Greenleaves

Newsletter of the Bruce Grey Woodlands Association

SUMMER 2021

www.bgwa.ca

NEXT EVENT
SAT SEP 18:
See back page for details

Upcoming Board Meetings:

(virtual/teleconference until further notice)

All dates 5:30PM start

Oct 12
Dec 14
Jan 11 (2022)

Members always welcome. Contact secretary@bgwa.ca for virtual meeting invite.

President's Message

Jim White

Dear BGWA Members,

I trust that you have had a good summer for local travel – staycationing, as it's called. Most importantly, I hope you have avoided getting infected by the coronavirus variant and that you have had both vaccinations to protect yourself and everyone you come in contact with.

As we move toward a return to a new school year and employers figuring-out what the new workplace will look like in the new work environment, we see the realization of recent Canadian market research. Three long-term societal changes are occurring from the pandemic. First, the ability and desire to work from home; second, localization, building relationships and supporting the local community and third, wellness, and sustainable practices to ensure we and our families keep well.

We have been fortunate to have two face-to-face field trips so far this summer. Both were well attended. The pre-registration practice seems to help us arrange for the right number of guides for the number of participants, and enables us to adhere to current public health guidance. The first tour was to Inglis Falls Arboretum. We had three Arboretum Alliance members who did an excellent job guiding us. We saw a tremendous variety of trees and shrubs, well labeled and, with the benefit of our guides, had a great learning experience. We also had opportunity to take home a few seeds from the nursery tours. My Rock Elm seeds germinated in a pot in about two weeks and are now at the four-leaf stage. Our second tour was at the Kinghurst Tract. It was previously the woodyard source for the Krug Furniture Manufacturing Company and was bequeathed in 1997 by the Krug family. They

(Continued on page 2)

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

Contact Jim Coles:
jcoles@gbtel.ca
519-934-0020

THANK YOU CONTRIBUTORS THANK YOU

We packed 10 pages for our members, not bad for the summer edition!

Can you help out with something for the next newsletter??

newsletter@bgwa.ca

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.

Content of articles is the sole responsibility of the authors and does not necessarily represent the views of BGWA. Images accompanying articles are provided by the author unless indicated otherwise.

BGWA's vision:

Promoting healthy forests and ecosystems in Bruce and Grey Counties through education, recreation and sustainable management practices.

bgwa.ca **info@bgwa.ca**

Mailing address:

BGWA, Box 45, Neustadt, ON, N0G 2M0

practiced sustainable logging, resulting in some very old trees. Most of the tour was beneath a very high canopy providing relief from the heat and humidity of the day. They also tried several other early forms of silvaculture as they followed 'current' practices during the same period as reforestation efforts in the sand plains of Norfolk and Simcoe counties. Thanks again to our guides for an excellent learning experience. The tract is huge so there is lots more to explore at this site.

You will notice from reading the summer issue of Greenleaves the strong focus the BGWA places on our local talent with contributions of articles on very diverse topics. A big thank you to each member who took time to prepare a contribution. Please don't forget to recognize the commitment, capability and creativity of our production and editorial team - Neil and Malcolm!!

Our membership has exceeded the 2020 number of families and individuals. In speaking with several new members, the theme of looking- for a local source of fact-based knowledge is the important reason for joining BGWA. Following closely is the interest in meeting other like-minded individuals.

We are planning another field trip in September. Look for details within this newsletter and check online bgwa.ca for updates.

The Board of Directors Committee continue to make progress on Strategic Plan/Long Term Plan for the BGWA. An overarching theme is membership for a lifetime. The expectation is that the next generations will share an appreciation and understanding of our forest ecosystems and that will make our local association sustainable. An actionable outcome from our process is the realization that the majority of land-owners with forests are also active farming in our counties. A working group has had initial conversations with the local county associations for the Ontario Federation of Agriculture (OFA). One potential outcome could be to have a director from both organizations sit on each other's board of directors to build local relationships and share common interests and understanding with regard to woodland management.

If you are currently a member of either Bruce or Grey County Federation of Agriculture I would very much like to hear from you. Please contact me directly (jwhite007@sympatico.ca or 519 820 0938). While I spent my career working in animal sciences in agriculture, I know we need your insights and perspectives specifically where agriculture and woodland management practices intersect.

Do you have a suggestion for a site tour or offer to host a tour to show your woodland property? Please let us know.

Keep well, be safe, be kind!

Jim

Kingshurst Forest: A gift of multiple legacies

By Gary Kenny - BGWA Director

"*I took a walk in the woods and came out taller than the trees.*" - Henry David Thoreau

As the quote above from the 19th century American naturalist Henry David Thoreau suggests, a walk in a forest can indeed lift one's spirits, if not stature, to new heights – through knowledge of the many ways forests support human enterprise, the stunning array of interdependent life forms that comprise them, and their unremitting capacity to stir one's soul with awe.

Old-growth forests especially bear these hallmarks, as members of the Bruce Grey Woodlands Association (BGWA) were reminded on Saturday, July 4th. Sixteen members of the Association gathered for an afternoon visit to the Ontario Nature owned- and stewarded-Kinghurst Forest Nature Reserve near Chatsworth, in Grey County. The event was organized by the Events Committee of the 160-member BGWA.

With the guidance of Saugeen Nature member, Nikki May, and BGWA member, Val Makhouleen, participants gathered at a cabin on the site, inside of which information about old-growth forests and the Kinghurst Tract in particular is featured.

Grey and Bruce County residents can thank the now-deceased Krug brothers, Bruce and Howard, for making the Kinghurst Forest wilderness jewel accessible to the public, May said. For 100 years the Krug family owned and operated a successful furniture manufacturing business in Chesley. Its sources of timber were the region's deciduous forests.

An avid conservationist, Howard Krug recognized the natural uniqueness of the Kinghurst tract and its value, especially for conservation education into the future. In 1997 he bequeathed 242 hectares for public use. Added to that was a legacy gift from Bruce Krug of 61 hectares at the time of his death in 2013. Other small parcels of land also were added, including 30 hectares of former pasture and wetlands bordering on the Reserve purchased by Ontario Nature, which now owns the Kinghurst tract. The reserve is now 370 hectares (913 acres) in size.

Saugeen Nature, a local group dedicated to nature-based conservation and education, stewards the Reserve and provides volunteer services including trail maintenance, the removal of trees representing a danger to hikers, and enhancing habitat for the benefit of Kinghurst's diverse animal life.

Although Ontario Nature promotes Kinghurst as old-growth forest, it's more accurately termed "older-growth," May explained, because of past disturbance by humans. An old-growth forest – also termed primary forest, virgin forest, or primeval forest – is a woodland that has attained advanced age without significant disturbance. Few old-growth stands remain in southern Ontario.

After the cabin visit the group wended its way along some of the reserve's forested trails, stopping periodically to listen to May and Makhouleen talk about the characteristics of old-growth forests and pointing out examples.

Old-growth forests exhibit many unique ecological features, they both said, some of which the participants viewed and learned about on the walkabout. For example, Kinghurst's towering, 250-300-year-old trees, among them Sugar Maple, Eastern Beech, and White Pine, reach 30 meters into the sky.

Looking skyward, the group saw how leaves of the forest's vaulted, cathedral-like canopy laced the sky like needle embroidery. Gaps in the leaf cover created by the death of old trees allow sunlight to reach the forest floor where it encourages the growth of seedlings, generating forest renewal.

May also drew attention to the rugged undulating pits and mounds visible across the forest floor, a feature called micro-topography. The pits were formed when old trees died and fell over taking their roots with them. The mounds are the result of decaying trunks and root masses.

(Continued on page 4)

(Kingshurst Forest, from page 3)

Throughout the older-growth area are large fallen and decaying logs which, as they break down over many years, form a rich layer of organic matter. Sponge-like, the layer retains moisture and becomes a medium for mushrooms, fungi, mosses, and microscopic life, all of which work to recycle the woody debris for the forest's ongoing health and renewal.

Snags, the decaying, standing remains of dead trees, serve as "forest condominiums," as one participant quipped. Some have been deeply excavated by Pileated and other woodpecker species, making of the slowly rotting upright carcasses hosts for many species of fauna and flora.

Yet another unique old-growth feature on display at Kinghurst at various times through spring and summer, is the thick ground cover of wildflowers, ferns, mosses, and tree and shrub seedlings that flourishes beneath the forest canopy. Some plants, trilliums and wild leeks, for example, grow in large colonies having had many undisturbed years to propagate.

At one point of the forest walk May drew the group's attention to a large piece of limestone trailside, about the size of a riding lawn mower. Growing on it were a multitude of small plants, some 15 species. Herb Robert, the rare Hart's Tongue Fern, Hepatica, Violet, Red Elderberry, and more grew in a community-like setting through moss that blanketed the rock. Participants marvelled at this microcosm of biodiversity. One called it "a multi-faced gemstone refracting the light of abundant life."

Designated by the Government of Ontario as an Area of Natural and Scientific Interest (ANSI), the Kinghurst Forest Nature Reserve is a special place that offers naturalists, professional or lay, or any person who appreciates and marvels at nature, a rare glimpse into Ontario's natural past. The Reserve is open year-round for people to enjoy and learn more about Ontario's wilderness woodlands. No camping or picnicking is allowed. For directions consult Saugeen Nature's website:

www.saugeenfieldnaturalists.com/SFN/Kinghurst_Forest_Reserve.html

The Klondike Hills of Chatsworth (former Sullivan) Township

By Don Rawls - (New!) BGWA Member

This article is a slightly edited version of a write up researched and published on my personal website in 2005, shortly after purchasing these rugged acres near Chatsworth. It's offered as an introduction, upon recently joining the BGWA.

We live at the north end of a rugged, mostly forested, hilly area, known locally as "The Klondike". These hills were formed into a series of drumlins (A long narrow hill of glacial deposit, the tapered end of which points to the direction of glacial retreat) that can be up to 100 to 5,000 meters long and up to 200 meters high and are part of the "Gibraltar Moraine" (material left by the glaciers). The bedrock is Guelph Dolomite which is similar to limestone but harder and heavier. The hills contain gravel, stones and boulders, some of which were moved by the Glaciers from many miles away and are called "erratics".

It is said that the Klondike was named for its rich diversity of wildlife whilst others say it was because of the rough terrain. Certainly, both assumptions have merit. The forested areas consisting of mainly maple, ash and butternut contain a very varied selection of plant life, including some relatively hard-to-find ferns and orchids and hundreds of other woodland flowers. In recent years we see that many of the huge old butternut trees are dying off and falling over. However, one in an open damp area seems to be in good condition so far. We regu-

(Continued on page 5)

(The Klondike Hills, from page 4)

larly see red fox, deer, rabbit, coon, porcupine and hairy, downy, red headed and red bellied woodpeckers and many more birds and animals.

The Klondike was (and still is) far from ideal farming land and was, therefore, one of the last areas to be taken-up. One condition of getting a deed from the crown was to clear and put under crop a portion of the land. This was difficult on the heavily forested but level areas but must have been all but impossible on the stony, boulder strewn hills in the Klondike. In fact, much of this area remains uncleared except for the removal of trees for lumber, much of which was used to supply local furniture factories in the early 1900s. Extensive stone windrows on our property reveal just how much clearing had to be done when first occupied, some boulders being quite large. The rocks reveal the variety of debris that the glaciers brought to the area and some of the dolomite ones have a number of small fossilized shellfish etc embedded in them.

Built into the side of a hill on the west side of this property is what is perhaps a reason for someone taking-up this lot. Lime kilns were usually built into a hill so that they could be loaded from the top with rocks and the resultant lime unloaded from the bottom. The lime, used to make cement or mortar, took several days to make, the kiln being loaded with logs and the stones being piled on top and the whole thing fired for 2 or 3 days. There was certainly no shortage of rocks in this area! The remains of this stone kiln reveal that is was 6′ or 7′ wide and about 15 to 20′ high. A stone foundation of a sizable barn near the bottom of the kiln was probably used to house teams required to haul the 30 or so loads of stone required to fill it and to haul away the finished product. Also, to bring-in the large quantities of wood required to heat the kiln. Not too far from the top of the kiln is the stone foundation and root cellar of what we presume was a small house. That much of the stone work is still in place after more than 100 years. at least 50 of which standing in total neglect as revealed by trees growing within the structure. It says much about pioneers′ skill at stone masonry.

To the west of the old house remains are a number of old apple trees, now totally hollow but still bearing an abundance of fruit most years, an upper branch that broke off from one of them some 20 years ago was found to be over 100 years old by ring count. This then is the remains of an orchard planted by the early occupiers of this property who seem to have settled it in the 1870s. A very large pear tree may well be of the same vintage. This healthy tree, which bears much fruit some years, is approximately 30′ across and about the same high.

This huge maple on the property obviously survived the area logging that occurred in the 1800s

Fireflies

By Malcolm Silver - BGWA Member & Newsletter Editor

I must confess. I become a voyeur during firefly sex nights. Their lights show when the weather gets warm and humid, usually between late June and early July. As darkness creeps-in, green flashes appear among the trees and grasses with the performance typically lasting a couple of hours. Fireflies are familiar, but you may not realize they are actually beetles, nocturnal members of the family *Lampyridae*. Most are winged, which distinguishes them from other luminescent insects of the same family, known as glowworms.

The bugs produce bioluminescent light. This occurs in specialized light-emitting organs, usually on a firefly's lower abdomen. The enzyme luciferase acts on luciferin, in the presence of magnesium ions, adenosine triphosphate (ATP) and oxygen to produce light. Firefly luciferase is used in forensics, and the enzyme has medical uses; in particular, for detecting ATP or magnesium. Electronic detectors built with these chemicals have been fitted into spacecraft to detect life in outer space, as well as food spoilage and bacterial contamination on earth. Firefly light is the most efficient in the world,100% of the energy is emitted as light. Compare that to an incandescent bulb, which emits 10% of its energy as light and the rest as heat, or a fluorescent bulb, which emits 90% of its energy as light. Because it produces no heat, scientists refer to firefly lights as "cold light".

It serves for communication during their mating season. It's usually intermittent, and flashes in patterns unique to each species. Each blinking pattern is an optical signal that helps fireflies find potential mates. Scientists are not sure how the insects regulate this process to turn their lights on and off. Males fly around trying to impress females, while they wait in trees, shrubs and grasses to spot an attractive male. If she finds one, she'll signal it with a flash of her own. Female Photuris fireflies are known for mimicking the mating flashes of other fireflies for the sole purpose of predation. Target males are attracted to what appears to be a suitable mate, and are then eaten. Most adults eschew such prey and typically feed on nectar or pollen, though some do not eat at all. Firefly light may also serve as a defense mechanism that flashes a clear warning of the insect's unappetizing taste. This is due at least in part to a group of steroid pyrones known as lucibufagins, which are similar to cardiotonic bufadienolides found in some poisonous toads. When attacked, fireflies shed drops of blood in a process known as "reflex bleeding." The blood contains chemicals that taste bitter and can be poisonous to some animals. Because of this, many animals learn to avoid eating fireflies. Pet owners should never feed fireflies to lizards, snakes and other reptilian pets. The beetles also communicate to defend territory. In some firefly species, only one sex lights up; in most, however, both sexes glow. After mating and laying eggs, all adults die.

Photuris lucicrescens

(Continued on page 7)

(Fireflies, from page 6)

Adult fireflies tend to be brown and soft-bodied, often with the elytra, or front wings, being more leathery than those of other beetles. Females of most species are similar in appearance to males, though there are differences in some species. The most commonly known fireflies are nocturnal, although there are numerous species that are diurnal. The latter are usually not luminescent; however, some species that remain in shadowy areas may produce light.

A few days after mating, a female lays her fertilized eggs on or just below the surface of the ground. The eggs hatch three to four weeks later, and the larvae feed until the end of the summer. In some species, the larvae and even the eggs emit light. Firefly eggs have been observed to flash in response to stimulus such as gentle tapping or vibrations. Fireflies hibernate over winter during the larval stage. Some by burrowing underground, while others find places on or under the bark of trees. They emerge in the spring. After several weeks of feeding on other insects, snails and worms, they pupate for 1 to 2.5 weeks and emerge as adults. The larvae of most species are specialized predators and feed on other larvae, terrestrial snails, and slugs. Some are so specialized that they have grooved mandibles that deliver digestive fluids directly to their prey.

Fireflies love warm, humid areas. Because of this, they thrive in tropical regions as well as temperate zones. They thrive in forests, fields and marshes near lakes, rivers, ponds, streams and vernal pools. They need a moist environment to survive. A study led by Sara Lewis, a professor in evolutionary and behavioral ecology at Tufts University, has sounded the alarm about the future of fireflies. The study identified several global threats, including habitat loss, light pollution, and pesticides. Fireflies in Ontario face the same challenges. In rapidly urbanizing Southern Ontario, action must be taken to ensure that they will continue to light up the night sky. A review co-authored by Stephen Marshall from the University of Guelph concluded that there are probably about 23 species in Eastern Canada, most of which could be found in Ontario. Firefly larvae need wet habitat to survive, so the insects often end up vying for the same lakeside habitats where people vacation. These are beautiful areas for us in terms of camping and cottaging, but if we are urbanizing them or renovating them to create our cottage homes and to spaces where we can camp, we're removing some of that habitat.

Also, more people in such areas means more artificial lights. Light pollution prevents fireflies from finding mates and communicating with one another. Cottagers can make some easy changes to create a firefly-friendly environment. For one, don't transform your whole property into lawn. Also, leave natural plants of different heights on your property. This will not only provide fireflies a home, but also creates a display platform that fireflies can use for their bioluminescent shows. And to combat light pollution, simply turn off lights when leaving a room, and switch-off outdoor patio lights when not needed. But to truly help fireflies, more research is needed to understand the biology of these animals and the impact humans have on them.

References

The Fire flies in Ontario, Biological surveys. Here one finds information about distinguishing species and comparisons with similar beetles.

Fireflies- lightening bugs , Canadian Wildlife Federation

Fireflies are threatened but you can help them , Here's how. From Cottage Life

Owen Sound applying to become a Tree City of the World

July 27, 2021, Owen Sound Sun Times. City council recently passed a motion to apply for the international certification, which is part of a global effort aimed at recognizing communities that are committed to ensuring their urban forests and trees are properly maintained, sustainably managed and celebrated. Full story: www.owensoundsuntimes.com/news/local-news/owen-sound-applying-to-become-a-tree-city-of-the-world

Over-wintering Woodland Butterflies

By Jim Coles - BGWA Director

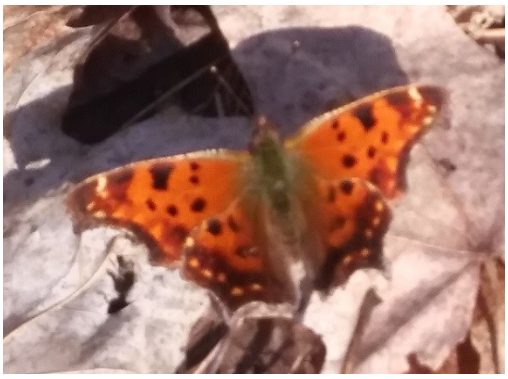
A walk through the woods on a warm, late winter afternoon is quiet and drab until a butterfly jumps up and lifts our spirits! How can an adult butterfly be out and about in late March? Most of our non-migrant butterflies overwinter as eggs, larva or pupa but we have 6 local, native species that overwinter as adults. I was fortunate this year to see two of the common ones (Eastern Comma & Mourning Cloak) on March 21 and the third (Compton Tortoiseshell) on March 22 (photos attached). These three are relatively common in this area, the others (Green Comma, Milbert's Tortoiseshell, and Question Mark) are less common.

How do hibernating butterflies survive? As cold-blooded animals, their body temperature drops to that of their surroundings. So no matter the life stage (egg, caterpillar, chrysalis, or adult) if ice crystals form in their cells, they rupture and the critter dies.

Surviving winter requires a period of dormancy known as hibernal diapause. This multi-step process is initiated by a hormonal response to changing environmental conditions, particularly length of day and temperature. Species that overwinter as adults must build up energy reserves by converting nectar into fat. Next they must secure a location in which to pass the winter, perhaps under loose bark, in a hollow tree or unheated outbuilding. The cryptic coloring of the underside of their wings helps them remain hidden from predators. I found two Mourning Cloaks in a firewood pile I was moving in early December last year. Once settled-in for the winter, feeding stops and metabolic and respiratory rates slow down. The body fluids are thickened with antifreeze molecules like glycerol that prevent ice crystals from forming. Mourning Cloaks have been shown to withstand temperatures as low as -60C. The following spring, as daylight lengthens and temperatures warm, diapause ends and life returns to normal, but they must again find suitable shelter if conditions worsen.

Next winter, when taking a midwinter walk in the woods, think of the hundreds of butterflies tucked away in secluded spots in your midst, waiting to fly in the spring. Photos Jim Coles

Mourning Cloak



Eastern Comma

Compton Tortoiseshell

My "fave" Forest Reference Book

By Neil Baldwin - BGWA Member & Newsletter Producer

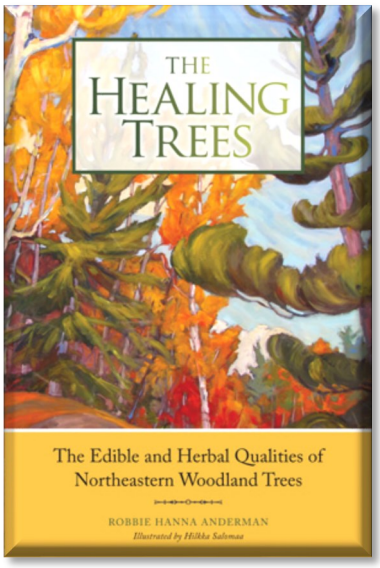
To be clear from the start, this isn't a book review so much as it is a book recommendation. *The Healing Trees: Edible and Herbal Qualities of Northeastern Woodland Trees* is a type of book I didn't know actually existed yet had been seeking for quite some time: facts, information and folklore about how trees can help all aspects of our health AND relevant to our local area.

It came by surprise a couple months ago, arriving in my mailbox not from Amazon or Chapters but with a return address of a small town independent publisher in eastern Ontario. It was a bit of a mystery but eventually I learned it had been ordered by my best friend Cameron—we've known each other since grade eight and have a pretty good intuition for our likes and interests. And Cameron was spot-on with his thoughtful gift. *The Healing Trees* is an awesome compendium of knowledge but, more than just information, it is all wrapped together within a package of wisdom.

That wisdom is a product of the author, Robbie Hanna Anderman, who moved to a property in the Wilno Hills, not far from the Killaloe area of eastern Ontario, and became an off-gridder in the days before it was full of the electronics and near-normal conveniences that I enjoy in my off-grid life. From the story Robbie tells, it doesn't sound like this life shift was entirely planned or entirely voluntary, and so there was a steep learning curve.

Part of that curve, now living out in the middle of near nowhere, was figuring out what would replace the pills, allergy shots, and such he says he was used to in his urban life. While he arrived at Wilno with an existing interest in herbalism, realizing that snow would blanket the ground for a good third of the year brought his focus to the woodlands which surrounded him with abundance, and could provide year-round.

"Thus began a journey of forty-eight years during which Robbie researched, nibbled, sampled, and learned the lore of the Healing Trees," reads the back cover, and the result is this 200+ page volume which is now in its sixth printing.



The core of the book is a listing of 35 different trees detailing some background, uses and healing qualities for the bark, buds, flowers, seeds, leaves/needles, sap/resin/gum, roots and more. You will find all the trees of Grey-Bruce represented with the exception of Elm. Did you know that the powder found on the south-facing side of Poplars has been mixed with fat and used as a sunblock, as a deodorant, and applied to deep cuts to promote coagulation? As a replacement for talcum powder? And that it is a yeast which can be used to get sourdough bread starter going? That's just one factoid of so many to be found in the books.

There is also a chapter which includes information on harvesting and storing tree parts, and an overview of the philosophy and practicalities of herbalism and basic herbal methods. "Forestry First Aid" has a list of afflictions that maybe encountered out in the wilderness and the help which is close at hand thanks to trees. And "Edibles from Trees by Season" is a guide to truly eating locally! A cross-referenced index also helps match the need to the trees which can assist it.

But, as I said at the outset, it's more than just a collection of information. This book has a soul, as the author relates so many of his personal experiences and weaves in his own life story. Plus a chapter of woodland-related notes and quotes. It is sure to become a dog-eared reference book, but I find it a joy to read in and of itself. Order your own or make someone's day by gifting it: www.healingtreesbook.com

Member ~~BBQ~~ BYO Saturday, September 18th

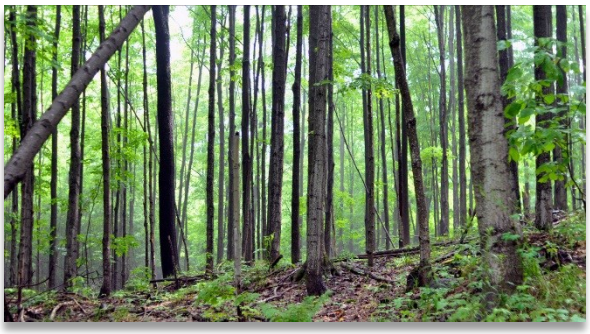
We can't do a traditional BBQ this year but at least we can gather in-person! Bring your own lunch to enjoy after a walkabout thru old growth forests and plantations on member Val Makhouleen's property.

Hike at 11, gather for lunch around 1

Pre-registration required
email jcoles@gbtel.ca

Host will provide hot water, tea, kitchenette and access to the bathroom and covered space in case of rain as needed.

The property is located in the southwest of Chatsworth Township, just north of the western entrance to the Kinghurst Tract. So if you wanted a few hours of hiking – it is the perfect spot! Directions provided upon registration confirmation.



ADVANCE NOTICE—NEXT EVENT:

A guided hike of the Greenock Swamp courtesy Saugeen Valley Conservation
Most likely sometime early October.
Keep a watch on bgwa.ca
(you can subscribe for updates to your inbox)