tract. Buckthorn is an alternative host to the rust disease inflicting cereal crops. In the 1950s, all counties in southern Ontario tried to eradicate it, but since rust resistant cereal crops have been developed, buckthorn has become very prevalent.

Buckthorn is a bushy shrub which can grow to about six meters and is shade and drought tolerant. It has a competitive advantage over our native species through root competition and shading - it leafs out earlier and retains its leaves longer than native species.

Lee is trying a number of different methods to eradicate the species from the area, with varying degrees of success. Pulling young seedlings from the ground is possible but buckthorn develops a substantial root system quickly so the seedlings should be young and the soil moist.

The leaves and berries of the invasive Buckthorn.

Cutting or girdling the stems is possible but a herbicide application is necessary on the cut to prevent stump sprouting. Lee has recently tried the biological herbicide, Lalcide Chondro, on the cut stumps. It contains a naturally occurring fungal plant pathogen, and he is awaiting results. Both these mechanical means, pulling seedlings and cutting or girdling stems (and then applying herbicide), are time consuming and expensive.

Conventional herbicides have been found to be the most effective.

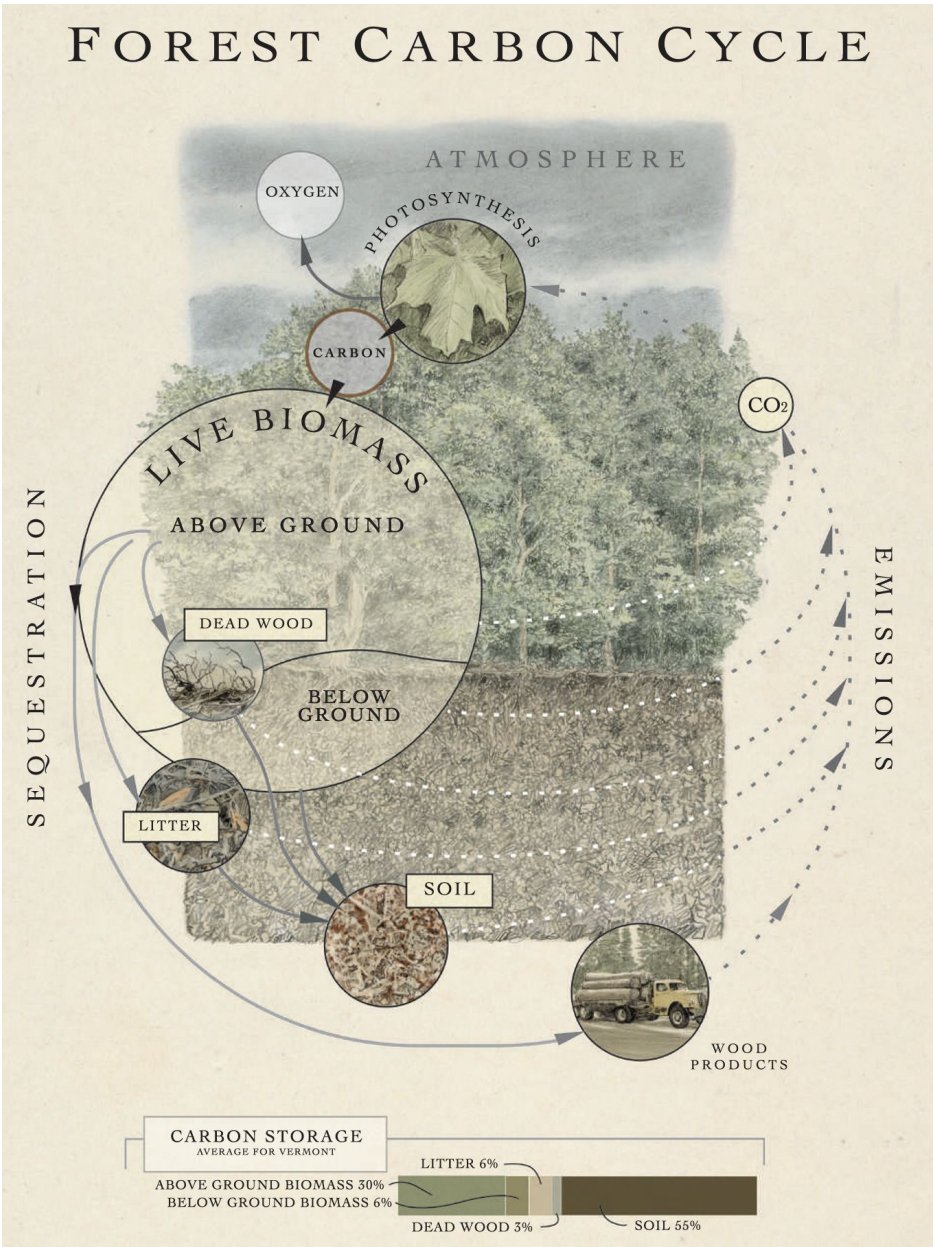
Garlon 4 has been developed to control woody plants and broadleaf vegetation and works well on buckthorn. Roundup has been tried but appears to be less effective.

Several other invasive species were identified at the event but none were considered to pose a major problem. It was a very informative and enjoyable walkabout. Many thanks to Lee Thurston.

An Introduction to Forest Carbon

By Alexandra Kosiba

Woodland enthusiasts often express interest in forests' capacity to absorb and store carbon. Northern Woodlands magazine recently published a four-part series (the link to the series is below) providing an overview of forest carbon basics, including an explanation of how carbon moves through forest systems. The articles are authored by forest ecologist and tree physiologist, Alexandra Kosiba. Thanks to BGWA member Val Makhouleen for drawing attention to the series and recommending it for *Greenleaves*.



https://northernwoodlands.org/forest-carbon/introduction-forest-carbon

The Canadian National Vegetation Classification

By BGWA member, Jim Coles

Over the past few years, Canada and the United States have cooperated to establish a unified system of mapping and describing the natural and semi-natural vegetation of North America. The Canadian National Vegetation Classification (CNVC) defines and describes the natural vegetation of Canada at various levels of ecological generalization, using standard criteria and terminology.

The CNVC uses an eight-level hierarchy. Our Grey Bruce upland hardwood forests fall within the fifth level (the Macrogroup) and are called the Eastern Canadian Temperate Deciduous Forest (ECTDF). Each CNVC unit is described in a fact sheet which provides a summary of the ecological attributes of the unit including information on vegetative structure, species composition, the environment, geographic distribution, and ecological processes. Much of the information we all intuitively know, but I have summarized the fact sheet for the ECTDF to show the types of information available.

The Location

The ECTDF describes the upland cool temperate forests of the southernmost portions of Ontario that are south of the Precambrian Shield including Manitoulin Island as well as the southwestern portion of Quebec. Two subtypes occur: the warmer sites near Lake Erie (the Carolinian Forest) dominated by Sugar Maple and species associates similar to those south of the Great lakes, and the cooler sites growing Maple, Beech, and Basswood with a greater conifer content in our area and east into the St Lawrence valley. Riparian and wetland forests within the overall range are described in a different fact sheet.

The Environment

The climate of the area is characterized by cool winters and moist, warm-to-hot summers. Temperatures are moderated and precipitation enhanced by the Great Lakes. Mean annual temperatures vary from 5 0C in our area to >9 0C in the far south. Growing degree days average between 1850 in our area and 2500 near Windsor. Annual precipitation averages >900 mm throughout the range.

The geology of the area comprises calcareous Paleozoic rocks except in the southeast portion of Ontario where an extension of Precambrian bedrock from the Adirondacks occurs. The entire area was affected by glaciation, so the landscape is dominated by glacial features like moraines, drumlins, and till deposits which overlie the calcareous bedrock. Except for the Niagara Escarpment, glaciation has produced a mostly subdued topography with low relief.

The upland mineral soils of the area, which developed in the glacial surficial material, and in the post glacial lake beds and outwash plains, are mostly calcareous and vary from well drained course textures to poorly drained finer textures. The variable glacial topography can produce changes in local site moisture and nutrient status over short distances.

Dynamics

Human disturbance is the dominant factor determining species composition and dynamics in the ECTDF although native and introduced insects and diseases are having an increasing influence. Windthrow and ice loading are the most prevalent climatic disturbances. Fire is not usually a factor.

Prior to European settlement, Indigenous/First Nation land management influenced the structure and species composition. Periodic low-intensity fires promoted the growth of vegetation that produced mast, firewood, and pole wood as well as habitat for fowl and large game. Since European settlement, forest harvesting, agricultural clearing, and urbanization have become the primary disturbance factors.

A number of native and introduced insects like Spruce Budworm, Tent Caterpillar, Gypsy Moth, White Pine Weevil, and Emerald Ash Borer and diseases like Root Rot, Trunk Rot, Dutch Elm Disease, and Beech Bark disease are now having a major impact on growth and mortality.

In our existing mature forests, the process of mortality of individual or small numbers of canopy trees by natural means or human harvesting causes stand dynamics to be relatively gradual and is called “gap dynamics.” Within these small gaps, existing seedlings can now grow more rapidly and root or stump regenerating species like Maples, Beech, Ironwood, White Ash, Black Cherry, Basswood, and some Poplars will sprout vigorously. Species like Hemlock and White Pine can regenerate if seed and mineral seedbeds are present in these gaps. Multi-storied, multi-aged, multi-species stand structures are perpetuated by gap dynamics in our upland hardwood forests. These stands have the potential to be hundreds of years old, but few exist.

Floristics

The overwhelmingly dominant tree species in the ECTDF is Sugar Maple. White Ash, Basswood, Beech, Ironwood , Black Cherry and Red Oak are common canopy associates throughout the range. Other species like Hemlock, White Pine, Elm, and Large-Tooth and Trembling Aspen, Balsam Fir, Yellow and White Birch, and White Spruce may occur in our more northern portion while Hickories, Red Ash, White Oak, and Blue Beech are more common in the southern portion.

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Sugar Maple is a long-lived (>300 years) shade tolerant late-stage species that dominates uneven-aged stands on well drained nutrient medium to rich sites. It maintains itself within stands with an abundance of seedlings that can persist under a closed canopy for many years and respond rapidly to a canopy opening. Sugar Maple creates a dense forest canopy that excludes all but the most shade-tolerant species in the understory, effectively favouring its own seedlings.

Beech is also a long-lived, shade tolerant, late-stage species of well drained, nutrient medium to rich sites that is often in association with Sugar Maple. It is one of the few species that is shade tolerant enough to survive under a dense Sugar Maple canopy. Ironwood is a small but shade tolerant hardwood in mid- to late-stage stands that is often associated with Sugar Maple and Beech.

Basswood is a mid- to late-stage species that is moderately shade tolerant on mesic sites where it replaces itself by stump sprouting.

White Ash and Black Cherry are early- to mid-stage temperate hardwoods that are common on mesic to moist sites. Both are generally intolerant of dense shade and colonize open- to lightly-shaded sites by seed dispersal. Both are prolific root and stump sprouters after stem death and are able to replace themselves in canopy gaps.

Red and White Oak are long-lived, moderately shade tolerant, early- to mid-stage hardwoods typically found on well drained dry to moist sites. They regenerate by seed and by sprouting in open areas or canopy gaps. If they attain the canopy, they can remain as associates of Sugar Maple and Beech in a late-stage forest due to their longevity.

Hemlock is a long-lived late-stage conifer that reproduces only by seed. Seedlings are highly shade tolerant, persisting under closed canopies and able to respond to release after many years of suppression.

Eastern White Cedar is a small, long-lived, late-stage conifer that reproduces by seed and vegetative layering. It is most common on moist, nutrient rich sites where it can form a sub-canopy tree layer. Seedlings are only moderately shade tolerant; in closed stands, reproduction is primarily vegetative. Some of the oldest trees in Canada are Eastern White Cedar.

The Canadian National Vegetation Classification is a wonderful resource for those newly arrived in an area or for those wishing to upgrade their knowledge of a home area. It provides a very detailed explanation of the local vegetation, dynamics, and environment. It is, however, a scientific document using only Latin names for species and technical terms to describe the environment.

2023 Report on Hemlock Woolly Adelgid

By BGWA member, Susan McGowan

Hemlock woolly adelgid (Adelges tsugae Annand) (Hemiptera: Adelgidae) (HWA) is an aphid-like insect, native to Asia. The insect attacks and kills Eastern Hemlock (Tsuga canadensis) trees in Ontario and Nova Scotia. It can be spread by wind, animals, and human movement of nursery stock, logs, firewood, and other wood products. It was identified in British Columbia (BC) in the 1920's and is considered native in the province.[i]Also it is noted that a genetically different strain of HWA causes minor damage to BC's Western Hemlock (Tsuga heterophylla) trees, which are protected by natural resistance to HWA and natural predators.[ii]

HWA was discovered in the eastern United States in 1951, in Virginia, and has since spread to 17 eastern states.

HWA, an invasive insect in Canada, is federally regulated by the Canadian Food Inspection Agency (CFIA), which continues to monitor current populations. There are Ministerial Orders in place to restrict the movement of wood products in the infested areas.[iv] The CFIA, Natural Resources Canada, Ontario Ministry of Natural Resources and Forestry, and other agencies are collaborating on monitoring and research efforts to better understand this pest.

In Ontario HWA was initially detected in a forested area along the Niagara River near Niagara Falls, in 2013 and 2015. Although affected trees were removed and disposed, HWA was confirmed to be established at the site in 2019. It was also discovered and subsequently eradicated in Etobicoke in 2012. In 2019 HWA was confirmed at two small populations near Wainfleet and Niagara Falls. In 2021, it was also confirmed in Fort Erie. By 2022 it was detected in Pelham and Grafton and, in 2023, the insect was also discovered in Hamilton, Lincoln (Niagara Region), and Haldimand County.

In Nova Scotia the insect was detected in 2017 in Yarmouth County and has since spread through the southwestern counties of Lunenburg, Digby, Kings, Queens, Shelburne, Annapolis, Hants, and the Municipality of Halifax.[v]

Characteristics and life cycle

This tiny aphid-like insect has a complex life cycle with two generations per year, each with several developmental stages and alternating periods of other activity and producing a white waxy covering.

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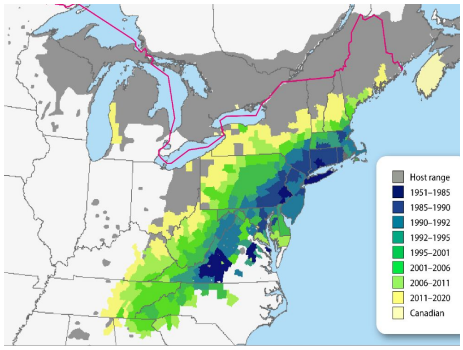
White woolly eggs sacs produced by hemlock woolly adelgid. Photo: Ontario Ministry of Natural Resources and Forestry

Dead Hemlock tree affected by hemlock woolly adelgid. Photo: Ontario Ministry of Natural Resources and Forestry



Progression of hemlock woolly adelgid establishment in eastern North America (Parker et al. 2023).[iii]

Signs and symptoms

The presence of HWA is identified by the white woolly egg sacs which resemble small cotton balls or puffs of snow, at the base of Hemlock needles on new shoots. Feeding on nutrients and water storage cells at the base of needles, by HWA causes premature needle loss, bud, and shoot dieback resulting in bare branch tips. Crowns become transparent and often change colour from dark green to grey. Infested trees typically die within four to 15 years from onset of infestation.

Control measures

At home, one can keep bird feeders away from Hemlock trees. Birds and wildlife are believed to be involved in the spread of HWA.

Detection and monitoring methods are being developed and tested. Additionally, some chemical and biological control methods are available and/or being studied.

If you believe you see evidence of hemlock woolly adelgid, contact the CFIA: 1-800-442-2342.

Recent News

In Nova Scotia, researchers have recently released the Laricobius nigrinus beetle (no common name) which is native to British Columbia and helps to keep HWA populations under control in that province. This isn't the first attempt at this strategy – the beetles have been released in the United States for 20 years. Only time will tell if the beetle can survive the eastern Canadian winter and will be effective in Nova Scotia. Release sites will be monitored for overwintering populations and effectiveness.

To read more about this initiative, visit: https://halifax.citynews.ca/2023/11/19/tiny-beetle-to-the-rescue-of-n-s-hemlocks-attacked-by-woolly-invasive-insect/

Continued on next page...

More Information

There is a wealth of material on HWA to be found online:

Canadian Food Inspection Agency
https://inspection.canada.ca/inspect-and-protect/plant-health/hemlock-woolly-adelgid/eng/1528042487935/1528042488278

Ontario Ministry of Natural Resources and Forestry
https://www.ontario.ca/page/hemlock-woolly-adelgid

Invasive Species Centre
https://www.invasivespeciescentre.ca/invasive-species/meet-the-species/invasive-insects/hemlock-woolly-adelgid/

Natural Resources Canada
https://cfs.nrcan.gc.ca/pubwarehouse/pdfs/39158.pdf

Cornell University
https://blogs.cornell.edu/nyshemlockinitiative/biocontrol-program/laricobius-beetles/

Entomological Society of America
https://academic.oup.com/jipm/article/9/1/27/5261344

[i] (Havill et al. 2016).

[ii] https://www.invasivespeciescentre.ca/invasive-species/meet-the-species/invasive-insects/hemlock-woolly-adelgid

[iii] Parker, W.C., V. Derry, K.A. Elliott, C.J.K. MacQuarrie and S. Reed. 2023. Hemlock woolly adelgid: Management guidelines to increase the resilience of Ontario's eastern hemlock resource to an exotic, invasive insect. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, ON. Science and Research Technical Note TN-09. p.14

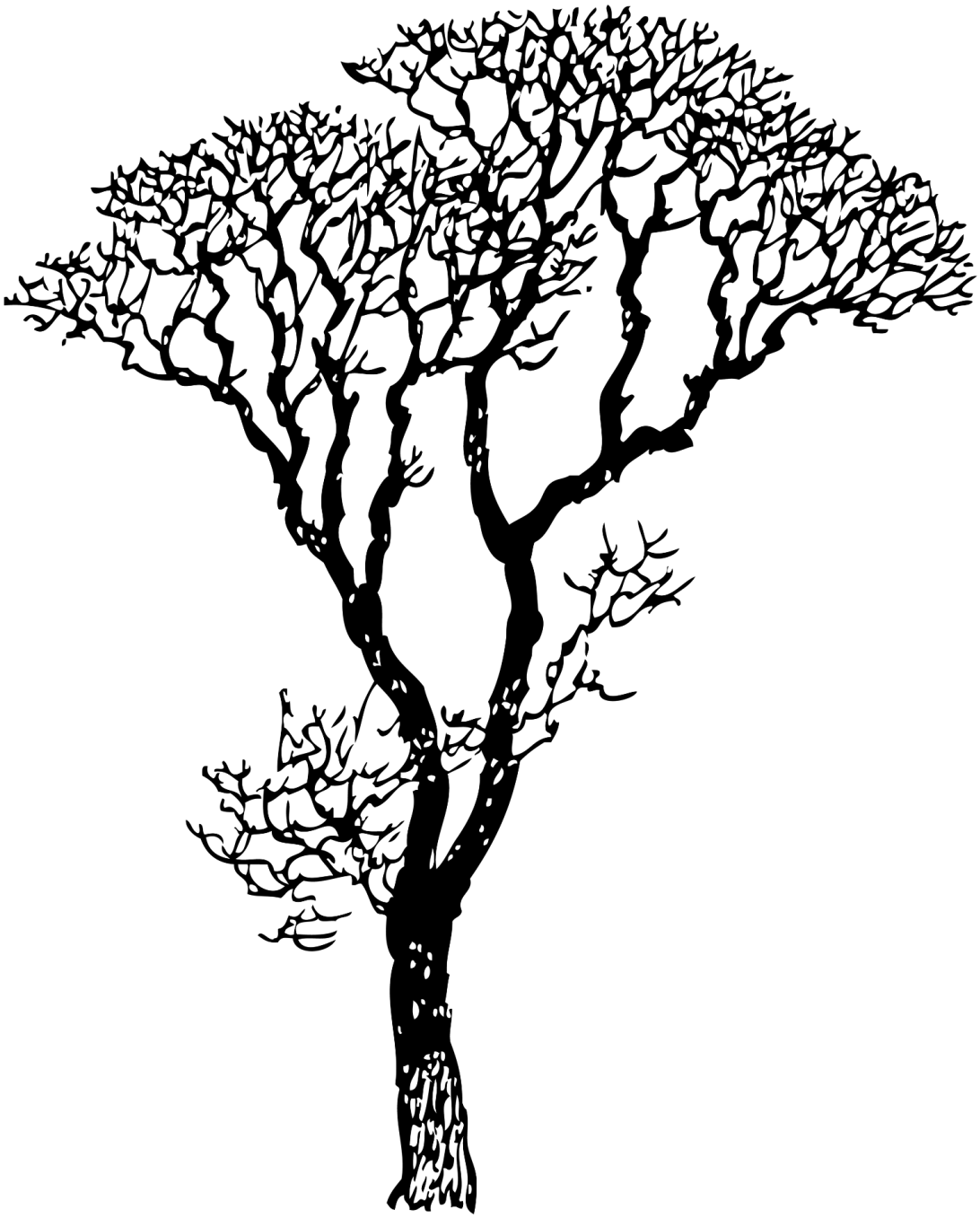
[iv] https://inspection.canada.ca/plant-health/invasive-species/insects/hemlock-woolly-adelgid/eng/1325610383502/1325610993855

[v] https://inspection.canada.ca/inspect-and-protect/plant-health/hemlock-woolly-adelgid/eng/1528042487935/1528042488278

Children's Corner

Based on a idea provided by BGWA member, Melena McGregor

In Ontario we experience and enjoy four distinct seasons: winter, spring, summer, and fall. In each of these seasons the trees around us - especially deciduous trees - look different. Imagine that the tree pictured below is growing in one of the four seasons. What might it look like? What might it look like in winter? In spring? In summer? In the fall? With copies of the tree image below, color and/or decorate the tree, one for each of the four seasons.



Bruce Grey Woodlands Membership Benefits:

Through membership you will support our vision and objectives, have the opportunity to participate in events, gain access to local woodlot management resources and network with some of the leading experts in the area.

- The Bruce Grey Woodlands Association (BGWA) is a collective force helping to demonstrate the value of privately owned woodlands in the community as a whole. Healthy forests provide clean air, water and offer a myriad of other benefits that support our ability to live on the planet.
- We present an opportunity for property owners to network with other like minded individuals and managers along with local resource management professionals to stay up to date on the latest information regarding threats and challenges to a forested ecosystem.
- We believe in the social contract: If we all do our best to look after our own properties, the collective becomes a healthier and nicer place to live.
- We serve as a voice for the membership with respect to legislation, taxation and regulations as they affect forest property and associated business interests.
- We welcome property owners moving to or purchasing land in Grey/Bruce and offer educational and networking opportunities, promoting best management practices for woodlands, enabling owners to realize their goals in owning a rural property.
- We help to educate by dispelling rumors, myths and misinformation about forest management and proper management practices.
- The BGWA provides opportunities to learn from the experiences of others, to find reputable contractors/partners, to stay current with modern and up-to-date policies and practices, to learn about non-timber forest products and alternative management practices.
- We act as an educational resource to help guide woodlot owners through effective management practices, helping to potentially increase returns on investments through improved yields, higher quality timber and value added wood products. Well managed forest are an economic asset.
- Woodland owners are a key element in prioritizing sound mananagement of a decreasing resource while supporting a balance between agriculture, development and forested lands through effective and informed management.
- We socialize, share knowledge and network with other people who are engaged in making their community a better place through healthy woodlands.
- Membership offers exclusive members only website, library, quarterly newsletter, events and guided tours by experts in numerous fields with a wide range of subject matter.
- We offer a quarterly BGWA members' newsletter with informative articles by members and local forestry experts, upcoming events/speakers and highlights of past events.

JOINING US IS EASY!

BGWA is made up of local woodland owners and enthusiasts with a vision to promote healthy forests & ecosystems. We believe in doing this through education, recreation and sustainable forestry management practices.

Yearly membership $30/year or pre-pay for up to 3 years for uninterrupted membership at a fixed price*

Youth membership (under 25) $15/year

Join instantly online at **www.bgwa.ca** or mail-in form below with a cheque.

Name: _____

Address: _____

_____

Phone: _____

E-mail: _____

Communication:

Communication from the BGWA is principally by email. You will receive:
- Greenleaves - A quarterly newsletter
- Advance notice of BGWA events
- Periodic local events and woodland news

The BGWA does not share your email address or our membership list.

***Life Membership option available $750**

Bruce Grey Woodlands Association
Box 45, Neustadt, ON N0G 2M0
www.bgwa.ca

Connect with us online!

Learn more about BGWA + get links to immediately useful woodland resources

For everyone:
- Local woodlands-related news
- Resource links: woodlot reference, local groups, tree/forest health & more
- Listings for local woodlot tours, workshops and learning events
- Past years newsletters

Members' Pages:
- Sign-up for events/workshops/tours
- Event photo gallery
- BGWA documents
- Slides & handouts from presentations
- Current year newsletters
- Notice board/Trade/Buy/Sell
- Ask-a-Forestry-Professional feature

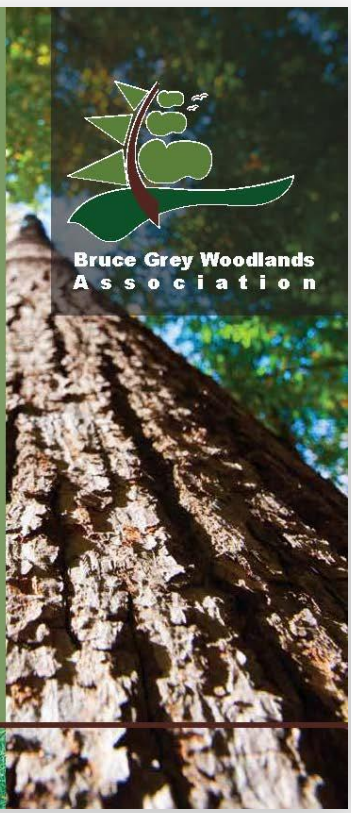
Bursary Opportunities

The BGWA is pleased to offer a bursary to a graduating student in each of the high schools throughout Bruce and Grey communities. The annual bursary recognizes students advancing in post secondary studies in Forestry, Forest Management or related Biological Science Studies. Interested students can contact their Guidance Department.

Contact Us:

For general inquiries, comments or suggestions

communications@bgwa.ca



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Gary Kenny (editing)
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Loaning Library
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Kevin Predon
Ben Sharpe (member-at-large)

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Anne Lennox
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Jim Coles (co-chair)

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