



**Fredericton Botanic Garden
Association Newsletter**

**Bulletin du Jardin botanique
de Fredericton**

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Fall 2017

President's Message

**A New Plan for Renewing the Fredericton
Botanic Garden**

By James Goltz

Soon after the Fredericton Botanic Garden was started in 1990, the visionary founding members developed a strategic plan that has been the foundation for Garden developments that have ensued, and has provided guidance and direction for the Garden's future. A number of accomplishments have been realized, including an entrance garden, gardens around the resource centre, a memorial garden featuring magnolias, a white garden, a spectacular rhododendron garden, a showy lilac garden, the Hal Hinds memorial garden, a day lily bed and a woodland fern trail. Plans for some other large garden developments, including a rose garden, a children's garden and a pond garden, have yet to be realized since these will require considerable resources for their establishment and maintenance.

The original plans are excellent, we haven't given up on them, and we hope that we can achieve them in the future, but they aren't likely to be implemented in the near future unless significant funds can be acquired. Our members, our partners and the public expect that the Garden will continue to grow, expand and be developed with exciting new plantings to entice visitors at all times of the year. The Board of Directors and the Garden's Site Development Committee have decided to take a new approach to Garden renewal, focussing on expansions and new plantings that are low cost and can readily be accomplished.

This fall, we have begun work on expanding our Day Lily Garden and creating an Arts and Culture Garden, the latter thanks to funding from a grant from the City of Fredericton. The Arts and Culture Garden will showcase plants that have been highlighted in the writings of New Brunswick authors and poets, and will pro-

Talks in the Garden

Fredericton Botanic Garden Resource Center
10 Cameron Court

The Strangest Tribute:

***How Scientific Names Celebrate Adventurers,
Heroes, and Even a Few Scoundrels***

Speaker: Stephen Heard
Thursday October 19, 7 p.m.

***Rock Gardening Masters of the
Czech Republic***

Speaker: Steve Stehouwer
Thursday November 16, 7 p.m.

***Christmas Trees: Celebrating Old Traditions
and Making New Ones***

Speakers: Louis-Philippe Albert and Mary Pugh
Thursday November 23, 7 p.m.

vide interpretive displays about what the writers and poets had to say about these plants, and information about the authors themselves. We're also working on a new self-guiding brochure for the Woodland Fern Trail.

We very much rely on and appreciate the excellent work of our many volunteers who generously help us with our Spring Fair and Plant Sale, and who participated in our weeding party in the Hal Hinds Memorial Garden on July 5. We welcome your participation and assistance with our transplanting party on Sunday October 15, when we will be retrieving Day Lilies from a generous donor and will be translocating them to our expanded Day Lily Garden. Please contact Graham to register to help.



Additional plans for the near future include a rock and crevice garden, a peony garden, a shade garden, a pollinator garden, a garden featuring “useful” plants, and expansion of our rhododendron garden. We welcome your ideas for how the Garden can better address the needs of our members, the public and the community.

Have a Happy Autumn and enjoy your garden harvests and your strolls through the Fredericton Botanic Garden!

Science in the Garden

Witches in the Woods

By Steve Heard (Professor, Biology, UNB).

Happy Hallowe'en!

As you read this, you probably have recent memories of neighbourhood children traipsing door-to-door in costume, shrieking and laughing along the way. You likely saw superheroes and scarecrows, pirates and police officers, wizards and witches. Some costumes go in and out of fashion; but there are witches every year.

There are witches in our woods, too.

The witches in our woods aren't children in costume, and they aren't the malevolent beings that inspire those costumes. Instead, they're natural phenomena that for one reason or another we've given witchy

names to. Three that are common in our region are witch-hazel, witches' broom, and witches' butter.

Witch-hazel, *Hamamelis virginiana*, is a large, broad-leaved shrub common in moist, acid woods and thickets along riverbanks and lakeshores. In New Brunswick, it's one of the last plants to flower each year, flowering in September and October with its somewhat untidy sprays of tousled yellow petals. When they persist late enough in autumn, they can sometimes wear bonnets of snow. Why “witch”-hazel? There are two possibilities. In Middle English, “wiche” meant “pliable”, and the young twigs and branches of wychelm and witch-hazel are indeed easily bent. (The same root gives us the word “wicker”). In addition, the young branches of witch-hazel are favoured as dowsing rods in divining for water – a witchy sort of pursuit. It seems likely that “wiche” evolved to “witch” as a result of this use, or perhaps it was the other way around – perhaps the “wiche” name suggested use in divining. That witch-hazel may sometimes persist in flower to Hallowe'en is a happy coincidence.

Witches' broom can refer to any number of cases in which a tree or shrub develops a tight, bushy growth of short twigs resembling the end of a broom. The growth of a witches' broom can be triggered by a genetic mutation in one line of plant cells, by the attack of



mistletoes (parasitic plants), by infestation with mites, or by infection with a number of microbial parasites. My favourite witches' broom occurs on spruce, and results from infection by the rust fungus *Chrysomyxa arctostaphyi* (the "spruce broom rust"). These tightly-packed brooms turn yellow, then brown, as affected needles die – although only with multiple infections is there serious damage to the tree. I love spruce brooms because of their life cycle. The fungus alternates (as most rusts do) between two hosts, with the non-spruce host being bearberry or kinnikinnick (*Arctostaphylos uva-ursi*). On each host, the fungus produces asexual spores, which are carried by wind and can only infect the *other* host. On spruce, it also produces sexual spores, along with a sweetly putrid odour that attracts insects to carry those spores between individuals. This is the same system, with the same odour cues, that flowers use in attracting insects for pollination. In a gardening context, by the way, we mostly think of witches' brooms as cosmetic *defects* in our plants – but a few dwarf cultivars, such as "Tom Thumb Gold" oriental spruce, originated as (cell-line mutation) witches' brooms on larger plants.

Finally, the oddest name: witches' butter (*Tremella mesenterica*, and related fungi).

This is a small, yellow or orange fungus with a lobed, convoluted body (hence another common name, "yellow brain"). Most individuals are small, perhaps a centimeter or two, and when fresh they have a rather gelatinous texture. They grow on dead wood, and for years I assumed that they were decomposers, but it turns out I was wrong. Instead, they're parasites of other fungi, and it's their hosts that are decomposers (unseen within the wood). Despite "gelatinous", "brain",



"dead wood", and "parasite", though, witches' butter is beautiful. Especially on a cloudy day, it provides a splash of sunny colour on a brown forest floor. But why "witches' butter"? Butter from the yellow, of course; but witches? Some sources suggest a folk belief that one could defend oneself from witchcraft by throwing witches' butter onto a blazing fire (certainly an improvement over burning the witch herself). A better story: because the fungi can appear rather suddenly, a Swedish folk myth holds that witches' butter is formed when witches come in the night, milk a household's cows, and scatter the butter on the ground.

Hazel, broom, and butter: three witches in our woods. Wonderful!

Photos: *witches' butter* © [Daniel Neil](#) CC BY 2.0; *witch-hazel* © [Mike Peel](#) CC BY-SA 4.0; *witches' broom* © [Scot Nelson](#) CC BY 2.0.

New Endowment Fund

By Jim Nicholson

The Fredericton Botanic Garden Association now has an endowment fund that is administered by The Fredericton Community Foundation. It is called The Fredericton Botanic Garden Association Fund. It is open ended and can be added to at any time by anyone. It is small but it is a start. Only the proceeds of the fund can be used by the Garden each year

I decided to establish the fund in memory of my late wife Betty who was an active member of FBG for many years. Neither her name nor mine is associated with the fund so others can feel free to add to it.

I am not wealthy, but I had some shares of Canadian corporations that I owned for some time. Over that time they increased in value quite a bit. If I cashed them for personal use I would have been hit with a high capital gains tax. When they are contributed in kind to a registered charity no one has to pay the tax. The charity gets the full value of the shares and the donor gets a receipt, also for the full amount. This results in lowering the tax on other income.

Compared with cashing the shares for personal use or leaving them to be cashed when my estate is liquidated, I am out of pocket only about half the value the charity receives. I recommend this to anyone with shares.



Talks in the Garden

Date: Oct 19, 2017 7:00 pm

Topic: The Strangest Tribute: How Scientific Names Celebrate Adventurers, Heroes, and Even a Few Scoundrels

Speaker: Dr. Stephen Heard
Professor & Acting Chair, Dept. of Biology
University of New Brunswick

Location: Fredericton Botanic Garden Resource Center, 10 Cameron Court, Fredericton

The Latin names we give to plants and animals have a reputation as difficult and dull. Some deserve this reputation – but other names – many others – have wonderful stories to tell. I'll tell some of these stories, focusing on species whose Latin names honour people. Taxonomists have named plants and animals for other scientists, for adventurers and explorers, even for a few scoundrels. Some honorees are famous; others have been forgotten, but the names now recall their stories. These Latin names weave the world together because they reflect connections between the scientists who name species, the people they honour in the naming, and the organisms that bear the names. The connections, and the connected, can be surprising, fascinating, even poignant.

Date: Thursday November 16, 7 pm

Topic: Rock Gardening Masters of the Czech Republic

Speaker: Steve Stehouwer

Location: Fredericton Botanic Garden Resource Center, 10 Cameron Court, Fredericton

Learn about the joys and possibilities of rock gardening through photos highlighting a number of spectacular rock gardens in the Czech Republic, and find out what went on during the 3rd International Czech Rock Gardens Conference

Date: Thursday November 23, 7 pm

Event: Christmas Trees: Celebrating Old Traditions and Making New Ones

Speakers: Louis-Philippe Albert and Mary Pugh

Location: Fredericton Botanic Garden Resource Center, 10 Cameron Court, Fredericton

Find out how to grow and care for natural (Balsam Fir) Christmas Trees and get advice on how to decorate them to suit your tastes.

Board Development

Anyone interested in becoming a member of the Board of Trustees for the Garden can contact one of the board members or by email fbga@nb.aibn.com or telephone 452-9269.

Membership

Visit the website frederictonbotanicgarden.com and find the calendar of upcoming events. The option to buy a gift membership has been added under the Membership tab.

Privileges of Membership include: 10% Discount at the following local garden centers:

- Co-Op Country Store (Northside)
- Corn Hill Nurseries
- Curries Greenhouses
- Kent Garden Center
- Scott's Nursery
- Wetmore's Nursery



Join the Fredericton Botanic Garden group page on Facebook to see announcements of events, pictures of the Garden

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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