OTTAWA HORTICULTURAL SOCIETY

NEWSLETTER

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Table of Contents

SUMMER BOUQUET

CHRONICLES OF A BACKYARD DAYLILY HYBRIDIZER

by Anne Johnston

Like so many other "good ideas," this one started off quite innocently and took on a life of its own.

DAYLILY PLOT

It began about ten years ago, when Jocelyn from Artemisia Daylilies gave a presentation at an OHS meeting. He showed us photographs of some beautiful daylilies that we just don't see at our local nurseries or big-box store garden centres. Seeing so many unusual and unique daylilies was really an eye opener. Any gardener who has a love for a certain type of plant, whether they are irises, peonies, hostas, etc., knows that some varieties can only be purchased from specialty nurseries, and this certainly includes Hemerocallis (daylilies). One would think that, with well over 60,000 named varieties, there would be nothing left to improve on. But one would be wrong. Belonging to daylily hybridizers Facebook groups, I can confirm that even small and backyard breeders are creating some very beautiful seedlings.

Going back to the "good idea" in my introduction, in his talk, Jocelyn mentioned that he could make daylily crosses for clients with the cultivars of our choice and we would simply purchase the resulting seeds. "Hey," I thought, "That would be fun!" Right away I browsed through Artemisia's daylily catalog and picked several cultivars I would like to cross. I contacted Jocelyn and he agreed to do these crosses for me and a few months later he sent me the harvested seeds. Along with the crosses I had ordered, I also bought some seeds from cross-

2017-361-02

Anne in the garden

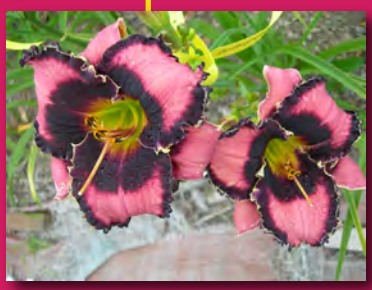
es he had made previously. I decided to focus on tetraploid daylilies (four sets of chromosomes) as opposed to the diploids (two sets); you can't cross a diploid with a tetraploid. Luckily, I had rented a garden plot at the Kilborn Allotment for growing peonies from crosses I had made at home, and so the allotment was divided 50/50: peonies/daylilies. When the seedlings started to flower, my garden received a lot of attention from fellow gardeners and passersby and many inquired about what I was doing; I am always happy to explain my breeding program.

When starting a breeding project, you really want to start with the best parents. The seeds I purchased gave me a good head start although I didn't know what I was going to get. From these early seedlings came four that became parents to many of my best seedlings. The first is '2010-02-10' from 'Spacecoast Butterfly Effect' x 'Wonder of it All'. The other three are '2010-05-05' from 'Piping Rock' x 'God Save the Queen', '2010-01-14' from 'Piano Man' x 'Catcher in the Eye' and finally '2011-04-05' from 'Blue Gold Macaw' x 'Forestlake Ragamuffin' (don't you love these names?). In all, I had about 20 seeds from the 2010-series (Jocelyn's crosses) and 60 from the 2011-series (the crosses I asked him to make for me).

The fun grew when I started making crosses using my own seedlings. It is really quite ad-

2010-04-05

2010-01-14



2013-21-02

2013-21-03

2013-21-07

2013-21-08

dictive. If you are like me, and borderline obsessive-compulsive, it becomes difficult to step away from the pollination task. I tend to walk around thinking "Oh, these two could make some cool babies….and these two as well" and this can go on for an hour or more. In a good year, about half the pollination attempts will produce seed whereas in a challenging year the success rate could be as low as 20%. In 2018, I made well over 1300 crosses and only 293 of these produced seeds. Why such a difference? Heat is a big factor! Don't even bother making a cross if the day starts off really hot; there's no point. Rain is another big one; don't make a cross if rain is imminent. Also, some plants have more fertile pods and/or pollen than others (2010-02-10's is easily fertile both ways). I make my crosses mid-morning when the pollen is dry and before the heat sets in. Like a good scientist, I label every cross with a tag and document it in my lab book. I know you may be thinking, "Where do you plant all these seedlings?" Well, I don't. I was able to rent a second allotment next to my first but even that one filled up pretty quickly. At its peak, I had approximately 1000 daylily seedlings at a time in my plots. I also purchased a mini-fridge to store my seed packets; I currently have 6500 seeds stored in it, all carefully catalogued, of course.

Like all addictions, it came at a cost. To increase my chances of getting exceptional seedlings, I purchased some exceptional parents. New introductions from American breeders can be priced at $250US each + phyto certificate + shipping + exchange rate. One of these was Karol Emmerich's 'All Things to All Men' which was rightfully described by Karol as "the one that will put me out of business by evening out the playing field." Wow! Yes indeed, that was a good investment; crossed with '2010-02-10', it made some pretty awesome kids (but, then again, '2010-02-10' can do no wrong!). I purchased several (read "several dozen") plants from Canadian specialty nurseries and imported from well-known American breeders: Karol Emmerich's Springwood Gardens; Ludlow Lambertson's Art Gallery Gardens; Greg Goff's Le Petit Jardin (don't!);

2010-02-10

ALL THINGS TO ALL MEN

Petals cannot open well 2014-12-03

2014-12-04

2014-12-09

2014-12-10

2010-02-10

2010-05-05

accidentally culled

2013-20-02

ALL THINGS TO ALL MEN

2015-57-02

2015-57-03

2015-57-05

and Rich Howard's CT Daylilies. I made a couple of trips to Ogdensburg NY to pick up my plants to save on very high shipping costs. All my purchased parents are in my home garden. So yes, I do take their pollen (on Q-tips) to the allotment and vice-versa to make crosses. One challenge with plants that were bred in, let's say, Florida!! is that some may struggle in Ottawa's winter climate. This is when you want to cross your Florida plants with a hardy plant ASAP in the hopes you can keep the Florida beauty and add the Canadian toughness to its genetic make-up. That being said, many warm-weather-grown daylilies did quite well at home. From some of my new "parents" I got some pretty nice seedlings, such as: '2017-260-05' from 'Bodacious Blues' x 'Blue Over You'; '2017-133-04' from '2013-26-02' ('2010-02-10' x '2010-05-05') x 'Trials of Job'; '2017-227-03' from 'Bodacious Blues' x 'Tet Lavender Blue Baby';

2017-260-05

and '2017-06-04' from '2010-01-14' x 'The Dark Side.'

I know many breeders focus on certain traits: Lambertson mainly breeds for violets and purples; Howard has some pretty interesting speckled seedlings; Emmerich looks for chalky eyes and great branching; and others choose patterns or ruffled edges or reds or tall scapes or miniatures or spiders, etc. Me? I don't have a specialty because I like the variety. I do lean towards tall purple/violets with chalky eyes but I like them all and I don't want to be restricted to just one goal. This means, of course, that I am spreading myself out a little thin, but really, my main goal is to have fun and to satisfy my curiosity about what two parents can produce. I have consulted with different breeders about how they choose their crosses: do they pair plants that are completely different or that are alike? The replies vary quite a bit but breeders are all quite convinced about their method. Some have told me they pair parents that are very similar to enhance certain features such as crossing two reds to make a better red, or doing "in-line" crosses, which means crossing their own lines together to recycle the known good genes; others prefer to cross two plants that have no common ancestor and are completely different, to bring in new genetic material. My instinct was to cross the latter. The movie "Deliverance" made a big impact on me when I was young and it certainly suggested genetic diversity is the way to go. But, as they say, "the proof is in the pudding" and it seems both camps have merit. I have had good success using either method.

A handful of my seedlings are quite tall. With adequate rain, '2014-70-04' tops 50 inches. '2014-70-04' comes from '2011-21-01' ('Bass Gibson' x 'Spacecoast Behavior Pattern') x '2010-05-05' ('Piping Rock' x 'God Save the Queen'); none of which, by the way, are especially tall. While the flowers always open well and the stems are strong and well branched I wonder if I can make the flower colour bolder. One way to do this may be to cross '2014-70-04' with one of

my newest seedlings that is a stunner and also tall: '2017-361-02' ('Stenciled Infusion' x 'Trials of Job')…something to try. Another of my favourite tall seedlings is '2014-12-04' which comes from '2010-02-10' x 'All Things to All Men.' Some of its siblings, however, do not consistently open very well because the petal edges are too frilly; turns out you can have too much of a good thing. Another successful pairing was '2011-04-05' x '2020-01-14' from which one seedling, '2013-21-02', has a near-black eye and edge and several of its siblings, who have a family resemblance, are very reliable bloomers.

So, what do I do with all these hundreds of seedlings? First, I determine if the seedlings are keepers or not. After two or three years of measuring scapes and flower diameters, photographing blooms, and counting branches and making bud counts, I determine if they are bound for the compost pile. It is sad and it took me a while to get comfortable trashing a seedling, thinking "maybe next year it will be better" and then it wasn't. About three-quarters of the seedlings get culled. What would make a seedling so bad it had to be thrown out? Flowers that don't open well because they are too frilly, plants that never increase in size because of winter die-off, petals that are too thin and don't withstand summer heat and sun, or flowers that are very ugly. I keep some plants longer to evaluate their value as a parent or for registering, and there are some that are really nice but I cannot keep, either from lack of space or because they are missing traits I really want; I usually sell these for $5 so they will have the home they deserve. Although I haven't registered a single one yet, there are a few seedlings I plan on naming. Last summer, I asked my mom to choose one to name, which she did. It is currently numbered '2015-35-04' from '2011-21-01' x '2010-02-10'; it is tall and always looks perfect. It will be named after one of our ancestors. Why has it taken this long to register any of my seedlings? Well, there are so many fantastic daylily breeders with exceptional daylilies that I sometimes feel like my seedlings do not measure up to theirs. However, having acquired many of their top and newest releases, I must admit that some of mine are as stunning and are hardier than many professional breeders' plants. Unfortunately, one thing that some commercial breeders routinely do is significantly "enhance" photos of their daylilies. I am a fan of Photoshop as much as the next person but I do not, and will not, manipulate the images of my seedlings to make them more marketable. In fact, my camera sensor downplays violets and blues and photos of my daylilies that contain these colours do not

show their full beauty. I do plan on registering some of my seedlings in the near future.

I know it sounds like it is all sunshine and rainbows in my allotment but here's a little reality check. In first place for "the worse thing about it is…": the weeds. OMG! I get bindweed and sow-thistle and other weeds I can't identify. They are relentless and I compare them to evil dictators…the moment you get rid of one, another, just as bad, will take its place. I am, unfortunately, surrounded by gardeners who have given up and the weeds just keep invading my plots and, since all herbicides are prohibited, it is difficult to make some headway. In second place: allergies. There is pollen everywhere, fluff blowing in from every direction and it's really hard on my sinuses and my eyes. In third place: the heat. There are days where the heat becomes unbearable and there is no shade. Since I go every day during my sum-

mer holidays (so I don't miss anything), some July mornings are very, very hot and it gets quite exhausting. In fourth place: my hands. From the pulling of weeds, some of my knuckles are getting swollen, red and sore. Of course, they might have done that even without weeding (I'm not getting any younger!) but, either way, my hands take a lot of punishment. So what does all this mean? Well, I am scaling down my breeding project somewhat to ensure I don't burn out; after all, this is not supposed to be torture!

Enough about the bad stuff; I would much rather speak about the enjoyment. You might be wondering if it's easy to predict what the seedlings of a particular cross will look like. Let's look at what happens with humans. You will have a mom and dad and their children; it may be easy to predict some traits and not others. If human parents have 10 kids, unless there are identical twins in the mix, their children will all look unique. Humans have two sets of chromosomes while tetraploid daylilies have four sets which tremendously increases the number of permutations. That being said, you can often see traits from mom and dad in a seedling but there are situations when progeny or siblings look nothing alike. In the case of the 2015-57-series, the kids are all gorgeous but quite different from each other. Sometimes, you have to look at the family tree to see a recessive trait that reappeared. That is what I find fascinating. I love to walk through the rows of seedlings and see in my mind what kids could look like from two parents. I love entering my allotment at 7:00am and see a seedling's first-ever flower; the first thing I do is look at my crosses book to determine who the parents were. Some take my breath away. The amount of work I put into the seedling garden is immeasurable, but seeing that perfect flower and thinking "Hey, I made this" is what keeps me going back.

Visit Anne's daylily website at:
https://elmvaledaylilies.gardentracker.com/

SETTING DOWN ROOTS
TIPS FOR PLANTING TREES

by Tuula Talvila

Full Moon Maple Photo by Tuula Talvila

TEN AND A HALF YEARS AGO, when we bought our house, there were no big trees in the backyard. The tallest things were a pair of skinny evergreens at maybe eight or ten feet tall and some shrubs, and it was a very hot and sunny rectangle of yard. There was evidence of past arboreal life in the form of a very large tree stump near the middle of the yard, which has since completely decomposed out of view.

Within five years we had ambitiously planted some trees: two magnolias (a yellow M. 'Butterflies' and a white, late-blooming *M. sieboldii* or Siebold's magnolia); a Korean maple (*Acer sieboldianum* 'Arctic Jade'); a dwarf sour cherry (*Prunus x eminens* 'North Star'); a columnar katsura (*Cercidiphyllum japonicum* 'Red Fox'); and a golden full-moon Japanese maple (*Acer shirasawanum* 'Aureum'). Today, two of those trees are dead and gone, both having dried to a crisp extremely suddenly (the katsura and cherry); two have health issues ('Butterflies' magnolia and Korean maple, showing signs of root collar rot and girdling roots respectively), and one (the full-moon maple) was transplanted to the front yard two years ago, to more favourable light conditions. Only one of the original six trees seems to be doing well where it is, the Siebold's magnolia, which I think was the very first tree we planted. What went wrong with the others and what can we do better when we plant trees in the future?

"There is no predetermined life span for a tree," according to Pieter Trip, author of "Growing Great Trees: A Practical Guide to Growing Big, Healthy Trees." While certain species may have a tendency to live for only a hundred years (birch, poplar), others are more inclined to several hundred (oak, hickory). Many conifers may stick around for five hundred or a thousand years – almost immortal, compared to us! However, all the growing conditions have to be optimal for this to happen. It would be such a benefit if all the local nurseries would provide detailed planting and care information to tree buyers. Over the past few years I have seen many tips and discussions online on how to properly plant a tree and I've started paying attention. Here are the pieces

of advice I've gleaned and can pass along, to help us all plant trees in such a way that they have the best shot at immortality – or at least a long and healthy life.

BEFORE PLANTING

The best time to plant a tree is in the early fall when the tree is going dormant and has lower energy demands above ground and root growth can dominate. Spring is the next best time, especially if the tree is still dormant from winter. If possible, do try to avoid planting in the heat of the summer; if it's unavoidable, be prepared to provide extra care for your new tree.

Try to select a younger sapling that won't be as root bound as something older that's been in a pot for several years. Younger roots are more likely to be supple and pliable enough to be straightened out as they are laid in the ground, to get them going in the right direction. Also, there will be less of a setback for a younger tree after transplanting, and it is advantageous to get established in the resident soil at a younger age.

"Right plant, right place" – this is especially true for trees! I know you really *want* that tree variety you've had your eye on but make sure you're truly considering its mature size, both height and spread. Look for fences, overhead wires, underground utilities, neighbours' yards, patios, house foundations, your other plants and trees, walkways and driveways. Make sure it's suited for the sun and drainage conditions of your site, and can endure our winters, both the temperatures and the snow load. When we bought our house there were the two columnar evergreens in the backyard. During our first winter I saw how the heavy snow made the branches bow. Upon closer inspection, we discovered a whole network of rope hidden inside the trees, tying up all the branches – clearly not a variety well adapted to carrying snow for many months of the year!

I knew when we planted our full moon maple that it wasn't in the best spot. It was lined up unattractively with some devil's walking sticks behind, and would likely have eventually tangled with them or a large smoke bush nearby. It was the full sun location, however, that prompted me to have it relocated to the dappled shade of the front yard after watching its beautiful leaves grow crispy each summer.

Trees get big. We know this, but at the same time we picture them at a smaller, pleasantly manageable size. There *are* dwarf, columnar, and weeping varieties of many species that may be a good alternative to a full-sized tree, but keep in mind that these too get big, just usually at a slower pace. (Our columnar katsura did live up to its name and was extremely narrow. Too bad it died.) Sometimes it can be difficult to determine the mature size of a tree just from the nursery label – the size listed may be for a ten-year old, but it could be something else too, so do some reading to find out for sure. Consider whether trees are merely temporary features in the garden that can be cut down (i.e., killed!) when their size or placement becomes inconvenient, or will they be allowed to be permanent living things on "your" patch of earth – with luck and good planting, living there longer than you.

PLANTING

First, the tree

When it comes time to plant, remove all the coverings: a plastic pot, burlap wrapping, or a metal cage. I'm embarrassed to admit that when we planted our 'Butterflies' magnolia, we followed the directions of the person who bought it for us who had said to leave the burlap and cage on, maybe just cutting it open a bit at the top. Now, five or more years later, the tree looks sickly, with fewer leaves

'Butterfies' magnolia

Girdling roots of our Korean maple (ignore all the weeds!)

each year. One of its two main stems died during its first winter, which didn't help matters, and it's really only half a tree now.

Just as you would with a perennial plant, wash off the roots and have a look at them. If the tree's been in a pot for a long time, the roots may have started circling. This can lead to root girdling, the problem our Korean maple appears to be suffering from. Roots can be wrapping around each other and, as they grow thicker, they will choke off the flow of water and nutrients, gradually weakening and killing the tree.

Don't be afraid to prune the roots, removing any that are heading inwards rather than outwards, and any that have started to wrap around others. You should be planting a nice spreadable array of roots to get them going in the right direction, away and out from the base of the tree. The roots should radiate outwards from the trunk like the spokes on a wagon wheel.

On The Garden Professors website there is also a great outline of what to do:
https://gardenprofessors.com/problems-with-planting-trees/

THIS SEQUENCE OF PHOTOS ILLUSTRATES THE STEPS TO FOLLOW

photos by Mary Ann Van Berlo

1 **Pot removed: in this case it was obvious the tree had been moved into a larger pot and much of the loose soil fell off.**

2 **Washing the remaining soil off the roots so they can be examined.**

3 **Examining the roots: some are pointing inwards or straight down instead of outwards (white arrows).**

4 **Green arrows indicate which roots were cut off. Yellow line shows the root flare and where the soil level should be (more on that below).**

Next, the hole

The hole should be only as deep as the root ball of your tree. If you make it deeper or loosen up the soil in the bottom, everything may settle and your tree will end up too deep. The tree may have been set too deeply in the pot, so don't use that as a guide for where the soil level should be on the trunk. You will need to identify the area where the root flare begins – this is the area at the base of the trunk that begins to widen at the transition to the roots (see last photo on previous page). Measure from the root flare down to the bottom of the roots and dig your hole to that depth. The width of the hole does not have to be more than the spread of the roots. Planting too deeply is the number one cause of tree health problems because the roots will not get sufficient oxygen and water, and the bark on the trunk is not adapted to below-ground conditions and can rot. Also, if you plant too deeply, you may end up with a depression/low spot where water will pool, subjecting your tree to too much moisture.

Finally, putting the tree in the hole

Place your tree into the hole, hold it vertical (remember to look at it from all sides), and refill the hole with the native soil you dug out. Don't bother amending the soil or putting in different soil; you want your tree's roots to venture out far and wide in their quest for water and nutrients, not stay lazily confined to a small surrounding area of luxury conditions. Pack the soil in firmly around the roots to eliminate air pockets; you can also water while refilling the hole to further reduce air pockets and help settle the soil around the roots. You'll want to have the level of the soil such that the slight widening of the root flare is just visible at the surface. If the sides of the trunk are perfectly straight and vertical all the way down right into the soil, it's too deep. Most trees have the majority of their roots within the top foot of soil to take in oxygen, moisture and food, and if the tree is planted too deeply these roots will not develop. In the case of heavy clay soil or other soils that drain poorly, even more of the root flare (2-3") can remain above ground.

Do not fertilize your tree now. The roots need to get growing first, before you provide extra nutrients that will promote growth of new stems and leaves that will need a good root system to provide them with food and water. Wait for a year of growth before doing any corrective pruning, except for damaged branches.

AFTER PLANTING

Mulching

A layer of mulch will help keep moisture in and competitive weeds out. Keep mulch away from the tree trunk by several inches to prevent the bark and trunk getting too moist, which can lead to rot. Mulch should be 3-5 inches deep at most; do not make a mulch volcano! For some reason, some landscaping companies seem to favour this approach to mulching but it's so thick that moisture and air won't get through well and the roots just below the soil surface will be suffocated, resulting in poor growth. And remember, as mentioned earlier, the trunk bark cannot tolerate moisture like root bark can, so burying the trunk in a mulch volcano could cause rot. Mulch will also help prevent frost heaving in winter, which can damage roots or uplift your tree.

No mulch volcanos!

(Adapted from CC image courtesy of Anne Marie VanDerZanden on Flickr)

Watering

Unless there's been rain, water your new tree every 3-4 days for the first few weeks and then once a week right into the fall, up until the ground starts to freeze up. This is critical to help get your tree

through winter. If it's very hot, dry, or windy, or if you have very free-draining soil, you may need to do extra watering but, of course, don't keep it waterlogged. Always check the soil under the mulch to see if it feels dry first.

Staking

Don't assume your tree will need to be staked – most do not. Movement in the wind is what will help it to develop a strong trunk. If it's a particularly windy location or it was a bare root sapling with a small root system, it may need staking. Soft, flexible ties should be used on the lower part of the trunk, making sure there is enough slack to still allow some movement of the trunk in all directions. Any staking and ties should not be left in place more than one year.

Protecting

If your tree gets sun in the late winter and early spring, it's a good idea to protect the lower trunk from sunscald by providing some shade for it. Constant freeze/thaw when the sunshine starts getting warmer but the nights are still below freezing can cause the bark to crack from the alternating expansion and contraction, creating potential entry routes for disease agents or insects. I like to use branches cut from our old Christmas tree to make a simple sun shade to lean again the trunk or a small trellis placed in front of the tree trunk, but you can also make a burlap shade or even just use a piece of wood – anything that can block the sun hitting the tree trunk. Sufficient watering in fall also improves a tree's resistance to sunscald cracking.

Another potential winter problem is critters who gnaw on tree bark. If this is likely in your yard, you can install a plastic or mesh tree guard around the trunk for the winter. Make sure it doesn't touch the trunk and goes into the ground as well as reaching well above the snow line to keep away both mice and rabbits. It will serve double duty by providing the necessary sun protection come early spring.

My full moon maple with a screen of old Christmas tree branches clipped to a small trellis

MISTAKES WERE MADE BUT LESSONS LEARNED

I'm still not sure why our sour cherry and katsura trees dried to a crisp and died suddenly. Their stumps are still in the ground and this spring I inspected below the soil surface to see what the roots look like

(basically a tree autopsy to help me learn for the future). There were not really any roots at the soil line or even slightly below, so they were likely both planted too deeply.

In this photo of a root autopsy, you can see that the roots were still growing downward in the shape of the pot instead of radiating outward. That means they weren't near enough to the surface to get air but probably more importantly, as the roots grew, they became too crowded (photo by Mary Ann Van Berlo).

Our Korean maple, which a couple of years ago began showing some signs of distress (wilting, plus leaves dropping from branch tips), has girdling roots. An arborist came to look at it last summer and made some cuts in the roots that were encircling others. I hope it can recover! In the case of our sickly 'Butterflies' magnolia, we should have removed the wrappings and it was likely also planted too deeply and might have root collar rot, according to the same arborist. He suggested I could scrape back a bit of soil around the base of the magnolia to prevent rot. (This can also be done by an arborist with an air spade.) I believe we've saved the full moon maple from the scorching sun of the backyard by transplanting it while it was still fairly small into the more dappled light of the front. It's been there for two years now and seems to be doing fine. Fingers crossed!

You may be saying to yourself: "I planted my such-and-such a tree five years ago, didn't do any of this stuff and it's doing just fine." Hopefully it wasn't pot-bound and will continue to do well, but experience has shown that most trees with these problems do well or struggle along for about 10 years and then they start to fail or just die. That is because the pencil thin roots of a young tree don't choke each other. It is as they grow that they start to girdle and cut off their food supply.

This spring we planted a new dwarf sour cherry tree (*Prunus cerasus* 'Evans') and we followed these guidelines with hopes of planting it well so we can enjoy the tree (and cherry syrup!) for many, many more years to come.

Many thanks to Mary Ann Van Berlo of the Master Gardeners of Ottawa-Carleton for reviewing and making valuable contributions to this article.

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FLETCHER WILDLIFE GARDEN

By Sandy Garland

Started more than 30 years ago as an idea in the minds of two Ottawa Field-Naturalist members, the Fletcher Wildlife Garden is becoming an icon in the Ottawa gardening scene.

THIS PAGE & NEXT PAGE: Trout lily and bloodroot are among the first native plants we see in our woods. Too deep to transplant, the former arrived by accident with other native species. The latter is being spread by ants and now appears in the area west of the woods as well as throughout the understorey. Photos by Christine Hanrahan.

Pioneers at the time, Jeff Harrison and Peter Hall thought that if you created a "natural area" with a variety of habitat – wetlands, meadows, woods – then local creatures would move in, creating a balanced ecosystem. And it worked – more or less.

INVENTORIES

Starting with Bill Holland, who used to stand in various parts of the garden every day and tally the number and species of birds he saw and heard, our inventories have grown. Thanks to Christine Hanrahan, we know that 152 species of birds have been seen at the FWG and 39 have nested there. We've also seen 45 species of butterflies, 34 dragonflies, 100s of other insects, 20 mammals, and 12 reptiles and amphibians. In addition to lists of these and other species, the FWG also keeps galleries of images for reference on PBase (https://www.pbase.com/fwg/).

HABITATS

How do you attract all this wildlife? "Plant it and they will come!" as Jeff used to say. For example, Peter Hall's *Butterflies of Canada* book was an excellent reference for finding out the larval host plants for all our local butterflies, as was Peter himself. We planted pearly everlasting in the Backyard Garden area of

the FWG, and within a year found American lady butterflies nectaring and laying eggs, and their caterpillars feeding and pupating – all on these beautiful native plants.

The original vision of the FWG was to establish various habitats typical of our part of the country. However, nature is not so tidy. After a decade, our Hedgerow was in the shade of the New Woodlot. We're slowly creating a new hedgerow along a farm road.

In 2014, emerald ash borers found the Ash Woodlot and we said goodbye to the ash trees. Renamed as the Old Woodlot, we've replaced the ashes with a wide variety of locally native species: lots of sugar maple, red oak, balsam fir, pagoda dogwood, bitternut hickory, ironwood, striped maple, yellow birch, and others. Black cherry and red-berried elder have arrived on their own, and we've planted chokecherries, cedars, blackberries and serviceberries around the edges.

OTHER RESEARCH

In addition to our inventories and experiments, the FWG has also been the site of other research studies. An English scientist asked permission to leave rotten meat in the ravine – he was studying blowflies. Carleton students were looking at water quality in ours and a number of other city ponds. An Ottawa U group monitored for ticks every spring and fall. Most recently, Lydia Wong has placed two bee boxes in our Backyard Garden for her PhD work on urban bees. And we host ongoing research on the *Hypena* moth, which eats dog-strangling vine.

INVASIVE SPECIES

Yes, it's not all sweetness and light at the FWG. Since the beginning, we have had a fierce battle with invasive species, and not just the "normal" ones like burdock and goutweed. Dog-strangling vine is our ongoing enemy,

Hypena opulenta, our hope for dealing with dog-strangling vine. Photo by Christine Hanrahan.

We love to see saucy red squirrels at the garden, but, even better, we love to see them finding food and shelter, because that was the original purpose of the FWG: to provide food, water, shelter, and space to build homes for local wildlife. Photo by Christine Hanrahan.

and we waste countless volunteer hours pulling, cutting, scything, and smothering this aggressive plant. Thanks to research by Naomi Cappuccino, we now see *Hypena* moth damage, but these tiny moth caterpillars have a long way to go before making a dent in the DSV population.

On a positive note, we've shared our experience, lessons, and tools used to control invasive species with many community groups.

PLANT SALE

Once the FWG's Backyard Garden and Butterfly Meadow were established, we suddenly had surplus plants. Not only that, we learned – slowly and painfully – how to propagate native species by collecting seeds, cold-treating them, and growing them indoors so that they would be large enough to put into your garden in late spring.

Our annual native plant sale is a fundraiser, but even more importantly, it gets native plants into the hands and gardens of hundreds of Ottawa residents every year. We also get a chance to talk to old friends, compare notes, give and get advice, and share stories.

I used to be afraid to ask how the plants bought last year were doing, as I thought repeat customers were replacing plants that didn't survive. I finally plucked up my courage and asked, "You bought some plants last year, right? How did they do?"

"Oh my goodness," replied the customer, "they're so great! I'm back to buy different species to make my garden bigger." We've heard similar feedback from many other "fans," as well as delighted comments about the butterflies and other species now frequenting their yards.

When we have spares, we also donate plants

to schools and community associations. We try to interest them in hardy plants that we know will survive a bit of trampling and neglect: flat-topped and heart-leaved aster, anise hyssop, wild bergamot, tall cinquefoil, figwort, rough and grey goldenrod. All attract pollinators and butterflies as well.

SOCIAL MEDIA

Like most organizations, we were eager to use social media to communicate with visitors and deliver "messages" about local wildlife. Our Facebook group now includes 1400 members. Most posts are photos of birds, but this is also a good way to communicate about such issues as dogs off-leash and creatures in trouble. We can also track things like the arrival of red-winged blackbirds and blooming times by monitoring what people post on Facebook.

MENTAL HEALTH

During the COVID pandemic, the FWG has been a place of refuge for many people as well as wild creatures. Membership in our social media groups has soared and our long-time visitors are telling us how much they appreciate their quiet time in nature.

With gurus like Sir David Attenborough, Doug Tallamy, and Canada's Lorraine Johnson telling us that, to save the planet, we have to plant native species and recreate ecosystems in our urban yards, the FWG has become an inspiration and a model for many of us. As well as a great place for a walk.

So many people have contributed to the FWG. Here are the ones who attended our 25th anniversary celebration. Photo by Christine Hanrahan.

MAKING FLORAL ARRANGEMENTS THAT

POP & PLEASE

BY LORI GANDY

Dare we dream that, at some time during the summer season, we will be able to welcome family and friends back into our gardens and to our tables? I'm feeling wistful even as I write that line. It's been too long. After all the work of prepping and preening our gardens in the spring, there is nothing more splendid than showing them off to our loved ones. I can't wait!

For me, a lunch or dinner party is a great excuse to bring my flower garden to the table.

Whether it's a cozy lunch, a roaring barbeque, a formal dinner or a summer soiree, the right floral arrangement can add a fragrant and colourful touch to your table. And what better way to express your creativity and pride in your garden.

With just a few tools and rules (or guidelines really; when it comes to flowers, anything goes), you can create stunning and long-lasting arrangements to showcase your flowers at their best.

Here are a few tips I gleaned from a recent prowl on the internet.



SELECT A SUITABLE CONTAINER FOR YOUR ARRANGEMENT

Vases are the most popular container for flower arrangements and they come in many shapes and sizes. But they are by no means the only vessels that can and should be pressed into service to create unique arrangements. Consider using watering cans, tea pots, mugs, mason jars. Any type of vessel or container can be matched to your occasion. Just be sure to clean the container before putting in the cut flowers to prevent bacterial growth.

TALL OR SMALL?

A general rule of thumb in determining the appropriate height of the flowers to the vase goes as follows: for a tall vase, the entire arrangement should be two and a half times the height of the vase; for smaller vases, you should aim for one and a half times the height of the vase and two times the width. If your arrangement is for a dinner table, consider using a smaller vase or vessel so people can see each other over the flowers and engage in that all-important conversation (I can't wait! Have I said that already?).

SELECT THE FLOWERS – BALANCE OVER SYMMETRY

When picking the flowers for your arrangement, focus on balance, rather than trying to achieve symmetry, as it's almost impossible to find two flowers of the same type that are exactly the same. Getting the right balance in your arrangement will make it more visually appealing and impactful. By focusing on balance, you can create crescent shapes or triangles, or whatever strikes your fancy. The result will not be symmetrical, but will have the right amount of balance to produce that "wow" you are looking for. You can check the balance of your arrangement by examining it from all angles, front, back and the top.

COLOUR

Nature's colour palette gives us so many options when making our floral arrangements –from a vase full of multi-coloured flowers, to a monochromatic display and everything in between. If you decide to go for a monochromatic arrangement, consider choosing a variety of types of flowers in different shades of the colour, and look for different textures to give even more flare. A stunning example is this display of delphinium and larkspur stems in blue-violet tones.

If you are going to mix colours, be sure that each colour gets noticed. Contrasting colours give a real pop to an arrangement. Darker coloured flowers can get lost in an arrangement, so be sure to place them beside white and paler coloured flowers so they get noticed. Green flowers and leaves are also a great addition, as they will stand out against both warm and cool colours.

Whatever you decide, mixing different colours, sizes, shapes and textures will add interest and appeal to your arrangement. Experiment and see what creations you can come up with.

TOOLS TO MAKE ARRANGING A SNAP

FLORAL SCISSORS OR CLIPPERS

A must-have to make those all-important clean cuts on flower stems, thus helping them take in water more easily.

FLORAL FOAM

Also known as oasis, floral foam is placed at the bottom of the vessel (you will need to cut it to fit snugly) to hold the stems in place. It has the added advantage of retaining water to keep the stems moist. Before placing any stems into the foam, hydrate it by soaking it in water. Floral foam also makes it easy to ramp up the dramatic appeal of your arrangement by allowing you to radiate flower stems from your container.

FLOWER FROGS

These intriguing tools will hold flowers in place, especially in containers that are too shallow or wide to provide adequate support on their own. And because they might be visible, depending on the vessel you use, they can also contribute to the beauty of the arrangement.

MAKE YOUR OWN FLOWER FROG

If you don't have a flower frog on hand, you can make your own. Martha Stewart provides the following instructions: "Make your own (flower frog) by balling up a square piece of chicken wire. The ball should be large enough to press against the sides of the container and stay snugly in place. Or secure a smaller ball to the bottom with floral adhesive. You can also make a flower frog using tape, florist foam, coiled grapevine, or hard cranberries. Keep several kinds on hand: The spiky variety are good for thin, flimsy stems; ones with holes are suited to the thicker stems of tulips and lilies; and hairpin frogs with wire loops are best for stiff stems and branches."

FLORAL TAPE

To make it easier to place your stems exactly where you want them, and ensure they stay there, clear floral tape can be applied in a grid formation on your vase. Just apply a few vertical lines of florist tape across the top, then the same number horizontally. Secure the tape by wrapping a layer of tape around the diameter of the vase to secure the grid. You can then position the stems. You may need to disguise any visible tape with either greenery or flowers. Floral tape also comes in green, which should be used only if it will be well hidden by plant material.

PUTTING IT ALL TOGETHER

PREPARING THE FLOWERS

Before you start placing any flowers inside your vase or container, you will need to cut the bottoms of the stems at a sharp 45-degree angle, about one to two inches from the bottom, to improve water intake. A good pair of floral scissors will make this task easier – don't use your kitchen shears. Playing with different heights can add dramatic visual appeal to your arrangement. So depending on the effect you want to create, you may need to trim the stems to different lengths to achieve it. Be sure to remove any leaves and thorns before placing stems.

DOMINANCE AND THE FOCAL POINT

The focal point of your arrangement might be a particularly dramatic flower or a dominant colour. It could be a pattern of one flower, or one colour appearing throughout the arrangement, such as several bright pink flowers scattered throughout. Or a texture – tall and spiky, ruffled petals, soft and airy fronds - at strategic locations. These repetitions and focal points create visual appeal and help carry your eye through the arrangement rather than just focusing it on one main point. If you use a mix of flower shapes and sizes, be sure to take care with the transitions between the types. The total display should look natural.

ARRANGING THE FLOWERS BY SIZE

If you have a mix of large and small blooms, place the larger flowers in the center of the arrangement and then add the small flowers around them. Use odd numbers of the same flower (for example, three of one type of flower instead of two or four).

The experts at The Spruce provide this great advice: "…When gathering flowers in various states of bloom, such as peonies or roses…place the smallest buds at the top and centre of the design, followed by partially opened blooms, while inserting the full blossoms at the bottom or centre of the arrangement."

CARING FOR THE ARRANGEMENT

FLOWER FOOD

If you've received a delivery of flowers recently, you might have a packet of flower food left over. These packets usually contain a mixture of sugar (nutrient for the stems), citric acid (lowers vase water pH), and bleach (wards off bacteria). If you don't have any flower food packets on hand, you can make your own. I found a couple of options that I will try: mix one part lemon-lime soda with three parts lukewarm water; or you can mix two tablespoons of lemon juice, one tablespoon of sugar, one quarter-tablespoon of bleach and one quart of lukewarm water.

WATER – KEEP IT CLEAN AND HEALTHY FOR YOUR FLOWERS

It's a good idea to change the water in your arrangement every two to three days, and add more flower food at the same time. Clear away any debris such as leaves or petals that you see floating in the water as these can promote bacterial growth. You can also trim the stems a bit to help with nutrient uptake. And lastly, to prevent your arrangement from drying out, keep it away from direct sunlight or heating and cooling vents. If you are preparing an arrangement for an outdoor event, you might consider keeping it indoors until your guests arrive.

What a glorious thought to end on – when the guests arrive! Bring on the friends, the feasts and the floral arrangements. Happy summer!

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HOW TO KILL INVASIVE PLANTS

By Julianne Labreche

Even though I love plants, last summer I became a self-confessed plant killer. It was first-degree, pre-meditated murder, plain and simple. Like a good Sherlock Holmes tale, my logic was elementary – to destroy every fast-spreading, non-native invasive plant that grows in my back garden.

But first, before telling you how to kill some plants, perhaps a little background would be useful. A few years ago, I attended a workshop about invasive plants, or 'aliens' as they are sometimes called, to learn more about them. Before that, my understanding of the threat they pose, especially when they escape into natural spaces, was rudimentary.

I learned that invasive plant species have a huge impact on biodiversity in the wild, crowding out native plant species that support pollinators, birds and mammals. They can also reduce forest regeneration, meaning fewer trees to combat climate change. Invasive plants also reduce crop yields, so farmers resort to expensive chemicals. Some invasive species are even toxic for humans, including nasty ones such as giant hogweed (*Heracleum mantegazzianum*) and wild parsnip (*Pastinaca sativa*). To make matters worse, invasive plants spread quickly – too quickly.

I also learned that Ontario has a serious problem with invasive plants, worse than any other province in Canada. Federally, the Canadian Food Inspection Agency identifies about 486 invasive or 'weedy' species. In Ontario, we have 441 species, nearly 91 percent of them.

Even though I care deeply about biodiversity in Canada, I am only a single gardener. What can one solitary gardener living on a medium-sized suburban property lot in Nepean do to make a difference? I decided that my best bet would be to get to know my enemy. I set out to improve my skills in recognizing invasive plant species and then find the best way to get rid of them.

Chemical deterrents – including homemade remedies – were not a solution. As a property

Yellow archangel *(Lamiastrum galeobdolon)*, an Ontario invasive plant species

owner in Ottawa, I respect and support the provincial pesticide ban. I also respect those experts searching for biological controls. Carleton University professor Naomi Cappuccino, for example, has spent years studying aggressive dog-strangling vine (DSV, *Vincetoxicum rossicum*) that entangles and kills other plants and confuses monarch butterflies that lay their eggs on them, mistaking them for milkweed. She is hoping to find an insect to manage the spread of this vine. In her lectures, she speaks about the complexity of finding biological controls.

Meanwhile, I'm an experienced gardener and know there are garden tools to control them – at least, in my own garden space. My garden has become my own ground zero in the fight against invasive plant species.

Based on what I've learned, my murder weapon depends on the plant species earmarked for destruction. Here are a few ways I kill invasive plants:

DIG Digging up lily-of-the-valley (*Lilium convallium*) works well in my garden, especially in spring when the soil is moist. It seems a shame, really, to get rid of it because this little woodland plant is so pretty in spring and smells so lovely. However, it is a non-native and considered an invasive plant that threatens natural spaces. It spreads rampantly, if left unchecked. I want it gone.

MOW The lawnmower can also help with some invasive plants. For instance, periwinkle (*Vinca minor)* is an invasive ground cover that spreads through underground runners. In time, it will form a tangled mass of stems that are difficult to eradicate. Mowing will help to contain the stems, at least, although other ways are needed to permanently eliminate it. Care needs to be taken however with the trimmings. Its stems can create new plants when they come into contact with the ground. I bag mine to send to landfill.

Periwinkle *(Vinca minor)*, an Ontario invasive plant species

CHOP When my Norway maple *(Acer platanoides*) got chopped down a few summers ago, it was pricey. It also attracted curious onlookers, fascinated by the crew and equipment needed to take it down. It is an invasive tree with a dense leaf cover that blocks light from understory plants. Its prolific seed production spreads Norway baby maples with gay abandon. It was worth every cent to remove it.

CUT BACK Cleaning tools and clothing will help to reduce the spread of invasive plant species. I always rinse and clean my boots carefully after returning from volunteer work at the Central Experimental Farm where dog-strangling vine is a problem. I was taught that the best method to reduce its spread in a garden is to cut it back, clipping the vine at its base. This needs to be done early, prior to it going to seed.

SMOTHER Plants need light to carry out photosynthesis and survive. Eliminating sunlight will eventually kill invasive plants. A thick black tarpaulin is one of the most environmentally friendly ways to destroy an unwanted plant. One of the most difficult invasive plants for any gardener to remove is goutweed (*Aegopodium podagraria*). It is a pernicious plant whose root structure forms a tangled mass that spreads and returns each spring. Covering a goutweed patch with a tarpaulin will block the light, causing it to weaken and die.

GIRDLE This method involves using a sharp tool to remove a strip of bark around the entire circumference of the plant's trunk. Over time, girdling a tree will weaken it, although it may not kill it. Sometimes, it will regrow from its roots. Girdling is an easy method to get rid of common buckthorn (*Rhamnus cathartica*), an invasive small tree that is a threat to the understory of forests around our region. Even if girdling doesn't kill buckthorn that ends up in my garden, it will weaken it and make it easier to dig it up by its roots next season.

CREATE BARRIERS As a gardener, I'm not too keen on black plastic edging that lifts and heaves after winter's frost. It will, however, slow down the growth of aggressive groundcovers, at least temporarily, including the invasive bugleweed (*Ajuga reptans*), a pretty little non-native that easily spreads into lawns. It is a rampant spreader in natural spaces.

EAT THEM If you're going to kill an invasive plant, then a gardener might consider eating it too, providing, of course, it's not toxic. Careful research is needed first. Most gardeners know that young dandelion leaves can be eaten in salads and the flowers used to make wine. That said, dandelion may be a nuisance weed but it isn't an invasive plant because it doesn't cause harm to native plants or their ecosystems. Garlic mustard (*Alliaria petiolata*), however, a native to Europe, is invasive. Its young leaves will enliven a mixed green salad.

No matter the invasive plant, care needs to be taken in removing them from a property. I never compost these plants, for instance. I don't even put them in the city's green bin.

I always remove any seed heads from these aggressive spreaders, lightening my load and saving me work next year.

This summer, I'll be murdering a few more invasive plants. With any luck, I'll replace them with native plants, filling those empty spaces with plants that really do deserve to be here.

Goutweed *(Aegopodium podagraria)*, an Ontario invasive plant species

OHS CAMPAIGN
Against Invasive Plants

During preparations for the recent OHS spring plant sale, a campaign was created called **Thanks But No Thanks**, encouraging both plant donors and sellers to politely say 'no' to invasive plants.

If you contributed plants, thank-you for considering our new guidelines relating to invasive plant species.

If you are looking for more information about invasive plant species, including photos and descriptions of invasive plant species in Ontario, please check out the **Ontario Invasive Plant Council (OIPC) at www.ontarioinvasiveplants.ca**

A helpful online brochure is available in both English and French from OIPC called *Grow Me Instead*, with useful alternative native plants to replace invasive species.

The City of Ottawa also has useful information on local invasive plants that gardeners should avoid. You can learn more by going to:
https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/wildlife-and-plants/plants/invasive-species

The Book Nook

31 TITLES SUGGESTED BY THE OTTAWA PUBLIC LIBRARY FOR OHS MEMBERS

Ottawa Public Library / Bibliothèque publique d'Ottawa

The Collection Development staff at the Ottawa Public Library have put together a list of materials for OHS members. This list includes new titles added to the OPL collection.

Among the materials this spring are books, DVDs and streaming videos, in English and French, relating to:

- Planting for wildlife, to attract birds, and to work with nature
- Sustainable, ecological and no-dig gardening
- Specific plants, such as conifers, bonsai, and herbal houseplants
- Plant propagation
- Home hydroponics
- Compost
- Le jardin potager
- My Garden Year, by Monty Don
- English and Irish gardens
- Seed to Dust, a meditative memoir
- DVDs, such as Ageless Gardens episodes
- Access gardening magazines (e.g. Horticulture, Gardens Illustrated, Le Jardin)

Click on the link below to see the complete list from the Library. This also allows you to view availability and place a hold from the link.

https://ottawa.bibliocommons.com/list/share/354296247_collection_development/1888636939_ottawa_horticultural_society_summer_titles

ONLY MAD DOGS & ENGLISHMEN

By Blaine Marchand

Another tradition has bitten the dust. And not due to the pandemic!

It all began innocently about 43 years ago when my sister-in-law came to a pre-Christmas family gathering in my apartment in the Glebe. Being the season of good tidings, she brought a plant arrangement in a pottery bowl. All these years later, I could not tell you what was in it. Most likely they were a miniature poinsettia and other festive plants. Whatever happened to the large ceramic pot, I have no idea. Accidentally dropped? Discarded in a fit of dispossession like the mantra - the only way to clean is to throw out?

Only one thing remained - a *Ficus benjamina* - and, like a child, it grew. Little did I know that decades later it would command such a large presence in my life. I mean way back then it was a mere snippet of a thing – maybe 7 to 10 cm, supple and easily flexible. Also, it was handily transferable. Great when home is an apartment and, in summer, provides a front porch shaded by bamboo stick blinds to provide privacy.

But then I moved and the gardening bug infected me. I grew feverish and delirious – a whole back yard! Mind you, most of it was asphalt and a double garage, which, as I did not own a car, immediately came down. I was so naive, not realizing garages are prized as inexpensive storage space. Its footprint was replaced by a raised vegetable garden edged with stones dug out of its earth floor. And then a few weeks later, in youthful ignorance or arrogance, I ignored the doctor's orders following an appendectomy and started lifting the asphalt with an iron bar, trucked in soil with a wheelbarrow, and created gardens and lawns in which I shaped a circular bed, which to my eye required something with height. There is only so much time when you are on sick leave.

For years, I had easily managed to carry the plant in the pot from the apartment to the porch, where it grew contentedly and upwards in the shadows of the overhang. Its drooping branchlets with glossy leaves leant the outdoor portico a festive southern air, in my mind at least. But now, 40 years later with creeping decrepitude settling into my bones and muscles, lugging a tree over 2 metres tall, greater than my height

- move over Tom Cruise and Napoleon – it has become unsustainable, not to mention unsupportable.

In nature, *Ficus benjamina* attains a height of 30 metres, which makes mine, from a certain perspective, rather puny. And you do see largeish specimens in office buildings and shopping centres growing contentedly under artificial light, protected from the erratics of seasonal change.

There are two theories as to why the tree is referred to as the weeping fig. The more mythic related how Buddha gained enlightenment while meditating under a fig tree for seven weeks without moving. (That's certainly enough to make one weep.) So, the ficus is considered a holy tree in East Asia. It symbolizes peace and abundance. In Indonesia, it is revered as the link between the human and spirit worlds.

Probably closer to the truth is that the *Ficus benjamina* is a rather sensitive thing. It quickly goes into stress mode, whether due to over- or under-watering, low light levels, or simply moving it from one place to another. It sulks, drops its leaves, frequently to the point of giving up the ghost.

Not mine. It has thrived on its bi-annual relocation. It is true that each May, when I take it outside, lift it from the pot and plant it into the circular bed, even with successive cloudy, rainy days, its leaves turn pale and drop off. Also, I have to use rocks to hold it in place until its roots take anchor. But in short order, in full sun, it is secure in its new environment and its emerald leaves emerge, happily spending the next four months growing. It draws gasps of surprise from passers-by along the Byron Park walkway. "How does your ficus survive the winter?"

Common parlance says to bring it in when temperatures dip below 10C. I ignore this. I leave it in the ground until there will be a frosty night. Though I admit, sometimes, being lazy or busy, I rush out late at night and throw a bedsheet over it. With overnight protection, it seems to relish the bright sunny September and early October days. To be honest, it is a chore to dig it out, largely due to its roots that, over the summer months, have grown thick and quite long, often extending beyond the edge of the garden. And there is the necessary, and usually impromptu, balance between trimming the roots and the size of pot I happen to have available. I use potting soil when settling it in.

Indoors, I place it in my dining room across (about 4 metres) from a double south-facing window. Leaves do drop but mostly they shine forth green and smooth and bring a tropical elegance on winter days. I give it a good watering once a week, to which I have added a dropper of standard liquid fertilizer.

On the plus side, studies have found that *Ficus benjamina* is effective at removing common household air toxins. On the down side, it can, in some people, cause allergic reactions, particularly for persons who have sensitivities to latex, which is present in the plant. However, in all the time I have had this tree, no one, not even the diner sitting next to it, has been impacted. And they have never left the table so ravenous that they munched on plant parts, which can bring on nausea, vomiting and diarrhea.

Well, May is nigh and the question is to plant or not to plant. Perhaps I need to find a strapping young neighbour willing to cart it outside. Or maybe I should merely turn a new leaf and begin a tradition of leaving it to bask in its glory indoors. **After all, we aging folks are now guided by the song's dictum - "Only mad dogs and Englishmen go out in the noonday sun." Et tu Benjamina?**

HORTICULTURAL THERAPY:
A HEALING AVENUE DURING THE COVID-19 PANDEMIC

by Sarah Shapiro, HTR
Horticultural Therapist, Registered

Horticultural Therapy is an evidence-based practice that can provide physical, social, emotional, intellectual, spiritual, and creative well-being for a specific population, institution, or client by promoting the engagement of gardening and nature activities. As many recent scientific studies have proven, being in nature is important; it aids in relaxation, improves relationships with yourself and others, awakens positive emotions and thinking, and so much more. Connecting people with the healing power of nature is an avenue needed more than ever during COVID with fear, stress, and anxiety doubling for most since the onset of the pandemic.

At the Perley and Rideau Veterans' Health Centre, I facilitate one-on-one and group Horticultural Therapy (HT) and Therapeutic Horticulture (TH) programs year-round for veterans and community seniors including those with dementia and/or those receiving palliative care. Promoting independence and empowerment supports residents to perform acts of daily living which leads to a better quality of life. Activities include but are not limited to: indoor and outdoor gardening, nature exploration, flower arranging, botanical crafts, as well as culinary and herbal projects using what we grow in the garden. We follow a "seed-to-harvest" approach and use grow lights for taking cuttings, dividing plants, starting seeds, and overwintering plants. In each session, we pay attention to, and interact

with, nature using all of our senses. I also incorporate other complementary therapies in my programs including: chair yoga, mindfulness, meditation, aromatherapy, sound and crystal healing, and herbalism. Assisted by volunteers, we maintain six courtyard gardens and undertake plant care in both indoor common areas and individual rooms. My ever-evolving programs are generated by strong and trustworthy relationships with residents by knowing their likes, dislikes, histories, and routines, incorporating play and humour in sessions, and being sensitive to their changing needs, abilities, and interests. Ultimately, I am able to meet residents where they are at, which informs my person-centered, personalized programming, and nature prescriptions.

Horticultural Therapy is an emerging field gaining recognition and accreditation. In Canada, the Canadian Horticultural Therapy Association offers a voluntary professional registration process of HTR (Horticultural Therapist Registered) and HTT (Horticultural Therapist Technician) designations. Horticultural Therapy is goal-oriented with defined outcomes and assessment procedures that are clinically documented by a trained Horticultural Therapist. Therapeutic Horticulture could include the same activities as HT but goals and outcomes are not necessarily considered nor clinically documented and may not be led by a trained Horticultural Therapist. HT and TH can be used together or on their own and activities can be adapted for any population. At The Perley Rideau, essential caregivers often accompany residents in a session and receive Therapeutic Horticulture while residents receive Horticultural Therapy.

When the pandemic was announced, staff members from my department, Therapeutic Recreation and Creative Arts, were each assigned to a single unit to prevent the transmission and spread of COVID-19. Prior to COVID, I worked on seven units which

included secured Dementia care units and I collaborated with colleagues for programming in our apple orchard, visits to our Duck Pond, and outings to garden nurseries with residents. Residents from units I was not assigned to would regularly participate in my programs and so we included residents from multiple units during activities. This allowed HT delivery to a wider audience and provided social opportunities for residents. Once COVID hit, residents were unable to visit other units. I had to re-evaluate the way I approached HT and the delivery of my programs, in order to bring nature to as many people as possible. I began with training staff on how to tend plants, and provided materials and nature-based activities they could use with the residents on their unit. I continued to find innovative and creative ways to engage others whether they are actively or passively participating, in verbal and non-verbal ways, indoors or outdoors, at their bedside, or at the end of life.

With COVID reorganization, I also schedule and facilitate video calls for residents and their loved ones. I integrate Therapeutic Horticulture

elements during virtual visits such as residents showing off their plants and providing virtual garden tours. These activities promote conversations about what the resident has been involved in, encourages them either to try something new or take up an old hobby, and allows them to continue to engage in gardening and nature activities they enjoy. Most residents are no strangers to gardening and kept their farms and gardens going through severe hardships including wartime. For many, plants were, and still are, a healing avenue.

Modifications and adaptations allow many of the same activities to continue during COVID, such as "Plant Clinic." The original focus of Plant Clinic was for residents to bring their plants to a session for care. It has now grown to the larger Perley Rideau community and

others stop by to see residents' projects, ask questions, and I give them gardening advice. Residents now bring nature materials and we create activities with them. Recently a resident brought avocado pits and we started by rooting them in water, saw the process of them splitting open and forming roots, and then planted them in pots. The resident who brought the avocados shared his previous experiences growing them and why it was a meaningful activity for him. We learned that it was his last project before moving to The Perley Rideau and that he had had to give his plants away to a friend.

While it is important to stay positive and consider how COVID could actually provide us with opportunities for personal growth, reflection, and the chance to listen to nature and to our bodies, lockdowns and outbreaks are nevertheless detrimental to our mental health and overall well-being. Often there is an emotional connection with pain. In order to safely express ourselves and release emotions, through HT, residents are able to give back to nature, themselves, and to one another by nurturing the garden in a non-threatening environment. We plant something at the start of a new endeavor and track our own development along with the growth of the plant. While weeding, deadheading, and pruning we let go of stress and negative emotions. When planting seeds we set an intention and envision something we want to materialize in our life. Our gardens provide spaces for solitude where we can appreciate the rhythms of life. I initiated a memorial section in the garden for residents to dedicate a piece of art that they had made, a plant, or another item of their choosing. For some, it is for the loss of a co-resident or a staff member who retired. For others, it represents the loss of a possession, freedom, or part of themselves. By acknowledging and accepting emotions without judgement we are able to work through the stages of grief and, furthermore, heal. Through our memorial garden we maintain a connection to our loss, create routine by cultivating the plants, are provided chances to mourn, and are able to focus on our own strengths and healthy coping strategies.

Volunteers are essential in my programs and I enjoy the intergenerational collaboration. I mentor high school students, college students, adults, seniors, co-op placements, summer youth programs, and community investment days. In our Amaryllis Project, volunteers and I select residents who are feeling isolated,

experiencing a mental health challenge, or are new to the facility. We visit the residents weekly and provide plant care together while discussing emotions. Residents are able to reflect on their experiences through poetry, painting, or another medium and, as a result, they are more likely to come to HT sessions which provide meaningful activities that encourage the desire to live, and reduce stress, anxiety, and depression. For more than a year, sadly, due to COVID, there have been no volunteers in my programs, including members from the Ottawa Garden Club who would assist with outdoor gardening. To manage the upkeep of the gardens, I collaborate with members of the care team. They assist Recreation and Creative Arts Staff and help residents outside to enjoy the gardens.

Through the so-called negative times, I believe there is always something positive that comes out of it. One of mine is developing closer relationships with the residents on my unit, residents' families, and staff. I am looking forward to continuing these much richer relationships while excited about our chance to once again form new ones. We are starting to welcome back volunteers including a 2021 summer youth program. In 2018, the Horticultural Therapy volunteers won the team award at the annual volunteer recognition awards. They were nominated again in 2019 (no awards in 2020 due to COVID).

We have been very resilient through COVID and nature has been our best teacher. Our gardens were always a shared space for residents, families, staff, and volunteers but when fences were installed in the courtyards we were divided by unit. During the construction, plants were damaged and even fell over on one resident's beloved Hibiscus. We lost hope that it would recover but a few weeks later the Hibiscus began growing and ended up coming back bigger and stronger than ever. What a beautiful display of resilience in nature. With lack of physical human interaction, residents are able to maintain contact with the natural world and through these HT activities, residents' fears, anxieties, and stress surrounding COVID are reduced and they are more adaptable to constant changes and COVID measures within the facility. The residents and I agree the best way to cope through these challenging and uncertain times is through humour and gratitude. A resident on my unit sums it up as, "It's

a prison on the outside but a five-star hotel on the inside."

Making self-care a priority continues to help me through COVID and allows me to prevent burn out. It is necessary to lead by example, and so I strive to live a holistic lifestyle. I make time for my own gardening, engage daily with the green wall in my apartment building lobby, take regular sensory nature walks, and use natural health products and alternative therapies including yoga, meditation, emotional freedom technique "tapping," essential oils, and Reiki. I keep the Sagittarius in me happy by continuing to explore and I have discovered new nature areas in my neighborhood over the past year. This goes to show one does not need to travel far to receive the benefits of staying grounded and connected to the Earth.

The pleasure, fulfillment, and rewarding benefits of HT and TH provide me with the ability to share these things with others and this is why I am continually promoting the profession and sharing expertise through interviews with the media and presentation of workshops. I am also a member of the Friends of the Experimental Farm, the Ottawa Herb Society, the Canadian Horticultural Therapy Association, and the Ottawa Horticultural Society. My upcoming project entails collaborating with a for-profit social enterprise business which will aim to bring HT and TH across Ottawa. My role is to be the lead Horticultural Therapist and to recruit volunteers. My next article will be coming out in the Friends of the Experimental Farm summer newsletter: https://friendsofthefarm.ca/newsletters/.

COVID-19 is our messenger to bring love to all walks of life by being kind to the planet, ourselves, and each other.

SARAH'S SOCIAL MEDIA AND CONTACT INFORMATION:

Facebook:
https://www.facebook.com/gardenwiththeplantlady/

Instagram:
https://www.instagram.com/gardenwiththeplantlady/

LinkedIn:
https://www.linkedin.com/in/sarah-anne-shapiro-42596268/

Email: sarahanneshapiro@gmail.com

SARAH'S RECENT INTERVIEWS:

"Staying Grounded." Glue magazine: Algonquin Student's Association Magazine
https://glueottawa.com/2020/12/20/staying-grounded/

'Everyone has a green thumb': Rediscovering gardening during the pandemic
https://ottawa.ctvnews.ca/everyone-has-a-green-thumb-rediscovering-gardening-during-the-pandemic-1.4988418?-cache=yes%3FclipId%3D89926#_gus&_gucid=&_gup=Facebook&_gsc=EilYcMP

Gardening QUIZ

PROPAGATION — MAKING MORE

BY EDYTHE FALCONER

TYPES OF CUTTINGS & PARTS OF PLANTS

1. Soft cutting from current season's immature growth

2. Semi-hard cutting from current season's growth with hardening begun at the base

3. Leaf or sections of leaves used to start new plants

4. Cuttings taken from lifted plant in late winter or early spring (upper end near surface)

5. Cutting taken with heel or sliver of older wood at its base

6. Cutting taken from base of plant as growth begins in spring

7. Growth bud on tubers or bud in leaf axils

8. Cutting made with short length of stem with bud or pair of buds at the node

9. Cutting made from side shoot with plug of older wood at its base

TERMINOLOGY

10. Roots formed at base of cutting

11. Chilling (or warming) seed to break dormancy

12. Nicking or abrading a hard seed to encourage germination

13. Protective tissue that forms over cut or wounded surface

14. Growth hormones

15. Temporary cessation of growth and slowing of metabolic processes

16. Gradual acclimatization to open garden

Match the following words with the descriptions above.

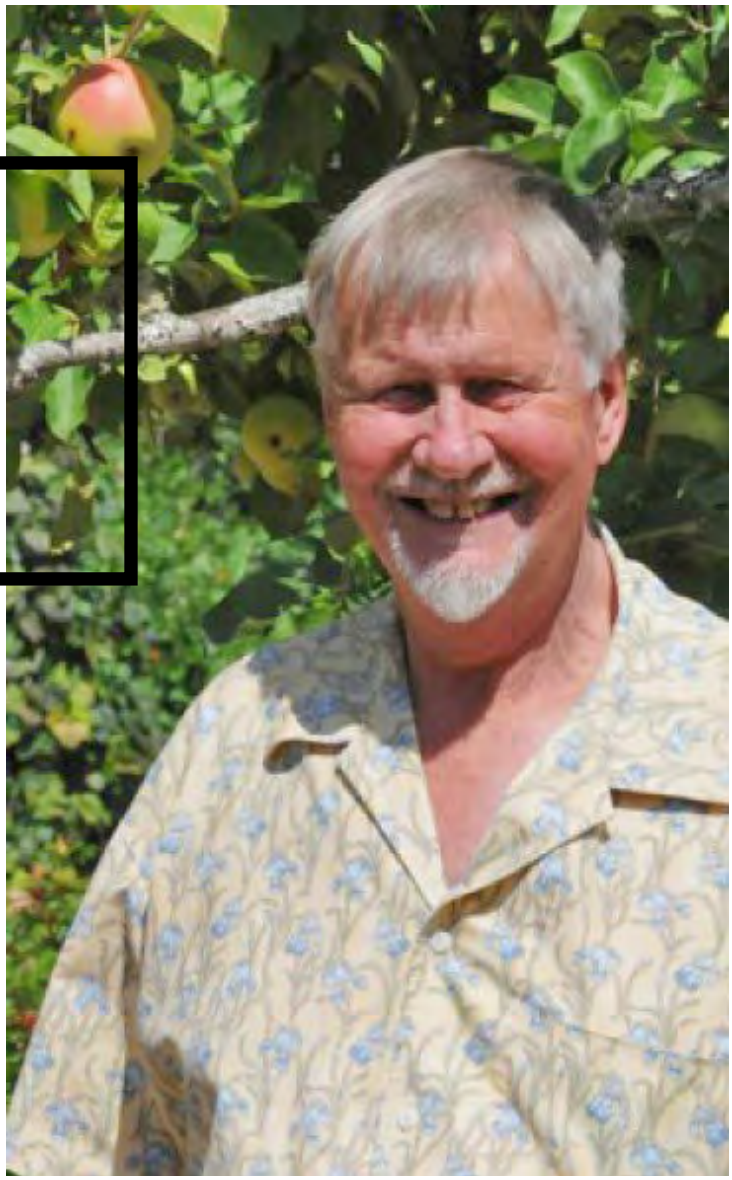
A. ADVENTITIOUS
B. HARDENING OFF
C. STEM
D. MALLET
E. AUXINS
F. EYE
G. DORMANCY
H. CALLUS
I. BASAL
J. STRATIFICATION
K. STEM
L. SCARIFICATION
M. LEAF
N. LEAF BUD
O. ROOT
P. HEEL

GARDENING QUIZ ANSWERS....DON'T PEEK!

Seriously...stop peeking. 1. Stem 2. stem 3. leaf 4. root 5. heel 6. basal 7. eye 8. leaf bud 9. mallet 10. adventitious 11. stratification 12. scarification 13. callus 14. auxins 15. dormancy 16. hardening off

IN MEMORIAM
DR. IAN E. EFFORD

January 4, 1936 - June 7, 2020



Ian Efford died in June 2020. He had been an active member of the OHS from 1993 to 2004, when he moved back to British Columbia.

Ian was a professor in the Department of Zoology at the University of British Columbia in the 1960s and 1970s, where he was a proponent of ecological research. Moving to Ottawa, he worked in senior positions in the federal public service.

Ian was a very active and valued member of the gardening community in Ottawa.

He was a member of the Ottawa Valley Rock Garden and Horticultural Society in its early days, and served as its third president. He was instrumental in getting it designated as a horticultural society, and thereby joining the Ontario Horticultural Association (OHA). He was also a founding member of the Ottawa River Iris Society. Much of his energy and dedication, however, was directed at the establishment of a National Botanical Garden in Ottawa. While the idea had been around for many years, Ian was instrumental in reviving and promoting the idea and establishing a group to lobby for a botanical garden in the 1990s. In this regard, he worked with other garden groups, including the OHS, and mobilized his knowledge and contacts of government. The Ottawa Botanical Garden Society that he established evolved into Canadensis.

For the OHS, Ian opened his garden for members' garden tours, donated plants to OHS sales, and volunteered at various activities, as well as contributing articles to the newsletter. He was nominated by the OHS in 2004 for a District 2 Service Award and in 2006 for the OHA's Silver Medal.

Ian's garden passion was species irises,

although he was also heavily involved with Siberian irises, rhododendrons, and rock garden plants.

Ian was extremely knowledgable and affable, always ready to give advice, share his knowledge, and eager to talk about gardens and gardening. He was invariably willing to open his garden to visitors, and was exceedingly generous in giving away plants. Many OHS members have irises and other plants in their gardens that came from Ian.

In retirement, Ian and his wife Shirley moved back to British Columbia, where he remained active in horticultural circles.

(Many thanks to various OHS members for their memories of Ian, as well as the OVRGHS newsletter.)

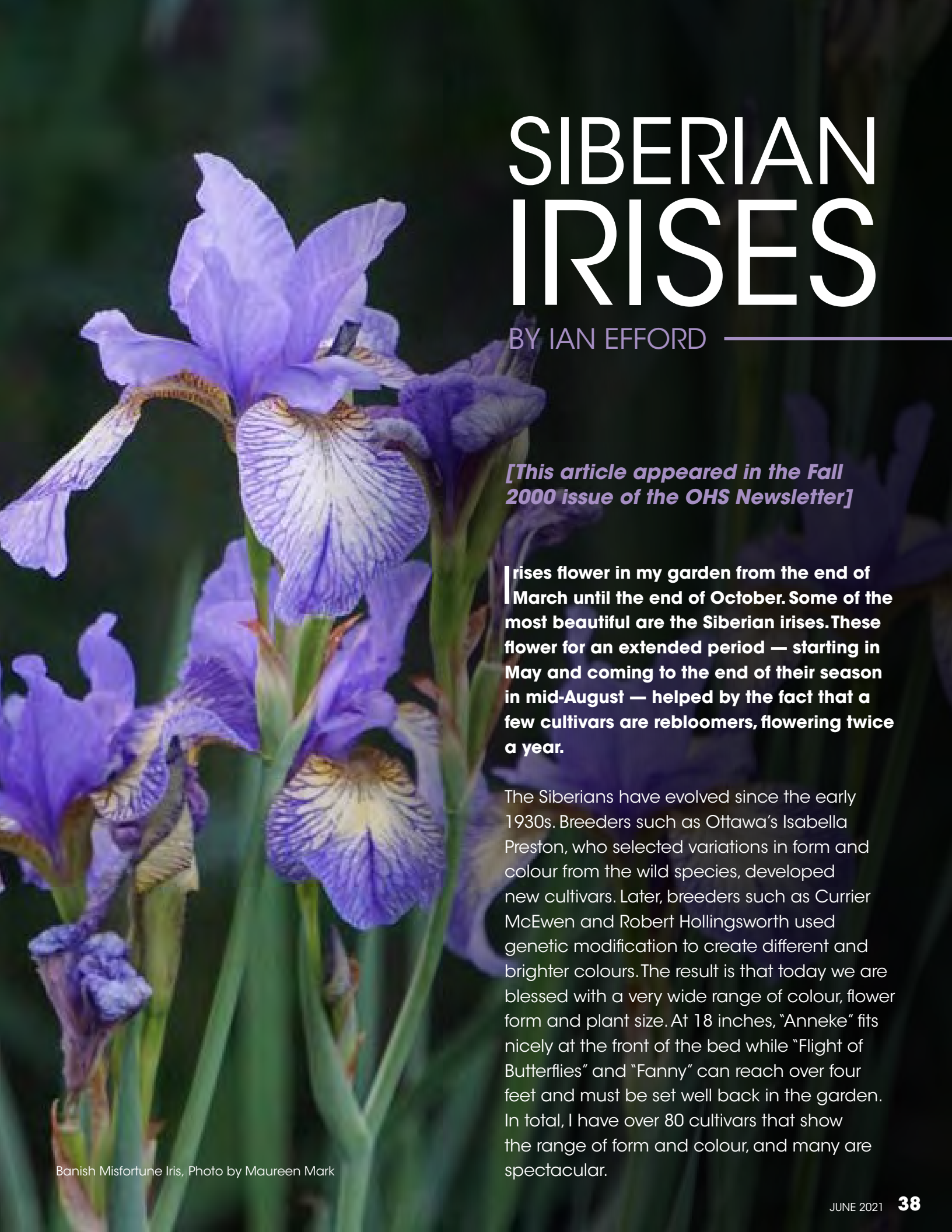
Photo taken & contributed by OHS Member Jane Ritchie

MEMORY

IAN EFFORD
by Sheila Burvill

In 2001, my first year working on the OHS newsletter, I already knew that Ian Efford was a man we could count on, whether it was to submit an original article or to take on a suggested topic and write something to fit in with the theme of a coming issue. So, it was no surprise to hear from him about an idea for a newsletter item, but what he suggested was something new to me. He'd somehow come up with an invitation for the newsletter to attend the official presentation by Natural Resources Canada of the new Plant Hardiness Zone map for Canada. Did he want to write up the topic himself? I asked. "No, no," he said, "You should go to the press conference yourself and write it all up." And so, I did. Channelling my inner Lois Lane, I turned up at Major's Hill Park, notebook and pen in hand. Ian introduced me to others in attendance, made sure I got a copy of the press releases, and answered some questions for me. Thanks to him, I got my first cover story in the September 2001 issue.

The following page is a previously published article written by Ian Efford for the OHS.



SIBERIAN IRISES

BY IAN EFFORD

[This article appeared in the Fall 2000 issue of the OHS Newsletter]

Irises flower in my garden from the end of March until the end of October. Some of the most beautiful are the Siberian irises. These flower for an extended period — starting in May and coming to the end of their season in mid-August — helped by the fact that a few cultivars are rebloomers, flowering twice a year.

The Siberians have evolved since the early 1930s. Breeders such as Ottawa's Isabella Preston, who selected variations in form and colour from the wild species, developed new cultivars. Later, breeders such as Currier McEwen and Robert Hollingsworth used genetic modification to create different and brighter colours. The result is that today we are blessed with a very wide range of colour, flower form and plant size. At 18 inches, "Anneke" fits nicely at the front of the bed while "Flight of Butterflies" and "Fanny" can reach over four feet and must be set well back in the garden. In total, I have over 80 cultivars that show the range of form and colour, and many are spectacular.

Banish Misfortune Iris, Photo by Maureen Mark

If we disregard the new species that have been found recently in China, there are 11 known species in the Series Sibiricae, and they can be divided into two groups: the Siberica and the Chrysographes. The three species in the first group have 28 chromosomes and include *I. sanguinea, I. sibirica and I. typhifolia.* The eight species in the second group have 40 chromosomes and include *I. bulleyana, I. chrysographes, I. clarkei, I. dykesii, I. forrestii, I. phragmitetrum, I. delavayi* and *I. wilsoni*. Since. *I. phragmitetorum* is unavailable and *I. dykesii* is of doubtful origins, I will exclude them here.

All these species come from the colder parts of Europe right through to North China, and so are well adapted to our climate. They certainly grow well in my garden. Four species produce blue to purple flowers well above the foliage at a height of three to four feet. Stately, with delicate long, fine leaves, they make ideal garden plants.

The following species prefer a damp area with partial shade, and I am sure there is one that will bring joy to any gardener. These little ones are 12 to 18 inches tall and are simply delightful!

I. clarkei is denim blue with fine black lines on the falls that are large, round and held out flat. Just beautiful! *I. forrestii* and *I. wilsonii* can be treated as identical for all but the systematics expert. This pair produces many very pale yellow flowers at about 15 inches. Finely formed, the flowers are beautiful to behold first thing in the morning when they [are] newly opened.

I. chrysographes is one of the few plants with naturally black flowers. At a distance, they appear black, but when held up to the light, the flowers are very dark maroon. This iris is also about 15 inches tall and is well worth growing.

Perpetual Emotion Iris, Photo by Maureen Mark

Finally, if you want some fun in the garden, there are the *chrysographes* x *wilsonii* or *forrestii* crosses. These stand out because their flowers are yellow with mottled black blotches. These are certainly different and add a comic touch.

Iris sources include local plant exchanges or sales. All these species can be grown easily from seed that can be obtained from local or international seed houses. Some local nurseries may even have plants.

If you want more information on Siberian irises, I suggest that you start with "The Gardener's Iris Book" by Willian Shear. It is recent, accurate, colourful, written by an expert and available in Ottawa. For a book on Siberian cultivars, there is the Currier McEwen classic "The Siberian Iris." Finally, if you have any questions please do not hesitate to ask me.

Ginger Twist Iris, Photo by Maureen Mark

Little Prince Iris, Photo by Maureen Mark

GARDENING IS GOOD FOR MY SOUL

BY HELEN MCGUIRE HOGAN

Thank goodness for gardening! I love gardening, but usually only from May to October, with the planting of garlic into November. Being in the garden between golf games is good for the soul and great exercise too.

My winters are normally spent on the ski slopes and gardening is set aside once again. But not this year.

With little snow until mid-January, and the pandemic lockdowns, I found myself in my gardening books, watching videos, and listening on Zoom to local gardeners from different gardening groups. The more I read and listened, the more I wanted to learn. And, given the isolation of the lockdowns, the camaraderie of the gardening community gave me a sense of the wonderful opportunities to come when I get to meet everyone live.

Each year, I usually plant a few tomato seeds indoors in April, once I have put my skis away. But this year I embraced my time at home and started planting seeds in February. Each week I would plant another tray of something different. I even invested in those magical grow lights and watched as the seedlings popped their tiny heads through the soil. I have a small home, with limited space for planting, transplanting, and growing plants. Thank goodness I have an understanding husband who thinks it is wonderful I have this passion that has kept my spirits high through this dark period in our lives. He is also out in our community garden with me every summer, building our raised beds, weeding, and planting his potatoes.

So, as I watch the snow fall on this April day, I once again head into my kitchen with my soil, trays, pots, seeds and seedlings and see what needs a bigger pot and which new seeds I would like to start today.

GARDENING It grounds us...gets us out of our busy heads and back into our bodies. Alone there on our knees, we can breathe. With our nurturing hands duly occupied, while gardening we allow ourselves the time & space to truly feel — peace, pride, satisfaction, joy.

Photos by Helen McGuire Hogan. Gardening quote © Jodee Stevens, Cardthartic

SPECIAL TREES

REMARKABLE TREES

OF CANADA'S CAPITAL

The forests of the capital region abound with hidden gems. The tremendous diversity of tree species that thrive within these forests tell the story of our culture and history.

The National Capital Commission (NCC) has gathered close to 170 examples of the most remarkable trees in a compilation entitled "A Living Legacy: Remarkable Trees of Canada's Capital."

The trees selected are outstanding because of their age, size or other characteristics. Some are remnants of ancient forests, while others date back to the very first projects aimed at beautifying the capital.

Photo by the National Capital Commission

The trees described in the book are easy to access on foot or by bicycle. Most of them can be found in Gatineau Park, as well as in the Greenbelt and urban parks, including the Dominion Arboretum at the Central Experimental Farm.

Photo by Suzanne Hardy

Suzanne Hardy, a specialist in identifying trees of interest, was asked to catalogue the most noteworthy specimens on federal lands in the National Capital Region.

The book is the product of countless visits and two years of in-depth research. In a very accessible way, this work describes the distinctive features of these trees, and includes anecdotes drawn from, as well as passing references to, regional history.

The NCC is committed to communicating the tree names and place names in the Algonquin language. The names provided in the book were reviewed and approved by members of the Kitigan Zibi Anishinabeg First Nation and the Algonquins of Pikwakanagan First Nation.

INTERACTIVE MAP OF REMARKABLE TREES

https://ncc-ccn.maps.arcgis.com/apps/MapJournal/index.html?appid=a9ba98fb7e8b4c2ba9be337235b95291

BLOG:

https://ncc-ccn.gc.ca/blog/150-remarkable-trees-in-the-national-capital-region

Suzanne Hardy, *A Living Legacy: Remarkable Trees of Canada's Capital*, National Capital Commission, 2020, ISBN 978-0-660-32171-4 (paper), 978-0-660-32170-7 (PDF)

ABOUT US

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We depend on our members for ideas, articles and information about what is going on in the gardening community.

PLEASE SEND YOUR SUBMISSIONS TO:
info@ottawahort.org

The views and opinions expressed in this newsletter are solely those of the individual authors. They do not purport to reflect the position of the OHS or its members.

EDITOR:
James R. Robertson

DESIGN & LAYOUT:
Kat B. Design Studio
www.katbdesign.com

EDITING / PROOFREADING:
Lori Gandy
Tuula Talvila

CONTRIBUTORS:
Sheila Burvill
Edythe Falconer
Lori Gandy
Sandy Garland
Anne Johnston
Juliane Labreche
Helen McGuire Hogan
Blaine Marchand
Maureen Mark
National Capital Commission
Ottawa Public Library
Sarah Shapiro
Tuula Talvila

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