



Friends of the Central Experimental Farm

Winter 2016 Newsletter

Volume 28 No. 1

What Will the Arboretum Look Like in 2100?

By Eric Jones



Raymond Roy

The Arboretum

Many trees live longer than people do. Forests seem timeless but all things change over time, and the Dominion Arboretum is no exception. How different will it be in 2100?

The Arboretum was founded in 1889 to assess how a variety of trees would fare in Canada's cold climate. Trees were brought in from various parts of Canada, Europe, Asia and the United States to test their hardiness.

Two of the tree species planted in the Arboretum are sometimes called "living fossils": the *Metasequoia* tree, also known as Dawn Redwood, and the *Ginkgo* tree. These trees were re-discovered not long ago in remote areas of China, but much earlier they were spread throughout the world.

That isn't to say they haven't changed. They're called living fossils because their leaves are identical to fossilized leaves from

millions of years ago. But fossils only preserve the outer form so it's not possible to know if a plant has changed. What happened to these trees? Were they nearly wiped out by predators or other environmental factors? Were they out-competed?

It may be more to the point to ask why they survived rather than why their range shrunk. They may have survived in China because they were lucky enough to find a stable environment with abundant resources. But now *Ginkgo* and *Metasequoia* trees thrive in the countries where they have been planted. So it appears they are well adapted to survive over time.

Change Agents

Earth has seen five great extinction episodes. It is believed that we are now entering a sixth extinction period due to

several causes including: climate change, invasive species and disease organisms, pollution, human overpopulation, and over-harvesting.

Climate Change

How can trees keep pace with climate change? This can happen either through genetic change (evolution) or re-location.

Genetic change is slow for trees due to their long lives. Re-location is also slow because their seeds don't fall far from the tree. If today's trees were moved to cooler regions, they'd be vulnerable during the first period of their lives—before the climate reaches a warmer level—and they might not grow into adult trees. Some northward migration is already happening, but tree ranges are also shrinking for some species.

A.R. Buckley's historical book *Trees and Shrubs of the Dominion Arboretum* recorded his experiences over decades of plantings in the

Arboretum. The book noted that some warmer-climate trees had survived: e.g. Bald Cypress, Eastern Redbud, Shingle Oak, magnolias, buckeyes, cherries and the Japanese Angelica-tree. On the other hand, many trees experienced winter damage here—some showing slight injury, others killed back to the ground level. This became part of a record of tree hardiness over the past century and helped us to understand how trees interact with the environment.

Genes are also important. At the Center for Forest Conservation Genetics in British Columbia, scientists are studying "assisted gene flow." This means trying to match trees with tomorrow's climate, using genetic technology and moving seed to targeted sites. This area of study is highly advanced but similar in principle to the original intent of the Arboretum: matching trees to their location.

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President's Message

As I write my first President's Message, I am conscious of the many capable presidents who have preceded me and their numerous contributions to the Friends. Most recently, Eric Jones has done an excellent job of helping us move towards thinking about larger, more long-range projects and concerns. He has provided strong leadership through some difficult issues and we are glad he is not only continuing on the Board but also serving as Chair of the Central Experimental Farm Advisory Committee. Eric and those like him are one of the great strengths of our organization—a significant number of people who have provided dedicated service over many years.

For the many gardeners who have dedicated their time over many years, the

winter is a quieter part of the year. The Ornamental Gardens are asleep. The newer Shelterbelt trees and shrubs are wrapped as protection against the wind and salt spray from snow clearing. The Arboretum is just as beautiful but in a different way than the summer and not needing the same kind of maintenance. But, for those who also volunteer their time in other ways besides gardening, it is just as busy. This past November, we launched a new kind of fundraising event. We held a very successful online silent auction. We were able to offer 61 items and were delighted with the number of bids we received. After the October book drop-off, volunteers began the winter-long task of sorting the books for our annual book sale. Towards the end of the year, we also mailed our Non-Dinner

invitations. After giving the non-event a hiatus for a year, this was once again part of our fundraising strategy.

During the winter, the Board will also go through the difficult task of deciding what projects we believe we can afford to do with funds we already have, what projects we believe we can do through targeted fundraising, and what things we believe we simply cannot afford. For me, as incoming president, I look forward to working with a Board of Directors I have already come to know as strongly committed to preserving and enhancing the Farm and its various gardens. So, while it looks like a quiet time of year for the Ornamental Gardens, Arboretum, and Shelterbelt it still is busy for those of us who support the Friends.

Judy Dodds



Message du président

Au moment de rédiger ce premier message à titre de présidente, je ne suis pas sans oublier mes prédécesseurs très compétents et l'énorme contribution qu'ils ont fournie aux Amis de la Ferme (les Amis). Tout récemment, Eric Jones a accompli un excellent travail en nous aidant à orienter notre vision vers des projets et des préoccupations de plus grande ampleur et à plus longue échéance. Il a fait preuve de leadership dynamique à l'égard de certaines questions épineuses, et nous sommes heureux qu'il continue d'apporter son appui au conseil d'administration (C.A.) et d'exercer en même temps la présidence du comité consultatif de la Ferme expérimentale centrale. Eric, ainsi que d'autres à son image, représente l'un des atouts de notre organisation, ce nombre imposant de personnes qui ont montré un dévouement admirable au cours de nombreuses années.

Pour le grand nombre de jardiniers qui ont dédié leur temps au cours de bien des

années, l'hiver est une saison calme. Les Jardins ornementaux sommeillent. Les tout nouveaux arbres et buissons du brise-vent sont recouverts d'une enveloppe protectrice contre le vent et l'embrun salé causé par le déneigement. L'Arboretum est toujours aussi magnifique, mais de manière différente qu'en période estivale, et il ne nécessite pas le même type d'entretien. Par contre, pour ceux qui donnent de leur temps ailleurs que dans les jardins, le travail ne manque pas. En novembre, nous avons lancé une nouvelle activité de financement. Nous avons tenu, en direct, un encan silencieux qui a remporté un vif succès. Pour les 61 objets offerts, nous avons été fort heureux du nombre de mises reçues. À la suite du dépôt de livres usagés en octobre, les bénévoles ont entrepris la tâche ardue que représente le tri de ceux-ci en prévision de la vente annuelle, tâche accomplie en hiver habituellement. Vers la fin de l'année,

nous avons mis à la poste les invitations du dîner qui en fait n'aura pas lieu. Cette activité, après une pause d'un an, fait de nouveau partie de notre stratégie de financement.

Durant les mois d'hiver, le C.A. s'attellera à la pénible tâche d'un processus décisionnel relativement aux projets, soit ceux que nous croyons pouvoir exécuter à partir des fonds à notre actif, réaliser moyennant un financement ciblé et écarter tout simplement, faute de moyens. En tant que présidente désignée, j'ai hâte d'entreprendre le travail avec les membres du C.A. dont je connais l'engagement profond envers la préservation et l'amélioration de la Ferme et de ses divers jardins. Donc, bien que ce soit un temps de l'année d'apparente tranquillité pour les Jardins ornementaux, l'Arboretum et le brise-vent, les activités ne manquent pas pour ceux d'entre nous qui prêtent leur appui aux Amis!

Judy Dodds

What Will the Arboretum Look Like in 2100? *(continued from Page 1)*

Invasive Species and Disease

The Arboretum includes many non-native trees and shrubs, some of which might even be described as “invasive,” meaning they reproduce and spread widely. Examples include the buckthorns, Amur maples, barberry, and Russian Olive. Even some native species, such as Black Locust and Manitoba Maple, are considered invasive by some, but they are good sources of food for native fauna.

More of a concern are invasive pests and diseases that attack trees and shrubs. Insects and pathogens now move easily between continents, and local trees have not evolved to resist them. Famous examples of trees that were decimated by imported pests are the majestic chestnut trees of the northeastern U.S., the graceful elm trees of Canada and the U.S., and now the ash trees.

Looking forward, there are many other threats, and climate change fuels their advance. In the West, the Mountain Pine Beetle is wiping out pine trees. The butternut tree is targeted by an aggressive canker disease, and in the U.S. Black Walnut trees are also under attack. Other threats are on the horizon: oak trees are under attack by a fungus, hemlock trees by an insect.

As we see more imported pests and pathogens come to Canada, we have to accept the fact that some trees in the Arboretum and the local region will not survive. But that doesn't mean they should all be written off. There is a growing need for strategies to address invasive threats, and where better to try out ideas than in an arboretum?

City Environment

The urban environment is hard on trees. Stresses include: heat, drought, road salt, inadequate soil, physical damage and pollution. Some trees are particularly prone to these effects. Greenspaces are also vulnerable to development pressure; cities abhor “vacant” space.

But trees are doubly important because they ameliorate the effects of the sun, wind, water and pollution to make cities healthier spaces to live. A huge amount of electricity used to cool our buildings can be conserved by planting shade trees. Urban spaces can never have too many trees.

We also need a variety of trees in our cities. Although some trees are preferred because they are more tolerant of urban conditions, we create a new problem if we rely too much on a species or even a small number of species, as demonstrated by the over-planting of ash trees in Ottawa!



R. Hinchcliff

Bebb's Oak

Vision of the Arboretum

This all leads to a vision of the Arboretum in the changing world. With the changing environment, the Arboretum helps us to understand how trees respond to climate change, invasive species and disease, and the effects of pollution. It also aids our understanding of diversity in trees.

So what are some of the trees that might appear there in 2100? Hopefully some of them will be those that are there now.

Some will be trees growing beyond their normal hardiness zone, such as redbud trees. Robert Glendinning, propagator for the Arboretum, says the ones planted here were grown from seed collected across the river in Quebec, a comparable climate zone. If gathered from their normal range further south, they would likely have succumbed to the Ottawa winter.

Staff at the Arboretum are always looking for comparable tree sources, and new trees are being nurtured for planting as this is being written. Glendinning has started Flowering Dogwoods derived from a northern New York source. Also started: Quince, Rose of Sharon, Medlar, Kousa Dogwood, and Japanese Umbrella-pine.

There are other trees that are just outside their range in Ottawa. Some of these are in the Arboretum now, but they are generally marginal here:

Oaks: Could species like White, Pin, Scarlet, Shingle, Chinquapin and Swamp White Oak (and others) expand northward?

Birches: Can species like Sweet, River and Gray Birch become more acclimatized in northern areas?

Nut trees: Can we find Shagbark, Shellbark, Mockernut and Pecan Hickory trees that will bear fruit here? How about hazelnut trees?

Conifers: Will a Rocky Mountain version of Douglas-fir grow better in the cold, eastern part of Canada? What other pines, firs and spruces from western Canada and the U.S. could prosper here? What about Asian and European varieties?

Others: Can we find a Tulip Tree variety that is hardier for northern planting? How about other southern trees like Sweetgum, Tupelo, Persimmon?

Disease resistance: Can we find varieties of ash—both native and imports—that are resistant to the Emerald Ash Borer attack? Can we find canker-resistant butternut and walnut varieties to propagate? Will maple decline become more of a concern, and can we identify its cause(s) and cure?

The basic question is what the Arboretum will look like in 2100: will many new species thrive there or will they be severely limited by the ravages of climate, disease and development? Although most of us will not be around to see it, let's hope for the former option.

Eric Jones is past president of the Friends and leader of the Friends' Arboretum and GPS teams.

Friends of the Farm Annual General Meeting, 2015

President Eric Jones welcomed everyone to the Friends of the Farm Annual General Meeting in September 2015 at the K. W. Neatby Building. He highlighted the many events offered by the Friends during the past year as well as the many collaborative activities we have with Agriculture and Agri-food Canada.

He also discussed the role of the organization and how the relationship with AAFC placed some restrictions on our activities. On the other hand, we are free to be involved in activities related to: raising awareness of the Farm, promoting the history and science, and helping with renewal and enhancement of the Farm.

Eric referred to upcoming fundraising events, the non-dinner and an online auction, which would help support our activities. He also explained how some of our resources are spent and described some of the larger projects we will be considering during the coming year.

Challenges, he said, included what to do about the lower part of the Hosta Garden and the invasive dog-strangling vine, especially in the Arboretum.

He invited members to provide input to

upcoming strategic planning for the Friends.

Financial statements

Nathan Leung from the firm Charles Barrow, Licensed Public Accountants, presented the financial statements for 2014. He reported that our financial position had improved over the previous year, explaining that revenue over expenses had increased from approximately \$4,000 to approximately \$30,000. He also reported that our balance sheet was healthy and our investments had also grown. He acknowledged the work of Treasurer Marsha Gutierrez on behalf of the Friends.

Long-serving volunteers recognized

Donna Pape, Director of Volunteers thanked the following volunteers:

- Marilyn Haan and Eva Rolfe, for their 15 years of service.
- Robert Barron. Diane Rusk and David Rusk, for their 5 years of service

In addition, Donna thanked Polly McColl for her 16 years of service on a wide variety of activities and gardens.



Kate Harrigan

Polly McColl

Board of Directors, 2015-16

The list of Board members was published in the Fall 2015 newsletter, and can also be seen at www.friendsofthefarm.ca/board.htm.

In Memory

Malcolm MacGregor, an original member of the Friends of the Farm, died on October 18, 2015, in his 87th year. Malcolm ran a family farm east of Morewood, Ontario, where he developed a top herd of purebred Guernseys, became a judge at shows around the world, and served on many boards and committees. He joined Agriculture Canada in 1978 as chief of the National Showcase Herd at the Central Experimental Farm, and rose to the position of acting director general of agriculture development. Before retiring in 1996, he was posted overseas on crop diversification projects.

Our deepest sympathies go to Malcolm's family and friends.

Three Gardens in Four Days Bus Tour 2016

By Denise Kennedy

Travel to spectacular gardens with the Friends of the Farm, July 12-July 15.

Easy does it to romantic **Domaine Joly de Lotbinière** on Day 1 and then frolic in old Québec City, sleep at the Clarendon, a Heritage Hotel.

Onward to Gaspé on Day 2 to visit the **Reford Gardens**, one of the largest gardens in North America, a paradise of natural beauty. Hotel Rimouski is our destination that evening.

Day 3 promises a discovery of natural flora at the **New Brunswick Botanical Garden** near Edmundston. Onward to

Hotel Le Faubourg in St. Jean Port Joli for dinner and an overnight stay. Day 4 will find us visiting the historic village and returning home to Ottawa.

Reserved seating offered on the bus, first come, first served. Base cost \$625 per person, based on double occupancy. Single supplement add \$210. Please email or call for your registration form at info@friendsofthefarm.ca or 613-230-3276.

Denise Kennedy is the Friends of the Farm's tour manager.

October Book Drop-off

By Jeannine Lewis

Donors arrived at Building 72 in a steady stream throughout the day for our drop-off of used books on Saturday, October 24th. They came in cars or trucks, on bikes with backpacks, by foot pulling wagons or pushing carts, and even by motorcycle. Several donors each delivered 30 boxes or more.

The weather was cool and partly sunny. Drop-off hours are usually 10 am to 3 pm, but *The Ottawa Citizen* advertised 4 pm, so some of the volunteers stayed an extra hour.

Twenty volunteers, scheduled in two shifts: 9:30-12:30 and 12:30-3:30, directed traffic, received the books, moved them to

the basement, repacked if necessary, and stacked them for sorting at a later date. Seventy-five volunteer hours were logged.

Donors were given a Thank You note with information about the Book Sale to be held in June 2016; this kept track of the number of donors. One hundred and sixty donations were received, a 30% increase from last year.

It was decided that there is no need to have another drop-off in March.

Jeannine Lewis is a Board member and coordinator of the Friends Book Sale event.

Meet New President Judy Dodds

By Mary Ann Smythe

Judy Dodds believes that a "good paper trail is a good thing." As the Friends of the Farm's Board secretary from 2011 to 2015, Judy put that belief into practice, producing minutes for the monthly Board meetings. However, last September she relinquished her minute-taking duties and moved to an even more demanding role as president.

In light of Judy's contribution to the Friends over the last eight years, it is surprising to hear her say that she became a volunteer for purely selfish reasons. Raised in Florida, Judy spent most of her working life at the Census Bureau in Washington, DC. It was through work that she met and subsequently married Ken Young, who was in Washington working on a special project on behalf of Statistics Canada. When Ken was summoned back to Ottawa in 2005, the couple faced a dilemma—which city would they call home. Since Ken had three years to retirement and Judy was eligible for retirement, Ottawa won out as the logical choice.

Although reluctant to move from the "spectacular" U.S. capital, Judy quickly settled into her new community. Of the Canadian capital that has been home for a decade, Judy says: "I really like Ottawa. It is beautiful and easily accessible to many recreational opportunities, including Gatineau Park. And, as the nation's capital, it has some of the same sense as Washington."

One of Judy's first tasks in Ottawa was to find out what plants to choose for her garden. "Many of the plants and trees I was familiar with in Washington are not what grow here," she explains. During her research, Judy happened upon the Friends of the Farm and after attending one of the information sessions, she signed up for the Arboretum team. "I didn't know anything about the organization or about the Farm. My motives were purely selfish. I wanted to learn about plants that grow well here so I could build my own garden."

Judy may have initially been motivated by self interest, but her record as a volunteer shows that the Friends of the Farm has become an integral part of her life. Judy joined the Friends in 2007 and although she once considered moving to one of the other garden groups, she remains a committed member of the Arboretum team. "I really enjoy the people," she says of her reason for staying. In 2011, then team leader and president Chuck Craddock approached Judy about sitting on the Board. "He asked if I was someone who could do minutes," Judy recalls. "The duties fit with what I am comfortable with. I am a structured person and I believe that a good paper trail is a good thing."

From her vantage point on the Board, Judy has a tremendous appreciation of the "conscientious and committed" people who "put in a lot of time and effort as volunteers." She also "values the relationship with the Agriculture and Agri-Food Canada staff who provide support and guidance" to the garden teams.

Looking ahead, Judy says that she doesn't yet have a "huge vision for the future. I think the organization is doing a very good job in fulfilling its mandate, with the help of the people who garden and volunteer at events. There are certainly more things we could do but we are limited by available resources." On the



Judy Dodds

Mary Ann Smythe

Board's wish list are the publication of a book about the Ornamental Gardens, completing much-needed repairs to the main garden shed, and perhaps building a gazebo and installing benches in the Arboretum and Ornamental Gardens. "The things we want to do are expensive," Judy adds. "We have to prioritize and that's a big job in itself. Even if we are able to access grants, some of the things require the approval of AG Canada and the NCC."

A less challenging, but equally important, part of the Friends' mandate is to raise public awareness of the Farm, which is often accomplished through fundraising events. "I like the events that get people to the Farm," Judy says. They may require a "tremendous amount of work" in relation to financial return, but "they raise awareness of the Farm," she adds. "When I moved here I had no idea this place existed. It's a heritage site, a renowned centre of scientific research. It belongs to Canada and we should do more to get people engaged."

Mary Ann Smythe, a regular contributor to the newsletter, has taken over from Judy as secretary on the Friends of the Farm's Board of Directors.

Growing the Tropicals

By Richard Hinchcliff

The collection in the restored Tropical Greenhouse gets more and more interesting. Agriculture and Agri-Food Canada staff led by Jean-Pascal (J-P) Gratton acquired about 60 new plants in early December. They also purchased some air plants such as Spanish Moss.

The largest of the new plants was a Golden Bamboo, an aggressive grower that will be kept in a container, said Robert Glendinning, who tends the collection. A Golden Barrel Cactus, also known as Mother-in-law's Cushion and a favourite of cactus lovers, was added as well.

A mahogany and a breadfruit tree were among the items. The plan, said Robert, is to acquire more such intriguing plants and build a unique collection of tropicals that appeals to both the novice and the expert. He plans to donate some unusual plants that he is growing at home from seed. He also hopes that a couple of Neem trees, grown and donated by former department researcher Steve Mihok, known as "Mr. Neem," will soon be ready for display.

Space, however, is limited. Some people, Robert said, who have loved the experience of visiting the Tropical Greenhouse, have wished it were larger. Ideally, the display would expand into the adjacent greenhouse. In the short term, it is planned to use the alcove between the two greenhouses.

Plant labels are also needed, said Robert, and digital forms such as QR codes for smart phones might be considered.

J-P, Robert, and the team are clearly planning to enjoy the Tropical Greenhouse. They have accomplished a great deal during the year or so they have been responsible for it, and are keen to be able to implement many interesting ideas for its future.



Robert Glendinning and the Golden Barrel Cactus



Robert unwrapping the Golden Bamboo



Jade Plant in bloom in the Tropical Greenhouse

A Glowing Crystal

In 2013, the Ottawa Citizen asked five Ottawa architects to name their favourite Ottawa buildings as seen by night. Sarah Murray of Nicholas Caragianis Architect, chose the Tropical Greenhouse, which, she wrote, "is the jewel in the crown of the greenhouse collection at the Farm. It is a psychological as well as physical oasis, a garden lantern totally connected to the exterior – stars, views, trees, rain, snow, moonlight. ... The romantic style and materials evoke Victorian times and values. ... The greenhouse at night at -40C is a glowing crystal-like hum of quietly busy life thinly separated from reality, the real climate."



Pas de Douze?

Maged Kamal



Gwen Addison (far right), a retired professional ballet dancer, is a member of the Macoun Memorial Garden volunteer team led by Denise Kennedy. In this photo, Denise reports, Gwen “was trying to show us a ‘pas’ or two!” (See Page 11.)

Tree Climbing Championship

Eric Jones



A simulated rescue was one of the challenges for competitors in the 27th annual Ontario Tree Climbing Championship held in September in the Arboretum. The day included guided tours of the Arboretum and the opportunity for kids (young and old) to climb the massive Bebb's Oak.

The Sir John Carling Building Site, Then and Now



The Sir John Carling Building before its demolition, July 13, 2014



The landscaped site of the former Sir John Carling Building, July 17, 2015

Tree Forms and Shapes in Winter

By Owen Clarkin

On the afternoon of November 15th, Bettina Henkelman and I led a late-season tour of the Dominion Arboretum to talk about the forms and shapes of trees in the winter.

Beginning at Building 72, we completed a clockwise lap of the Arboretum in roughly two hours, progressing from the old windbreak to areas that feature poplars, oaks, and maples, and returning via the upper circle back to our starting point.

Along the way we discussed how to enjoy winter tree watching, and how to identify trees in the landscape both from a distance via growth forms and colours, and up close by looking at twigs, leaves, flowers, fruit, and bark. Here and there we also noted a number of trees slightly breaking dormancy due to the recent unseasonable warm weather (e.g. flowers on Bur Oak and freshly emerged leaves of a sorbus).

Viewing from a distance

We looked at how trees often have a shape that can be recognized from a distance, which is especially easy when viewing broadleaved deciduous species growing in an open area. Their characteristic branching patterns are much easier to recognize with practice than to describe in words, as an example, the low-forking, wide-spreading growth form of the Wych Elm helps differentiate it from cousins such as the graceful American Elm, rugged Rock Elm, and more coarsely-branched Slippery Elm. The naturalized Siberian Elm has very slight wispy-looking twigs that sprout correspondingly small sized leaves during the growing season.

It's even easier to recognize trees from a great distance if their fruit persists into winter. We looked at trees easily identified from far away via their distinctive fruit such as Catalpa, Honey Locust, Black Locust, Kentucky Coffee Tree, Japanese Tree Lilac, and Sea-Buckthorn. Similarly, the abundant yellow flowers on a smallish tree manifested Witch-hazel's presence. Sweetgum was conspicuous by virtue of its putting on a starry display of yellow to red and purple autumn colours a full month after the peak colour of native showoffs such as Sugar Maple.



Owen Clarkin and tour group

Eric Jones



Three elm shapes

Collage by Owen Clarkin



Sea-Buckthorn

Owen Clarkin

Tree Forms and Shapes in Winter *(continued)*

We also compared the silhouettes of coniferous trees, which are easier to spot in the winter and are more easily recognized even when surrounded by other trees. The dense lacy sprays of foliage found in Hemlock's outline for example contrast sharply with the more open and coarsely branched crown of Norway Spruce.

Examining up close

We also examined trees up close, emphasizing general guidelines to help differentiate between them. It is often best to begin by trying to determine what the tree is not by noting leaf and bud arrangements on the twigs: e.g. opposite (decussate vs. distichous), alternate (spiral vs. distichous), vs. whorled, sub-opposite, etc.

The best way to make progress is often by aiming to recognize the family or genus; after that the species or variety can usually be determined fairly easily by comparing key features. For example, one may first recognize both Hemlock and Norway Spruce as belonging to the Pinaceae family based on their needle-leaves and woody cones. A wide-spreading tree with spiral alternate buds clustered at the twig tips and what look to be miniature acorns along the twig is almost certainly an oak, even if its leaves don't look "oak-like" (e.g. Shingle Oak).

Taking in as many clues as possible before coming to a conclusion is essential to successful tree identification. For example, we spotted what appeared to be Swamp White Oak from a distance via the high-contrast leaf litter underneath it, and confirmed the species up close by noticing characteristic peeling

bark on branchlets. We examined numerous other characteristic up-close traits on our tour such as the thick and hollow twigs of an Empress Tree, the square profile twigs with light coloured buds of a Blue Ash, and the sharp-pointed buds of a Rock Elm.

Some tips to help identify trees:

- Twigs with their developed buds, leaf scars, lenticels etc., should be considered as the closest thing available to a tree's "fingerprint;" often the species can be immediately recognized (with practice!) if a winter twig can be examined.
- Binoculars and especially modern superzoom cameras can be used to examine distant out-of-reach twigs high up in a tree; good pictures can be studied later to figure out what that mystery tree at the bend in the trail was.
- When taking pictures try to capture as many clues you can think of: twigs, leaves (cold season? look under the tree), flowers, fruit, bark, growth form, and habitat.
- Auto-zoom cameras can be trained to focus on details in twigs or fruit by placing your hand behind the item of interest.
- Get one or more good tree books and join online forums to help you learn about trees.

We hope these tips will help you enjoy looking at trees this winter both on the trail and across the field.

Owen Clarkin was co-leader of two other popular Arboretum tours in 2015, one in the spring on birds and the other in the summer on tree identification. He reported on the latter in the Fall 2015 newsletter.

Best Wishes Sharon

Sharon Saunders, lead hand in the Ornamental Gardens, is retiring in January after 35 years of service at the Farm. She began as a casual in 1980 but her connection with the Farm went back further. Her father worked there, and Sharon and her sister were often brought to play among the gardens at the weekend. It is fitting that in the last few years before her retirement she was working at the Gardens.

Sharon's creative designs for the annual beds were a pleasure to behold each year. Lately, she gained North American recognition with her winning entries in a garden landscape design contest. For many years in the Gardens and before that in the Arboretum, Sharon has guided teams of Friends volunteers, who have learned much from her about plants and gardening.

We wish her all the best in her retirement.



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. Membership in the Friends of the Farm costs \$25 per year for an individual and \$45 per year for a family, \$20 Seniors/Students. Membership fees support the many projects of the Friends of the Farm.

The Newsletter (ISSN 1702-2762) is published four times a year (Winter, Spring, Summer, Fall) by Friends of the Central Experimental Farm. All members receive the newsletter and it is sent either by regular mail or e-mail. Editor: Richard Hinchcliff. Assistant Editor: Barbara Woodward. Design & Printing: Nancy Poirier Printing. Contributors: Owen Clarkin, Caroline Dabrus, Eric Jones, Denise Kennedy, Mary Ann Smythe. Translator: Lise Anne James.

Friends of the Farm
Building 72, Central Experimental Farm
Ottawa, ON K1A 0C6
Telephone: 613-230-3276
Fax: 613-230-1238
E-mail: info@friendsofthefarm.ca
www.friendsofthefarm.ca

Deborah Higdon-LeBlond Brings Lego to the Farm

By Barbara Woodward

Deborah's volunteer activities with the Friends involve, for the most part, data management and administration (read her profile in "Previous Spotlights" at www.friendsofthefarm.ca). However, her obvious skill in detail that those activities require extends to her other pursuits as is evident in the faithful model of the Experimental Farm's lovely old Cereal Barn, which she built and displayed at the Friends' Art on the Farm event held in August last year.

Deborah loved Lego from early childhood, even though she didn't have very many pieces back then. As an adult, she has been able to buy more and over 15 years has developed her building prowess. Initially this involved Lego sessions with her nieces and nephews—many of the pieces used have now returned to Deborah. She feels this is fitting because she gave her nephews and nieces the Lego and will be the "one buying it for their children when the time comes."

On realizing she could afford to buy pieces for herself Deborah began to build more serious structures. She also discovered Lego internet sites, which introduced her to like-minded people, to a Lego fan group and eventually to constructing many models, including that of the Cereal Barn.

Choosing the Cereal Barn

Deborah knew she would build something related to the Experimental Farm for the Friends' art exhibit. She first considered replicating the Farm's Dairy Barn because she loves its

architecture. However Lego's "perfect sand red colour" that matched that of the roof had been discontinued and there were only 39 such pieces available.

As well, the sheer size of working in the scale she chose ("minifig" scale) would have resulted in a structure easily three times bigger than the model she finally decided on. Deborah says, "in the end, the Cereal Barn's colours were very Lego-able, and the architectural details were interesting enough to make it an enjoyable project." Deborah's skillful and accurate model beautifully portrays the features of this designated Canadian Heritage building.

Constructing the model

Deborah's careful planning began with viewing and taking a lot of photos of the structure. She also "used google earth to roughly measure the footprint and proportions," using a scale of 1 Lego stud = 1 foot. She worked hard to make a model "as accurate as you can get when working within the limitations of Lego."

Because she does not cut or glue pieces, each part either works, or she finds "a reasonable work around to evoke the style of the building." Deborah rarely counts the pieces she uses to make a model, but made a "very wild guess" that she likely used 2,000 to 4,000 Lego pieces in this case. That guesstimate would have been much higher if she had been able to also detail the interior as she usually does, "but time and the engineering of the exterior structure made it impossible."

The barn construction had to be done quickly, because, she says, "as always I left it to the last minute, so I worked practically non-stop for almost two weeks!" There was no time to order extra pieces but she was able to borrow from members of Ottawa's adult Lego club. She "loved it when people ... recognized the building, especially if they had a connection to the building itself!"

Barbara Woodward is a member of the Friends' peony team and assistant editor of the Friends' newsletter.



Polly McCall



Kate Harrigan

Lego Cereal Barn

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Website: www.friendsofthefarm.ca

The Macoun Dancers



The Macoun Memorial Garden dancing team (see Page 7) are from left: Gwen Addison, Judy Hyland, Anne Darley, Kate Hadden, Sahar Jaffal, Yvonne Ackerman, Denise Kennedy, Dorothy Tol, Karen Walker, Sue McGregor, Joanne Kingsley, David Addison. Absent: Linda Lewis

Gardens of Inspiration ... (continued from Page 12)

the best ones to grow in a home garden?

Another beautiful garden space is the Macoun Memorial Garden. It features a sunken area with a pond, a border of shade-loving plants, a hosta plant collection, and various trees and shrubs. Every year it also showcases the creative use of annuals. This past season the annual beds edging the sunken garden were ablaze with the colours of fire. The creative mixing of red, orange, and the brilliant yellow "rooster comb" plumes of *Celosia* plants made for a showy and unique display, which could be reproduced easily in the home garden.

As well, masses of New Guinea *Impatiens* were planted outside the Macoun garden, providing brilliant colour under the shade of large trees. Last year, many gardeners were disappointed to see few, if any, *Impatiens walleriana* at garden centres. These "go-to" annuals that we rely on to brighten and add colour to shady areas in our gardens were no longer being grown by nurseries due to the rampant problem with downy mildew. The plantings of New Guinea *Impatiens* demonstrated how a simple switch to an *impatiens* variety not susceptible to downy mildew could provide an equally showy summer performance.

The daylily and iris collection found in the middle section of the Ornamental Gardens highlights that there is more to

daylilies than the ubiquitous orange ditch lily and that irises are aptly named after the Greek goddess of the rainbow. The range of colours, heights, and form demonstrates the richness these plants can add to your garden. Daylilies and irises are also scattered throughout other sections of the Ornamental Gardens, reinforcing their versatility—grown alone as accent plants, in groups in the middle of a mixed border, or in the foreground of large shrubbery.

Borders and beds

The perennial borders of the Ornamental Gardens are another section worthy of a stop before going plant shopping. Designed to provide bloom throughout the growing season, the perennial borders are home to a wide variety of plant material, including phlox, monarda, hardy geraniums, platycodons, dianthus, to name but a few, which provide a varied composition of heights, forms, and textures. Here one is captivated by show-stopping hardy hibiscuses with flowers the size of dinner plates in the fall, decorative plume grasses lifting the visual interest high into the air, and a variety of groundcovers that encourage pausing for closer examination. Plans are now underway to update the collection and introduce new plants of interest to gardeners.

Finally, there are numerous annual beds scattered throughout the Ornamental

Gardens and every year the plantings in them change. The beds are designed to provide different visual effects and give visitors an idea of possible plant combinations. For example, past plantings have included mixing decorative kale with flowering annuals and growing striking, tall castor bean plants to provide height, texture, and drama. Last year, large groupings of canna lilies provided bold colour and height to some of the planting beds. Unfortunately, many of the blooms were devoured by the Japanese beetle. A lesson well learned—never plant canna lilies if Japanese beetles frequent your garden.

The Bird, Bee and Butterfly bed, featuring plants that attract such pollinators as honey bees, monarch butterflies, and hummingbirds is located at the southern end of the gardens. Home gardeners interested in encouraging pollinators could easily put together a scaled-down version of this bed.

There is much to see, appreciate, and learn from in the Ornamental Gardens. So, before making an investment in your garden with a purchase from the garden centre, stroll through the Farm and take in the various gardens for both pleasure and inspiration. I know I will.

Caroline Dabrus is the Friends' director of gardens and leader of the Rock Garden team.

Gardens of Inspiration and Instruction

The Ornamental Gardens at the Farm

By Caroline Dabrus

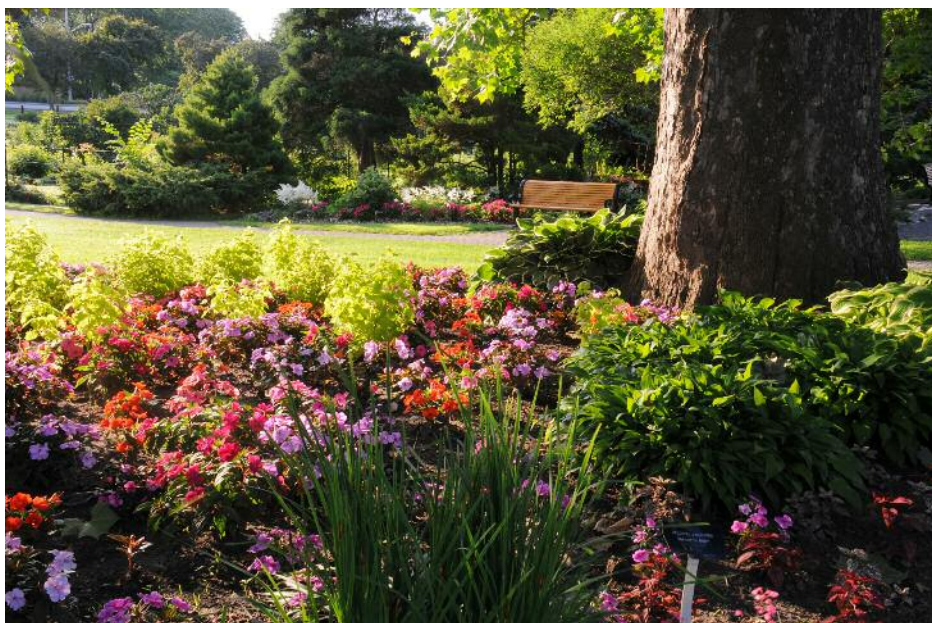
Even when deep snow covers our gardens and freezing temperatures keep us indoors, gardeners think about the new plants they might try to grow once spring ushers in a new season of possibilities. I know that as soon as the New Year rings in, like many of my gardening friends I will turn to garden books and magazines, seed catalogues, and various on-line garden resources for inspiration and instruction. And with the first breath of warm spring air, I'll head to the garden centres to shop for herbaceous perennials and seasonal bedding plants. But first, I will stop at the Central Experimental Farm and walk through the Ornamental Gardens.

Why the Ornamental Gardens? Before I discovered them, I would head to the garden centre with a bit of a plan and some plants in mind. Like many other gardeners, both novice and well-seasoned, I would be dazzled by the sheer number and seemingly endless choice of young annual and perennial plants available for purchase.

I would invariably be drawn to the plants in bloom, ignoring many of the other offerings, and failing to fully appreciate the information on the accompanying tags. As a result, I would often head home with plants that struggled to survive or quickly outgrew their new home. And sometimes I was disappointed about how the plant performed in combination with my existing garden.

Plant selection begins at the Farm

Now my first plant-shopping trip



New Guinea Impatiens outside the Macoun Memorial Garden

begins at the Farm with a walk through the grounds to explore the Ornamental Gardens. I find the gardens a source of inspiration and instruction throughout the year. They showcase annual and perennial plants, shrubs, and trees that perform well in our climate and soils under a variety of conditions and with minimal maintenance (except weeding). They also provide an excellent visual indication of the mature size and growth habits of those immature plants we buy in garden centres. And, above all, the diversity and combination of plantings provides inspiration and ideas for my own garden.

By way of background, the Ornamental Gardens first opened in the 1880s to showcase plants being developed and tested by researchers at the Farm. Over the years, many new and improved varieties of roses, peonies, chrysanthemums, gladiolus, lilies, and other plants were developed and/or

tested. These plants were not only tested for cold-hardiness, but also for disease and pest-resistance with a view to developing plants suitable for the Canadian climate and environment. These varieties were grown in the Farm's various test gardens and displayed for the general public.

While the Farm is no longer conducting the same level of ornamental plant development research, the Ornamental Gardens remain an important plant demonstration area, and provide a delightful venue for learning about and finding plants that will thrive in our own Ottawa gardens.

Garden spaces and collections

There are a number of different garden spaces and collections, each with its own unique focus. For example, the peony collection on the northeast side of the gardens now consists of 450 varieties with the recent addition of 41 new varieties in October 2015. The collection is incredibly diverse. In May and June a broad range of colours and forms are on serial display. What better way to find the right peony for your garden than by looking through the collection at the Farm and talking to volunteers about some of



Heritage Rose Garden

Photos by R. Hinchcliff

Continued on Page 11