



# Friends of the Central Experimental Farm

Fall 2020 Newsletter

Volume 32 No. 4

## Where are the Bees?

By Julianne Labreche

**A**s you leaf through the pages of the Friends of the Farm's wonderful book *Blooms, An Illustrated History of the Ornamental Gardens at Ottawa's Central Experimental Farm*, you will see some stunning flower images: the bold, bright peonies of Percy Saunders; the sweet-smelling lilacs of Isabella Preston; the showy roses of Felicitas Svejda; and many lovely images of iris and daylilies. The book is packed with gorgeous flowers and well-researched text. But something is missing. Where are the bees?

In the history of the Central Experimental Farm, it is easy to forget the complex life of bees and other pollinators. If not ignored entirely, these insects tend to be taken for granted and yet, without our bees and other pollinators, there would be far fewer flowering plants. The Farm would be a very different place and a lot less interesting.

*Blooms* does show a Bird, Bee and Butterfly Buffet garden teeming with tall yellow sunflowers and big, bright, black-eyed Susans. It was designed in 2012 by Sharon Saunders, former head of the garden staff, and her Agriculture and Agri-Food Canada team in order to attract urban wildlife. It is gone now, but many gardeners these days are following Sharon's footsteps by relaxing gardening styles, using more native plants and welcoming bees.

### Honeybees and native bees

Typically, it is the non-native honeybee that is most familiar to Farm visitors. Early colonists brought the European bee to North America with them. Honeybees live in hives, have a Queen and a strict hierarchy of tasks, and produce delicious honey. They also swarm if provoked, which is why beekeepers wear hooded bee suits with gloves and fire up their smokers to reduce the agitation of the bees as they work slowly and carefully around the hives. Hives at the Farm are maintained by staff who work there.

But native bees also are important to



Julianne Labreche

Sweat bee on a Flower Carpet Rose.

horticulture and to our wild spaces. There are some 400 different bee species in Ontario and more are still being discovered. Native bees come in all shapes and forms, ranging from fat, fuzzy bumblebees to solitary mason bees, dwarf carpenter bees, and leaf-cutter bees. Some, like the mining bees, are ground dwelling. Native bee species don't often bite or sting, nor do they live in hives like honeybees. If they do sting, you might not even feel it.

Unlike the honeybee, few native bees produce honey – or, at least, enough to share. Bumblebees – about 16 species in Ontario – do produce honey but in small amounts.

As urban development expands, habitat loss means there is less room for nature, including bees and the plants that they depend on to survive. In the countryside, pesticides not only kill pests

*Continued on Page 3*

## A Clearly Understood Purpose

This is a time to reflect on what we have in this National Historic Site.

The Central Experimental Farm Advisory Council (CEFAC) undertook a survey of visitors to the Farm over the period February to May of this year. The purpose of the survey was to form a picture of how people use the site now, and to better understand what people are looking for in their visits.

The survey started before the Covid-19 lockdown and ended in the midst of the big wave. While the results were quite consistent over this period, the lockdown did have some effect on how people interacted with the site.

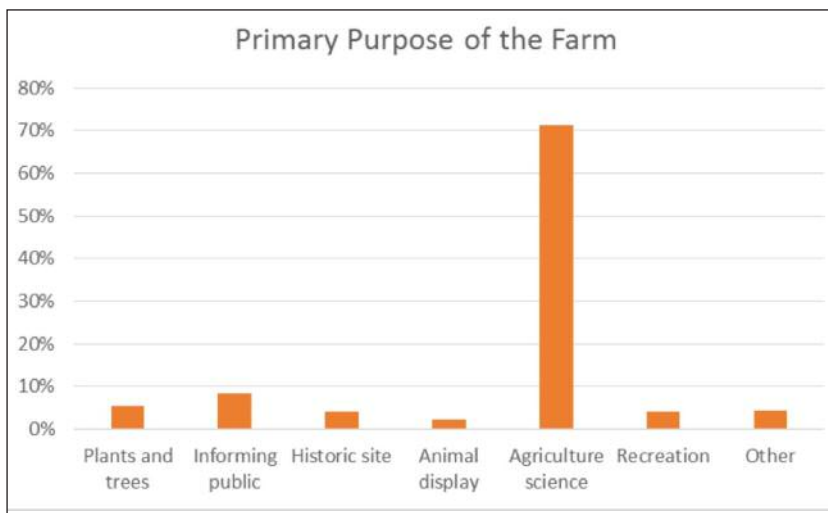
One of the big take-aways of the survey was how well visitors understand the underlying purpose of the Central Experimental Farm (see graph). This was true even though only a small minority of survey respondents had any working connection with the Farm.

Another big take-away is how much people value the Farm. An open-ended question drew in many expressions of appreciation and memories of experiences over the years. There is obviously a deep emotional connection between the public and the site.

In the next edition of the newsletter we'll include a more detailed examination of the survey results.

*Eric Jones*

*President, Friends of the Farm.*



## Un but clairement perçu

C'est le temps de se pencher sur ce que représente ce lieu historique national et ce que nous en retirons.

Cette année, au cours des mois de février à mai, le Conseil consultatif de la Ferme expérimentale centrale (CCFEC) a effectué un sondage sur les personnes qui visitent la Ferme. Le sondage consistait essentiellement à se faire une image de la façon dont les personnes utilisent les espaces publics du lieu et, ainsi, de mieux comprendre ce qu'elles recherchent lors de leurs visites.

Le sondage a été distribué avant le déclenchement du confinement dû à la COVID-19 et s'est terminé en plein milieu de la grosse vague. Si les résultats montrent une certaine cohérence, le confinement, par contre, a eu certaines répercussions sur le type d'interactions que les gens maintiennent avec la Ferme.

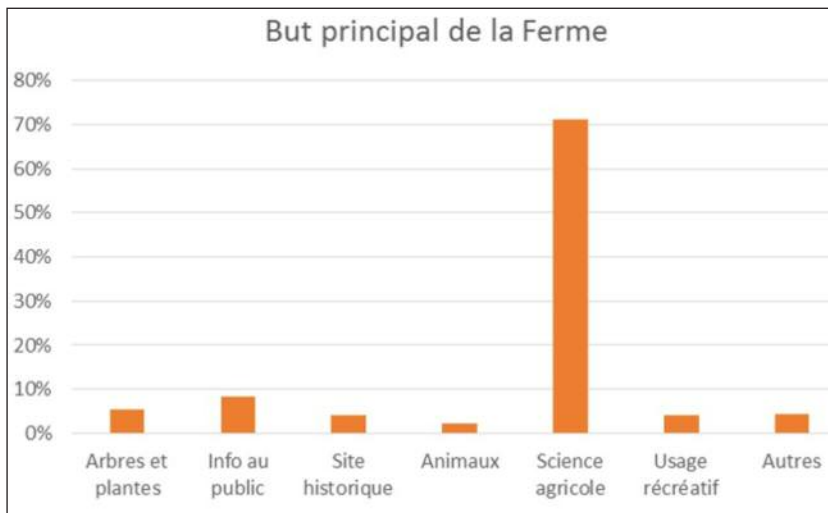
L'un des résultats les plus probants a démontré la façon dont les visiteurs comprennent le but sous-jacent qui régit les activités de la Ferme expérimentale centrale (voir le graphique). Ceci s'est avéré exact, bien qu'une petite minorité ait indiqué n'avoir aucun lien de travail avec la Ferme.

Un autre résultat concluant a permis de découvrir à quel point les gens ont de l'estime pour la Ferme. Une question à réponse ouverte a suscité de nombreuses expressions d'appréciation et de souvenirs d'expériences vécues au long des années. Nul doute qu'il existe un lien profond, un attachement vibrant entre le public et le site historique national qu'est la Ferme.

Dans la prochaine édition du bulletin, nous fournirons plus de détails sur les résultats du sondage.

*Eric Jones*

*Président, Les Amis de la Ferme*





## Where are the Bees? ... *(continued from Page 1)*

but beneficial insects too, including some bee species.

Pollinators need all the help they can get these days. Urban gardens, including those at the Farm, can play a critical role in protecting bee species.

### The Ornamental Gardens buffet

The Ornamental Gardens provide continuous bloom that bees need to survive. While collecting nectar and pollen, the insects also are unwittingly pollinating plants. Given the size and scope of our large garden beds, there is probably something for most bee species – a buffet of flowers. There is no pesticide used in the gardens, so it is a safe haven for bees.

The season for bees begins early in spring when the ground thaws and hungry bees emerge. It ends in late fall when bees prepare for hibernation.

Bees are attracted to many kinds of blooms but they're especially attracted to purple, blue and yellow flowers. That's because they can see parts of the spectrum not seen by humans, including ultra-violet light. Typically, these plants are found in sun-drenched gardens, with fewer in shade. The Ornamental Gardens have many of them.

Spring flowers include various spring blooming crocus, chives, forget-me-nots, and hellebores. Early blooming fruit trees—cherry, peach, plum, apple, crabapple, lilac, and others—also attract bees. The flowering crabapple trees and the lilacs are showstoppers every spring at the Farm. Silver, red and sugar maples are bee magnets too, as well as other kinds of maples.

### Food from weeds

Even common weeds provide bee food. Suffice to say, there have been many more weeds this past summer as volunteer teams have not been permitted access to the garden beds because of COVID-19. Spring dandelion provides food for bees, as does clover in lawns. Mullein is a tall, showy weed with small yellow flowers that attracts the insects. Queen Anne's lace is a bee magnet too.

Beginning in mid-spring and throughout the summer, bee-friendly plants abound. These include herbs such as rosemary, sage, anise hyssop, lavender, and mint. Bees are attracted to the nectar in basil and oregano. Nectar-rich plants also include borage, wisteria, barberry, and salvia. Pollen-rich plants such as the common yarrow and California poppies also are popular with bees.

Some plants provide a combination of nectar and pollen. These include plants such as blanket flower, blazing star, tansy, and daisies. In mass plantings around the Farm – in other words, when more than one plant of the same type is planted – bees expend less energy and can be more productive in their food search.

Later in the summer, bees enjoy black-eyed Susans, flax, cosmos, dusty miller, pincushion, beebalm, liatris, sunflowers, goldenrod, coneflower, and other flowers. In the fall, bees will benefit from fall asters of all kinds. Sedum is sure to attract them.

Many fruits and vegetables that we eat depend on the pollination of bees. Flowers bring beauty to the Farm because of bees and other pollinators.

These are just a few bee-friendly ideas that could be added to *Blooms*. No



Bumblebee on milkweed.

matter. As a naturalist, gardener, and bee enthusiast, I treasure my own copy of this fine book and will continue to give it as a gift to my gardening friends.

*Julianne Labreche is a volunteer with Master Gardeners of Ottawa-Carleton and a member of the Friends of the Farm.*

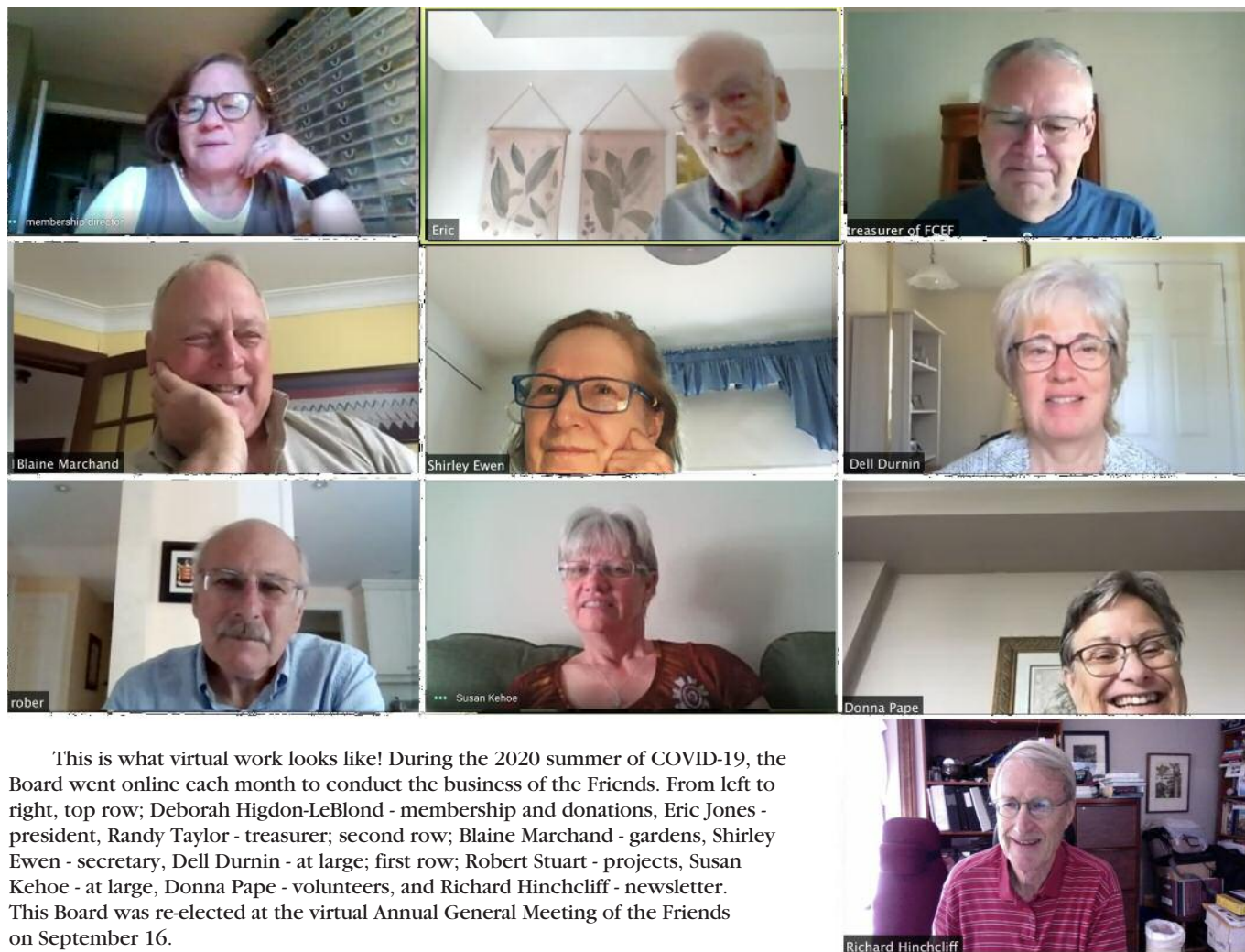


Honeybee on gaillardia.



Queen bee.

## Friends of the Farm Board of Directors, 2020



This is what virtual work looks like! During the 2020 summer of COVID-19, the Board went online each month to conduct the business of the Friends. From left to right, top row; Deborah Higdon-LeBlond - membership and donations, Eric Jones - president, Randy Taylor - treasurer; second row; Blaine Marchand - gardens, Shirley Ewen - secretary, Dell Durnin - at large; first row; Robert Stuart - projects, Susan Kehoe - at large, Donna Pape - volunteers, and Richard Hinchcliff - newsletter. This Board was re-elected at the virtual Annual General Meeting of the Friends on September 16.

## A Special Place

The recent survey (see Eric Jones' column on page 2) revealed how much people value the Farm. In response to an open-ended question, there were many positive, supportive messages, such as the following:

"I recently took your survey about the CEF.

I feel that this article from *Ottawa Magazine* from a few years ago very nicely explains how I feel about the Farm.

[www.ottawamagazine.com/going-out/escape-the-city-without-leaving-ottawas-experimental-farm/](http://www.ottawamagazine.com/going-out/escape-the-city-without-leaving-ottawas-experimental-farm/).

I hope others express their love of the Farm, just the way it is. I feel like the community doesn't need anything fancy from the Farm – just a safe space to walk, bike, or run freely. I love that it has kept its heritage, and I can walk through it with my mother to see not much has changed since I was a child, but also since she was a child. For such a large area to keep its heritage feels rare and special these days. I hope I get to share it with my children someday.

Thank you for your work keeping the CEF a special place – for generations.

Best,

Emily CEF area resident since 1984."

## Annual Non-dinner

Please join the Friends for our popular annual fundraiser. Not a single person will show up and we will be delighted. You can help the Friends of the Farm just by staying at home!

By purchasing tickets to this fundraising event that will never take place, you can help sponsor numerous activities in support of the Ornamental Gardens and Arboretum on the Farm.

Individual seats \$25. Couples \$50. Family \$100. Table of Six \$150. Community \$500. Your support is greatly appreciated and your donation is tax deductible. You can contribute by using our online fillable form in English or French for cheques or PayPal at [www.friendsofthefarm.ca/donations/](http://www.friendsofthefarm.ca/donations/). For more information, visit [www.friendsofthefarm.ca](http://www.friendsofthefarm.ca) or call 613-230-3276.



# A Steady Process of Change in the Arboretum

By Owen Clarkin

On Sunday August 9th, the Friends of the Farm hosted its very first in-person tour of 2020. Pandemic precautions were in place, e.g., mandatory masks, physical distancing, and a limit of 20 attendees.

The theme of this event was recently planted trees and shrubs, and the related idea of natural tree aging and death. We discussed trees which either died recently, such as a row of Sugar Maples (probable heat/drought damage), or were dying, such as a Swiss Pine (unknown cause) and a Rock Elm (probable Dutch Elm Disease). These were compared with a hardier Black Maple (conspicuously surviving) and also trees which were notable for planting themselves such as a volunteer Canada Elderberry. We observed that the Manchurian Ash is surviving adverse conditions, shrugging off the invasive Emerald Ash Borer insect with which it shares a common Asian natural history. We discussed that in a cultivated landscape, a steady process of change is occurring due to natural tree deaths and the appearance of a mix of new trees which originate via intentional plantings or which appear spontaneously and are left in place.

We then toured a selection of recently planted trees and shrubs, discussing wider tree planting trends such as a move toward the introduction of smaller ornamental trees in towns and cities, and



Arboretum tour, August 9, 2020

Eric Jones

correspondingly fewer large shade trees being planted. We observed recently planted and potential future giants from western Canada such as Sitka Spruce and Grand Fir, along with colourful European Beech 'Roseomarginata' and Black Tupelo 'Afterburner'. We can also look forward to attractive spring flowers from small ornamental trees such as Flowering

Dogwood, Kousa Dogwood, and Korean Mountain Ash.

*In addition to leading public nature bikes, Owen Clarkin regularly contributes to local and worldwide plant identification forums on social media.*

## 100 Years Ago

# Bees and Honey at the Ottawa Exhibition

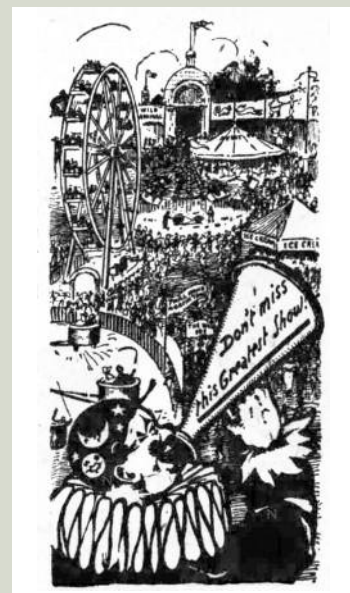
The exhibit of the Central Experimental Farm at the 1920 Central Canada Exhibition in Ottawa "beats all previous efforts," according to a story in *The Ottawa Citizen* (September 16, 1920).

"The horticulture display occupies the centre portion of the exhibit and greets the visitor on entering. Over 60 boxes of highly coloured apples are arranged in pyramidal formation and clearly demonstrate that a high grade of fruit can be grown in the Ottawa Valley ...

"The exhibit from the bee and honey division consisted chiefly of a display of extracted honey taken during different parts of the season, and also a small amount of wax and supplies for production purposes.

"At the back of the stand a pyramid-shaped exhibit of honey was very noticeable and consisted chiefly of honey gathered from aliski (*sic*) and white clover. Another pyramid showed darker honey gathered from dandelion, fruit bloom and buckwheat, and was very tastefully arranged.

"In the supply show were included Langstroth frame hives, one of which was fitted up for the production of honey and another for section honey. On top of each of these hives was an observation hive, in which the queen and other bees could be seen busily at work."



## World Honeybee Day

By Julianne Labreche

One of the casualties of COVID-19 was the fun-filled family event hosted each year by the Canada Agriculture and Food Museum at the Central Experimental Farm to celebrate World Honeybee Day. Our master gardeners were part of the activities, educating children about native bees and bee-friendly flowers.

The day buzzed with activities: bee-keepers showing visitors their hives, children churning honey ice cream, cooking demonstrations with honey, bee-themed games and quizzes, and children decked out in yellow and black striped bee costumes. All these activities took place at the Farm, surrounded by the big barns, flower gardens, and farm animals.

Master Gardeners got into the spirit of the day with demonstrations on ways to make a simple bee house for mason bees. There were posters with lists of bee-friendly plants and images of native bees. One Master Gardener even brought a magical homemade fairy garden. Fairies reportedly love bees, butterflies, and dragonflies.

It was also a chance to teach children about the importance of bees, celebrate foods that are pollinated by insects and learn about pollination. We hope the World Honeybee Day event returns next year.

*Julianne Labreche volunteers as a master gardener and Friend of the Farm.*



Julianne Labreche

## Bee Stings

By Julianne Labreche

Unlike wasps, bees are not usually aggressive. The general rule of thumb is that if you leave bees alone, they'll leave you alone.

Honeybees may swarm and attack, especially if you're close to a hive. Many species of solitary native bees do not sting at all. Others, such as bumblebees, may sting when threatened.

To avoid getting stung, don't go barefoot outdoors. Be aware that perfumes and other scented fragrances may attract bees. Wearing long pants, long sleeves, and a hat will reduce risk of a sting. Calm, gentle movements are better than sudden, fast ones.

If a bee stings, remove the stinger using a credit card or a butter knife. Avoid tweezers that may push venom into the skin. Ice helps to reduce swelling. Usually, a sting produces a local reaction that goes away in a few days.

Anyone with a serious allergy to bees should never leave the house without carrying an EpiPen and a cell phone.



R. Hinchcliff

"Caution! Bee yard ahead." Canada Food and Agriculture Museum, 2018.

## Consider joining the Friends of the Farm!

Find our membership form on the website and pay by PayPal or send in a cheque:

[www.friendsofthefarm.ca/become-a-member/](http://www.friendsofthefarm.ca/become-a-member/)

Benefits include discounts on Master Gardener lectures hosted by the Friends, one free adult admission per visit to the Canada Agriculture and Food Museum, quarterly printed newsletters by post, and monthly Farm Notes e-newsletters.

We also accept donations to support our activities and events, which also support the garden teams that maintain the cherished Ornamental Gardens. A variety of donations can be made through our webpage:

[www.friendsofthefarm.ca/donations/](http://www.friendsofthefarm.ca/donations/)





# Early Bee Research at the Central Experimental Farm

By Patricia Jasen

*"They are the most beneficial insects we have. They are terrific workers—it takes 40,000 miles of travel and visits to 1,000,000 flowers to collect one pound of honey. That's industry in anyone's league."*

*"Charles B. Gooderham, 'As Busy as a Bee,'" The Ottawa Citizen, May 1, 1948*

## Beginnings

From the start, bee research at Ottawa's Experimental Farm was a cooperative enterprise. Bee experts collaborated with colleagues in other divisions at the Farm, such as Chemistry, Forage Crops, and Horticulture; they undertook shared research projects with apiaries at Dominion branch farms from sea to sea; and there was a constant flow of information to and from the nation-wide beekeeping community.

Bee research began in 1893 under the supervision of James Fletcher, chief of the Entomology and Botany Division. Ten swarms of Common Black Bees were purchased, and an apiary was set up near the house of the farm foreman, John Fixter, who became its manager. At the suggestion of the *Canadian Bee Journal*, the first experiments involved assessing the various kinds of foundation comb used by beekeepers in Canada (its purpose being to save bees the work of producing wax for the combs themselves, so they could concentrate on producing more honey).

Other early experiments they focused on:

- how to sustain the flow of nectar throughout the summer by the



Apiary near the Farm foreman's house, 1895.

repeated seeding of bee fodder plants, such as buckwheat;

- the control of bee-moth, which causes damage by laying its eggs in bee hives;
- the introduction and breeding of Italian bees which gradually replaced the original black bees; and,
- the search for the best method of wintering bees.

## The Origins of the Bee Division

Fixter left the Farm in 1906 and, after Fletcher's death in 1908, young wildlife enthusiast C. Gordon Hewitt came from England to head the Division of Entomology. He transformed it into a separate branch of the Department of Agriculture by 1915. The Farm's apiary gained the status of a Division under F.W.L. Sladen, who was passionate about bees and took special interest in the relationship between honey production and the flowering sequence of plants in different regions. He oversaw the construction of the red brick Bee (Apiculture) Building, which still stands near the corner of Maple Drive and Winding Lane. Sladen added a dozen new apiaries at branch farms across the country. Unfortunately, in 1921, while conducting research on breeding queen bees at Duck Island, Ontario, he suffered a heart attack and drowned, aged 45.

## Bee Man of Renown: Charles Gooderham

For the next 28 years, Charles Gooderham, Sladen's former assistant, led the Division from his small office in the Bee Building. He was a celebrity in the



Bee (Apiculture) Building, 1916, viewed from the southeast.

## Early Bee Research at the Farm ... (continued from Page 7)

world of bees, known internationally for his research, and was relied upon by bee-keepers to solve all manner of problems. He kept them up-to-date on the latest research through publications, demonstrations, and field days and, to assist in the day-to-day management of hives, he issued regular bulletins reminding the bee-keeper "of the many things he might otherwise forget."

For Canadians generally, Gooderham was a jovial feature of the Farm's public face, frequently urging office workers, homemakers, and students to consider the pleasures and profits of bee-keeping. He presented talks and films to groups such as the Gyro Club and the Ottawa Field Naturalists and entertained the "little folk" who gathered to hear him tell bee stories at the Victoria Memorial Museum. His visits to branch farms across the country were well-noted in the daily press, as were his occasional misadventures. In 1948, *The Ottawa Citizen* dubbed him "the most 'bee-stung' man in the whole Dominion."

Helen Smith & Mary Bramley, Ottawa's Farm, GSPH, 1996



Charles Gooderham

bee cellars, entirely underground, ventilated through the cupola on the roof. Gooderham experimented extensively with wintering bees both indoors and out, and eventually confirmed that the latter was just as safe, as long as the colonies had proper protection from the weather and the bees were given "plenty of wholesome stores."

Under Gooderham's leadership, research proceeded in many other areas, including:

- bees' role in pollinating tree fruits, crucial to Canada's burgeoning orchard industry;
- the control of bee diseases, such as American foulbrood;
- the breeding of bees less likely to swarm (desert the hive);
- the use of the "Two Queen System" to produce more honey; and,
- the effect of spraying orchards in bloom with DDT, which Gooderham concluded in 1947 was not harmful to bees.

### Research on Many Fronts

The need to accommodate hives during the cold months was fundamental to the design of the Bee Building, which had three



Canadian Bee Journal, July 1942.

### Marketing Canadian Honey

At the core of Gooderham's mandate was the expansion of honey production in Canada, and in this he was exceedingly successful. In 1947, Canada produced

41.8 million pounds of honey, compared with 16.8 million pounds in 1924. The marketing of honey developed apace. In cooperation with the Division of Chemistry and Bacteriology, work began in 1929 on the chemical and microbiological analysis of honey sampled from different areas of Canada in order to develop a protocol for inspecting and grading honey for interprovincial trade and export. The standardization of packaging materials was also essential, both for the preservation of honey and its appearance to the consumer. The use of appropriate cans or jars was demonstrated at Farm field days and agricultural exhibitions, and manufacturers vaunted the appeal of their containers in the beekeepers' press.

Another aspect of marketing was the education of Canadians



Working at the Farm's experimental apiary

C.B. Gooderham, *Bees and How to Keep Them*, Bee Division, Department of Agriculture, 1934

Continued on Page 9



## Early Bee Research at the Farm ... *(continued from Page 8)*



Patricia Jasen

Bee (Apiculture) Building, built in 1915-16, viewed from the west, 2020.

about cooking, canning, and preserving with honey. In 1933, Lilian Heeney of the Horticultural Division began experimenting in the Farm kitchen to develop techniques and recipes that substituted honey for sugar. She and Gooderham prepared a cookbook, revised and reprinted numerous times, called "Honey and Some of the Ways It May Be Used." When sugar was rationed during wartime, honey became a significant part of the "Wartime Food Economy" and was promoted for its superior nutritional value. Despite fears that honey consumption would decline once sugar was readily available, the honey industry—and the nation-wide research that supported it—continued to flourish in the post-war years.

### Changing Times: The Bee Building

As the needs of researchers changed, the Bee Building was converted into offices and eventually fell into disuse in the 1970s. Two decades later, its interior was renovated and its exterior faithfully restored, and it became home to the Canadian 4-H Council for 15 years. At the opening ceremony, the Minister of Agriculture unveiled a specially-designed weathervane topped by a honey bee in flight, thus commemorating the building's many years as a hive of bee research and education.

*Patricia Jasen is a historian who loves exploring the Farm.*



R. Hinchcliff

The bee and 4H Canada weathervane.



The Friends of the Central Experimental Farm is a volunteer organization committed to the maintenance and protection of the Ornamental Gardens and the Arboretum of the Central Experimental Farm in Ottawa, Ontario, Canada.

The Friends of the Central Experimental Farm publish the Newsletter (ISSN 1702 2762) four times a year (Winter, Spring, Summer, Fall). All members receive the newsletter and it is sent by regular mail or e-mail.

Editor: Richard Hinchcliff. Assistant Editor: Joan Butcher. Design & Printing: Nancy Poirier Printing. Contributors: Joan Butcher, Owen Clarkin, Patricia Jasen, Julianne Labreche. Translator: Lise Anne James.

Friends of the Farm      **Telephone:** 613-230-3276  
 Building 72, Central Experimental Farm, Ottawa, ON K1A 0C6      **E-mail:** info@friendsofthefarm.ca  
**www.friendsofthefarm.ca**  
 Charitable Number 118913565RR0001



# Gerald A. (Gerry) Mulligan

## A Long History and Career at the Farm

By Joan Butcher

**G**erry Mulligan, aka The Weed Man, former Agriculture and Agri-Food Canada (AAFC) Scientist, Research Director, and current Honorary Research Associate, began his career at the Central Experimental Farm (CEF) in 1947. His family connection goes much further back. In the 1840s, after John Mulligan Senior came from Ireland, he and his family acquired and worked lands on what is now the east end of the Farm. In the 1880s, John Mulligan Junior bought a ten-acre parcel of land in a subdivision called Nepeanville. This land and part of his father's land was expropriated to allow for the establishment of the CEF in 1886. Their loss was Ottawa's gain, as the son's acreage would become part of the present Arboretum. Many Mulligans continued to live close to the Farm and three generations of them spent their working lives there.

"My first visit to the Farm was on the handlebars of my father's bicycle when I was two years old, over 90 years ago," recalled Mr. Mulligan. "My father was in charge of the Cereal Division greenhouse and outside plots." Gerry often accompanied his father on his weekend visits to care for the greenhouse and plot plants. And that was the beginning of Gerry's nine-decade association with the Farm. His paid employment at the Farm started when he was a summer field hand during his high school years and ended with his acting appointment as Director General of AAFC research institutes.

After graduating from high school, Gerry spent a year or so working in a civil engineer's office in Ottawa, but didn't feel it would provide much scope for career advancement. His success when he took the Government of Canada's public service exam, together with fate, landed him a technician job working for the Weed Investigations Unit at Agriculture Canada. Back on the Farm in a full-time position, he found many opportunities to learn.

Inspired by working with botanists in the unit, and keen to try a new thing, he took the bold step of quitting his job to attend Macdonald College (part of McGill University). Although it was a big financial risk, and academically challenging, Gerry felt it might be possible, given that he was promised continuing summer jobs on the Farm and that his job would still be available if his foray into higher learning failed. He adjusted well to academic life and found great success at university.

Gerry returned to Agriculture Canada in 1952 with a Bachelor of Science degree and began to work with Dr. Clarence Frankton, a distinguished weed scientist, on the biology of weeds. This involved summer fieldwork that saw him travel widely through Canada and the United States. He began to take photos of the plants, which led to him amassing a large collection of colored slides of weeds. Gerry went on to make very good use of this resource, as we shall see when we discuss his post-retirement activities.

As his career at Agriculture Canada progressed, Gerry became very interested in plants of the mustard family (*Brassicaceae*). The mustard family contains more weeds in Canada than any plant family except grasses. To better understand the weeds, Gerry began studying related native and cultivated mustards. He became an authority on the biology of the mustard genera *Arabis* and *Draba*. His studies included collecting plant specimens and growing them in the greenhouse from their seeds. Once they had flowered, he examined the chromosomes and artificially hybridized many of the species. This was ground-breaking work, and Gerry is now renowned as an expert on plants of the mustard family.

### An Unconventional Research Scientist

As a life-long learner and doer, Gerry Mulligan strove to keep up with the latest research of experts in areas such as botanical genetics and evolutionary



Julie Mulligan

Gerry Mulligan, June 24, 2020. The bench plaque reads: "Gerald A. Mulligan, Botanist, CEF"

biology. He was determined to find out what they were doing and sought to emulate their techniques. Although, as a biologist without a PhD, he was neither expected nor encouraged to write research papers, he did so successfully. He was the sole Canadian invited to present a paper at the first symposium organized by the International Union of Biological Sciences in 1964. This symposium is now credited with initiating the study of the genetics and evolution of invasive species.

Gerry Mulligan has determined and published the chromosome numbers for more species of plant families found in Canada and the United States than any other botanist. He has discovered and

*Continued on Page 11*



## Gerald A. (Gerry) Mulligan ... (continued from Page 10)

named many new plant species from Alaska to California and from British Columbia to Quebec. He co-founded the Biology of Canadian Weeds series and edited the series for the *Canadian Journal of Plant Science* for many years.

Active in national and international associations, he was a founding member of the Canadian Botanical Association, the Genetics Society of Canada, the International Organization of Plant Biostatistics, and the Association of Systematic Collections. He served as President of the Canadian Botanical Society and was awarded its most prestigious award, the George Lawson Medal, in 2006. He was awarded the Macdonald Distinguished Alumni Award by McGill University in 2014.

Gerry is proud that his proposed name *Draba franktonii* was accepted for a new species, honouring Dr. Clarence Frankton, whom he described as “a person whose support and friendship was of prime importance throughout my career.” In 2009 Dr. I.A. Al-Shehbaz, a Harvard researcher, named an Alaskan plant *Draba mulliganii*.

### The Reluctant Manager

Without it being his career goal, Gerry gradually moved into the management side of science at AAFC. Embracing his research work, he was at the same time keen to do new things. He assumed the added responsibility of management through acting positions at

first, but in the late 1970s accepted the job of Director at the Biosystematics Research Institute (BRI). He never gave up doing active research, however, and spent as much time as he could spare in a tiny room looking through a microscope. It was his failsafe should there come a time when the burdens of management became too great. He found that “keeping in touch with research also helped with my credibility when dealing with other scientific staff.”

As a Director, Mulligan took a straightforward, analytical approach to management hurdles such as staffing, job classification, and project oversight. He determined that he would only do things he thought were right, stay focussed on the business at hand, make clear decisions, and maintain an open-door policy. He always took great personal satisfaction in doing a good job and habitually sought out new challenges.

### The Biosystematics Research Institute

The Institute was a research centre concerned with taxonomy, i.e., the classification of things, especially organisms. It was formed in 1973 when all of the systematics programs in the Department of Agriculture were united in one centre. Over the past decades the name went through several changes, with the systematics component in the AAFC Research Branch becoming a science program within the Eastern Cereal and



Gerry Mulligan, c. 1995.

Oilseed Research Centre (ECORC).

The BRI conducted systematic research on the classification of insects, arachnids, nematodes, vascular plants, fungi, and non-medical bacteria. Its mandate included developing and maintaining the national collections of insects, arachnids, nematodes, and fungi, and AAFC's extensive Vascular Plant Herbarium.

### Publications

Gerry is a firm believer that it is imperative for scientists to provide information of general interest to the public. Communicating useful information to the taxpayer is a key function of government. As a Director, Gerry urged experts at the BRI to produce information sheets and manuals on beetles that could damage grains and trees. This proved very useful to the forestry and tree nursery industries.

A publication that has had a significant impact on the public and professionals outside of botanical science is the comprehensive AAFC publication *Weeds of Canada*, which Gerry originally updated along with Clarence Frankton. It has remained in print with Gerry as author since 1970.

A smaller volume, *Common weeds of Canada/Les mauvaises herbes du Canada* (1976) contains many of the fine photographs of weeds taken by Gerry and became a favourite with botanists, farmers, and gardeners across the country. In 1980, he wrote a popular booklet on poison ivy and its relatives, weeds that cause the most widespread skin disorder affecting Canadians. It provides clear, science-based information on this hazard.

### MULLIGAN'S DRABA

*Draba mulliganii*

Mustard Family (Brassicaceae)

**Habitat:** 370–1550 m on limestone gravel around outcrops, limestone crevices, dry serpentine knolls in heath vegetation with patches of exposed slide rock, and shale rubble slopes.

#### DISTRIBUTION

**Yukon:** Kluane National Park

**World:** Endemic to Yukon and Alaska

#### CONSERVATION RANK

**Global rank:** Not Ranked (GNR)

**Canadian rank:** Critically Imperilled (N1)

**Yukon rank:** Critically Imperilled (S1)

**Species at Risk Act status:** Candidate

**Distinguishing features:** Distinguished from by having broadly obovate petals 3.2–4.0 × 2–3 mm (vs. spatulate petals 1.5–2.2 × 0.7–1.2 mm), divaricate to ascending lowermost fruiting pedicels (4–)5–9 mm long (vs. ascending pedicels 0.5–2(–4) mm long), non-appressed fruits with styles 0.4–1.0 mm long (vs. appressed fruits with styles 0.05–0.10 mm long), and abaxial leaf surface with 8–12-rayed stellate trichomes often without spurred rays (vs. 3–5-rayed trichomes often with some rays 1-spurred).



Agriculture Canada

## Gerald A. (Gerry) Mulligan ... (continued from Page 11)

### Surfing the Web for Weeds

In retirement, Gerry continued to take an interest in sharing information with Canadians. In 2004 he began to review his botanical slides and scan them. Fortunately, his son Steve possessed the computer skills to enable him to set up a website that featured his colour photos of weeds accompanied by their English and French common names along with the Latin name, and information about where and how the plant grows.

The site proved very popular but technical difficulties with the successive hosting sites caused more than a few frustrations for father and son. Eventually Steve determined that they would set up their own site at <https://www.weedscanada.ca/>. It went live in 2009, featuring about 1,000 photos and some 250 species. As of the end of July, 2020 it had recorded over 815,000 visits. It is a valuable resource used by people all over the world as well as by institutions and universities.

Weedscanada.ca was really hitting its stride, with the site getting first rank on Google for the entry "weeds of Canada" but there was a sudden, sizeable decrease in users. It was a mystery that was solved by Gerry's daughter Julie when she attempted to access her father's site while she was at work. Her company's servers would not allow her access to what looked like a cannabis retailer, weedscanada.com. This similarly named site served a cannabis dispensary in Vancouver, not the gardening community. Gerry was disappointed to realize that the public who wanted to get data on plants were being blocked as an unintended consequence of cannabis legalization.

The story came to public attention and gained traction with media outlets. The Ottawa Citizen's headline writer had a great time: *Weed scientist's website uprooted by*



Gerry Mulligan and his four children on "Gerry's bench" in the Arboretum, October 14, 2019. From left to right: Steve, Julie, Gerry, Don, and Paul.

*cannabis, A tangled web of weed and When weed has nothing to do with cannabis.* Coverage of the story served as a good promotion for the site, and gradually those seeking horticultural advice about weeds were able to access weedscanada.ca again.

### Establishing the Friends of the Farm

Gerry recalls that Peter Elliott, who had been an Agriculture Canada chemical technologist at the Farm and was a former President of the Ottawa Tulip Festival, came to see him in 1986. Nearing retirement Peter came to ask permission of the Acting Director General to explore other opportunities to address the shifting of emphasis at AAFC away from the Arboretum and Ornamental Gardens. His idea was to form a volunteer organization to address this gap. He needed Gerry Mulligan's go-ahead. Since Gerry was also very concerned about this trend and had been trying to do something about it, he

was pleased to support any effort that Peter Elliott could make. In 1988, the Friends of the Central Experimental Farm organization was incorporated and a first board meeting held.

Always active and innovative, Gerry Mulligan has been a field botanist, a much-published research scientist, a hybridizer, a strong manager, an athlete, a gardener, a dedicated husband and father, a photographer, the keeper of a remarkably popular website, and an early supporter of the Friends of the Farm. He continues to give his time and expertise to advancing science in Canada as an Honorary Research Associate at AAFC. And people keep on sending plants to him for identification because he is Canada's foremost specialist in this area – he is the Weed Man. And Gerry, age 92, says "If I'm interested in it, I'll work on it."

*Joan Butcher, a Friends of the Farm volunteer, previously worked for the federal government as a communications director.*

A copy of the *History of Systemics in Agriculture Canada at Ottawa, 1886-1986*, with a foreword by Gerry Mulligan, can be found at <https://www.biodiversitylibrary.org/item/126410#page/8/mode/1up>

Much of his history at the Farm is contained in a book by his daughter Julie Mulligan, *The Real Weed Man: Portrait of Canadian Botanist Gerald A. Mulligan*.

## New Benches in the Arboretum

"Gerry's bench" (above) was installed and dedicated under the Friends of the Farm bench program. Five benches are to be installed in the Arboretum this fall with dedication plaques attached that were purchased by individuals, each of whom have their own special reason for celebration at the Farm.

These five new benches will make a total of eight that have been installed in 2019 and 2020. Please keep checking <https://friendsofthefarm.ca/bench-program/> or write to [bench@friendsofthefarm.ca](mailto:bench@friendsofthefarm.ca) for information on future offerings.

Board of Directors  
Friends of the Central Experimental Farm