Message from the President – Stephen Heard
It’s been a remarkable summer, hasn’t it?

I don’t mean the pandemic, although that (and humanity’s response to it) has certainly been remarkable, both in good ways and bad. I mean, and this is a much happier subject, at our Garden. It’s been a great summer for building the Garden; and it’s been a great summer for enjoying the Garden.

On the building side, I hope you’ve noticed the hubbub of activity from the top of the Garden to the bottom. There are new plantings in almost every bed. See the Site Development Report on page 2 for more Garden updates.

I hope you’ve visited the Garden often this summer (two metres from the next visitor, of course). We’re always happy to see the Garden busy with walkers, joggers, bikers, photographers, picnickers – really, everyone except for the very odd people who cut the rhubarb and dig up the potatoes in our Literature Garden… (Who on earth steals potatoes?) We’ve been thrilled to be able to cohost the City’s Summer Artist in Residence Program, and we’ve started a Garden Explorers program for the youngest fans of the outdoors. Outdoor recreation spaces are more important this year than ever, in light of the pandemic. Please continue to visit through fall and winter, finding enjoyment and serenity – and a little learning too – in our Garden.

None of this happens, of course, without volunteers. It’s been wonderful to see steady turnout and hardworking crews for our regular Weeding Wednesdays (see page 6), and to see our most devoted volunteers working almost any day somewhere in the Garden. If you pass some folks at work weeding, planting, digging, or building, please stop and say “thanks” – or even better, please stop and join in.

It’s a pleasure to work with the City of Fredericton, our Board, summer student, Reece McGinn, Office Manager, and with volunteers from all walks of life – all to make our Garden better.

Stephen Heard,
President, Fredericton Botanic Garden Association

Reception for Graham Allen
September 24, 4—5:30 p.m.
Graham Allen retired this spring from his longtime role as Office Manager for the Garden. To celebrate his contributions, the Garden invites members who knew him to a reception with light refreshments, to be held outdoors with physical distancing. Please drop by and join us in wishing Graham all the best for the future!

Find us outside the Resource Centre, September 24 from 4 - 5:30 p.m. The rain date is October 1
- Steve Heard, President; and Jim Goltz, Past President.
**Report from the Site Development Committee**

James Goltz

The spring and summer of 2020 have been highly productive for the Fredericton Botanic Garden and much progress has been achieved. Some of our major accomplishments are as follows:

- Weed control has been extremely effective in all garden beds and measures were implemented to control invasive plants along trails and roadways.
- The framework for a Wabanaki (Indigenous Peoples’) Healing Garden has been constructed and planting will begin this fall.
- A new information kiosk with bench was installed near the Resource Centre, and garden beds flanking this kiosk were created and planted.
- The Woodland Fern Trail has been rehabilitated, mainly due to the hard work of Boy Scout Jamie Heard.
- Blooms were spectacular in the Pollinator Garden, Peony Garden, Hal Hinds’ Garden, Holding Beds, Lilac Garden and both Rhododendron Gardens.
- Many plants were added to the Hal Hinds Garden, Pollinator Garden, Rock and Crevice Garden and Urban Orchard.
- The fence beside the Pollinator Garden was completed and a border of rocks was placed at the back of this garden.
- The Crevice Garden was enhanced with pea gravel to help protect the plants and retain moisture, a walkway, and rock stairs. A Rock Garden is being created on the slopes surrounding this garden.
- Several of the Holding Beds were rebuilt or restored.
- A sand beach was created at one of the ponds.
- Measures have been put in place to repair and help prevent erosion in the Daylily Garden and the Peony Garden.
- Many new visitors have been attracted to the Botanic Garden and some people visit every day; both kindly express their appreciation of the beauty, serenity and recent progress in the Botanic Garden.

One of the major challenges that is the lack of an irrigation system. The only sources of water are precipitation and water that is transported from the Resource Centre. The low precipitation in 2020 required frequent augmentation of water supply to any new plantings.

A huge thank you to all of our volunteers, staff, sponsors and supporters, including the City of Fredericton.

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**Woodland Fern Trail Renovation**

Jamie Heard

Attention fellow Garden goers! The Woodland Fern Trail is now open and fully refurbished thanks to the efforts of a dedicated team of volunteers! Over the summer months, these volunteers spent countless hours restoring the Woodland Fern trail to its former glory as one of the Garden’s best nature trails. Before this project was taken on, the trail had been overgrown by plants, blocked by fallen trees, eroded and had generally fallen into disrepair. Now, after hours of effort on the part of our trail restoration team, the trail is usable once more.

Additionally, the trail now features a Geocache, and is a great place to spot plants and animals in their natural habitat. The trail is located in the upper half of the Garden, and has access points along the main trail, the softball fields and the Memorial Garden. Come and check out the Woodland Fern Trail, you won’t regret it!
Spring Plant Sale
John Welling

Autumn is upon us, you can start to feel it in the air. It has been a unique year here at the gardens for this year’s Plant Sale, but you all made it a wonderful success just the same!

The online part of the sale worked out well with scheduled pick ups and then when restrictions eased and we did the Second Chance Plant Sale. We cannot thank you enough for all your support!

The Greenhouses and holding beds this year have never been busier with all the volunteers around working in the gardens. A very big shout out to all the great folks that volunteered this year. A wonderful group indeed! The holding beds are almost full in preparation for next Spring’s Show! It has been great! I hate to see the cold weather coming, kind of hard to do Weeding Wednesday in 4 feet of snow.

We’re trying a few new things & we will have great plants to show for it. Looking forward to a fresh start in the new year!

Artists in Residence Exhibit
October 8 - 30
Gallery 78, 796 Queen Street

The group exhibition of the City of Fredericton Artists in Residence from both the Fredericton Botanic Garden and Odell Park opens Thursday, October 8 from 4-7 pm. You are invited to mingle outside with artists and tour the gallery in limited numbers. Face masks are required.

Artists in Residence Riel Nason, who’s represented in the New Brunswick Literature Garden by brown-eyed Susans from her 2011 novel The Town That Drowned.

There’s a long and rich history of connection between gardens and the arts, of course. Paintings represent plants and use them in a language of imagery; textiles are woven from plants and dyed with them; prose and poetry are inspired by plants and set amongst them. One could make a career of exploring these connections – as many artists have made careers of creating them. All this makes the outdoors, and a Garden in particular, a wonderful place to create art. The Artists in Residence Program has made our Garden a great place to observe the creation of art, and to chat with an artist; and with modern social media the program has had electronic wings.

And if you missed the artists as they were working, never fear! A fall exhibition, bringing together work from all the summer’s artists, both from the Garden and Odell, will be at Gallery 78, October 8 — 30.

Artists in the Garden
Stephen Heard

Was that a painted trillium you saw, or a painted canvas?

For the second summer in a row, the Garden has co-hosted (with Odell Park) the City of Fredericton’s summer Artists in Residence Program. It’s been wonderful, with a series of five artists working around the Garden and sharing what they’ve done with visitors in person and via social media. The series kicked off in early July with textile artist Cat Candow, who (among other projects) did some wet felting inspired by our hosta collection. Our other artists were novelist and quilter Riel Nason (above right), graphic designer and digital painter Kristen Stackhouse, photographer Sarah Sarty, and fibre artist Tracey Dutt. (More information about any of these artists is available at www.fredericton.ca/en/community/art-culture/artist-in-residence.)
The Pollinator Garden is the Bee’s Knees
Holly Abbandonato

I am so pleased to see such a diversity of critters visiting our pollinator garden this summer. It has become a temporary home and feeding ground to number of social and solitary bees (like leaf-cutter bees), butterflies, moths, beetles, hoverflies and the intriguing ruby-throated hummingbird. We have seen a hummingbird feeding on nectar from scarlet bee balm, cardinal flower, foxglove, hollyhock and phlox. While it is a generalist pollinator, it prefers red tubular flowers best. Next year, we hope to add a honeysuckle bush to grow on our newly constructed fence.

This August, we spotted a Monarch Butterfly flying around the butterfly section of the garden, but we did not see any Monarch caterpillars or chrysalis on the stems or leaves of our milkweed plants like we did the previous summer. However, we have a new guest on our milkweed plants – the Milkweed Tiger Moth. It likes to feed on milkweed and dogbane species, which provide chemical defences to the caterpillars and adults making them unpalatable to predators. Both common and swamp milkweed species are excellent plants to attract beneficial insects to your garden, let alone the charismatic Monarch.

Our plants were full of bumblebees and butterflies, but also aphids, which bring in parasitic wasps and lady bugs to your garden. The aphids themselves were unable to significantly harm the milkweed plants (they are tough plants!), but they brought in a diversity of trophic levels to the garden, such as insect predators, pollinators and plant-eating bugs.

I would like to thank our wonderful volunteers for installing the fence. I am very excited to add some climbing plants, such as clematis, honeysuckle and climbing roses to our beds next spring. I am also finishing informational signage about how you can attract pollinators to your garden.

Our wildflower meadow, which was largely sown by seed in the center of the garden, is filling up rather nicely. This summer was especially dry, which made it a challenge to germinate plants from seed; however, the poppy seedlings loved it! Our pollinator garden is always evolving and there is plenty to see no matter the season.

I am curious to know what you thought about the pollinator garden. Which plants were your favourite? Did you see any pollinators while you were visiting? You can let us know on Facebook, Instagram or Twitter or by email (fredbotgarden@gmail.com).

Bee happy!
Science in the Garden
Amy Parachnowitsch

As the weather starts to change and it begins to smell distinctly of autumn (already?!), it is a perfect time to reflect on the scents from the garden. Your nose can be a wonderful way to explore the Fredericton Botanic Garden and just like exploring through our other senses, a garden’s smells are always changing. Some plants we know by our noses even before we see them, especially when they are in flower. Other plants have more subtle smells or seem to lack them entirely, at least until we cut or crush them. All life produces some kind of smell, or at least small compounds that are released into the air. These Volatile Organic Compounds (sometimes referred to as VOCs) become a “smell” when they are detected by another organism with their olfactory senses. Some of these compounds are just the byproducts of living, but others are purposefully emitted. Floral scents might be among the most well known VOCs as humans often enjoy them. But what is the smell of a flower exactly?

Floral scents are a bouquet rather than a single stem. Researchers refer to floral scents as a bouquet because what you smell is usually not a single chemical compound but a blend of many different compounds in varying amounts. There are over 2000 different compounds identified in the scents of flowers representing organic compounds of many different types. While some flowers do emit unique compounds that haven’t been detected in any other species, for most flowers it is the blend that makes it unique rather than the compounds themselves. In our gardens, many of the flowering plants emit the same compounds but even to our noses they will smell different because of these blends. For example, both roses and violets emit β-ionone, while lilies and lilacs produce β-ocimene but it is the combination of these shared compounds with others that give them all a distinct scent. For those plants that smell similar or don’t really smell of much to our noses, they may be perceived as very different to other visitors because we humans don’t have particularly sensitive olfactory systems. We only just beginning to unlock the diversity of compounds emitted from flowers and understand their function. Something to think about the next time you put your nose to a flower!

Floral scents can be an important signal for pollinators. Floral scents are of course not for our benefit, although we do appreciate and use them in all kinds of ways (think scented soaps, lotions and perfumes). Just like when you can tell when the lilacs are in full bloom from the distinctive smell wafting towards you, so can pollinators. Many insects are able to locate and follow scent plumes back to the source from long distances, but floral scent bouquets can be more than just a signal to find flowers in the natural world. Scents help pollinators learn to differentiate between species and move efficiently through a community of mixed flowers. There is still time to observe pollinators at work in the Pollinator Garden on a warm day. If they are avoiding some flowers or locating more patches of the same, they might be using scent to help make those decisions.

Floral scents are not all about attracting pollinators. We now have evidence that some compounds in a floral scent bouquet might be there to protect rather than attract. As pretty as they may be, flowers can have enemies too. Some insects eat the petals and reproductive parts which can be bad for reproduction. Other visitors steal rewards such as nectar without doing any pollination. Enemies aren’t only animals, microbes and diseases can destroy flowers, foul nectar rewards and generally interfere with reproduction. So far researchers have shown that some floral scents that have antimicrobial properties, while others can be deterrents to with herbivores or nectar robbers. That whole floral scent bouquet might be a blend of functions as well as compounds.

Floral scents are a key to understanding a secret world of plant communication, chemical warfare and other functions that we humans are just starting to comprehend. Something to ponder as we sniff those last fragrant blooms of the garden this autumn and wait for the profusion of next spring to come.
Garden Gratitude
Cynthia Stacey

Although it is not over yet, this has been a very productive season at the Garden thanks to the outstanding work of many volunteers. Starting in the Spring, volunteers worked on bed preparation and planting. In addition to the gardening tasks, highlighted in the Site Development Report (page 2), a team of volunteers also managed to run a successful Annual Plant Sale despite challenging conditions due to Covid-19. Among other projects have been painting the greenhouses and entrance kiosk, building a fence around the Pollinator Garden, securing sponsorships and donations, and selling memberships.

A very special expression of thanks goes to the Weeding Wednesday crew who toiled every week no matter the weather to remove tons of weeds and hundreds of Angelica plants. They all should know how very much their time and effort is appreciated.

A great deal of gratitude is also extended to Jim Goltz and Axel Brisebois who are two of the star volunteers this summer. Jim was working away at a variety of projects almost everyday no matter the heat and Axel, a senior Forestry student, was a ready, willing and valued volunteer who assisted Jim many mornings.

It has been a wonderful team of committed individuals who have worked together to make the ‘Garden Grow’. All the time, effort and caring is greatly appreciated. Thank you and know you are appreciated!

Weeding Wednesdays
Continues through October 7, 5:30 p.m.-Dark. Bring your own gloves and a friend.

Garden Wish List

We welcome donations of the following items:

- Spades, garden rakes, pruning shears
- Mulching leaf blower
- Dehumidifier
- Soaker hoses, sprinklers, rain barrels, watering cans
- Frost cloth, Heat mats

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. For information on membership and to become involved, please contact us:

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Resource Centre Hours October—April:
Wednesday, 1-4 p.m.