



Fredericton Botanic Garden

Newsletter

Vol 35 No 1

Bulb Bonanza and Mushroom Mania

Come check out our fall bulb sale happening on Saturday, September 16th in and around our greenhouses located at 10 Cameron Court. This year on top of all the bulbs being sold we are also selling mushroom kits. Are you one of our members? There's a special online sale taking place Thursday, September 14th just for you. These sales are a chance for you to buy truly unique bulbs. The majority of blooms being sold can't be found at local commercial locations!



Bulletin du Jardin

botanique

Summer/Fall 2023

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Message from the President

Stephen Heard

Quiet, and bustling, at the same time: that's your Garden this summer. When you visit, we hope you're noticing the wealth of programming and the diversity of guest organizations using our space. But at the same time, the Garden itself might not seem to be changing much. Sure, we've weeded and refreshed the beds, but in terms of major change, things seem



Message from the President

Cont.

quieter than they've been for a while: no big piles of dirt (except around the under-renovation Resource Centre), no brand new beds. Quiet – on the surface. But underneath, there's bustle, even if you don't see it. A Rose Collection at the ponds, in honour of Fredericton's 175th anniversary, will soon be under construction; we've been designing the beds and getting our hands on dozens of different roses. The much-delayed installation of our new signage is imminent (I know, we keep saying that...). We're working to assemble a long-term plan for development of the Garden site. And we're negotiating with the City for a renewal of the partnership agreement under which the FBGA and the City cooperate to build the Garden you've come to know. You'll hear a lot more about each of these initiatives over the next year; but for now, I think they make an important point. The Garden you see rests on an enormous amount of work by our staff and volunteers – and a lot of this work happens out of sight. Next time you're the Garden, please think about what makes it all possible – and if you see our horticulturalist, or our Garden Manager, or a Board member or a volunteer (among others), please let them know that you realize how much they do. Or if you're one of them: thank you!

See you in the garden,

Steve Heard
President

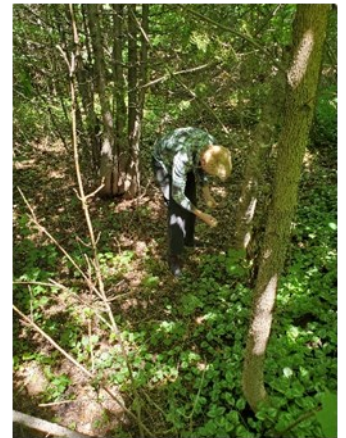
Science in the Garden

Mushrooms in the Garden and worlds within worlds

By Steve Heard (Professor, Biology, UNB)

Early this summer, if you had a *really* sharp eye, you might have spotted something odd in the Garden. Tucked away in the woods near the Daylily Beds, you might have noticed some mushrooms. Now, there's nothing unusual about mushrooms in the woods – except that these mushrooms looked a whole lot like the ones you buy at the grocery store. That's because they were. So what was going on?

You can blame me for those mushrooms – but there's an interesting story lurking inside them. I bought the mushrooms at the grocery store, and (with help from summer student Gray Miller) I put them out in the woods. A few days later I picked them up again, and mailed them off to a colleague (Dr. Steve Perlman) in the Biology Department at the University of Victoria. What can we learn from these mushrooms (other than that biologists sometimes do peculiar things)?



My colleague's interest wasn't really in the mushrooms, but in the worlds within them. Steve Perlman studies interactions between parasitic worms and bacteria – but to get there from the mushrooms you have to know a little something. The mushrooms you see popping up in the forest aren't just snacks for squirrels and slugs (and occasionally me). They're a crucial resource for a diverse set of mushroom-breeding flies and other insects, which lay their eggs on mushrooms



as soon as they pop up from the soil so their larvae can feed on its tissues as they decay. These include fruit flies (relatives of the *Drosophila* that are the workhorse of the science of genetics, and the bane of your summer kitchen), as well as crane flies, fungus gnats, and many more. My hope and my colleague's was that, in the couple of days the mushrooms spent in our woods, they'd have been colonized by *Drosophila*.

The ecology of those flies is fascinating (I've studied them in the past), but they're just one top level in an amazing set of biological matryoshka (nesting dolls). So far, we have *Drosophila* flies inside mushrooms. But the flies, in their turn, are attacked by tiny parasitic worms; and the worms, in their turn, play host to specialized bacteria. In fact, the worms can't live without the bacteria, although nobody quite knows why. Do the bacteria help the worms overcome the immune systems of the flies? Do they provide nutrients that aren't otherwise available inside a fly inside a rotting mushroom? And these bacteria are closely related to others that cause plant diseases. How did they evolve, rather quickly, from hurting plants to helping worms?

I can't answer those questions, but one day the mushrooms from our Garden may help Steve Perlman answer them. *Drosophila* flies from our Garden are now in culture in his lab, and the worms and bacteria are being studied. Bacteria within worms; worms within flies; flies within mushrooms – worlds within worlds.



Of course, in a way there's nothing new under the sun. Jonathan Swift knew about biological worlds within worlds. In his 1733 poem "On Poetry: A Rhapsody", he wrote:

So, [Nat'ralists](#) observe, a Flea
Hath smaller Fleas that on him prey,
And these have smaller yet to bite 'em,
And so proceed *ad infinitum*

Swift was actually making a point about poetry, and critics, with a flea metaphor. But to a biologist, those classic lines speak truth about nature. Worlds within worlds.

Photos: Summer student Gray Miller deploying mushrooms near the Daylily Bed. Photo S. Heard

Exciting News!

The Fredericton Botanic Garden is among the list of 13 Must-See Botanical Gardens Across Canada by HGTV.

You can read the whole story here:

<https://www.hgtv.ca/13-must-see-botanical-gardens-across-canada/>



Weeding Wednesdays

6-8 p.m.

A weekly opportunity to garden with a group of fellow gardening enthusiasts. Weeding and invasive species removal are among the many projects that happen Wednesday evenings, rain or shine. Wear long sleeves and bring your own gloves. Meet outside the greenhouses at 10 Cameron Court.

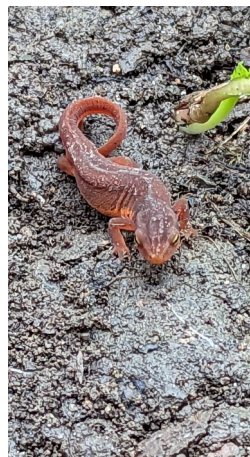
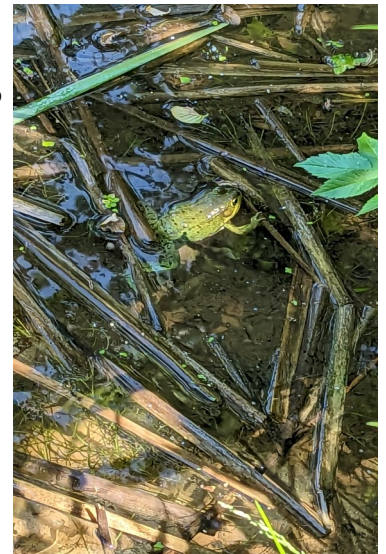


If you are interested in volunteering, but are not available Wednesday nights, contact fredbotanicgarden@gmail.com to make arrangements.

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Amazing Amphibians

We are home to many animals here at the Fredericton Botanic Garden. One of the most popular of which are our frogs which live in the pond between the rock and crevice garden and the literature garden. We are so glad people like to come visit our frog friends, however we would like to ask folks not to catch/touch the frogs. Even if visitors plan on releasing them back into the pond the frogs can still be hurt. Amphibians have very absorbent skin so anything you have on your hands can cross-contaminate leaving the frogs injured. Frogs can also carry salmonella which can cause humans infections and illness which could lead to something more serious. So for the safety of your kids and our frogs we ask for you look and not touch. A fun activity we do here at the garden is listen for all the different



frog sounds and then once you've counted them all, go and try and match up the ribbit to the frogs! There are also tons of other amphibians who live in the garden . Check our this salamander found right outside the resource center!

Photos: Gray Miller



Summer Programming

Alex Dawson

This summer we have had many different programs and activities. The most popular of which has been storytime in the Garden. Pre-school age children have had the chance to visit the Garden and meet the Botanic Garden Fairy. This hour-long experience includes 2 to 3 books, a few songs sung by the Fairy and a tour of the Gardens focused on identifying flower colours' and different bugs. We always end near the pond watching and listening for frogs. This activity has been so well received that we heard that one of the little girls went home and said that her new friend was a garden fairy and that she would be a fairy when she grew up.



Other activities we've been offering this summer include Garden Explorers which is a weekly class to teach elementary students about nature through fun games such as scavenger hunts, guessing games or crafts. Finally, we've been offering theatre games in the garden which have also gained some interest. Did you miss any of these activities this summer? That's okay because there will be more summer programs coming. Keep your eye out in June, July and August of next year for more free drop in classes and community building activities.



Another popular activity has been mindfulness in the garden. The evenings have been the perfect temperature to enjoy the sounds and views of the gardens while enjoying the expertise of our volunteer instructors.



Artists in Residence

Alex Dawson

◇ We had four artists in residence this summer. Our first Artist, Gary Crosby, is a visual artist with a specialty in woodcarving. During his time here he made a sculpture with New Brunswick cedar of seven salmon inspired by the species of Atlantic Salmon which travel the Maramichi River during the summer. Shinaid Jane Grace, our second artist, who has a focus on storytelling through bonds to places and things, made holders out of clay for earth-made found objects. Our third artist Steph Kincade, who's most recent embroidery work explored tiny worlds under water and foot used their time in the garden to sketch, photograph and embroider the intricate details of different plants and organisms in the garden.



◇ Our fourth artist was Alex Rioux a theatre artist fresh off the New Brunswick tour of their piece "Fruit Machine" who started creating their new show titled "Late Bloomer." Which explores being queer in New Brunswick through authentic movement practices.



◇ When asked what inspires them about the Garden Alex responded with: It reminds me to focus and reflect and slow down and just the visuals of the garden are really beautiful. I do movement based theatre so just being able to look at these cool... like the architecture of the plants is really fun. It gives me a lot — it almost gives me too much material to try and translate because there's just such a wealth of it here. Our final artist Nat Cann will be constructing a large scale collagraph to raise awareness of climate change inspired by the flowers in the garden. Thank you to all the artists who have shared their art with us. We can't wait to see how all these projects turn out!



New Member Benefit: Reciprocal Privileges

Jane Loughborough and Lee Swanson

Members of the FREDERICTONBOTANIC GARDEN ASSOCIATION will be pleased to learn that the Fredericton Botanic Garden Association has been accepted into the American Horticultural Society (AHS). This means that FBGA members now enjoy reciprocal privileges at 345+gardens across North America. Reciprocal privileges means free admission and special discounts at the garden you are visiting, upon presentation of your FBGA membership card. The Member and Volunteer Services Committee completed the application to the AHS on behalf of



One of our members recently took advantage of this benefit at the Royal Botanical Gardens in Burlington, Ontario, which is over 80 years old, a National Historic Site, and is the largest botanical garden in Canada – see <https://www.rbg.ca/>. The RBG is part of the Niagara Escarpment UNESCO World Biosphere Reserve protecting 2,700 acres of environmentally sensitive areas (including 2,400 acres of nature sanctuaries, 300 acres cultivated gardens and an arboretum). In March, she received free admission (\$19.50 value) and took in their wonderful gift shop, dinner with jazz in their Rock Garden Café, and the RBG Center greenhouse that included blooming orchids, spring blooming plants, Mediterranean garden and the cacti/succulent collection, as well as a special exhibit with live frogs and plant terrariums from around the world. A ribbiting experience! So don't leave town without your FBGA membership card.



the Board last year and so are very keen that members of the Fredericton Botanic Garden take advantage of this new benefit. The American Horticultural Society's website is: <https://ahsgardening.org/about-us/> and you can find the names and locations of the Reciprocal Admissions Program Gardens, Arboreta and Conservatories here: <https://ahsgardening.org/gardening-programs/rap/>.



NB Plants Project



We are pleased to received continued funding from New Brunswick's Environmental Trust Fund to continue work on the New Brunswick Plants website, an online visual guide to the plants of New Brunswick, building on the work of Hal Hinds' *Flora of New Brunswick*. Above, Charles Neveu (left) and Jim Goltz examining Cliff ferns at Little River Falls (J.D. Irving, Limited. Black Brook District).

"Your Environmental Trust Fund at Work"



FBGA Membership

A Garden membership provides ongoing support to the maintenance of the Fredericton Botanic Garden.

- Individual \$30/year
- Senior/Student \$25/year
- Family \$45/year

In addition to free admission to most FBGA events, members receive advance access to our highly acclaimed Spring Plant Sale and Fall Bulb Bonanza! Members also receive a 10% discount in the Garden Gift Shop, and a 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 or renew online at

frederictonbotanicgarden.com/membership

Paper forms are also available from the link above and at the Resource Centre.

Gift memberships are also available.



How You Can Support the Garden

After more than 30 years, the Botanic Garden remains a work in progress. This 53-acre community gem depends on volunteers for its development and maintenance in partnership with the City of Fredericton.

There are various ways as a member that you can support our beautiful Botanic Garden to continue to thrive and grow:

- ◇ Visit the Garden often throughout the year (even in winter) to become familiar with and appreciate the changing flora throughout the seasons;
- ◇ Renew your membership when it is due;
- ◇ Invite your friends and neighbours to become members, to visit and to support the Garden;
- ◇ Remain informed about activities through the Newsletter, Facebook and e-mails;
- ◇ Participate in the Talks in the Garden, tours held within the Garden, and other special events such as the opening of new garden beds;
- ◇ Volunteer to serve on the Board of Directors or on a committee;
- ◇ Contribute financially through donations, endowment, and receive tax deductible receipts;
- ◇ Solicit support for projects from private corporations and community organizations;
- ◇ Support government financial assistance requests.

Membership numbers are an important consideration when corporations are looking to provide funding for a project. The Membership and Volunteer Committee is therefore striving to substantially increase the active numbers of members.

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[Twitter](#) @FredBotGarden



[#frederictonbotanicgarden](#)

The Fredericton Botanic Garden Association Newsletter is published by the Fredericton Botanic Garden Association, Inc. The FBGA is a registered charitable organization. The objectives of the FBGA are to guide the establishment of the Fredericton Botanic Garden and to foster an awareness and appreciation of plants. For information on membership and to become involved, please contact us:

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