



**Fredericton Botanic Garden
Association Newsletter**

**Bulletin du Jardin botanique
de Fredericton**

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Spring 2017

OPPORTUNITIES TO CELEBRATE SPRING

Message from the President, James Goltz

The spring parade of flowers is well underway, with many promises to come. Gardens and yards are adorned with the vibrant yellow blooms of forsythia, the pale pink to snowy white blossoms of magnolia, and the showy blue and pink blooms of pulmonaria. Trout lilies (often called dog-toothed violets) and red trilliums decorate the carpets of brown leaves in hardwoods, and the delightful fragrance of trailing arbutus (locally known as mayflower) fills the air and gladdens the heart in softwoods, especially where pines and sandy soil prevail. Patches of daffodils and periwinkle persist and add unexpected splashes of colour at abandoned homesteads where well-tended gardens used to be.

Spring is a perfect time to take stock of your garden to assess how your careful planning and hard work have paid off. Gardeners maintain daily vigil, watching to see how their fall bulb plantings have fared and monitoring for the first shoots of perennials. Garden centres are filled with people eager for new varieties of plants that excite their imagination and sense of whimsy, familiar plants that fuel nostalgia, and plants ideal for complementing what is already well established.

Never fear if winter or wildlife have wreaked havoc on your garden or something isn't working out as planned. The Fredericton Botanic Garden's annual Spring Fair and Plant Sale is only a two weeks away; mark the afternoon of Sunday May 28 on your calendars. This event will provide you with the opportunity to obtain new plants for your garden, get advice on where and how to plant them to help ensure success, jump start your vegetable garden and add new houseplants to your home. Our Spring Fair and Plant Sale is our main fundraising event, so we welcome your participation and support. The fair and sale would not be possible without the generous donations of plants from our members and supporters, and without the kind assistance of our reliable volunteers. Please contact the Fredericton Botanic Garden Association if you would like to donate plants or if you are interested in offering your help.

**Spring Fair and Plant Sale
Entrance Garden**

695 Prospect Street
May 28, Noon to 4:00 pm
(details page 2)

Talk in the Garden

Talk cancelled to be rescheduled in the fall
Fredericton Botanic Garden Resource Center

10 Cameron Court

*Spruce Budworm: quick
detection, early intervention and
public engagement*

Speaker: Emily Owens,
Canadian Forest Service

After participating in the Plant Sale, we encourage you to celebrate spring by taking a stroll through the Garden. By May 28, our Rhododendron Garden should be especially worthwhile, and many blooms of primroses and other spring flowers should be evident in our Hal Hinds' Memorial Garden. As with most gardens, the Fredericton Botanic Garden is a work in progress with much potential.

Membership in the Fredericton Botanic Garden Association has its privileges, including discounts for purchases at a number of local garden supply centres and promptly receiving notification of upcoming events, such as our Talks in the Garden and Spring Plant Fair and Sale. We welcome new members and very much appreciate the support of our stalwart members and volunteers and local businesses.

Happy gardening!



New appointments to the FBGA Board of Directors

The FBGA is extremely pleased to welcome five new members to its board of directors. The board sets direction for the Garden, manages its operations, and works to secure funding to maintain and improve our trails and plantings. Meet the new directors!

Louis-Philippe Albert returns to the board after a 13-year hiatus. Louis-Philippe is a retired agrologist who worked for the Province of New Brunswick and for Agriculture and Agrifood Canada. He now devotes much of his time to operating a small farm and woodlot. He has a wealth of experience with the Garden and we are excited to have him back.

Rebecca Matchett is a passionate community volunteer, working with youth curling at the Capital Winter Club and serving on the board of the Fredericton Public Library. As general manager of Capital Safe and Lock, she works very near the Garden and is a frequent explorer of our beds and trails. She is an advocate for the preservation of outdoor community spaces and is excited about the potential for the Garden to educate residents about botany and ecology.

John Robison is currently President and Chief Administrative Officer of Skill Search Recruiting. He has decades of experience in city management and municipal administration. He describes himself as a lifelong learner in leadership, immigration, culture, and diversity, and he brings enthusiasm for the Botanic Garden to his new role on the board.

Michael Stastny is new to Fredericton, employed as a Research Scientist at the Canadian Forest Service. He is a plant and insect ecologist with broad expertise in ecology and natural history. He's also an avid gardener, and an advocate for community gardens, roadside green corridors, and the educational role of botanic gardens. Both his scientific and gardening experience will be an asset to the Garden.

Owen Washburn is an environmental engineer with a long history of activity in naturalist, conservation, and other community organizations. Among other roles, he has served as President of the Nature Trust of NB, the Guelph Naturalist Club, and the Federation of Ontario Naturalists. He is an avid birdwatcher and nature photographer. Both his engineering experience and his perspective as a naturalist will serve the Garden well.

The board (which also includes continuing members Wendy Bourque, Jim Goltz, Steve Heard, Marg Routledge, and John Welling) is both excited about its new members and grateful to them for bringing their energy to your Gar-

den. Do you have something to offer too? We are always looking for volunteers, and if you don't want to serve on the board, we can likely find a committee role for you. Contact us at fbga@nb.aibn.com.

The Spring Fair, Plant Sale and Raffle What You Need to Know

The Spring Fair takes place on Sunday May 28, from noon to 4:00 pm, at the Fredericton Botanic Garden's Entrance Garden off Prospect Street. We will again have a selection of purchased perennials and herbs, peppers and heirloom tomatoes, young trees donated by the Canadian Forest Service, plants donated by area nurseries, material from our own propagation beds and, importantly, perennials and some house plants donated by members. We will have another Raffle and this year the prizes are first - a beautiful fountain crafted by Mitch Bourque, - second a barbecue donated by Botanicals Gift Shop, - and third a hand crafted lap robe/wall hanging quilt made by Marg Routledge. The Raffle draw takes place at the end of the Fair. There will also be entertainment (including the Big Bubble Guy – John Williamson), educational displays artists, and (Jamie Brown, blacksmith, of Valley Welding, Knightville) with garden related items for sale, and beverage and barbecued food for purchase. Further details will be shared in the coming weeks on our Facebook page and by email.

This is the major fundraising event for the Fredericton Botanic Garden and its success is dependent on the support of members. Below are some of the ways in which you can help. Remember that when you volunteer your time to help the Spring Fair, Plant Sale and Raffle, for every shift you work at the greenhouse, selling Raffle tickets at the Market, helping at the Saturday set-up and Sunday Spring Fair, your name is entered in a draw for garden related prizes. The draw takes place at the end of the Fair on May 28.

Plant donations Please look at the perennials in your garden and consider donating some plant divisions to our sale. Such donations have greater value, and we can charge a higher price, if they are labeled with a plant name; a word on the colour and height is an added bonus. Plants should be taken to the Resource Centre, Cameron Court, and left in the roped receiving area in front of the greenhouse. The sooner we receive your plants, the more established and better looking they will be by the time of the Sale. If you need pots for your plants, you can pick some up at the greenhouse (it is open most days), or potting up can be done at the greenhouse.



Assistance is available if you require help digging plants. Please call or email our office and leave a message (452-9269 or fbga@nb.aibn.com) and we'll contact you to arrange a convenient time.

House plants are accepted only on the set-up day, Saturday, May 27 at the big tent.

Carry out boxes are needed for our customers to carry their purchases. Particularly useful for this purpose are the low-sided corrugated cardboard boxes used for shipping produce and grocery products, and which are available from stores such as Costco. It will be very helpful if you can collect such boxes between now and the Sale and take them to the Resource Centre on Tuesday or Thursday afternoons.

Help at our greenhouse In the weeks leading up to the Plant Sale we pot up and label material grown in our own propagation beds. The need for help potting up and labeling is particularly great during the two weeks leading up to the Sale; a work group will be busy many afternoons and evenings. We invite members to join us in this task – if you are able to help please drop by or leave your name and contact information at our office (452-9269 or fbga@nb.aibn.com). Work group schedules will be shared by email closer to the time. Also watch our Facebook page for more news and information.

Saturday, May 27 Set-up Our tent will be put up on Saturday morning. In the afternoon, starting at 1:30 help will be needed to set up tables, move and organize plants, and related tasks. At the end of the afternoon a pizza supper is provided on-site for the volunteers.

The Fair and Sale Staffing the plant tables, answering customers' plant questions, working the cashes and helping with the membership and raffle tables are some of the jobs for volunteers. Volunteers are asked to be on-site no later than 11:30 am on Sunday May 28 for assignment of tasks and final instructions before customers enter. At the end of the Fair help is required to clean up.

Raffle Tickets The Raffle continues to be an important fundraiser for us and if you have sold Raffle tickets in previous years or you are a new member you may have already received some tickets in the mail. Raffle tickets are \$2 each or three for \$5; a book of 12 tickets sells for \$20. We greatly appreciate your support in selling them. If you require additional tickets for colleagues at work, members of groups or teams, or family and friends, please contact the FBGA office (452-9269 or fbga@nb.aibn.com). Please be sure to return your ticket stubs and money, plus any unsold tickets, before the draw; you can do this by taking

them to our Market table (see below) or to the Garden Resource Centre on Cameron Court on Tuesday or Thursday afternoons.

Market Shifts We are selling Raffle tickets at the Boyce Farmers' Market on the remaining Saturdays in May: May 20 and May 27. Volunteers are still needed for some of the two hour shifts (7:00 - 9:00, 9:00 - 11:00 and 11:00 - 1:00) on these dates; we like to have at least two people for each shift so please consider signing up with a friend. This year in an effort to make it easier for you to sign up we are using a web-based scheduling site, VolunteerSpot, designed specifically for such volunteer activities – you can reach our Market schedule at <http://signup.com/go/HfGgape>. You will be asked to submit your email address, your name and phone number after which you will see the days and times that are open. Once you have marked the time(s) you wish to volunteer you will receive an email confirming the date and time. You will also receive a reminder three days before your shift. (Beware of the ads and uncheck the invitations to receive further emails.) If you wish to volunteer to work a shift without using this site please email Owen Washburn at owenw@nbnet.nb.ca or leave a message at the FBGA office. Your help will contribute to the success of the Raffle.

Let's join in making this year's Spring Fair, Plant Sale and Raffle a fundraiser success for the Botanic Garden and an enjoyable event for all participants. If you are unable to help in any of the ways described above, please consider making a charitable donation
... your Botanic Garden needs your help.

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

facebook

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



Science in the Garden

Why is our Garden green?

By Steve Heard (Professor, Biology, UNB).



Photo: The Hal Hinds Memorial Garden

It's spring, and our Garden is beginning to turn green. That sounds utterly unsurprising; and yet, lurking in that simple observation is one of the deepest mysteries in the science of ecology. Why, exactly, is the world green?

I don't mean why the *colour* green. That we more or less understand – green wavelengths of light are reflected, not absorbed, by the chlorophyll plants use to capture light for photosynthesis. What I mean instead is this: given that every plant is fed upon by herbivores (both insect and vertebrate), why do we see such large standing crops of green plant tissue? Why don't herbivores nibble every Garden to the ground? This does happen occasionally, for instance, when invasive lily beetles find your lilies, or when an outbreaking pest like spruce budworm reaches its population peak. But it's rare enough that the world is, in most places and most of the time, green.

The persistence of plant populations in the face of herbivory has puzzled ecologists for a very long time. We don't have a simple answer. There are two major possibilities, although neither is a slam dunk:

It may be that the world is green because herbivores *also* get eaten. The logic here is that herbivore populations can't overexploit their host plants because their own populations are kept in check by predators. If this is correct, we can make a simple prediction: when predators are removed, herbivores should increase and plants decline. This certainly happens sometimes. In eastern deciduous forests, for example, humans have suppressed wolves and cougars, and white-tailed deer populations

have exploded. The consequence: devastation of plants on the forest floor. But predators can't be a universal explanation, because we can turn the same logic on cases where predators are attacked by predators of their own. In such a case, top predators should suppress the intermediate predators, leaving herbivores unchecked to overeat their plant hosts. Such four-member food chains are not uncommon, so how do plants at their bases survive?

Alternatively, it may be that the world is green because plants taste bad. This isn't always intuitive to us, because we like our fruits and our salads, but most plants are well defended against herbivores. These defences can be physical (like thorns or toughness) or chemical (with a myriad of chemicals distasteful or toxic). So perhaps the green world isn't the buffet for herbivores that it seems. But (and you knew a "but" was coming): why don't herbivores simply evolve to circumvent these defences? We know many examples of such evolution; think about monarch butterflies feasting on toxic milkweeds, or giraffes stripping leaves from thorny acacias. The evolutionary process of defence and counter-innovation is an arms race, so we need to explain why plants are winning. Perhaps the nature of chemistry is that it's cheaper to make a toxic chemical than it is to detoxify it, but it's not obvious why this should always be true.

Actually, there are two mysteries here. The first is why the world is green. The second is why, given decades of work by a lot of very smart people, we haven't solved the first one! That second mystery, though, shouldn't really be unexpected. Complex systems show remarkably complex behaviour, and our natural world is one of the most complex systems we know – with thousands of interacting species in a spatial mosaic living under ever-shifting physical conditions. Among the complexities: some plants remain unexploited because they are difficult for herbivores to find, especially in diverse communities (plants in monocultures tend to be much more vulnerable). Herbivores often need to match the timing of plant development, so plants can grow green before herbivores catch up. And even within species, plants can vary substantially in defence (and herbivores in countermeasures). An apparently simple question like "why is the world green", it turns out, is really not simple at all. So please enjoy our Garden's greenness, and marvel at the complicated and fascinating biology that makes it so.

To read more: a recent scientific paper reviews this question and its possible answers; see <http://dx.doi.org/10.1080/17550874.2016.1178353>.



Talk in the Garden

Date: Talk to be rescheduled in the fall

Topic: Spruce Budworm: quick detection, early intervention and public engagement

Speaker: Emily Owens, Canadian Forest Service

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

Spruce budworm is the most severely damaging insect to northeastern America's Acadian forests. There is concern that a massive outbreak in Quebec will spill over into New Brunswick and could cause an economic impact of \$4.7 - 6.7 billion over the next 40 years, threatening eco-systems services (salmon industries), Christmas tree growers, watersheds, etc. The first line of defence in any integrated pest management strategy is monitoring and early detection. The Canadian Forest Service recruited 294 members of the public to trap and collect budworm moths between July and August. The data return rate was an "unheard of" 90%, far in excess of typical citizen science projects that generally expect 20-40%. The data and specimens will be analyzed and genetically tested to generate knowledge on population dynamics and test the predictive capacity of current models. Research will inform and aid provincial decision-making and may provide a "blueprint" for future citizen engagement. Researchers hope to fill in the gaps across the eastern provinces by finding citizen scientists willing to trap in those rural and remote areas, including northern Maine.

Report from Seedy Saturday

Steven Stehouwer, Seedy Saturday Organizer

March 18, 2017 – FBGA Resource Center – 1:00 pm to 3:00 pm

This year's Seedy Saturday was the best one we have had so far. We had around 80 people come by and participate. The entry fee was \$2.00 per adult (Teens and Children were free) which gave them access to our plethora of seed from commercial sponsors and member donors.

We had a great response from our commercial sponsors again this year. Kent and Canadian Tire, (Two Nations Crossing Store), led the donors giving 30 seed packets each. Scott's Nursery, Lincoln Rd., donated 20 packets, Fredericton Farm Supply Co-op donated 14 packets, Fredericton Direct Charge Co-op donated 11 packets of seed and Home Hardware, Main St. donated 10 packets.

Thank you very much to our commercial sponsors for your generous support of the FBGA.

We also had a least one new membership to the FBGA issued this day. We also advertised our FBGA Spring Fair and Plant Sale on Sunday, May 28, 2017 to most of our attendees. (Please start saving those divisions and new seedlings for our biggest fund raiser of the year.)

I would also like to thank all the radio stations contacted who advertised this event through their public service announcements.

Thanks to Brian Parker for his help with seed distribution and timely gardening advice.

Thanks to Jim Goltz for being our FBGA ambassador, doorman, cashier and provider of most excellent baked goods, cider, coffee and tea, as well as dishwasher and janitor.

The afternoon went by in a flash and fun was had by all. I look forward to next year's event and I would ask you to save seeds for us. Also promote this event to friends, neighbours, family and anyone else who you think might be interested.

Summer Students

We are very pleased to welcome two students, Emily Boudreau and Dakota Van Dijk, who will be working in the Fredericton Botanic Garden this summer, alongside City employee Morgan Doucet. When you see them in the Garden please speak to them and make them feel welcome. We are very grateful to the Canada Summer Jobs program (CSJ) and the provincial Student Employment and Experience Development (SEED) program for providing funding that enabled us to hire Emily and Dakota.

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**

**Fredericton Botanic Garden Association
Board of Directors**

President - Jim Goltz Treasurer - Stephen Heard
Louis-Philippe Albert Wendy Bourque
Rebecca Matchett John Robison Marg Routledge
Michael Stastny Owen Washburn John Welling



**May
28**



FREDERICTON BOTANIC GARDEN SPRING FAIR & PLANT SALE

**Entrance Garden, 695 Prospect St
Sunday May 28 Noon – 4:00 pm Free Admission**

Entertainment, invited artists, garden-related exhibits, BBQ, raffle, prizes and a super selection of plants: perennials, trees, heritage tomatoes, herbs and much more.

This is a fundraiser to help develop the Botanic Garden.

www.frederictonbotanicgarden.com
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