Greenleaves

Newsletter of the Bruce Grey Woodlands Association

SUMMER 2019

www.bgwa.ca

President's Message

Alison Stewart

Happy Summer! While spring was wet, summer has been hot and dry. I don't know about you; however, I have been busy with pruning trees, inspecting them and maintaining equipment. Of course, there are the times in the shade under a tree; looking at the results of various tree planting we have done and the beauty of nature. My, the to do list seems to be never ending here at the farm.

Hunter and I inherited the property after her Mom passed away in 2012. It is a beautiful 100-acre farm. For 2 city slickers that relocated to Ontario from the West Coast we have been on an amazing learning curve, for both trees and agriculture. Hunter's Mom had planted 30,000 trees, utilizing Ontario's 50 Million Tree Program; we followed suit and planted another 3,000 in 2013. We did a mix of cedar, pine, maple, spruce, oak, black cherry and hackberry. Then, squirrels have assisted, by burying black walnuts around the property, and those seedlings are also growing very nicely.

I am fascinated and in awe of nature as I watch our tree seedlings grow. From the large ant hills and dead trees around them; the flooding in spring from melting snow and rains; the damage that large snow drifts

(Continued on page 2)

AUG 05	SEP 07	OCT 19	NOV 16
TrailCam contest begins	Annual Members BBQ	Tree Marking Workshop	Treevia returns!

DETAILS WILL BE POSTED TO WEB SITE AS EVENTS APPROACH

How about hosting a member tour of your wooodlands?!?

Contact

Chris VanderHout

519-665-7414

(President's Message, from page 1)

cause and the beauty of all seasons. The birds have returned and multiplied this year (yeah) and we have a wonderful natural crop of milkweed growing for monarch butterflies. The wild flowers are great for the pollinators and look magnificent too. There seems to be an abundance of seeds and cones developing on the various tree species around the area, this summer. It looks to be a bumper year for them. We are looking to create a private arboretum here at the farm – more details to come in another edition.

Now onto Association business; we held a board meeting on June 12th. Amongst regularly discussed items we focused on upcoming events and outreach activities. There is a long list planned (save the dates found in the Newsletter and on the website).

Ron Stewart continues our outreach activities at the Bruce County Heritage Farm Show August 16-18 at Paisley. If you would like to volunteer some time to be at the booth and see the show please reach out to Ron (contact info on back page). We are looking at other events that would allow us to share our insights on promoting healthy forests within Bruce and Grey counties. If you have any suggestions about an event that would be suitable, please let us know. We would love your input!

I wish you all a wonderful summer; see you at the BBQ!

Save the Date: Sat SEPT 7th

BBQ meets BUS TRIP!

This year our annual Members' BBQ will feature a new (optional) morning bus excursion followed by the usual lunch and social time you have come to enjoy.

Approx times: Bus 9AM-1PM BBQ 1-3PM

Watch web site and email for details.

This newsletter was made possible in large part by the BGWA members who generously gave their time and effort to write the content you are enjoying.

Would you please consider contributing to a future issue to keep the newsletters full and interesting? And as a thank you, all contributors are entered into a prize draw at next year's AGM for each piece contributed.

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.

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

Grandkids and Woodlots

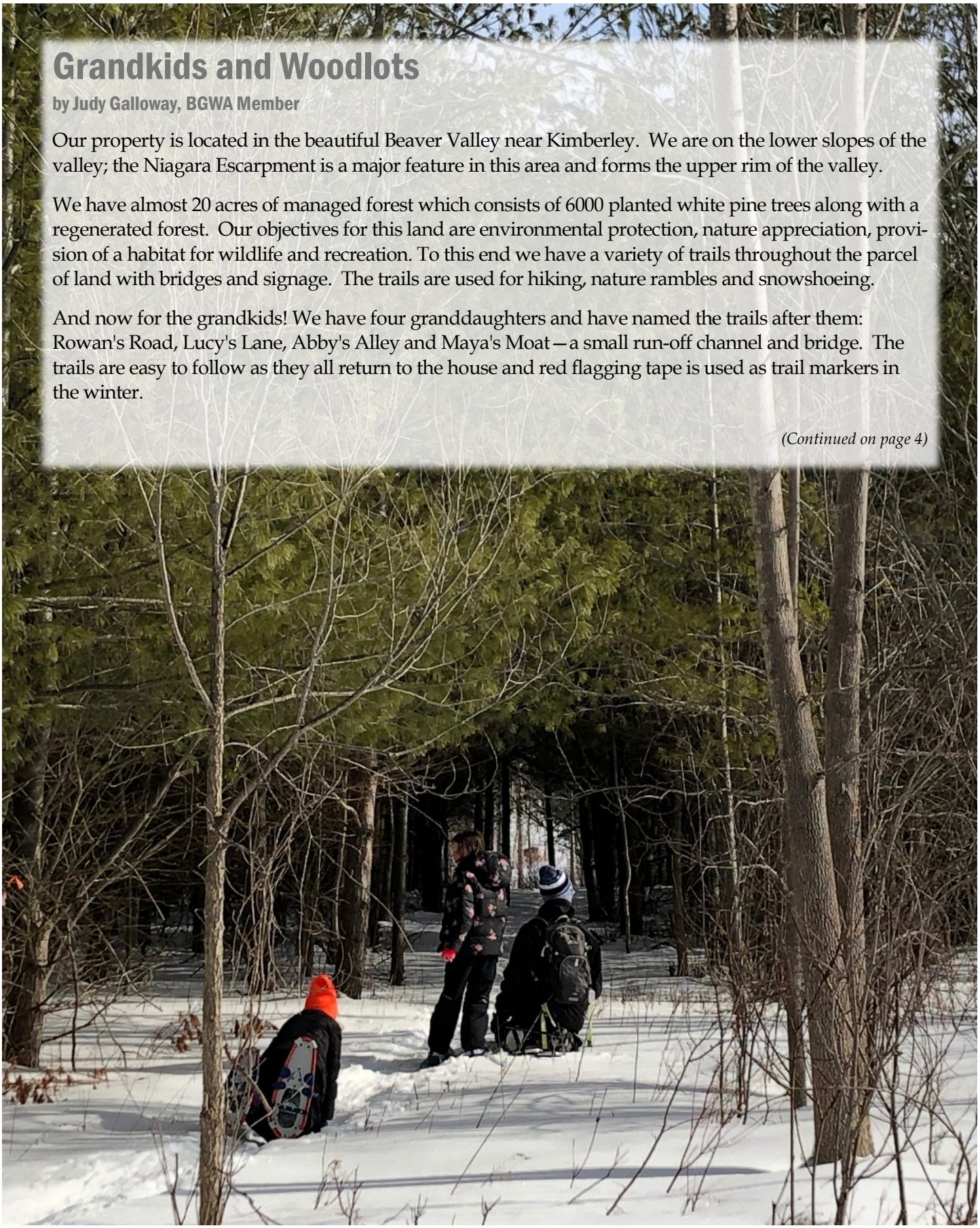
by Judy Galloway, BGWA Member

Our property is located in the beautiful Beaver Valley near Kimberley. We are on the lower slopes of the valley; the Niagara Escarpment is a major feature in this area and forms the upper rim of the valley.

We have almost 20 acres of managed forest which consists of 6000 planted white pine trees along with a regenerated forest. Our objectives for this land are environmental protection, nature appreciation, provision of a habitat for wildlife and recreation. To this end we have a variety of trails throughout the parcel of land with bridges and signage. The trails are used for hiking, nature rambles and snowshoeing.

And now for the grandkids! We have four granddaughters and have named the trails after them: Rowan's Road, Lucy's Lane, Abby's Alley and Maya's Moat—a small run-off channel and bridge. The trails are easy to follow as they all return to the house and red flagging tape is used as trail markers in the winter.

(Continued on page 4)



(Grandkids and Woodlots, from page 3)

Our granddaughters are all city kids living in Toronto and visit in the summer and on weekends; the woodlot is their playground and outdoor education centre. When our oldest granddaughter, who is now sixteen, would come up as a preschooler we played for many hours a game she invented called "Deer and Wolves". She used the brush piles as deer homes. She was always a deer and I was always a wolf who had to crawl around on my hands and knees trying to catch her. She never got caught and I had sore knees!

Our second granddaughter is very interested in natural science and the woodlot has been a constant discovery centre for various insects, snakes, butterflies, birds and flowers. We have gone through many insect nets and carrying cases from the dollar store. We have small binoculars for use as well as bird and butterfly identification books. She is now very interested in raising monarch butterflies and last year we released about 15 of them. We hope to do the same this year and also tag some in August and early September for their migration.

Our youngest granddaughters are twins and are the explorers--the hikers and snowshoers. They slip on their rubber boots and discover life—and mud--in the small channel behind the house in early spring. They made signs for and cleared a path to a climbing tree part way up the trail. Many hours have been spent in that tree! They investigate rock piles left by the early farmers who inhabited this land and follow the trails to the top to sit on the bench under the old pear tree. In the winter, they snowshoe up our trails and continue on up the escarpment to the Bruce Trail.

Our woodlot has provided and continues to provide a level of self-discovery of the outdoors which our grandkids could not experience in the city. It is a safe environment where they are free to explore at will and take manageable risks. We wouldn't have it any other way!

Investigating a new disease affecting Ontario's beech

From Ontario Ministry of Natural Resources & Forestry
supplied by Craig Todd Partnership Specialist MNRF Owen Sound

MNRF Science and Research Branch's (SRB) forest health team is studying a new disease affecting Ontario's American beech trees. Known as beech leaf disease, this malady was first detected in Elgin County in fall 2017. American beech in five southwestern Ontario counties are now found to be affected. It's unclear what causes it, but SRB researchers are investigating a tiny nematode that has been found in the buds, leaves, and leaf litter of affected trees in North America (including Ontario) as well as in Japan. Scientists elsewhere are investigating if a virus or a mycoplasma (parasitic bacteria) plays a role.

Beech leaf disease was first detected in the United States in 2012 with Ohio, Pennsylvania, and New York all reporting cases. Leaves emerge infected and suffer increasing damage over the growing season, becoming unable to produce energy through photosynthesis. U.S. foresters report that smaller infected trees die after two to five years. It's not clear how the disease affects larger trees. During the 2019 field season, SRB scientists plan to work with partners to learn more about how the disease is distributed in Ontario and how it's affecting forests.

Beech's future in Ontario is already at risk due to beech bark disease, which has spread rapidly and killed thousands of trees, drastically altering the forest landscape in some areas. The arrival of beech leaf disease compounds stress on beech and uncertainty about its future. SRB scientists note that some American researchers have been working on beech-bark-disease-resistant beech, but they may not be resistant to the new disease.

Climate change may reduce height growth in white pine plantations

From Ontario Ministry of Natural Resources & Forestry
supplied by Craig Todd Partnership Specialist MNRF Owen Sound

Changes in climate are likely to reduce site productivity for white pine plantations in Ontario, with more pronounced effects in the south, according to new findings from MNRF researchers.

They found that climate variables explained about half (52 per cent) of the variability in white pine site productivity. They developed stand height growth models for white pine plantations that incorporate the effects of climate. Climate variables that explained the most variability in stand height growth were growing season total precipitation and growing season mean temperature.

These models can be used to estimate stand height at any age at a point in time. They can also be used to determine site index (measure of site productivity). In the absence of climate data, the model fitted without climate variables can be used to estimate stand heights and site indices. The researchers recently published similar work for white spruce and red pine, with results showing decreased tree height in response to scenarios incorporating projected climate changes.

Study results may help those who make forest management decisions related to adaptation. This work supports Integrated Science Action Plan Objective 15 (predicting effects of climate change).

My Favourite Trees

by Malcolm Silver, BGWA Member (aka your Travelling Editor)

I have always loved plane trees. My admiration was inspired by a magnificent avenue of London plane trees (*Platanus* × *acerifolia*) found along Frome Road in Adelaide South Australia, The trees had been planted in 1902, to celebrate an Arbor Day.

A hybrid, which occurred in the 1600s between the Oriental Plane (*Platanus orientalis*) distributed from SE Europe to Asia and the American Sycamore (*Platanus occidentalis*) native to the USA and Mexico, the trees marched past my medical school and during 18 months in 1952-53 as we learned anatomy by dissection on the 2nd floor we were level with their leafy branches and could study the trees as closely as the task before us. What a delight watching their leaves unfurl & the trees flower in the austral spring (they carry both male and female flowers), and then the leaves turn yellow/brown and fall in massive quantities.

London Plane Tree Avenue, Frome Road Adelaide

Their fruits, borne on dangling peduncles, are brown balls, 2.5 cm in diameter, formed by aggregates of hundreds of seeds 2.3 mm long with stiff hairs which aid wind dispersal, usually 2, if sometimes 3 balls are found on each stalk and ripened in the fall. They usually fell to the ground and broke apart but often remained on the trees into winter and fed European goldfinches, another import to the country. Also, I was thrilled to see and touch their smooth mottled bark that presents a militaristic camouflage pattern. The London plane is widely grown in urban areas around the world In Toronto you can see them on Toronto Island and in Trinity Bellwoods, Queens and High Parks.

Once in Canada I widened my admiration to include sycamores (*P. occidentalis)* found naturally in scattered locations across southwestern Ontario to the Toronto area, and with outlying pockets as far north as the Collingwood-Thornbury area and on Prince Edward Island. They usually grow in lowlands and alluvial soils along streams. Apart from their different habitats these two trees may be distinguished by their bark. On London planes, the military camouflage, due to bark flaking is found up and down the trunk; on American sycamores, the bark is thick and rough on most of the main trunk and only flakes off higher-up. American sycamores generally have a white, and commonly bone-white, underbark while the London planes' will have a yellow or green tinge, The leaves of both trees are lobed, and in the London plane, the center lobe is longer than it is wide, whereas the sycamore's is generally wider than it is long. A final character separates the two; fruits are single on American sycamores while, as indicated, on the London plane they hang in twos or threes.

Recently I toured in Uzbekistan and Turkey studying Islamic architecture. There I renewed acquaintance with magnificent Oriental planes (*P. orientalis*) particularly noted previously in Kashmir where they are called chenars. They have huge, often squat, boles, some of

(Continued on page 7)

(My Favourite Trees, from page 6)

enormous circumference. Their bristly seedballs hang in clusters of two to six.

I was intrigued by trunk rot affecting many in the Topkapi Palace Gardens in Istanbul. In some instances it had hollowed them out. I was determined to find its cause. My investigations indicated the problem was probably caused by, heart rot, a fungal disease that causes wood decay at the center of the trunk and branches. Fungi enter the tree through wounds in the bark and decay the heartwood.. Heart rot is prevalent throughout the world affecting all hardwood trees and can be very difficult to prevent. A good indication of heart rot is the presence of mushrooms or fungus conks on a tree.

And then I learned another disease is affecting both Oriental and London plane trees on the European side of the Bosporus. Just as our forests have been plagued by diseases/pests from overseas, this causative agent came from North America where it is endemic. It was probably brought to Europe in wood of ammunition cases used during WW2. Initially it affected planes in France & Italy and then gradually spread across Europe and, alas, has been discovered in Turkey. The invasive fungal pathogen, *Ceratocystis platani*, produces canker stain disease. Its impact in Europe can be compared to notorious tree problems such as Dutch elm disease, chestnut blight, and more recently the emerald ash borer, which have all devastated our woody ecosystems. Its symptoms, seen in the crowns of diseased trees, depends on the manner in which infection is initiated. In large trees, when it is initiated from pruning or other wounds on one side of the tree, the first symptoms develop on that side with one or more branches showing chlorotic foliage that dies progressively. Very often, these symptoms in large trees are initiated from root grafts. Here, they usually develop on the side where roots have become infected from those of neighboring trees. The disease develops progressively over the entire crown with foliage thinning and yellowing as well as microphyllia. Usually, these symptoms are more pronounced on the side where the infection first appeared however, in some cases, trees show them evenly over their entire crown.

References

***Ceratocystis platani* is killing plane trees in Istanbul** (Turkey) A. Lehtijärvi1 et al . Forest Pathology. 2018;48:e12375. wileyonlinelibrary.com/journal/efp

Canker Stain: A Lethal Disease Destroying Iconic Plane Trees. Panaghiotis Tsopelaset al , Published Online:30 Mar 2017 https://doi.org/10.1094/PDIS-09-16-1235-FE

BGWA MEMBERS' TRAILCAM CONTEST

bgwa.ca/trailcam

Contest Opens Monday August 5th

Closes October 14 (Thanksgiving)

Voting period Oct 15-31

Prize Awarded at Treevia Event in November

Rules:

Pictures must be taken on member's property during contest time period.

Each member may upload up to 10 pictures during contest time period.

Only still pictures (no videos) day or nighttime (infrared) okay.

Members' Choice voting; a tie will be decided by Board vote if required.

The Giant Puffball

by Jim Coles, BGWA Member

The late summer/ fall season is the best time to find mushrooms on the landscape of Grey Bruce and one of the most spectacular fungi is the Giant Puffball (*Calvatia gigantia*). Puffballs, like most mushrooms are basidiocarps, producing reproductive spores called basidiospores and are members of the phylum *Basidiomycota*.

Giant puffballs are found throughout eastern North America, in Europe and parts of Asia. They can occur wherever there is a high nutrient area with decaying animal or plant matter be it open grassy fields, lawns, field/forest edges or open upland forest. On our property giant puffballs are most common in the forest but I have found them in an uncut meadow. They can be solitary, in small groups or in large fairy circles.

The word *puffball* originates from the dust-like cloud of spores that escapes from the ripe fruiting body, called a gleba, when it bursts or is impacted by an outside force. Puffballs have statismospores, meaning not forcibly extruded, rather than ballistospores.

True puffballs do not have visible stalks or stems and do not have an open cap with spore bearing gills. The immature gleba is creamy white and has the texture of a marshmallow both internally and on the surface. It is only at this stage that it can be eaten. As the fruiting body matures it turns yellow, becoming darker with time. The fully mature gleba of a giant puffball is dark green/brown, and as the skin splits it reveals a mass of dark green to purple spores.

Giant puffballs can become very large - up to 70 cm in diameter but most are the size of a cabbage. It has been estimated that a large puffball contains 7×10^{12} spores.

The life cycle of the giant puffball is like most members of the *Basidiomycota*. The released spores are carried by the wind. Spore germination occurs when landing on moist decaying material. The germinating spore produces a hypha, a long, tubular filament or strand which branches repeatedly. These hyphae are almost impossible to see but obtain required nutrients by decomposing organic matter. A large mass of hyphae become a mycelium, often visible. Mycelium can grow out from a central point in a circular fashion - hence fairy circles, but that depends on the consistency of the organic matter. When the mycelium has reached a certain mass of stored energy, and the conditions are right, a prolonged period of wetness , fruiting bodies (the giant puffball) are produced.

It is thought that sexual organs of basidiomycetes were lost during evolution but that the vegetative hyphae have taken over that function. The spores and early hyphae are haploid:- that is, they have one set of chromosomes in the nuclei of a cell, but there are two strains of haploid cells (sort of like male & female). At some point compatible hyphae combine or mate such that the cell now contains two nuclei, each with a one set of chromosomes. This is called the dikaryotic phase and continues in the mycelium until fruiting bodies are produced. During spore development within the fruiting body, cells undergo karyogamy:- that is, the two haploid nuclei join and form a diploid cell, one nuclei with two sets of chromosomes. As these diploid spores in the fruiting body further mature, meiosis occurs and the spores that are released on the wind are haploid once again.

Storage is easy – slice about 1 in thick, separate each slice with wax paper, put in ziplock bag and freeze. Happy mushroom hunting next fall and don't fret the lack of sex among the basidiocarps.

Ed. Like Jim, I like mine fried as strips in butter, but you can find recipes for cooking them on the net.

This article was originally published in Newsletter of Owen Sound Field Naturalists.

Dueling Chainsaws: (Yet More) Green Tools for the Woodlot

by Neil Baldwin, BGWA Member

Those of you at my presentation a couple woodlot conferences ago know of my bent toward battery-powered woodlot tools. Part of it is environmental. Part of it is personal health. And part of it is, living off-grid as I do, these things basically end up being solar-powered… free, clean energy from the sun!

The arsenal includes: a line trimmer and hedge trimmer (Yardworks 20 volt); a brush cutter, chain saw and lawn mower (Greenworks 40 volt). The 40 volt equipment is fairly robust and functional, truly tools not toys. Well, ladies and gentlemen, the magical combination of sale discount and online promo occurred in April and I couldn't help but be tempted by the latest incarnation, now at 80 volts… particularly the chainsaw which trumpeted on its box: *45cc gas engine equivalent*. Really, thinks me, that's the engine size of my Stihl MS250!

I don't have a mature woodlot so I had already been using the Greenworks 40V for about 90% of my cutting, and the MS250 just for felling medium-to-large elms when I really needed reliable power to get through the tough gnarl of their trunks. The 40V was great for limbing and leisurely bucking but would sometimes stop and give me a torque warning when really ripping in hard for felling.

The 80V comes with an 18" bar (40V came with 16"). It feels like a serious saw and has noticeably more heft than the 40V; in fact, with large battery, it weighs in about a pound more than the MS250 with full gas tank. It has a lot of guts—and torque. I continue to be impressed, at how handily it slices through tough trunks.

Overall assessment: seems like same or very close power to my MS250, and good manufacturing quality (have only owned it 3 months, though it has 4 yr warranty). The main limitation is the battery capacity; box says *150+ cuts on a charge*, but they must be pretty small and low-torque cuts. On the up side, it has new charging technology which I timed gets you back to full in just a half hour. Or of course, I could buy another 80V tool for a second battery ;-) Stay tuned.

This high quality metal 12"x18" sign is perfect for gate, fence or post! (printing on one side only) $15 each available to current members.

All 50 signs in last year's order sold out! We will be ordering another print run of signs. If you would like one (or more) please contact Donna Lacey:

d.lacey@svca.on.ca

519-367-3040 ext 231

Bruce Grey Woodlands Association Member

LEADERSHIP + SUPPORT

Board - Executive

President/Chair
Alison Stewart
president@bgwa.ca
604-809-5283

Vice-President
Chris VanderHout*
chris@evolvebuilders.ca
519-665-7414

Secretary
Kevin Predon
secretary@bgwa.ca
519-270-0748

Treasurer/Registrar
Larry Cluchey
treasurer@bgwa.ca
519-799-5304

*also Past President

Board - Directors

Neil Baldwin
communications@bgwa.ca
794-0129

Cam Bennett
c.bennett@greysauble.on.ca
519-376-3076

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

Donna Lacey
d.lacey@svca.on.ca
519-367-3040 x231

Susan McGowan
susan.mcgowan@outlook.com
519-794-0812

Scott McGregor
scottmc83@gmail.com
519-379-3559

Jim White
pjwhite@sympatico.ca
519-833-2931

Ron Stewart
519-386-2833

Adjuncts to Board*

Web Site Manager
Neil Baldwin
info@bgwa.ca

Newsletter
Neil Baldwin (production)
Malcolm Silver (editor)
newsletter@bgwa.ca

Librarian
Hunter Dickson
Alison Stewart
library@bgwa.ca

Ontario MNRF Liaison
Craig Todd
craig.todd@ontario.ca
519-371-8465

*not Director, non-voting positions

Board Committees

Communications
Neil Baldwin*
Kevin Pedon
Alison Stewart
Jim White

Events & Education
Cam Bennett
Jim Coles
Donna Lacey
Scott McGregor
Ron Stewart
Chris VanderHout*

Membership
Larry Cluchey*
Donna Lacey
Susan McGowan
Alison Stewart*
Ron Stewart

* committee chair

Sign, sign, everywhere a sign

by Dave Fritz, BGWA Member

Hello fellow members. Well, I finally made time to post my member of Bruce Grey Woodlands Association sign.

I thought about putting it up ever since I got it, and that was with the first batch, and when was that…in 2018? I picked it up at the Annual General Meeting and that time of year is just not suitable to make a project where a sign post needs to be dug in. The sign was cautiously placed where it wouldn't get damaged and from time to time I would see it and think *I should do something about that*.

I know many of us have these signs, and if you are like me, other things take priority. Then one day I put it on my *to do* list (actually several days) after making it more visible in my shop and then one day I decided: *it won't take long…just do it.*

I wanted the background to be the trees, I wanted it visible from the road and it should be along the side of the driveway so the public (and members) can see that we are proud members who put up the sign. I didn't want it too eye catching however or people would view it as a business sign so placement needed to have these thoughts in mind. It is more noticeable when driving East to West past our driveway but nicely noticeable when you start in our short lane.

So… do you have your member sign? Is it posted? Have you sent a picture of it for Neil to post on our website? Perhaps in the future we can organize an event to go find our proud member's signs scattered through out our area. (Send your sign pic to communications@bgwa.ca!)