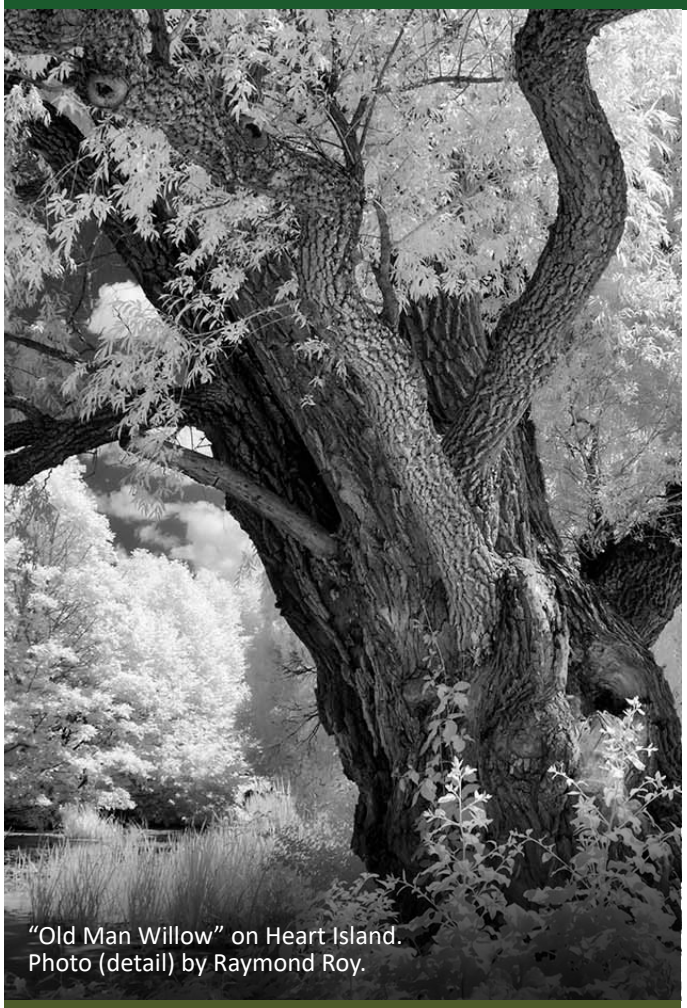
friends of the farm
les amis de la ferme

FRIENDS of the Central Experimental Farm

Fall 2025 Newsletter | Volume 37 No. 4

Follow us



"Old Man Willow" on Heart Island.
Photo (detail) by Raymond Roy.

"Old Man Willow"

The tree in the photograph by Raymond Roy above has fallen. Raymond laments its loss, but celebrates its life, as follows: "Today (September 3) was the first time I was actually able to climb on Old Man Willow. Even horizontally it was quite a challenge and exhilarating. While teetering on a limb over the pond I caught a glimpse below of a beautiful great blue heron.

This amazing tree was a very good friend and over many years has given me much joy. I am sad to see him go but also happy to think its wonderful energy will live on as a landscape for growth and renewal."

On the Bark Side in the Arboretum

By Eric Jones

As we walk through the Arboretum, our eyes are drawn first to the overall size and shape of a tree. Then we home in on the crown with all of its branches and leaves. Then we look for flowers or fruit that might be hidden in the crown. If we look at the bark at all, it's usually because of something unusual such as a striking colour or a peeling texture, or because somebody has written on it.

Yet bark plays a key role in a tree's life. It lies right next to the lifeblood of the tree, the cambium, a narrow sheath of stem cells that runs from tip to roots. Outside the cambium is the phloem that brings food down from the leaves. Outside that is the bark. Bark is doing something for the tree, for the environment, and for you. It deserves to be better appreciated.

WHAT BARK DOES FOR THE TREE

The first thing bark does is to protect the tree's living cells from weather, fire, decay and predators. Thick-barked trees like Ponderosa Pine can survive moderate fires and drought, which enables them to live in areas of frequent fires like the US Southwest. Peeling-bark trees like Paper Birch can shed moss and pests as they grow. Bark has chemical defenses as well, e.g., Oak bark contains tannins to resist predatory insects.

Bark provides the shield that protects the tree from rain, snow, and ice. But it also stores water that the tree can use to supplement water from the roots, which can be especially important in dry times. Rough-barked trees like Oaks and Willows store more water than smooth-barked species.

Bark also lends structural support. Wood fibres in the tree are very good at resisting vertical loads from branches, leaves, and other burdens. But the tree also needs to resist horizontal loads like wind. As the tree swings back and forth in a storm, the latticework of the bark tightens up to limit side sway. Without that restraint, during a storm, trees would topple like dominoes.

Another function of bark is to let air in and out of the tree, keeping the living cells alive. On many trees such as Birch and Cherry, the bark shows horizontal lines called lenticels that perform this function. If you look at the lenticels under a magnifying glass, you'll see they consist of small pores that let oxygen and carbon dioxide in and out. This allows the tree to transpire, i.e., give off water vapor, so it can draw nutrients from the roots and keep water in balance.

And if you've ever seen a tree with green bark (think Sycamore or Trembling Aspen), you're witnessing yet another amazing function. The chlorophyll in the bark is performing photosynthesis, resulting in more food for the tree.

Continued on page 3...

Participants in an "On the Bark Side" tour in July led by Eric Jones (right). *Photo by Bill Joyce*

Message from the President
Un message de la présidente

DIANNE CALDBICK
President, Friends of the Central Experimental Farm
Président, Les Amis de la Ferme expérimentale centrale

It's hard to believe that another gardening season is coming to a close. This year brought some challenges, as we all coped with the heat and the lack of rain this summer. But our intrepid FCEF volunteers soldiered on. I hope that you were able to spend time in the Ornamental Gardens, the Merivale Shelterbelt, and the Dominion Arboretum to enjoy the fruits of their labour.

This year, to complement the work that we do to maintain and enhance the public areas of the Farm, we launched a new Speaker Series aimed at raising public awareness of and appreciation for the Farm's history and the important science that continues to happen here. As of this writing, two sessions in the Series have taken place, related to insects (those we love and those we love to hate) and the 'get your hands dirty' details of composting to maximize soil health. These sessions featured Agriculture and Agri-Food Canada scientists keen to share the results of their work. You'll find articles on these sessions on pages 6 and 8. Be sure to check our website and Farm Notes for information on the remaining sessions that will round out the Speaker Series this year.

As always, I encourage you to visit the Farm and enjoy the colours of Fall. The Arboretum is endlessly fascinating to me, with its wide variety of trees from North America, Europe, and Asia. Come and experience the peace and beauty of this special place.

Incroyable! Une autre saison de jardinage sur le point de prendre fin! Des défis, nous avons dû en relever certains et devoir à la fois composer avec la forte chaleur et l'absence de pluie. Les bénévoles de la Ferme ont heureusement tenu le coup. J'espère toutefois que vous avez eu l'occasion d'admirer les fruits de leur travail lors de vos visites dans les jardins ornementaux, le brise-vent Merivale et l'arboretum du Dominion.

Cette année, en vue de maintenir et d'embellir les espaces publics de la Ferme, nous avons lancé une nouvelle Série de conférences destinée à sensibiliser le public en égard au travail des bénévoles, à l'histoire de la Ferme et l'importance des travaux scientifiques qui y sont menés. Au moment d'écrire ces lignes, deux conférences ont récemment eu lieu : l'une sur les insectes (ceux que nous aimons et ceux que nous aimons détester) et l'autre, qu'on pourrait qualifier tout simplement « Salissez-vous les mains » ou les aspects pratiques du compostage pour maximiser la santé des sols. Ces conférences mettaient en vedette des scientifiques d'Agriculture et Agroalimentaire Canada, fort heureux de partager les résultats de leurs travaux. Vous trouverez des articles à ce sujets aux pages 6 et 8. Ne manquez pas de consulter notre site Web et les Notes de la Ferme pour vous renseigner sur les dernières séances qui viendront conclure la Série de conférences de cette année.

Comme toujours, je vous invite à venir à la Ferme et y admirer le coloris automnal. L'arboretum est infiniment captivant pour moi, avec la grande variété de ses arbres originaires de l'Amérique du Nord, de l'Europe et de l'Asie. L'invitation vous est lancée : venez vivre une expérience incomparable dans ce havre de beauté et de paix!

Continued from page 1...

WHAT BARK DOES FOR THE ENVIRONMENT

The Arboretum is a wonderful environment in itself, a haven in the city for people and wildlife alike. Many living things are dependent on having a home in the trees. The deep bark fissures on trees like Oak help to shelter insects and other small animals. The presence of lichens, a healthy sign in an urban setting, does no harm to the trees.

Bark's ability to store water is also important for many organisms that live on the tree, including birds, insects, lichen, and plants. It makes it possible for epiphytic plants to grow on the tree without needing to have their own roots in the ground.

A recent discovery has shown that bark helps to capture methane from the air, adding to the other climate benefits provided by trees. Methane is even more potent a greenhouse gas than carbon dioxide.

Many trees, especially in tropical climates, have toxic chemicals in their bark to help protect the tree from being eaten. This poison can also be used by wildlife. Some mammals have even been known to chew tree bark and then masticate on their fur to protect themselves from predators.

Bark is frequently used as mulch to enhance the soil. While this can benefit the soil's makeup and microbes, it needs to be done carefully to ensure that the bark is suitable for the planting, not contaminated with chemicals and/or weeds, and properly put in place.

WHAT HAS BARK DONE FOR YOU?

Trees pre-date humans by millions of years, and any benefits to people are byproducts of their existence. Still, it is interesting to learn how closely our culture and well-being are linked to trees. The English word 'book' is derived from the Germanic word for a beech tree, reflecting the history of people writing on beech bark (Note: this is not something we recommend you do in the Arboretum).

In North America and elsewhere, there are many examples of Indigenous people making creative uses of tree bark, as well as other parts of trees. The iconic example in Canada is the use of Paper Birch bark to make canoes, baskets, and shelter, and help to start fires. Bark has also been used to make clothing and structural products.

JUST A FEW OTHER HISTORIC BARK USES INCLUDE:

- **Willow and Poplar bark for food and headache relief (think aspirin)**
- **Oak and Hemlock bark to tan leather and make dyes**
- **Cork Oak bark to make corks**
- **Cinchona bark to make quinine**
- **Basswood and Linden bark for rope, netting and baskets**
- **Cinammon bark for spices**

Although bark extracts can be toxic, it is possible to modify them for use in many different food and medicine concoctions, because the extract's chemicals can have antibacterial and other properties. Examples are: Slippery Elm lozenges for sore throats, Cedar and Fir for scurvy, Pine species for anti-inflammatory treatment, Cranberry for cramps, Cascara for laxatives, and Black Cherry for coughs and indigestion.

That's only the tip of the iceberg. And now science is starting to find amazing new application for bark chemicals. These studies are showing great promise for their use in wound healing, treatment of cancer, heart disease, diabetes, and Parkinson's disease. The pace of new research on tree bark is accelerating, and we'll be hearing more about bark in the near future.

1. Peeling-bark trees like this River Birch can shed moss and pests as they grow. 2. The thick bark of the Ponderosa Pine can help it survive moderate fires and drought. 3. Rough-barked trees like that of this Golden Weeping Willow store more water than smooth-barked species. 4. The horizontal lines called lenticels seen on this Yellow Birch bark let air in and out of the tree, keeping the living cells alive. 5. The word 'book' is derived from the Germanic word for a beech tree, reflecting the history of people writing on its smooth bark, seen on this Copper Beech. *Photos by R. Hinchcliff*

AFTERWORD

Since bark is good to you, be good to it. Never use weed whackers close to tree stems—they are lethal! And don't prune trees any more than you have to. Any damage to the bark can be a mortal wound to a tree.

Eric Jones, leader of the Arboretum volunteer team, is co-author of the book Pathways to the Trees at the Central Experimental Farm. He led a tour "On the Bark Side at the Arboretum" in July (see page 5).

GREAT TURNOUT FOR THE PLANT SALE *By Lois Burrows*

Our annual Friends of the Farm Mother's Day Plant Sale was held on May 11th this year. A sunny but cool day helped contribute to a great turnout from those looking to get their gardens started or for a special Mother's Day gift. The event continues to grow with some new vendors as well as our regular participants, including plant sales, garden art, expert advice from the Master Gardeners, and an information booth from the World Wildlife Fund.

Susan Bailey, our plant sale coordinator, organized the day. Our early morning volunteers were on hand for set up operations, while volunteers ensured the Friends of the Farm plant check, promotional, used books, and refreshments tables ran smoothly. Thanks to all our vendors, our volunteers, and the public for supporting the Friends of the Farm. *Lois Burrows is a Friends' Board member. Photo by Lois Burrows.*

CelebriTree: Small Trees, Big Meaning, and Taking Good Care

By Elizabeth Atkinson

If you've strolled the Dominion Arboretum this year you may have spotted a few slender trunks with shiny new tags among the many giants. Those young trees are part of our CelebriTree program — a simple, heartfelt way for people to mark milestones while adding to the Arboretum's living story. Between 2023 and 2024 the program welcomed 37 new trees to the collection, and we're planning 20 more plantings in 2025.

There's excitement and meaning in every new tag. Each CelebriTree carries a QR code for visitors to scan, which links to an online story describing the tree, explaining who or what the tree honours, and telling the personal story behind the dedication. If you prefer to plan a walk, the interactive map (and GPS/Google Maps directions) on the CelebriTree page makes it easy to tour the trees and enjoy the Arboretum at your own pace.

This year has been a reminder that young trees need patience and vigilance. Drought conditions and a heavy presence of Japanese beetles have made 2025 a trying season for many newly planted specimens. Thanks to the steady, hands-on work of the expert staff at Agriculture and Agri-Food Canada and the CelebriTree Maintenance Team, these saplings have received extra watering, mulching, and attentive pest management — interventions that have materially helped them through a difficult summer. We will continue to monitor each tree carefully over the winter and into the spring to see how they fare; we're hopeful many will show the resilience that young trees can muster with good care.

We also want to reassure sponsors that the CelebriTree program is committed to looking after the trees. If a sponsored tree does not survive during the 10-year sponsorship period, the Friends will arrange a replacement, so the sponsorship continues for the original term. That safety net, and the close oversight by AAFC staff and the Maintenance Team, means donors' intentions remain honoured even in a tough year.

Dawn Redwood 'Jade Prince'. *Elizabeth Atkinson*

Interest in CelebriTree keeps growing — and that community enthusiasm is wonderful to see. Because demand currently exceeds the number of available trees, not every applicant will receive a tree in a given year. However, as CelebriTrees is a continuing program there will be further opportunities ahead. We're grateful to everyone who has supported the program and to the many people who visit the Arboretum to enjoy the new plantings and read the stories they carry.

For full details — species, the interactive map, and how to visit, please go to the CelebriTree page.

Elizabeth Atkinson, Director of Programs for the Friends, launched the CelebriTree program.

Friends of the Farm Board of Directors – 2025/2026

Dianne Caldbick, *President*
Heather Webster, *Treasurer*
Shirley Ewen, *Secretary*
Elizabeth Atkinson, *Programs Director*
Christina Fiedorowicz, *Volunteer Director*
Eric Jones, *Project Director*
Liz Lumsden, *Communications Director*
Linda McLaren, *Gardens Director*
Mark Vigder, *Operations Director*
Yves Garcia, *Membership and Donations Director*
Lois Burrows, *Member at Large*
Vacant, *Events Director*

Inclement weather did not dampen enthusiasm for a tour of the peonies in June led by Blaine Marchand (in red shirt). *R. Hinchcliff*

Tree Tours 2025

The Central Experimental Farm, especially the Arboretum, offers a fabulous opportunity to learn about trees. Tours of the trees are offered by the Friends of the Farm on request and, typically, every month from May to November the Friends give tours guided by local experts.

An excellent guidebook, entitled *Pathways to the Trees at the Central Experimental Farm*, is available from the Friends' office and independent bookstores in Ottawa.

For regular updates on Friends of the Farm events, you may sign up for our free monthly e-bulletin Farm Notes and visit our Facebook page.

The following were tours presented up until the end of August this year. *All photos by Eric Jones.*

SPRING FLOWERS

Some flowering is happening earlier due to climate change. A tour in early May led by Clayton Shearer found some showy flowers, others that were less apparent. Most people don't think of flowers when they think of an oak tree! Parts of flowers were examined, ranging from simple and ancient flowers to the more complex ones.

THE FISHER WOODLOT

The interesting biodiversity present in the strip of woods at the western edge of the Experimental Farm along Fisher Avenue was the subject of a tour in June led by Owen Clarkin. While trees were the focus, attention was also paid to the biodiversity of the woods as a whole, including birds, insects, and fungi.

ON THE BARK SIDE

This July tour was led by Eric Jones (see page 1 story and photo on page 2).

NUT TREES

In August, Robert Glendinning led a tour of nut trees at the Arboretum. A joint tour with the Eastern Chapter of the Society of Nut Growers (ECSONG), it included species of northern nut trees such as hickory, pecan, walnut, heartnut, and nut tree hybrids or cultivars, as well as familiar local nut tree species such as oak, beech, and hazel.

THE CONIFER WALK

Conifers include the spruces, pines, and firs that populate most of Canada's forest land. The Conifer Walk is one of eight walks in the Friends of the Farm book, "Pathways to the Trees at the Central Experimental Farm." Roman Popadiouk, one of the book's authors, showed highlights of the Walk, and a few that aren't identified in the book.

Speaker Series

From the Friends of the Farm and the Ottawa Research and Development Centre

This Speaker Series provides the opportunity to learn more about the Central Experimental Farm: its history, its successes, and the role and importance of its ongoing research. The free talks are featuring scientists from the Central Experimental Farm's Ottawa Research and Development Centre, who are taking us into their fascinating worlds of beneficial insects and invertebrates (see page 6); the art and science of composting (see page 8); and invasive species and biovigilance. The Series will also include presentations on the history of the Central Experimental Farm and its horticultural legacy and Notable Women of the Farm.

Check the Speaker Series page on our website for dates.

Ian Dublin (in red shirt) introduces the Explorer rose collection during a tour in June. It was a combined tour with Jennifer Williams, who spoke about the Heritage Rose Garden. *R. Hinchcliff*

BENEFICIAL INSECTS AND INVASIVE SPECIES:

Two Worlds Colliding

Friends of the Farm Speaker Series Event, July 23, 2025

By Patricia Jasen

This event was the first in a series of presentations titled 'Ottawa's Treasure – the Central Experimental Farm.' The series features talks and demonstrations by CEF scientists from the Ottawa Research and Development Centre (ORDC) that illuminate the vitally important research conducted at the Farm that is helping protect food security and encourage healthy ecosystems in a rapidly changing environment.

On this occasion, we heard from two speakers who are experts in the study of our insect friends and foes. Dr. Sophie Cardinal specializes in wild bees and the development of research tools to better understand native pollinators. Jake Miall's research concerns the safe introduction of invasive species' natural enemies to control their populations.

The sun-drenched Neatby Pollinator Garden, located across from the K.W. Neatby Building greenhouses on Winding Lane, was the ideal setting for this mid-summer gathering. The plot was in glorious bloom with purple coneflower, goldenrods, yarrow, cardinal flower, evening primrose, spotted Joe-Pye weed, wild bergamot, and other bee and butterfly favourites. For this event, a marquee sheltered a row of tables displaying pollinating insect collections, many different species of bees, and various bee nests. Just south of the garden lie long narrow beds used in biological control research, and these attracted much interest during the interactive portion of the event.

THE WORLD OF WILD BEES

Following FCEF president Dianne Caldbick's welcoming remarks, Sophie Cardinal introduced us to the complex world of wild bees. Her research focuses on 'the taxonomy, systematics, evolutionary history and biodiversity' of bees, and she is engaged in the development of new morphological tools to advance the study of bee anatomy and molecular tools for research at the DNA and RNA level. These tools are essential to understanding adaptations that have occurred over time and in new environments. Worldwide, there are over 20,000 described species of bees. Their diversity has evolved over the past 125 million years and has led to our present reliance on their 'pollination services.'

At the Farm, there are over 1000 species of wild bees, ranging in size and appearance from the chubby, furry bumblebee to the tiny leafcutter and mining bees. Unlike the honey bee, imported by European colonists in the early 17th century, most wild bees are solitary and live not in hives but in the ground or in hollow stems and crevices.

Bees have evolved to be supremely suited to pollination. In addition to other senses that draw bees to nectar-producing plants, scientists have discovered that a weak electrostatic field exists between bees and flowers. Through friction with the air as they fly, bees' hairy bodies take on a positive electric charge while flowers tend to have a negative charge.

Because wild bees pollinate such a vast number of plants, we depend on them for a great many of the fruits, vegetables and grains we eat, from blueberries to squashes to canola. Of course, species other than humans also rely on wild bees, not only for food, such as seeds and berries, but the shelter that plants provide. Bees are essential to the biodiversity of both plants and animals, and all that plants do to sustain life on earth owes much to bees.

At the same time, wild bees are at risk due to many factors, including competition from honey bees, introduced diseases, climate change, pesticide use, and habitat loss, which includes the practice of planting large areas in a single crop. A diversity of plants is needed in order for wild bees to thrive, and healthy ecosystems require a diversity of bee species.

Top: Dr Sophie Cardinal (right) chats with event participants. Linda McLaren, FCEF gardens director, is on the left next to FCEF office manager Bill Joyce. Above: There was much to see and learn under the marquee. *Photos by Patricia Jasen.*

At the close of her remarks, Sophie urged listeners to consider taking part in an ongoing Citizen Science project. Volunteers assist in the digitization of AAFC's vast specimen collection, which is invaluable in her research and that of scientists worldwide. (See sidebar)

CONTROLLING INVASIVE INSECTS

Our second speaker was Jake Miall, an insect biologist in the ORDC's Biological Control Laboratory. It is part of the National Biocontrol of Invasive Insects and Weeds Program, involving nine research centres across Canada. His work focuses on reducing the impact of alien species while preventing harm to the ecosystems in which they are found.

Jake's field is called classical biological control. In entomology, this refers, in part,

In the research plots, Jake Miall demonstrates how a biocontrol agent is being tested across the growing season.

to the management of an invasive species through importing, from its region of origin, a natural enemy that feeds upon, infects, or parasitizes the pest and reduce its numbers. The goal is suppression, rather than eradication. Past successes at the Central Experimental Farm include the release, in 2010, of the tiny European wasp that preys upon the lily leaf beetle (see 'Controlling invaders' in the Spring 2021 Newsletter).

In Ottawa, the Japanese beetle, leek moth, diamondback moth and cabbage seedpod weevil are among the insect pests under investigation, along with a variety of biological control agents associated with each. Jake's presentation demonstrated some of the methods used to monitor pest species and to track and quantify the impact of the parasitoids used to combat them.

Research into controlling the voracious Japanese beetle, which attacks many food crops, is focused on a parasitic fly *(Istocheta aldrichi)* introduced into the eastern US a century ago from Japan. (See sidebar on page 8) The ORDC's current project, explains Jake, includes distributing this biocontrol agent to western and eastern regions of Canada which do not have established populations.

Harm prevention is at the core of classical biological control, and participants were curious about the safety of introducing 'exotic' species into Canada. There are historical precedents for things going terribly wrong when an imported agent turns into a major scourge in its own right. Recall the example of the cane toad, brought to Australia in 1935 to control the cane beetles (which it failed to do). It famously became, and remains, a serious menace with no natural predators.

Finding precisely the right predator, therefore, is only the beginning of the years-long process of establishing a biocontrol agent. Once a species is identified and imported, it must be contained, studied, and exhaustively tested before it is approved for release and continued monitoring. Central to Jake's work at the ORDC is the prevention of collateral damage, which includes host range assessment—determining the range of species that an agent can feed upon or infect. A narrow range means it is less likely to cause harm to non-target organisms or put closely-related species at risk. At the biocontrol greenhouse on the north side of Winding Lane, crops are grown to feed potential agents being tested, but the testing itself occurs in a separate, secure laboratory at the Farm.

Sophie's and Jake's presentations were followed by a hugely successful interactive session. Along with others on the team, they answered innumerable questions and explained the displays, with the Japanese Beetle and its nemesis vying for centre stage (See sidebar). Among the cabbages in the research plots beside the garden, Jake demonstrated how a biocontrol agent aimed at combatting a pest affecting brassicaceous crops is being monitored at this site across the entire growing season.

People came away from the event with a heightened appreciation of the many years it takes for the Farm's scientific research to bring results and of the vital importance of keeping experimental conditions constant. They were impressed by the dedication of the scientists and the enthusiasm of their assistants who were evidently 'keen on a future in some kind of entomology.' As one participant said, it 'made me feel hopeful that so many young people are doing this work.'

Patricia Jasen is co-author of Building Canada's Farm: An Illustrated Guide to Buildings at the Central Experimental Farm. Thanks to Sophie Cardinal, Jacob Miall, Robin Richter, and a number of participants for their assistance in preparing this article.

CITIZEN SCIENCE

The Canadian National Collection of Insects, Arachnids and Nematodes (CNC) got its start in 1886 when James Fletcher donated his own collection to the Department of Agriculture. Now one of the five largest collections of its kind in the world, it has been housed at the Ottawa Research and Development Centre in the K.W. Neatby Building since 1949 and holds about 18 million specimens and over 150,000 identified species. The collection is vital to research on protecting biodiversity and native Canadian fauna, developing biological controls, and responding to the climate crisis. Volunteers help with the process of digitization by transcribing data from specimen labels that identify when, where, and by whom each item was collected. In this way, they assist in the creation of a database accessible to researchers around the world.

NEATBY POLLINATOR GARDEN

The Neatby Pollinator Garden, located across from the greenhouses on Winding Lane, is an important ORDC biodiversity research site. Created in 2016, the garden was redesigned in 2024 and now consists of three 16' by 16' beds surrounded by wood chip paths edged with reclaimed masonry. Bee houses, a small pond, and dozens of native plant species—chosen to ensure that something is in flower from early spring to fall—welcome pollinators to the garden. A tall band of sunchokes at the west end offers shade and a windbreak in this exposed environment. The garden has several functions, as research assistant Robin Richter explains. It provides 'food, water, and refuge to pollinators and parasitoid insects that are studied in the context of agriculture and local biodiversity.' It also serves as a demonstration site for public outreach events, such as Bug Day and Doors Open. 'The talk with your group,' she adds, 'is a prime example!'

Left photo: The pollinator garden, seen here from the northeast, is across from the research greenhouses on Winding Lane.

Continued from page 7...

JAPANESE BEETLE

The dreaded green and copper Japanese beetle was a star attraction (of sorts!) at the presentation. Accidentally brought to North America over a century ago, it has recently become a major pest in our region, munching its way through gardens, trees, and food crops. Although notoriously fond of roses, it enjoys feasting on over 350 species of plants. Traps are of limited use because they may attract even more beetles to our gardens. Knocking them into a jar of soapy water is a popular method of control but, as we learned from our speakers, it is useful to avoid killing those with white spots on their bodies, for they are infected with the parasitoid Istocheta aldrichi, a natural enemy of the beetle in Japan and a promising biological control agent. Also known as the 'winsome fly,' this small insect lays its eggs on the back of its host. Within a few days the eggs hatch into larvae which consume the beetle from within, usually before the beetle itself (the fly prefers females) lays eggs. The advantage of leaving infected beetles alone is that the larvae typically pupate during winter within the cadaver so that, next season, a new generation of flies emerges to prey upon the beetle population. An FCEF member who does a regular circuit of the Farm remarked next day: 'This morning when I was out beetle-collecting I actually saw the spots on a few and let them be!' We know the winsome fly won't eradicate the Japanese beetle, but this method of classical biological control may help to keep them in check.

Left Photo: A team member displays a Japanese beetle with the telltale white spot, the egg of the winsome fly.

Getting Expert Advice on Composting

By Bill Joyce

Far Left: Ulrica McKim demonstrates a rolling type composter. Bottom: Participants got their hands dirty inspecting finished compost. *Photos by Bill Joyce*

On August 21, the Friends of the Farm held the second session in its Speakers Series, titled Composting and Compost Use for Healthier Soils. At this session, two scientists from Agriculture and Agri-Food Canada shared their expertise on composting. Ulrica McKim is a Soil Biochemistry Technician who provides technical support for Soil Resources and Sustainability Research. Ulrica specializes in soil carbon cycling, greenhouse gas measurement, and composting in northern climates. Dr. Sandra Yanni is a soil research scientist, with expertise in soil carbon cycling, greenhouse gas emissions from soil, and soil health. She conducts research on soil sustainability and resiliency under climate change.

The presenters covered a range of topics based on their experience in home composting as well as in community and industrial-level composting. They explained that the goal of any composting is to produce stabilized organic matter that, when applied to the soil, gradually breaks down with the help of micro-organisms in the soil. These nutrients are then in a state that they can be slowly used by the plants.

Participants in the session learned that composting, although similar, should not be confused with rotting. Composting is a managed process in the presence of oxygen. The right levels of heat and moisture are also important factors. The end result is not a fertilizer per se, but it improves soil structure and drainage significantly and helps plants resist disease.

An all-important factor in creating good compost is using the right recipe. Materials going into the composter should consist of one part "greens" to two-to-three parts "browns". Greens can be food waste, grass clippings, green leaves, etc. Browns are dried leaves, shredded paper or cardboard, woodchips, small twigs, etc.

The presenters also demonstrated composting with worms or vermicomposting. Apparently Red Wigglers are the best worms to use.

The attendees had many questions and were also very interested in the composting initiative in the town of Makkovik, Labrador, where the Inuit community government has set up backyard gardens for seniors with help from Agriculture and Agri-Food Canada.

Bill Joyce is the Office Manager for the Friends of the Farm.

Pushing the Boundaries at the Rock Garden

By Annie Creighton

The Rock Garden is an ideal location to head for during the hot summer months as there is plenty of shade, lively sights and sounds of water cascading over rock, and a pond where fish dart about.

Top: *Gentiana acaulis* (Stemless Gentian) in a crevice garden. Middle: *Ipomopsis rubra* (Texas Plume). Bottom: The water feature is popular with its waterfall and fish. *Photos by Annie Creighton*

The garden's design continually changes as we plant more varieties, provided by Agriculture and Agri-Food Canada's ever-innovative propagator, Robert Glendenning, who continues to push the boundaries of what we can grow. The outstanding biennial *Ipomopsis rubra* (Texas plume) is our most showy example this summer. It is hardy to USDA zone 6, whereas Ottawa is zone 5. It is not to be missed at the south end of the gardens.

The team is full of great ideas, and we implement them where possible. Recent initiatives include having bricks reset along the edge to the south section, giving definition to the plantings. Aggressive geraniums, sedums, and thyme have been replaced by a large variety of interesting and unusual perennials. Soil and evergreen needles have been removed from under the trees to expose the original rocks, thus creating pockets for plantings in an area that is now largely under shade. The "dwarf" evergreens planted some 70 years ago are now no longer dwarf!

There are two showcase crevice gardens which have attracted a lot of attention, as well as three troughs with contributions from the Ottawa Valley Rock Gardens Horticultural Society. These areas demonstrate techniques that can create ideal growing conditions for true alpine plants by creating adequately drained soil pockets between the rocks.

The water feature is popular as visitors stop to admire the waterfall and the movements of the fish—families with small children love it. Judicious pruning now allows a bit of a water view from the upper pathway.

The rock garden is a work in progress, benefitting from constant experimentation, and evolving organically as plants bloom from April until November. We have had two successful tours through the Friends of the Farm this summer and are happy to share our lovely rock garden with others.

Many of the volunteers at the Rock Garden have been on the team for many years—a testament to what an enjoyable experience it is to garden in this special environment.

Annie Creighton has been on the Rock Garden volunteer team for 13 years, the last nine of them as team leader.

Mapping the Macoun Garden

By Debra Hauer

The Macoun Memorial Garden was officially opened by the then-Prime Minister, the Honorable William Lyon Mackenzie King in 1936 to mark the 50th Anniversary of the Central Experimental Farm. The garden was established to commemorate William Tyrrell Macoun's contribution to Canadian horticulture. Macoun, a noted plant breeder, spent his career at the Experimental Farm and acted as the first Dominion Horticulturist from 1910 to 1933. He wanted everyone to have the opportunity to enjoy a colourful home garden.

The garden, located on the site of Macoun's home at the Central Experimental Farm, initially contained roses, lilacs, lilies, and crabapple varieties that originated at the Farm, as well as other flowers, trees, and shrubs. Unfortunately, the original plans for the Garden have been lost.

The Macoun Memorial Garden continues to be a well-loved part of the Farm's Ornamental Gardens. Located in front of Building 75 near the traffic circle on Prince of Wales Drive, the lower garden is maintained by Agriculture and Agri-Food Canada staff. It has a water feature, and the rectangular area inside the walkway is planted with annuals. Friends of the Central Experimental Farm volunteers maintain the perennial borders outside the rectangular walkway during the summer months.

On Monday mornings, a team of about 25 volunteers meet to take on the task of maintaining and enhancing the plantings. The team keeps the garden thriving by adding compost, weeding, and watering as necessary. They assess what's thriving and what's overgrown, and what can be cut back or moved.

During the past two seasons, the Macoun gardening team has been mapping the Macoun Garden by identifying what is growing in each area of the garden. Our team has provided pencil drawings on graph paper to Agriculture and Agri-Food Canada staff who have transferred this information into AutoCAD. In this way, information about the plant material in the Macoun Garden is kept in an electronic format.

To ensure that the mapping is as accurate as possible, Macoun volunteers have searched for historical records of the varieties of perennials planted in the garden. Records have been retrieved from the Friends' office and from current and former Friends volunteers. This historical information has been scanned and is now available in an electronic format. Work is underway to match these records to what is actually growing in the garden. As well, detailed information including height, preferred growing conditions, and bloom times is recorded for each plant variety that has been identified.

The Macoun Garden was designed in the formal style of the period and many of the plantings date from the early days of the Farm. Two of the four Rosybloom crabapples planted at each corner of the garden remain today.

Isabella Preston, the world-renowned plant breeder and specialist in ornamental gardening assisted in obtaining material for the initial plantings. According to a memo found in the records, these plantings included *Heuchera sanguinea* (Coral bells), *Liatris pycnostachya* (Prairie Blazing Star), *Aster amellus* (European Michaelmas-daisy), as well as a selection of *Astilbe* varieties.

However, plantings in the Macoun Garden have changed over the decades. At one time, dozens of staff worked in horticulture research and maintained the ornamental gardens. During World War II, perennials were removed, and trees and shrubs were planted as it was felt that these would be easier to maintain while the men were away at war. Over time, these shrubs were removed, and a variety of perennials were added. But the memory of what was planted has for the most part been lost.

Some of the astilbes at the Macoun Memorial Garden. The darker blooms on the left foreground are 'Red Sentinel'; the droopy blooms in the foreground on the right are 'Ostrich Plume'; and the lighter pink blooms in the background are 'Reine des lacs'. *Photo by Debra Hauer*

For example, we know that thirty varieties of daylilies grew in the Macoun Garden in the 1980s. During the daylilies' bloom time in mid-July, the team worked to identify which of these varieties are still growing in the garden. Similarly, team members have been matching the Siberian iris varieties growing in the garden to the historical maps of these plantings.

About a dozen varieties of *Astilbe Arendsii,* a group of complex Astilbe hybrids developed by Georg Arends in Germany in the 1920s, were probably planted in the southern borders during the 1980s. Some of these varieties are labelled but many are not. Volunteers are recording where each variety can be found in the Garden.

To commemorate Canada's 150th birthday, the north-east perennial beds in the Macoun Garden were redeveloped with plants that Mr. Macoun would have used in his garden in the early 1900s. The garden redevelopment was a joint effort of the Ottawa Horticulture Society, Agriculture and Agri-Food Canada, and Friends of the Farm. At the time, the plantings included a selection of tulips and narcissus that provide colour in the spring and a variety of

The water feature in the lower garden, August 2025. *R. Hinchcliff*

This photo was taken at the Macoun Memorial Garden by Malak Karsh circa 1950.

© Government of Canada. Reproduced with the permission of Library and Archives Canada. LAC/Malak Karsh fonds/e011073136

perennials that provide colour throughout the summer months. The mapping of the perennials in the north-east border by Macoun volunteers last summer revealed that only 40% of the perennials planted in the 2017-2018 redevelopment could be found.

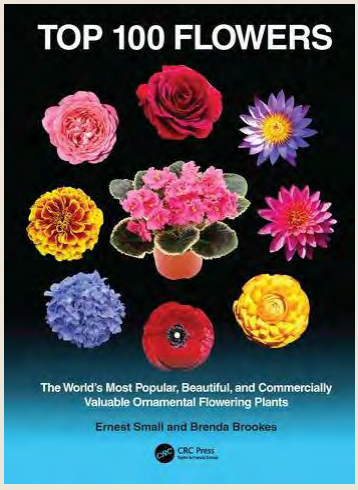
The mapping exercise is producing living documents. In the coming seasons, we plan to complete the mapping of the garden, confirm the plant varieties in the garden, and update the maps of the Macoun on an ongoing basis. In the future, we hope to be able to tie together the existing maps of the other areas of the Ornamental Gardens and expand mapping to other areas of the Ornamental Gardens and the Arboretum.

Debra Hauer enjoys gardening at home, is interested in learning more about horticulture, and is a co-team leader of the Friends of the Farm volunteer team in the Macoun Garden.

Debra Hauer (left) leading a tour of the Macoun Garden, June 25, 2025. *R. Hinchcliff*

TOP 100 FLOWERS:
THE WORLD'S MOST POPULAR, BEAUTIFUL, AND COMMERCIALLY VALUABLE ORNAMENTAL FLOWERING PLANTS

By Ernest Small and Brenda Brookes



This is a gorgeous book on ornamental flowers. Open it at random and enjoy beautiful images and fascinating facts on a particular flower, along with information on its cultivation and maintenance and how it can be used. It is pricey but serves as an essential reference source for the home flower gardener and for those in business in the horticulture and floriculture industries.

Hundreds of wonderful images illustrate the unique qualities and uses of each flower. For the rose, for example, there are photos and illustrations depicting bouquets, close-ups, romance, thorns, gardens, hips, edibles, climbing, potted, standard, botanical art, archival paintings, and others.

Each one of the 100 flowers includes major horticulture groupings. For example, there are 15 types of irises, from Aril to Xiphium, not just the well-known Bearded and Siberians. Similarly, there are eight groups of lily hybrids, plus wild species, Madonna and Easter lilies. The total number of individual species and varieties covered across the 100 flower chapters is huge.

How the 100 were selected is explained in the context of why flowers are popular and how they have become commercially valuable. Stories told include Tulipomania and how a disease organism was used to produce attractive poinsettias. Timely issues are addressed, such as flowers and pollinators, the importance of native plants, and the dangers of invasives and pesticides.

Dr. Small, in his long career as a research scientist with Agriculture and Agri-Food Canada, has become widely known as an expert advisor on plants and as a prolific author of both research papers and books for non-specialist readers, such as his prize-winning *Top 100 Food Plants: The World's Most Important Culinary Crops*. The special contribution of Brenda Brookes, his co-author for many books, has been to seek and find the most appealing archival and current images to illustrate the texts.

ISBN 9781032902272
720 Pages, 1315 Color & 2 B/W Illustrations
June 16, 2025 by CRC Press

Blooming Beauty

By Jeremy DiZazzo

Canada Post recently released stamps of our peonies as part of their flower series. This brought to mind the many stamps issued over the years by Canada Post that featured our floral collections, and I thought it would be of interest to others to prepare a display of them. I have a personal interest here, having participated as a student in the growing of the sunflowers that were photographed for a set of stamps. I also used one of the stamp images on our wedding invitations.

The issue of this latest set of stamps of our peonies prompted me to have a conversation with my local postmaster, who connected me with someone in Stamp Services (who coincidently knows of the Farm having had family photos taken here). On my behalf they connected with their contact in the Canada Post Archives, who was gracious enough to provide me with access to the archived stamps that were missing from my collection of the flower series stamps that have AAFC provenance.

With the help of colleagues who share an interest in highlighting the treasures of our beloved Ornamental Gardens and Arboretum and who have artistic/collaging skills, we put together a stamp display. We hope it will bring our floral collections to the attention of those who may not know of them, as well as attract the interest of philatelists. We included a map to the Ornamental Gardens to show people they are within walking distance of blooms that have played a part in Canadian ornamental plant history.

The display, which I intend to bring to the public entrance lobby of the Neatby Building, includes eight stamp series released by Canada Post that feature our plants—roses, lilacs, peonies (twice), sunflowers, daylilies, magnolias, and crabapples (not in the order of release).

If I were to choose a favourite, which is difficult to say the least, it would be the sunflowers. I fondly remember the day I assisted with their planting in the days of AAFC staff members Sharon Saunders and Same Nay, and it makes me smile and laugh to this day!

Jeremy DiZazzo is Chief, Grounds Maintenance, at AAFC.

Left: **Eight sets of Canada Post stamps featuring flowers at the Farm.** ***Right:*** **The stamp display cabinet at the employee entrance to the Neatby Building.**
Photos by Jeremy DiZazzo

EDITOR: Richard Hinchcliff
ASSISTANT EDITOR: Joan Butcher
DESIGN: Kat B. Design Studio | www.katbdesign.com
PRINTING: Nancy Poirier Printing
CONTRIBUTORS: Elizabeth Atkinson, Annie Creighton, Jeremy DiZazzo, Debra Hauer, Patricia Jasen, Eric Jones, Bill Joyce.
TRANSLATOR: Lise Anne James

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.

Consider joining us!

Find our membership form on the website by using the QR code to the right: https://friendsofthefarm.ca/become-a-member/ and pay by PayPal, or send in a cheque.

Benefits include discounts on Master Gardener lectures, discounts at some local nurseries, one free admission per group per visit to the Canada Agriculture and Food Museum, quarterly printed newsletters by post, and monthly Farm Notes e-newsletter.

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/.

info@friendsofthefarm.ca | 613-230-3276 | CHARITABLE NUMBER 118913565RR0001
Building 75, Central Experimental Farm Ottawa, ON K1A 0C6

friends of the farm
les amis de la ferme

Follow us
www.friendsofthefarm.ca

See our newsletters at: