



**Fredericton Botanic Garden
Association Newsletter**

**Bulletin du Jardin botanique
de Fredericton**

Vol 31 No 1

Winter 2019

Happy New Year!

Message from the President ~ James Goltz

Greetings, fellow gardeners and garden enthusiasts. I hope you enjoyed a wonderful holiday and that your New Year is filled with great health, happiness, fun, and many garden delights. The early arrival of winter weather in November and persistent snow since then have meant for most an extended down-time from being active in one's garden and have provided ample time for reflection and mindfulness (a term that has recently been embraced by health care professionals and pop-culture).

This past year has been a very productive one for the Fredericton Botanic Garden. We had two successful inaugural events for new and expanded gardens: one for our expanded Daylily Garden in July, and one for our New Brunswick Literature Garden in August. We are delighted that the Honourable Jocelyne Roy Vienneau, our honorary patron and New Brunswick's Lieutenant Governor, was able to participate in the opening of the New Brunswick Literature Garden and to share a few words of inspiration at the ceremony (you can read her remarks on the Literature Garden's web site at nbliteraturegarden.wordpress.com/). These gardens provided an exciting splash of floral colour and creative design in parts of the Fredericton Botanic Garden where they were needed. Our program of growing our Garden continues. In late September, we created and planted a Peony Garden with over 80 different peonies generously donated by Erwin Landauer, a resident of the Plaster Rock area and a long-time supporter of the Fredericton Botanic Garden. We also began construction on a Pollinator Garden and were successful in obtaining a grant from the Fredericton Community Foundation to help with the development of this garden.

The development of new gardens and the continued operation and maintenance of the Fredericton Botanic Garden would not be possible without the help and generosity of many people, including the City of Fredericton, members of our Board and committees, other volunteers, and donors of plants and funds. Your steadfast support is very much appreciated.

The New Year is a time to make resolutions, and I encourage each of you to resolve to share your love of gardens

Annual General Meeting

**Saturday March 23, 2019, 1:00 pm
Unitarian Fellowship, 874 York Street**

Speaker: Andrew Byers

Topic: Beekeeping in New Brunswick

Talks in the Garden

**Ecology and Conservation
of Furbish's Lousewort in Canada**

Speaker: Dr. Graham Forbes

Thursday January 31, 7 p.m.

**Fredericton Botanic Garden Association
Resource Centre on Cameron Court**

See page 2 for more "Talks"

Seedy Saturday

**Saturday, March 2, 2019 1:00—4:00 pm
Fredericton Botanic Garden Resource Center
10 Cameron Court**

and gardening with at least one other person to help enrich their life. Gardeners tend to be very creative, so no doubt you will come up with your own ideas how to do this, but here are a few suggestions:

- Introduce a youth to gardening by inviting them to plant something in your garden or helping them plant something in their own yard.
- Share something you have grown, e.g., some fresh vegetables, freshly cut flowers or a live plant, with a neighbour or friend.
- Invite someone who doesn't have a garden to visit your garden.
- Bring someone to the Fredericton Botanic Garden or to one of our Talks in the Garden.
- Tell your neighbours or the City how much you enjoy their gardens – or ours.
- Offer to help a friend or neighbour weed their garden or with other garden maintenance work.
- Donate some plants to the Fredericton Botanic Garden for our Spring Fair and Plant Sale, or for our new Pollinator Garden.
- Donate some fresh produce to a local food kitchen.



Take photos of your garden and share them using social media, or take photos of the Fredericton Botanic Garden and send them to us so we can post them. If you share on social media, please tag us on Facebook (@FrederictonBotanicGarden) or Twitter (@FredBotGarden).

With the gardens we've just described mostly snow-covered, it may seem like an odd time for it – but why not visit us in winter? Our lower parking lot is plowed, our trails are available for skiing or snowshoeing, and our shrubs and our woods are beautiful this time of year too.

In closing – thank you for being part of our Garden. May our Garden, yours, and the gardens of others enrich your lives and bring you great joy and pleasure in the New Year.

Talks in the Garden

Fredericton Botanic Garden Association Schedule for TALKS IN THE GARDEN January to May, 2019

Location: **Fredericton Botanic Garden**

Resource Centre, 10 Cameron Court, Fredericton NB

Thursday January 31, 7 p.m.

Topic: **ECOLOGY AND CONSERVATION OF FURBISH'S LOUSEWORT IN CANADA**

Speaker: **Dr. Graham Forbes**

Furbish's Lousewort, named in honour of Maine botanist and botanic-artist Kate Furbish (1834-1931), is globally rare and one of the most endangered wildflowers in Canada, found only along the St. John River in New Brunswick and Maine and nowhere else in the world. Dr. Forbes and others have been working on the species lately and his presentation will be an overview of the habitat, threats, and management of this special endemic.

Graham is a Professor in the Faculty of Forestry and Environmental Management and Faculty of Science, and Director, NB Cooperative Fish and Wildlife Research Unit, at UNB in Fredericton, and President of the Fredericton Nature Club.

Topic: **THE MYSTERY OF THE DISAPPEARING CHIMNEY SWIFTS**

Speaker: **Dr. Joseph J. Nocera**

Date: **Wednesday February 27, 7 p.m.**

Chimney Swifts provide constant background chatter in urban skies during the summer. Their mass entrance to their roosts provides enthusiasts with a nightly spectacle. But populations of this once common bird have plummeted in recent decades. Today, the Chimney Swift is listed as federally Threatened. There is active research on Chimney Swifts right here in our backyard looking at such things as: What happened? Where do we go from here? This presentation will explore those questions, provide a few answers, and pose even more questions. There is active research on Chimney Swifts right here in our backyard.

Joe is an Associate Professor of wildlife ecology at the University of New Brunswick, in the Faculty of Forestry and Environmental Management. His research program focuses on habitat selection and movement ecology of species-at-risk, especially aerial insectivores. He has led many studies on swifts, ranging from historical dietary profiles of Chimney and Vaux's Swifts to patterns of huddling in roosts.

Thursday March 21, 7 p.m.

Topic: **EUROPEAN CHAFER BEETLE "THE REASON YOUR LAWN LOOKS LIKE SWISS CHEESE"**

Speaker: **Mike LaCroix**

Learn how to recognize when your lawn is infested with the European Chafer Beetle and how to identify it, and gain an understanding of its life cycle and how to control it.

Mike has been working in the landscape industry for 15 years. He first started this path years ago for a small business, not knowing at the time it would become a passion for him. He is currently the Horticulture foreman for the City of Fredericton.

Tuesday April 16, 7 p.m.

Topic: **PARKS ARE FOR PEOPLE**

Speaker: **Julie Baker**

Fredericton City Council has approved a Master Plan for Odell Park. Julie Baker, Landscape Urbanist for the City of Fredericton will discuss the importance of urban parks and present the main recommendations of the plan.

Julie is a Landscape Designer, Park Planner and Horticulturist. She works as a Landscape Urbanist for the City of Fredericton and is responsible for new park development and Master Plans for our existing City Parks.

Thursday May 16, 2019

Topic: **ENJOYING, SAVOURING, AND PRESERVING THE PLEASURES OF THE HERB GARDEN**

Speaker: **Marg Routledge**

Following the long winter, the spring sunshine warms the soil and we soon welcome the sight of green shoots of perennial herbs. May is the ideal time to talk about building a herb garden with both perennial and annual herbs, suitable for our climate. You will be encouraged to experiment with new recipes including herbs, and to prolong the wonderful tastes of summer in your freezer and pantry.

Marg is a retired professional Home Economist. Dedicated to the culinary arts, Marg's experience included education, product promotion and cookbook author. She is a member of the Board of the Fredericton Botanic Garden and for several years has been responsible for the herb sales at the Spring Fair and Plant Sale.



Science in the Garden

Tree trunks, game theory, and the invisible hand

By Steve Heard (Professor, Biology, UNB).



Photo: Collecting foliage from balsam fir trees in Quebec. Photo courtesy Cameron Rugo

Most of the formal attractions in our Garden are short: herbs and shrubs, blooming at knee level or perhaps, like our lilacs, just above your head. There's more to see and enjoy in any garden than what the gardeners have planted, though. Throughout our Garden, and in adjoining Odell Park, you'll find plants of much greater height: trees. And trees, if you think about it, are a little weird.

I'd never thought much about the weirdness of trees until a research field trip to some spruce-budworm-defoliated forests in Quebec. Our research involved sampling both soil (to measure carbon storage) and foliage (to measure defoliation). The soil was always easy to reach, conveniently located right at ground level – but not the foliage. As is true of the trees in our Garden, and is equally true in forests the

world around, the bulk of the foliage is way, way up in the air. We took foliage samples using a pole pruner, which has a cutting head at the end of a series of interlocking pole segments – seven segments in the photo above. Using that pruner means balancing a wobbly, bendy pole while manoeuvring it through snags and branches to snip foliage samples about 12 metres (40 feet) from the ground. This is hard, as you might imagine, and after a few hours anyone doing it is sure to daydream about how much simpler the whole thing would be if the trees could just get their act together and grow at bush height.

So why *don't* they? Perhaps surprisingly, there's no real reason for a tree to be tall, other than the nearby presence of other trees. A single tree growing by itself would be best served by sprawling, not reaching for the sky. A sprawler can harvest light without investing resources in a trunk and in the machinery and energy to lift water and nutrients up that trunk, and without running the very substantial risk of wind sending the whole thing crashing to earth. But a tree typically grows among other trees, and if its neighbours grow up and it doesn't, it will be overtopped and shaded out. But here's what's interesting: *all* the trees would be better off if they could somehow all sign a treaty agreeing to cap their heights. Without that treaty, what's best for each individual (to grow up, in a race with their neighbours) leaves every individual stuck with the inefficiency of hoisting foliage up on an otherwise useless trunk. Lots of complicated tree anatomy and physiology then has to exist only because the foliage is far above the supply of water and nutrients it needs to photosynthesize.

The problem is this: like every living things on Earth, trees are a product of evolution by natural selection – and natural selection requires special circumstances to evolve cooperation that depends on restraint.

The tree trunks in our garden offer much broader lessons. Their evolutionary history involves, in mathematical terms, "game theory" – in which the best "move" for each player (tree) depends on the moves of other players they're interacting with. The same bit of game theory applies to us too, and so it isn't just trees that have trunks. The world's enormous, many-times-overkilling nuclear arsenals are, metaphorically, tree trunks (and we have nuclear-arms pacts in an attempt to shorten them). The financial incentives local governments offer to attract new industries are tree trunks too, as jurisdictions compete with each other to wring the least possible net benefit from the arrangement. And increasingly, our carbon emissions are tree trunks, as each country refuses to apply tough-enough carbon taxes (or their equivalent) because all the others won't either. Tree trunks are everywhere, and they make clear the frequent failures, in economics, of Adam Smith's famous invisible hand.

There – the next time you crane your neck to look up, up into the treetops, you've got something to think about.



Supporting our pollinators: one garden at a time.

By: Holly Abbandonato, PhD

When I was a little girl, gardening in the summer was a regular activity. Digging in the dirt, inhaling the fragrance of each successful bloom, and listening to the bees, crickets, and grasshoppers zoom and click about. Today, many of these once common creepy crawlies are starting to disappear as a result of anthropogenic impacts, such as land use changes, habitat degradation, and climate change.

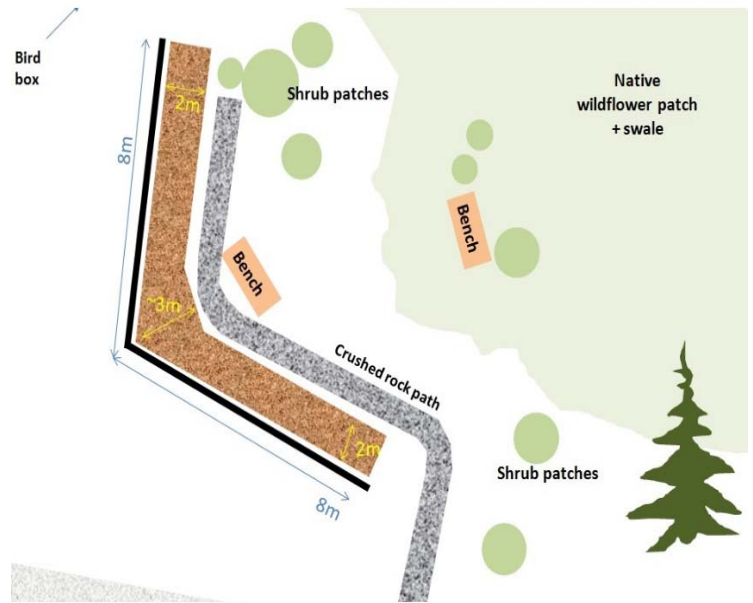
As Audrey Hepburn once said: "To plant a garden is to believe in tomorrow".

Whether you are adamant gardener or a garden admirer, insects and especially pollinators are a common sight and sound. Insects provide a critical role within our gardens, such as consuming pests, pollinating flowers, and providing food for birds and small mammals. They are an essential component of an ecosystem, and many insects such as the Luna Moth or Hummingbird Clearwing (hawk moth) are also quite dazzling.



Luna Moth (*Actias luna*) © Ray Dumas CC BY 2.0

This summer we are pleased to announce that the Fredericton Botanic Garden will be adding a new garden bed aimed at attracting and supporting our local pollinators. This will include carefully selected herbaceous plants, shrubs, and trees that provide pollen, nectar, available water and nesting sites for bees, butterflies and hummingbirds. Preparation for the new bed is underway (beginning last autumn) and we hope to provide beneficial habitat that is recreational and educational to our visitors, which includes native and horticultural plant species.



Many of the plants we are familiar with or have grown to love wouldn't be here without the help of pollinators. For example, in the United States alone, over 2.5 billion honey bees pollinate \$15 billion crop species every year, such as blueberries, almonds and watermelons. Just last year, the rusty patched bumblebee (*Bombus affinus*) was put on the Endangered Species list in the United States, which is a species common in many Canadian provinces. Over the last 30 years, the rusty patched bumble bee has declined by 99% in southern Ontario. Moreso, the yellow-banded bumble bee has been declining in much of the southern Canadian provinces. Of course, it's not just bees: our most familiar butterfly, the monarch, is now listed as endangered. Bees, butterflies and hummingbirds are all part of our natural landscape here in New Brunswick, and what we do in our own backyards can really make a difference!

To learn more and receive updates, visit our GoFundMe page at: <https://www.gofundme.com/saving-our-pollinators>

Your Garden on social media

Did you know that you don't have to wait for our next *Newsletter* for news about, and from, your Garden?

You'll find us on Twitter or on Facebook, and you don't need to be a member of either service to see our pages. We post photos and news about your Garden, plus links to interesting stories and resources from the world of gardening and nature. Simply visit us via these links:

Facebook: [facebook.com/FrederictonBotanicGarden](https://www.facebook.com/FrederictonBotanicGarden)

Twitter: twitter.com/FredBotGarden



Spring Fair and Plant Sale

The planning for our 2019 Spring Plant Sale are well underway. Our tomatoes & peppers from Heritage Seed, herbs from Richters have been ordered as have the perennials from VanNoort. With last years show being such a smashing success we increased our inventory for this years sale.



So mark your calendars for Sunday May 26th 12pm-4pm. We hope to see you there & that the sun is out! Join us in the gardens this Spring. All the very best for 2019.

Membership

Visit the website frederictonbotanicgarden.com and find the calendar of upcoming events. Note the website is under-going upgrading with a new look. Check it out. Also the option to buy a gift membership has been added under the Membership tab.

Board Development

Hello Fredericton Botanic Garden Association Members.

Have you been wanting to become more involved in your Association? We are currently looking for some members to fill a few vacancies. Perhaps your experience would make you a good fit to join the Association's board of directors. If you have the time (approximately one board meeting per month and participation in several events throughout the year) and some expertise that you feel might be an asset to the organization, please contact Wendy Bourque (450-3904) or Graham Allen at the FBGA office (452-9269). We really hope you will consider volunteering some of your time to contribute to this long standing community organization.



Seedy Saturday

Saturday March 2, 1– 4 pm
Fredericton Botanic Garden
Resource Center
10 Cameron Court off Hanwell
Members: \$2.00 Non-members
\$4.00

The Fredericton Botanic Garden Association Newsletter is published four times a year by the Fredericton Botanic Garden Association, Inc. The FBGA is a registered charitable organization for tax purposes.

The objectives of the FBGA are to guide the establishment of the Fredericton Botanic Garden and to foster an awareness and appreciation of plants.

To obtain information on membership and to become involved in FBGA activities please contact us: **506-452-9269 PO Box 57, Stn. A, Fredericton, NB E3B 4Y2 or fbga@nb.aibn.com**
Web: www.frederictonbotanicgarden.com

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