

FRIENDS *of the* Central Experimental Farm

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Whatever Happened to That Seed ...

By Robert Glendinning

Over the years, we have received a lot of seed from various sources. It is satisfying, even magical, when the seed germinates, but true gratification comes with looking up at a tree and knowing that you made this significant contribution to the landscape.

One of the trees that evokes this feeling is *Euonymus maackii* (Maack's Spindletree). It was grown from seed that came from Russia's V.N. Sukacherv Forestry Institute in 2009. It germinated in 2010 and we now have three specimens in the collection. There is one near the Neatby Building, another behind the older greenhouse complex, and one in the Arboretum by Prince of Wales Drive, as part of our *Euonymus* collection. Although its botanical name has been moved about by scientists, I have stuck to the original one. The proper Latin name may be at issue, but the striking autumn colour of this tree cannot be disputed. Its leaves are a particularly vivid orange, pink, and red, and each tree presents a slight colour variation.

Another gift from that same forestry institute is *Acer truncatum* (Shangtung Maple). Only one from the seed packet has made it and is now residing in the maple collection. Last year it successfully produced seed of its own. We previously had a specimen of this tree, but there was some discussion as to whether it was the true species. Former Arboretum Curator A.R. Buckley named it *Acer x ottawensis*. He suspected it was a hybrid. The name was later changed back to *A. truncatum*, but suspicion remained. The seed we received was collected from the wild and appears to be the true species.

There is a stately tree by the front entrance of Building 74. I get questions about it from time to time. It is our single specimen of *Eucommia ulmoides* or Hardy Rubber-tree. I grew it from seed that was given to me by my friend Kristl Walek in 2009. As its common name suggests, it was thought to be a possible source of latex, but that may have been overstated. The literature suggests extracting the latex would not be cost effective. Its leaves and stem do 'bleed' latex much like the tropical Rubber Tree. Its drawback is that it lacks fall colour.

In the Arboretum circle there is a specimen of *Pterocarya stenoptera* (Chinese Wingnut) which I collected, with permission, at the Montreal Botanical Garden in 2010. We have a few more specimens of that seed batch, but this is the only one that is thriving. It is living up to its common name, festooned with strands of ripening winged seed. We have an older *P. rhoifolia* (Japanese Wingnut), which has never produced hardy seedlings. There is a beautiful mature specimen of what I think is *P. fraxinifolia* (Caucasian Wingnut) at Whitehouse Perennials in Almonte which is well worth checking out. I was given seeds of this species this year from another source and it is hoped that next year they will germinate. The genus is flagged as invasive further south, but so far that has not been a problem here.

We have recently planted some *Taxodium distichum*, Bald Cypress, in the circle and down by the canal. This tree is not new to the collection. We have had specimens

dating from early in the last century. In the wild it can be found growing as far south as Florida. This seed batch was a gift from the Dawes Arboretum in 2013 and it was collected from the most northerly wild population in Illinois. These trees should perform better in the long term.

In the recent past, the Emerald Ash Borer destroyed the ash population of Ottawa, and the Arboretum was no exception. Early on, *Fraxinus quadrangulata*, Blue Ash, was said to be resistant to the beetle.



PHOTOS ABOVE:

1. *Pterocarya stenoptera* (Chinese Wingnut) in the Arboretum Circle, "living up to its common name right now with these strands of ripening winged seed."
2. *Pterocarya stenoptera* (Chinese Wingnut) grown from seed collected by Robert in 2010.

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Current research next to Carling Avenue, across from the Civic Hospital. *Friends of the Farm.*



In the Best Interest of the Community? Dans l'intérêt véritable de la communauté?



ERIC JONES

*President, Friends of the Farm
Président, Les Amis de la Ferme*

The Central Experimental Farm is again facing a breach of its boundaries and core mission. This summer, a plan was put forward to build high-rise towers on Carling Avenue facing the Farm. At the time of writing this, Ottawa City Council has sent the proposal back to committee on procedural grounds, but there was no sign that it would be turned down. This in spite of the analysis by Agriculture and Agri-Food Canada scientists showing that shadows from these buildings would cause a negative impact on research conducted at the Farm.

Retired scientists Steve Gleddie and Ed Gregorich wrote a letter to the Ottawa Citizen on August 19, saying: "Historically, many of the major crop varieties that underpin Canadian agricultural productivity in Canada (such as wheat, and short-season corn and soybeans) were developed through field research on the Farm. Plant science research continues today in these fields, focusing on developing highly productive, resilient crops able to support food security in the face of climate change. Any reduction in the amount of daylight received by field crops, especially 'photoperiod-sensitive' crops like soybeans, will affect both the growth and yield of these crops and confound the research conducted on those fields."

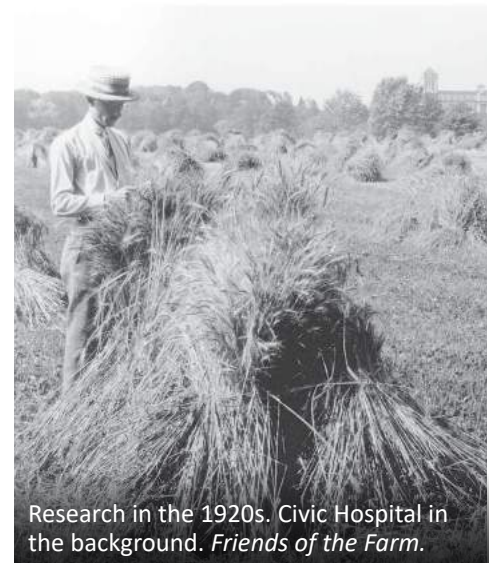
They went on to say: "At the very least, city planners, members of city council, and AAFC researchers should agree on parameters that will significantly affect research on the CEF, so that reasonable height restrictions and setbacks can be clearly identified on all properties surrounding the sensitive areas of the CEF."

Paul Johannis of the Greenspace Alliance also wrote a letter emphasizing the need for a negotiated protocol with AAFC on building heights and enshrining this protocol as an Area Specific Policy in Ottawa's Official Plan. He went on to say, "In this climate crisis, we are all aware of the fragility of our society, including our agricultural sector. Droughts, floods and other threats of an unprecedented nature and scale menace our food security, and research into ways to mitigate these impacts may ultimately prove life-saving."

Two 24-storey high-rise buildings and a 32-storey tower have been proposed to the south of the Farm at Baseline and Fisher. More applications for towers on the Farm's edges are expected, and their impacts will likely go beyond shading effects. This is a looming crisis for the Farm.

Agriculture and Agri-Food Canada is aware of the need to defend their National Heritage Site. There have been many cuts to this place, too many to go into at this time. As Paul Johannis has written, "Allowing the gradual demise of the CEF would not be in the best interest of the community locally and nationally."

La Ferme expérimentale centrale se voit de nouveau confrontée à une violation de ses frontières et de sa mission principale. Cet été, un plan a été mis de l'avant en vue de la construction d'immeubles de grande hauteur sur l'avenue Carling, directement en face à la Ferme. Au moment de la rédaction de ces lignes, le conseil de la Ville d'Ottawa a renvoyé la proposition au comité pour raisons



Research in the 1920s. Civic Hospital in the background. *Friends of the Farm.*

de procédure, mais rien n'indiquait que le plan serait rejeté. Et ce, en dépit de l'analyse des scientifiques du ministère d'Agriculture et Agroalimentaire Canada (AAC), laquelle démontre que l'ombre projetée par ces immeubles pourrait causer un impact négatif sur la recherche menée à la Ferme.

Les scientifiques à la retraite, Steve Gleddie et Ed Gregorich, dans une lettre au Ottawa Citizen le 19 août dernier, s'exprimaient ainsi : « Historiquement, un grand nombre des plus importantes variétés végétales qui soutiennent la productivité agricole au Canada (par exemple le blé, ainsi que le maïs et le soya, ces derniers de saison courte) ont été obtenues dans le cadre d'études sur place à la Ferme. L'étude de plantes végétales se poursuit de nos jours dans ces domaines et se concentre sur le développement de

cultures hautement productives et résistantes, capables de soutenir la sécurité alimentaire face au changement climatique. Toute réduction de la quantité de lumière du jour reçue par les grandes cultures, en particulier les cultures "sensibles à la photopériode" comme le soya, affectera à la fois la croissance et le rendement de ces cultures et mettra en déroute les recherches menées dans ces domaines. »

Ils poursuivent : « Tout au moins, les urbanistes, les membres du conseil municipal et les chercheurs d'AAC devraient s'entendre sur les paramètres qui affecteront dans une grande mesure la recherche sur la Ferme, afin que des restrictions de hauteur et des reculs raisonnables puissent être clairement définis sur toutes les propriétés entourant les zones sensibles de la Ferme. »

Paul Johannis, de la Greenspace Alliance, a aussi rédigé une lettre indiquant la nécessité d'établir un protocole avec AAC quant à la hauteur des immeubles et d'enchâsser ce protocole en tant que politique spécifique à un secteur dans le plan officiel de la Ville d'Ottawa. Il a de plus ajouté que « dans cette crise climatique, nous sommes tous conscients de la fragilité de notre société, y compris celle de notre secteur agricole. Des périodes de sécheresse, des inondations et d'autres menaces de nature et d'ampleur à une échelle inédite mettent en danger la sécurité alimentaire, et de même pour la recherche qui se verra réduite à adopter des moyens pour atténuer ces impacts, ce qui pourrait en fin de compte contribuer à sauver des vies. »

Deux immeubles de grande hauteur de 24 étages et une tour de 32 étages ont été proposés au sud de la Ferme, à l'intersection de Baseline et Fischer. D'autres demandes de tours d'habitation en bordure de la Ferme sont attendues, et leur impact ira probablement au-delà des effets d'ombrage. C'est une crise imminente pour la Ferme.

Agriculture et Agroalimentaire Canada est bien conscient de la nécessité de défendre son patrimoine national. Des compressions ont été faites à ce lieu, trop nombreuses pour s'y attarder en ce moment. Comme l'écrit Paul Johannis, « permettre la disparation graduelle de la Ferme ne serait pas dans l'intérêt véritable de la communauté à l'échelle locale et nationale ».

The seed for this *Taxodium distichum* (Bald Cypress) "was collected from the most northerly wild population in Illinois." Robert Glendinning.

Whatever Happened to That Seed ...

Continued from page 1...

We only had one specimen of this and unfortunately it succumbed to the insect. The Guelph Arboretum was kind enough to send us some seed and three Blue Ash are now in our collection. At least one was given to the NCC. Ours have yet to set seed and are not breaking any growth records, but they are alive.

There are many other successful seed stories. *Quercus mongolica*, Mongolian Oak, acorns may have found their way into the luggage of a retired employee on a return trip from the Minnesota Arboretum. Offspring from a hardy *Cercis canadensis*, Eastern Redbud, was collected from a garden very near my home where it has been growing for years. There have been countless positive results from seed that my friend Tony Beane has given to us. It is possible that a couple of trees have also resulted from my adventures.

Going back in time, the beautiful *Malus baccata* 'gracilis', Weeping Siberian Crabapple, that sits at the bottom of the South lookout, is the result of seed from the Arnold Arboretum in 1903. That is just one example of the happy outcomes of seed trading that can be found in our records.

I was asked about the results of the seed we send to other institutions. Unfortunately, I have received little information back. It would be



interesting to know about the 200 *Ginkgo biloba* seeds that travelled to Germany, and the fate of all the magnolia seed that was provided to Norway and Sweden, as well as the walnuts to Finland. We have sent many other seeds far and wide. It is an understood tradition, however, that records are kept about materials that are gifted, so one hopes that at some point information or questions will be forthcoming from seed recipients.

Robert Glendinning is Propagator/Landscape Gardener with Agriculture and Agri-Food Canada.

PHOTO: The striking fall colour of the *Euonymus maackii* (Maack's Spindletree). Robert Glendinning.

EVENTS 2023

USED BOOK SALE

Saturday and Sunday,
October 21-22,
10 am – 4 pm, Building 72, Arboretum.
Thousands of the best used books in
Ottawa. Great selection of fiction and non-
fiction. Many special publications. Bargain
prices. Free admission.

USED BOOK DROP-OFF

Saturday, November 4,
9 am – 1 pm,
Building 72.

Clean out your shelves and donate your
books for a great cause! Friends of the
Farm volunteers will be ready to unload
your boxes and bags of gently used and re-
gifted books. Check the Friends' website to
confirm details.



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!

Individual seats \$25. Couples \$50. Family
\$100. Table of Six \$250. Community \$500.
Your support is greatly appreciated, and
your donation is tax deductible. You can
contribute by using our online fillable
form for cheques or PayPal at [http://
friendsofthefarm.ca/donations/](http://friendsofthefarm.ca/donations/).

STAY TUNED!

For more details on our events, use the
QR codes below:

2023 Events



Facebook



ANNUAL PLANT SALE

By Dianne Caldbick
Vice President, Friends of the Farm.

As the gardening season winds down,
the Friends of the Farm is thinking
ahead to its 2024 Annual Plant Sale,
planning to build on the success of
this year's event.

The Annual Plant Sale is a well-
loved tradition among gardening
enthusiasts. It brings area nurseries
and specialty growers together in
one place, providing the opportunity
for novice and seasoned gardeners
alike to take advantage of 'one-stop'
shopping to kick off the gardening
season.

Following tradition, this year's Plant
Sale was held on Mother's Day (May
14th) in the parking lot of the Central
Experimental Farm's Neatby Building.
Twenty-three vendors were on hand,
with most coming from the Ottawa-
Gatineau region. One, however,
travelled all the way from Grey County
in Southern Ontario. A wide variety of
products was on offer, from seedlings
grown in local greenhouses and
fields, to more mature plants from
established commercial growers, to
art designed to add whimsy and style
to gardens.

The Master Gardeners of Ottawa-
Carleton were also on hand to



PHOTO: Rabbits from the Museum
delighted plant sale attendees.
Chantale Neapole.

offer free, expert advice on buyers'
and browsers' gardening questions
and challenges. New to the sale this
year, the Canada Agriculture and
Food Museum (a fellow resident
of the Central Experimental Farm)
participated in the event. The Museum
representative brought two rabbits
to delight and educate plant sale
attendees. There was also coffee on
hand to keep attendees warm on
the bright but chilly day, generously
donated by Happy Goat Coffee in the
Glebe.

The Annual Plant Sale is one of the
Friends of the Farm's key fund-raising
events. Funds raised allow us to
continue the activities that help to
preserve, maintain, and enhance the
public areas of the Farm, notably the
Dominion Arboretum, the Ornamental
Gardens, and the Merivale Shelterbelt.

As the Friends of the Farm start
planning for next year's plant sale,
we welcome ideas to enhance the
event in 2024 for vendors, buyers, and
browsers. Please feel free to send your
ideas to plantsale@friendsofthefarm.ca.

Ohio Buckeye, one of the new plantings for the CelebriTree program.

Donate a Tree and Tell Your Story

The Friends of the Farm are delighted to announce the launch of the CelebriTree program, giving the public a meaningful way to celebrate the special people and events in their lives, as well as providing a means to help restore trees in the Arboretum. Donors will be able to tell their stories at the same time as they are donating a tree.

In cooperation with Agriculture and Agri-Food Canada, the Friends set up the program to replace trees that have been lost to storms, disease, or other causes. The new saplings may represent a new species or variety to the Arboretum, or they may be a replacement for or an addition to species already in the collection. In any case, these plantings will help fill out the landscape and shape the Arboretum of the future. Of course, trees also serve the purpose of fighting climate change.

Each tree in this program will be tagged with its species name and that of the celebrated person or event and will also be featured in the CelebriTree website. This site will enable the viewer to learn more about the species and will tell the story behind your donation. This information will come easily to hand by clicking on a QR code that appears on the tree tag. The website will also include a map that shows the location of each tree.

LIVING HISTORY OF THE FARM

The trees in the Dominion Arboretum of the Central Experimental Farm are a living and evolving collection. Begun in 1889, when 200 trees and shrubs were planted, today there are more than 4,000 individual plantings and some 1,700 types

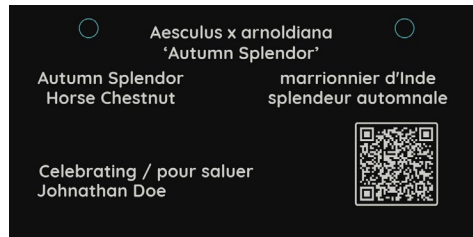


PHOTO: A sample tree tag that will be attached to your selected tree.

of trees and shrubs from a wide range of climate zones and growing conditions. Over the entire tree lifespan from sapling to maturity, they bring the landscape to life through the seasons and over the years.

Your donation will add a young new tree to enhance the collection, help preserve greenspace, and fight climate change, as well as furthering the Arboretum's outreach and education objectives.

CelebriTree trees are donated by, but not owned by donors. These trees are included in the program with the permission of Agriculture and Agri-Food Canada, which is responsible for the selection, planting, and maintenance of trees on the Central Experimental Farm.

Our thanks for the great work done by our Program Director, Elizabeth Atkinson, to get the program fully defined and off to a great start, and the remarkable efforts made by Mark Vigder, our Operations Director, in setting up the website for the project.

For more information, go to <https://friendsofthefarm.ca/dedication-tree-program/> or call the Friends' office at (613) 230-3276.

Visiting the Peonies

Suzanne Saunders, from Carmel, California, visited the Farm's peony collection in early June. Her great-great-grandfather William Saunders, first director of the Central Experimental Farm (CEF), had a special fondness for peonies. They were among the first ornamentals he planted in his garden on the main lawn in the early days of the Farm. His son Percy became famous as a hybridizer of stunning new peonies, many of which are in the CEF collection.

Former Friends' Gardens Director Blaine Marchand arranged the visit and invited current and past leaders of the peony volunteer team to meet Suzanne. They were Mary Pratte, who restored the collection in 2000, Bill Wegman, who took over from Mary, and current leader Kathy McDougall.

Suzanne wrote that the peony collection was "breathtaking, and a fitting tribute to the CEF volunteers who make these magnificent 'shows' happen ... I feel truly honored to meet people who are so passionate and essential to the success and continued relevance of the CEF's ornamental gardens."

PHOTO: (From left) Suzanne Saunders, Kathy McDougall, Bill Wegman, Blaine Marchand, Mary Pratte.



Robert Stuart (left) and Marc LeBlond. Annie Creighton.

Rocking a New Look – Crevice Gardening

By Robert Stuart

In the summer of 2022, the Friends of the Farm decided to create a demonstration Crevice Garden within the Farm's Rock Garden. Crevice Gardening is a relatively new style of rock gardening inspired by Czechia's karst rock outcrops. These outcrops of sedimentary rock have, over millions of years, been subjected to major forces that have transformed horizontal rock layers into vertical or upward-facing diagonal crevices.

One of the advantages of Crevice Gardening is that it more closely mimics the natural environment where many alpine plants grow, in mineral and free-draining soils with little-to-no humus and lots of narrow crevices. The narrow crevices play an important role since they force the plant's roots to grow down to where there is additional moisture and nutrients, which helps them survive periods of drought. In deciding to install a crevice garden we chose a site that includes full-to-partial sun,

morning sun being better than afternoon sun. In addition, to test the individual needs of each plant, it was decided to build one crevice where the stones were aligned in an East-West direction and another crevice where the stones were aligned in a North-South direction.

BUILDING THE GARDEN

Our crevice garden was constructed of vertically installed flagstone with crevices no larger than 2.5 cm between the stones. The first steps involved removing the existing plants on the site and adding new soil. The soil was mounded in order to boost drainage. The soil mixture consisted of 2 parts loam, 2 parts coarse sand, 1 part pumice or perlite, 1 part organic matter, and ½ part small gravel – mixed well. Next, we took some of the larger pieces of flagstone and buried these upright in an East-West direction making sure that as we extended the width of the garden, we

carefully aligned the stones and ensured the gaps between the rows of stones was less than 2.5 cm in width. We continued this until we reached the edge of the garden, tapering the stones at the edge to make the overall garden resemble a small outcrop of stone. As we worked, we packed down the soil between the stones well, so that no air pockets remained. We then continued to fill up the crevices until the soil was about 2.5cm from the top. Smaller pieces of stone were then inserted at the ends of each crevice to keep the soil from washing out during a heavy rain.

With Marc LeBlond's help, it took about two to three hours to build the East-West section of garden, after which we built the North-South part in less than two hours. We then marvelled at our work and waited until the weather cooled off before doing any planting.



Aligning, tapering, and fixing gaps between stones. *Robert Stuart.*

PLANTING THE GARDEN

In early September, the time and weather were right to start adding the plants. We chose a number of different types of plants; not necessarily alpine, but they did have to be hardy. They included: *Androsace marei*, *Androsace villosa*, *Dianthus microlepis*, *Erigeron pennatisectus*, *Potentilla uniflora*, *Potentilla porphyrantha*, *Sedum pluricaule*, and *Veronica onoei*. Once these were planted bare root, they were mulched with up to 2.5 cm of small gravel and pea stones, to speed up the acclimatization of the plant in its new home. The garden was then watered well and photographed. These photos were then imported into PowerPoint and labelled with the plant name to document the plantings. We did not cover the gardens in preparation for winter, leaving the snow to provide its blanket of warmth.

When spring did arrive, we anxiously went to inspect our garden and were delighted to find that all our plants had survived the winter! Unfortunately, the information regarding hardiness, light exposure, etc., of alpine plants is somewhat inconsistent and it is only through trial and error that one comes to understand each plant's needs. This makes success in rock gardening all the more enriching and satisfying. As the weather warmed up in spring, we received some additional alpine plants that the staff at the Experimental Farm had grown from seed over the winter and gladly planted these in the Crevice Garden. As the seasons change, and the garden matures, we expect to be adding and removing plants to improve the overall effect of the garden. In a few years, we hope it will look like it has always been there. In the meantime, we'll be looking for opportunities and resources to expand the garden and experiment with a wider variety of alpine plants.

Robert Stuart is co-President of the Ottawa Valley Rock Garden and Horticultural Society and a member of the Friends of the Farm since 2016. He regularly volunteers to help maintain the Rock Gardens at the Central Experimental Farm.



Plants in the first year of the new garden included the blooming *Erigeron pennatisectus* in the upper left of this photo. *Annie Creighton.*



The finished crevice garden. *Robert Stuart.*

There is coolness around trees from both shade and released water vapour.

What Do We Get From Trees?

By Eric Jones

On June 11 we held a tree tour in the Dominion Arboretum that posed this very question. Participants enjoyed a casual walk and shared stories about our woody friends. Before the Arboretum was here, even before Europeans arrived, Indigenous people had discovered and used many gifts from the trees that stood on this site.

WHAT DO WE GET FROM THEM NOW?

Everybody knows about lumber, paper, and telephone poles. But how about things like toothpaste, shampoo, soap, printing ink, insecticide, vitamins—some of the ingredients for these also come from trees. Tree outputs show up in so many walks of life: wine barrels, furniture, baseball bats, baby food, animal bedding, cancer drugs, surgical gowns, mulch, and on and on. (The editor has imposed a word limit). When you think you've finally exhausted the list of goods, you remember all the services you get from trees, including psychological or spiritual benefits from taking walks like the June 11th tour.

On that mild day we discussed the notion of receiving from trees through our senses. Through vision: the colours that result from pigments in the leaves or in the flowers. Through smell: breathing in the terpenes from the pines, or the sweet scent of the lilacs. Through taste: the fruit and nuts that emerge from the branches, or the sweet sap just inside the bark. Through touch: feeling the rough outer bark of an oak tree, or the spines on the buckeye fruit. Through sound: hearing the music made by tapping on a trunk, or the vibration of strings on a spruce soundboard.

We also talked about how these trees are alive and able to sense the world. What



Visual stimulus from trees through colours of flowers and leaves.

you see (or feel) isn't always what they're sending forth. After all, the colour pigments aren't for show, they're for photosynthesis or to attract pollinators to the flowers. The aromatic compounds are there to ward off pests and signal distress, or to attract birds and insects. The sweet taste of the fruit helps the tree spread its seed, and the sap is its own food. The rough bark is to insulate the tree from fire and pests; the spiny fruit is to keep predators away from seeds. The resonance enables a tree to detect pests, or locate sources of water.

Although these traits aren't designed specifically for us, we benefit from them in many ways.

WHAT HAVE THEY DONE FOR US LATELY?

But this is 2023: a year full of Ice, Fire, Smoke, and Wind. If you were lucky enough not to be in a place where forest fires were a direct threat or where a falling tree or branch could cause damage or harm, you

could still lose power or breathe in the bad air caused by all the smoke. Although fires and storms can teach us to fear trees, it's often our own doing that puts us in danger.

For this reason, we need to remember the ecosystem services the trees give to us: oxygen, food, water, moisture, and pollution management. And then there's the crucial thing they can do for us to help fight climate change—they store carbon, so it is removed from the air.

We know that trees, like other plants, make their food out of carbon dioxide and the sun. If this didn't happen, animals like us would never exist. The byproduct is oxygen, which happens to be another thing we can't do without.

They also bring water out of the ground and release it into the air. The main reason they do this is because they need moisture for their leaves to grow, but the vast majority of the water gets sent up and out

the leaf pores. The vapour output can be as much as 500 litres a day for a mature tree, a large contribution to the air's water content.

Trees cool the area around them as a result of both the shade and the released water vapour. They also absorb tiny particles out of the air, making it much healthier to breathe (remember all that smoke?). At the same time, they fight erosion and slow down storm water so we don't overload our sewers.

What about carbon? A hectare of trees can capture as much as ten tons of carbon dioxide each year. That's why cutting a tree down is a much bigger deal than it used to be. You're not just removing a plant, you're releasing carbon back into the atmosphere as the tree dies and decomposes.

WHAT SHOULD THEY GET FROM US?

1. Respect their space. Don't crowd them, give the roots the room they need to grow and avoid compacting them. Don't use weed-whackers next to the bark—remember the only living part of the tree is just under the bark, and it's very vulnerable! And when walking in the Arboretum, stick mainly to the paths and walkways.
2. Own them. Did you know that you and your neighbours are in charge of your community's trees? Like other public spaces, the Arboretum has a certain amount of resources to keep it healthy and beautiful. But it will continue only if you want it to. One way you can own the trees on the Farm is by volunteering with the Friends of the Farm through their teams or education or event activities. Or you can own the trees by donating to and/or advocating for the Farm. Trees need help to survive in the city.
3. Enjoy them. The Arboretum is a special place. It has many unique specimens of varied traits and features, brought here and nurtured by the staff of Agriculture and Agri-Food Canada. The Arboretum enables you to visit distant parts of the world without leaving Ottawa. It also allows you to see these trees in all stages of their growth, from little seedlings or cuttings to full-grown size. Learn to appreciate their characteristics. Share your photos, artwork, stories, and concern.

And take a casual walk to remind you of all we're getting from them.

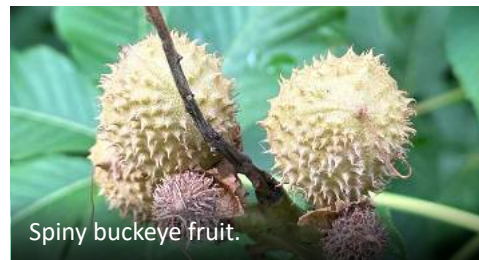
Eric Jones leads the Arboretum volunteer team for the Friends of the Farm and organizes the tree tours.



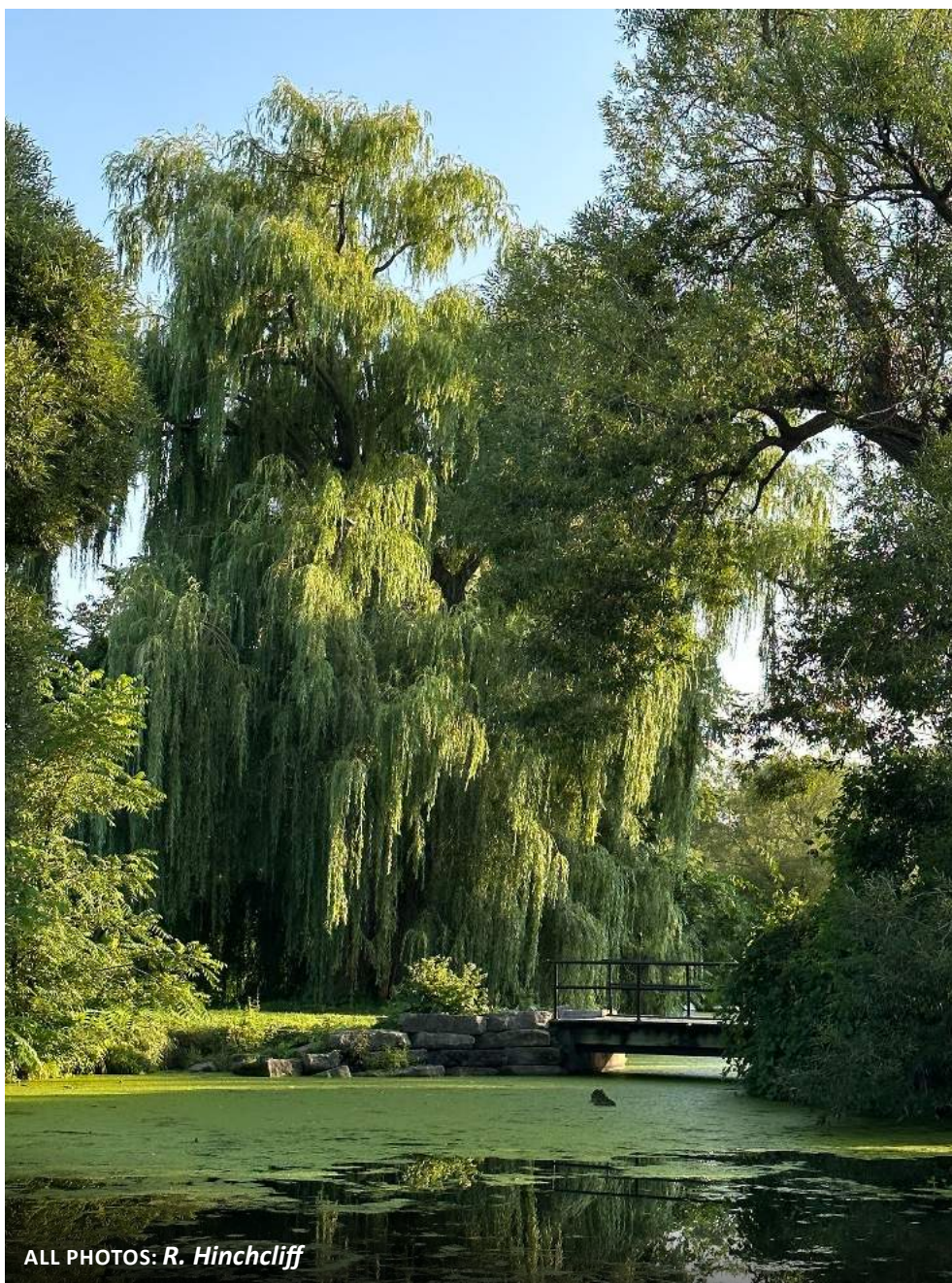
Rough oak bark.



Friends of the Farm volunteers in the Arboretum.



Spiny buckeye fruit.



ALL PHOTOS: R. Hinchcliff

Picking strawberries in 1888 at the Farm. *LAC, 1993-239.*

There is coolness around trees from both shade and released water vapour.



Strawberry Fields For Ever

By Richard Hinchcliff

Were you impressed by the shape, fine flavour, and gorgeous appearance of strawberries this year? Chances are, if they were Canadian-grown, they were bred at Agriculture and Agri-Food Canada's research station in Kentville, Nova Scotia, known as the Atlantic Food and Horticulture Research Centre.

And they may have been one of three new strawberry varieties released this year, namely 'AAC Audrey', 'AAC Evelyn', and 'AAC Kate'¹. (AAC is Agriculture et Agroalimentaire Canada.) "The three new varieties have been sold across Eastern Canada and are likely available at farms in the Ottawa area," says Dr. Beatrice Amyotte, who leads the strawberry research team at Kentville.

A AFC scientists have been testing and breeding strawberries for 136 years—first at the Central Experimental Farm (CEF) in Ottawa and then at Kentville.

"STRAWBERRY FEVER YEARS"

High demand for strawberries encouraged market gardeners to plant them extensively

in the mid-1800s, and there was a surge in the breeding of new sorts from 1859 to 1870, known as the "strawberry fever years."² Among the early breeders in Canada was W.W. Hilborn, an Ontario farmer with a special interest in small fruits.

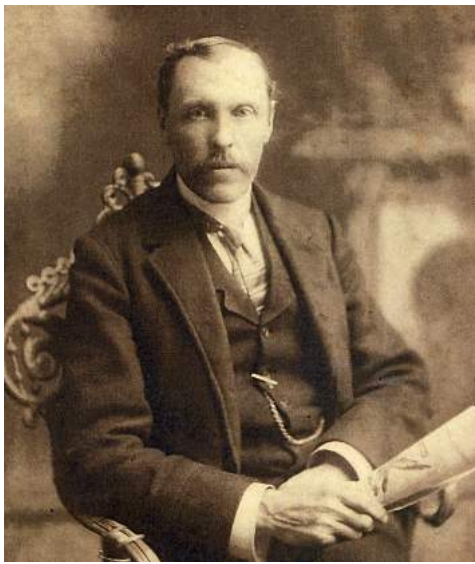
Another person who bred strawberries, along with other small fruits and flowers, was William Saunders. Originally grown at his private hobby farm in London, Ontario, the strawberries came with him to Ottawa when he was appointed director of the new experimental farm system in 1886. Currants, gooseberries, and raspberries also made the journey from his farm to the Farm. One of his strawberries was selected for commercial testing and named 'Carleton'.

Because of his strong personal interest in horticulture, it was one of the first divisions to be created by Saunders at the CEF. He immediately appointed Hilborn as the first chief of the Horticulture Division. The plan for strawberries was to test the varieties on offer, develop new ones that could be grown successfully in this country, and experiment with different cultivation



PHOTO ABOVE: 'Research scientist Dr. Beatrice Amyotte leads the small fruits team at Kentville. Ian Fairclough.

FOOTNOTES: ¹ <https://agriculture.canada.ca/en/scientific-achievements-agriculture/three-new-strawberry-varieties-watch-season> ² Edwinna von Baeyer, *Commercial Fruit Growing in Canada, from European Contact to 1930: An Outline*, EvB Communications, 2018, p.252.



methods. By that time, the strawberry market was flooded with varieties, often untested and sometimes identical to existing ones. Because it was difficult for them to know what were the best varieties to plant and the best way to do so, growers were keen for information from the CEF experts.

TESTING AND BREEDING AT THE CENTRAL EXPERIMENTAL FARM

Hilborn set out his first strawberries at the CEF in 1887, the first growing season at the Farm. Among the 20,900 plants were about 90 named and 50 unnamed seedlings, including “most of the standard and many new sorts”³ such as those bred by William Saunders.

The testing continued; for example, 1,400 seedlings were planted in 1897. In 1912, 61 varieties were growing and the head of the division, Dominion Horticulturist William Macoun, selected 21 of the most promising and gave them names of Shakespearean heroines— ‘Cassandra’, ‘Desdemona’, ‘Lavinia’, ‘Portia’, etc. They were sent out to experimental farms across the country for commercial testing.

Strawberries continued to be a focus of research at the Farm and from 1949 to 1953 about 300 selections were propagated and tested under commercial conditions by Dr. L.P.S. Spangelo. From them, he chose nine for further commercial tests in 1954, and in 1957 named four – ‘Cavalier’, ‘Grenadier’, ‘Guardsman’, and ‘Redcoat’. The latter was successful for more than 25 years.⁴ According to Dr. Amyotte, the varieties ‘Cavalier’, ‘Grenadier’, and ‘Redcoat’ can still be found in the United States Department of Agriculture gene bank, and plant material can be requested for research purposes.

KENTVILLE’S ‘KENT’ AND OTHERS

“The Ottawa varieties played an important role in the Kentville breeding program. ‘Portia’, ‘Guardsman’ and ‘Redcoat’ were each part of the founding pedigrees of Kentville strawberries.”
Dr. Beatrice Amyotte

The research station at Kentville, Nova Scotia, has had a strawberry research program since its inception in 1911. In the early years it was limited to cultivar evaluation, and among those grown would have been ones bred at the CEF and sent out across the country for testing.

The first strawberry breeder at Kentville was Dr. Donald Craig, hired in 1947.⁵ He developed eight varieties from 1965 to 1984 which were commercially successful. AAFC reported in 2011 that 60 per cent of strawberries grown in Canada since 1986 were from cultivars bred in Kentville. The mother plants of two of Craig’s strawberries, ‘Kent’ and ‘Annapolis’, are still maintained in Kentville.

After Dr. Craig came Dr. Andrew Jamieson, who began breeding strawberries in 1985. His varieties include ‘Cavendish’, ‘Mira’, ‘Sable’, ‘Cabot’, ‘Brunswick’, ‘Evangeline’, ‘Wendy’, ‘Valley Sunset’, ‘Laurel’, and ‘AAC Lila’. Most of these varieties are grown commercially today.

When he retired in 2017, Jamieson left three new varieties, which he named for his three granddaughters—Audrey, Evelyn, and Kate. Dr. Beatrice Amyotte succeeded him as the strawberry breeder at Kentville, and supervised the commercial testing and release in 2023 of Jamieson’s new brood, which, she says, are starting to gain recognition.

If someone is interested in the new varieties, Dr. Amyotte suggests contacting their local growers to ask about the



varieties. “Growers may have plants in the ground that will produce fruit again next summer. If they do not have plants of ‘AAC Audrey’, ‘AAC Evelyn’ or ‘AAC Kate’ but would like to grow them, they can purchase plants from the two licensed nurseries, C.O. Keddy in Nova Scotia or Lareault Nursery in Quebec.”

ABOVE PHOTOS FROM LEFT TO RIGHT:

1. W.W. Hilborn, strawberry breeder, began the first strawberry plantation at the CEF in 1887. *Dictionary of Canadian Biography*.
2. & 3. ‘Cassandra’, and ‘Portia’, painted by Faith Fyles. ‘Portia’ was an exceptionally good canning berry, very popular in both Canada and the US. *Ingenium*.
4. ‘AAC Audrey’, one of three new strawberries from Kentville in 2023.
© Government of Canada

FOOTNOTES: ³ “Report of the Horticulturist,” W.W. Hilborn, *Experimental Farms Reports for 1887*, p. 57. ⁴ T.H. Anstey, *One Hundred Harvests: Research Branch, Agriculture Canada, 1886-1986*, Agriculture Canada, 1986, p. 250. ⁵ C. Roger MacLellan, et al., *Advancing Agriculture: A History - Kentville Research Station 1911-1986*, Agriculture Canada, 1986

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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.

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