

CROSS POLLINATION

Halton Master Gardeners Monthly Newsletter
MARCH 2025 | VOL. 18 ISSUE 2

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Halton Region
Master Gardeners



Image: Design by Nature - Upper Peninsula Native Plants LLC

Barren Strawberry (*Geum fragarioides*): An Attractive, Low Maintenance, Native Groundcover

By Hariette Henry, Halton Master Gardener

Barren Strawberry, *Geum fragarioides*, formerly *Waldsteinia fragarioides* is an ornamental plant grown primarily as a perennial wildflower. Unlike real strawberries such as *Fragaria virginiana*, the plant does not bear an edible sweet fruit, rather it produces a small dry single-seeded, inedible achene, hence the common name "barren".

Barren Strawberry is a mat-forming plant (to 6" tall) which spreads by rhizomes below the soil surface. It features yellow, 5-petaled flowers which bloom singly or in clusters in mid-spring and dark green leaves with wedge-shaped leaflets that remain over the winter. These leaves develop a copper to purplish tinge as the temperatures drop.

While seeds for Barren Strawberry are available, it is usually grown by vegetative propagation. You can find it at local nurseries, especially those specializing in native plants. In a year or two, you should be able to propagate Barren Strawberry by carefully dividing the rhizomes and replanting them in other locations in your yard that need a low-growing groundcover.

Very little is known about Barren Strawberry's floral-faunal relationships. However, [Andrenid bees](#) (*Andrena* spp.) have been observed visiting the flowers for nectar and/or pollen. It is likely that other small bees and other insects visit the flowers as well. Slugs are thought to be occasional unwanted visitors.

Continued on next page

A LOW-MAINTENANCE, NATIVE GROUND COVER (CONT'D)

A member of the Rose (*Rosaceae*) family, Barren Strawberry can be used as a ground cover in many locations. It works well below shrubs in small areas of the border, in rock gardens, native plant gardens, woodland gardens and in other naturalized areas. It can also be used as an edging plant or as a reasonably good substitute for grass in transitional areas. If planted near a driveway, path or other hardscape, it will tolerate occasional light foot traffic, but not regular walking. Barren Strawberry combines well with other native plants such as Foamflower, Wild Ginger, Wild Blue Phlox and Pennsylvania Sedge.

They prefer soil containing rocky material, clay, loam, or humus. The soil's pH should be moderately acidic to neutral (5.5–7.0). These versatile plants prefer part shade, but they will grow in full sun to full shade. Barren Strawberry is drought tolerant once established and most reports indicate it will tolerate salt.

In Canada its native distribution is to southern Ontario east to New Brunswick. Unfortunately, some native plant nurseries have been selling their customers a look-alike species from Eurasia called *Geum ternata*, by mistake. It is therefore important, if you plan to shop for Barren Strawberry, to be able to distinguish the difference between the two plants. For one thing the Eurasian plant has prettier flowers with rounder petals, but the definitive way to tell them apart is to turn the flower over. Between the sepals, there are little bractlets on *G. ternata* (the Eurasian plant) and none on the native *G. fragarioides*. Please refer to the photos below to properly identify what you are purchasing.





Eurasian *Geum ternata* (above) has rounder petals and prettier flowers than *G. fragarioides*



Backside of flower shows small bractlets on *G. ternata* between the sepals

DETAILS AT A GLANCE

 FULL SHADE	PART SHADE	FULL SUN
 MOIST	MEDIUM	DRY

Plant Type (Family): Perennial groundcover (*Rosaceae*)

Height/Width: (H) 5-8 cm (2-3") (W) 20-25 cm (8-10")

Flowers: 2 cm (3/4"), bright yellow, 5-petaled flowers which bloom singly or in clusters in mid-spring.

Leaves: dark green, trifoliate leaves with wedge-shaped leaflets (each 1-2" long) that remain over the winter. Leaves develop a copper to purplish tinge in winter.

Faunal value : little is known... Andrenid bees (*Andrena* spp.) have been observed visiting the flowers for nectar and pollen.

Companion Plants: foamflower, wild ginger, wild blue phlox.

Tolerates: soil containing rocky material, clay, loam or humus; salt tolerant.

Growing advice: can be used as an edging plant or a good substitute for grass in small areas.

Native Range: Ontario east to New Brunswick

Supports



Nectar and pollen



Vascan Range

References:

- [Minnesota Wildflowers, a field guide to the flora of Minnesota](#)
- [How to Plant and Care for Barren Strawberry](#)
- [North Carolina Extension - Plant tool box](#)
- [Credit Valley Conservation](#)
- [Penn State Extension - Barren Strawberry, A Low-Maintenance Native Groundcover](#)
- [Barren Strawberry, Is Yours Native?](#)



MARCH GARDEN 'TO DO' LIST

By Claudette Sims, Halton Master Gardener

☐ **Perennials** – Continue to leave seedheads for birds, but be aware that they are not useful to our bees *until they are cut*. When you see your first bee flying, trim stems down to 20-60 cm (8-24 in) and *leave them until next year* to allow bees to complete their life cycle. For more detailed information read this article about [Gardening with Wildlife](#).

☐ **Pruning** – Prune *Hydrangea arborescens* – (Smooth Hydrangea or 'Annabelle') before new growth appears. Remove old weak stems, leaving about 1/3 of stems 30 cm long for structure and support. For information about other hydrangea species check out our easy to read [factsheet](#)! **Clematis** – This method works for all clematis: Starting at the top of the plant working down, cut out all deadwood on each stem until you reach a live bud. Secure vines as needed. For more information about pruning specific clematis groups, check out this [factsheet](#). Prune **fruit trees** such as apple, cherry, plum, pear before flower buds swell. Remove any dead, diseased twigs and prune for an open shape. Pear trees generally don't require pruning, except for shaping. **Overgrown Shrubs** – Use [rejuvenation or renewal pruning](#) to restore scraggly or overgrown multi-stemmed shrubs. **Red raspberries** – Cut and remove any canes that bore fruit last year as well as any weak canes and dead tips. **Blueberries** require annual pruning to produce high yields. Prune out dead, broken, injured branches and remove weak canes and canes older than 5 years or larger than 5 cm. **Prune with Wildlife in Mind**– Use the "[chop & drop](#)" method so 'prunings' replenish the soil & provide nesting material for native birds. Leave larger pieces of wood in the garden for wildlife & consider leaving 'snags' in place as long as it is safe to do so.

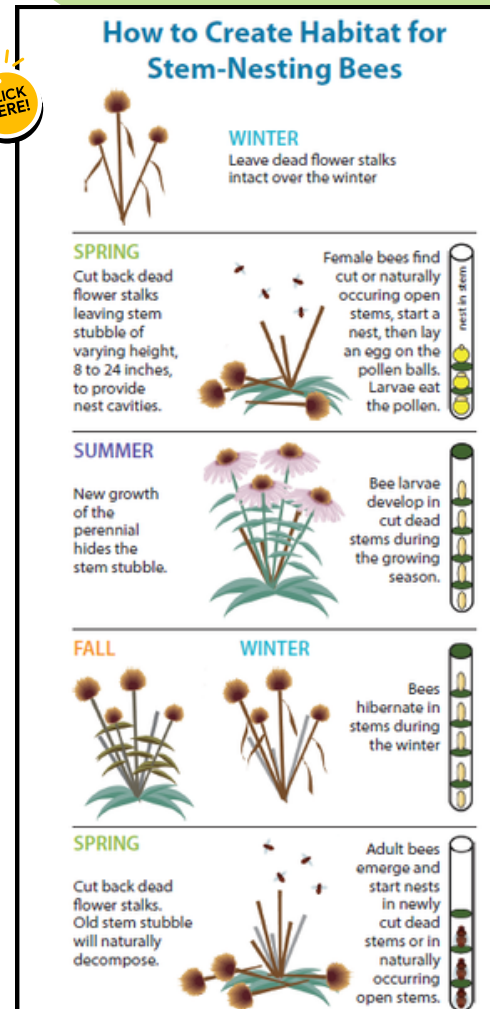
Image: [linda bergman-althouse](#)

“Bee Care-ful!

How you garden makes a difference to our native bees. Cut back stems in spring as soon as you see bees flying! Leave those stems for a year so bees can complete their life cycle”



For more information



☐ **March break** is the perfect time to try some of these [fun gardening activities](#) with your children or grandkids!



What Happens “Under a Blanket of Snow”?

By Olga Marranca, Halton Master Gardener

A Winter Wonderland

It is a beautiful cold, clear sunny day in February. The snow's reflection on the sun warms us. At night, the same snow glistens like scattered diamonds under the street lights. Have you ever wondered what happens under that blanket of snow? What do you think of when you hear the term? To me it is when the pine tree's boughs droop from the weight of the snow and lawn ornaments and low-lying shrubs look like little ghosts, as if they are covered with a white sheet, totally unrecognizable. Under that layer is another world. Before I explain what happens, it helps to understand what makes it snow?

What Makes It Snow?

In order for it to snow, the atmosphere must contain moisture and be below freezing, 0°C (32°F). If the ground temperature is 5°C (41°F) the snow will melt. It can never be too cold to snow (provided there is moisture in the atmosphere). Snow is an accumulation of packed ice crystals, and weather variations change: the type of snowpack; the temperature under its layer; the water content; the color of the snow; and its characteristics. These variations also change the snowpack structure, providing various layers of deposits and textures, composed of snow.

Snow as an Insulator

Snow acts as insulation against the frigid air temperatures. Since every snowflake is unique, their desultory order leaves air between each one. These air gaps act as insulation between the snow layer and the soil beneath it. The [*pukak layer*](#), so named by Inuit people, is a porous, loose layer of snow that forms at the bottom of the snowpack at soil level. This layer (subnivean layer) warmed by the heat of the soil acts as a playground for voles, shrews, weasels and even squirrels.

Strong winds can break snowflakes (crystals) into even finer crystals and form heavy dense layers. Surprisingly, air temperatures above the snow can be higher, compared to below the snow layer. This is true when the sky is clear and sunny and the reflection radiates thermal energy.

Photo:
Christie Lake
Conservation
Area, Black
Raspberry and
Evergreens,
Morag Johnston,
Halton Master
Gardeners



How Snow Protects Plants and Soil

If the soil is not frozen, plants and insects will continue to stay alive. This insulation of snow will also protect against dry, frigid temperatures that can kill various crops, (e.g. wheat) without that layer of snow. The top foot of the snow layer will be colder if temperatures are low, but snow temperatures at ground level are warmer from the ground absorbing the heat in warmer months. The snow layer insulates and slows the heat transfer to the cold air above.

Water density in the snow cover is also quite variable depending on flake structure, temperatures, wind, sun and other variables. A 10" layer of snow contains between 4 and 10% water. Look at snow as a slow release watering hose, trickling as it melts.



Photo: Canva, Highbush Blueberry

Continued on next page

“UNDER A BLANKET OF SNOW” (CONT'D)**How Plants Survive Under Snow**

What happens to plants also varies. Most evergreen trees do not lose their needles (foliage) the way deciduous trees do, and comparably perennials can live throughout the winter, but annuals live a single season and die, although their seeds can survive to germinate and grow in the spring. Photosynthesis is the process by which plants convert sunlight, water and carbon dioxide to create oxygen and sugar to live. When winter arrives, with reduced daylight hours deciduous plants respond by dropping their leaves and entering a state of dormancy, where their growth and respiration significantly slow down. They rely on stored carbohydrates and nutrients within their roots to sustain them through the colder months.

Snow and Light Penetration

A snowpack can reflect 75 - 95% of the sun's light while still enabling photosynthesis to continue under the layer of snow. Measurements as deep as 80 cm (31 inches) have shown light penetration. This is one of the reasons some plants begin to flower under a blanket of snow.

The Role of Snow in Protecting Plants

- As mentioned above, a snowpack adds protection from wind and extreme temperatures, protecting the plants.
- Our native plants evolved to withstand freezing temperatures and many of their seeds require cold, moist stratification to germinate.
- Snow will provide some protection from extreme temperatures reaching deep into the soil that may result in damage to the roots.
- Snow provides a layer of insulation for bulbs.
- Snow provides a layer of protection from fluctuating freeze/thaw temperatures.
- When snow melts, it will provide moisture to the soil.
- A snowpack also helps contain the existing moisture within the soil.

How Insects Survive the Winter

Leaf litter protects insects in larval form. Insects can also replace the water in their bodies with glycerol, while others bore deeper underground. Some insects can overwinter as nymphs in bodies of slow moving waters. Some lay eggs that survive the cold or overwinter as pupae attaching themselves to plant branches. Queen bumble bees overwinter in the soil, and leaf cutter bees overwinter in stems. We have all found insects hibernating in house attics, eaves, tree holes, and under logs and rocks. Not all insects have the opportunity to overwinter. Along with some birds and other insects, Monarch Butterflies migrate south. Similar to plants, to overwinter, insects require stable, cold temperatures. Severe temperature variations of thaws and freezes can be damaging. It is important for us to protect their micro-habitats by leaving bare soil, pieces of logs, twigs and leaves.



Snow Fly, [Genus Chionea](#) - a type of wingless crane fly.
Photo: Sean James, Guelph Master Gardener, noticed it wobbling its way across a snowy path in January.
Temperature that day: -2°C !

Hopefully you have planted some native plants that nurture nature and show off in the winter weather. Be sure to look at our members' winter photos in the [Garden Inspiration](#) page of this issue.

Further Reading:

[National Snow and Ice Data Center](#)
[Walking Mountains Science Center](#)
[Nature's Seed](#)
[University of Illinois Urbana-Champaign](#)



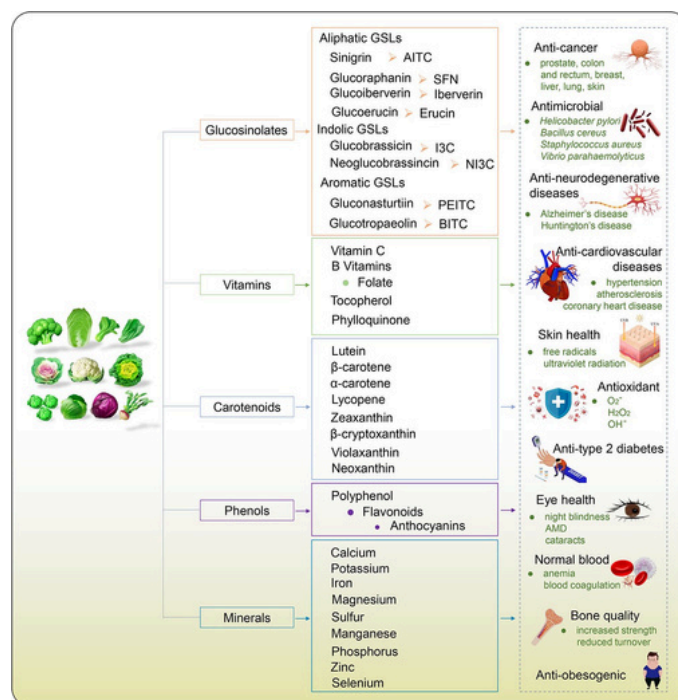
Nourish Your Garden, Nourish Your Health: The Power of Brassica Vegetables

By Nikolina Radulovich, Halton Master Gardeners

Planning your vegetable garden for the upcoming season? As you map out your garden beds and select the best crops to cultivate, consider incorporating members of the *Brassica* family. Recent research has highlighted their impressive nutritional benefits, making them a must-have in any garden focused on health and vitality.

Brassicas—favorites like broccoli, cabbage, cauliflower, kale, and Brussels sprouts—are celebrated not only for their robust flavors and culinary versatility but also for their powerful health-promoting compounds. A [recent review](#) in [Horticulture Research](#) explains how these vegetables pack a nutritional punch by producing natural substances called glucosinolates. When broken down, these compounds form bioactive chemicals such as sulforaphane—particularly abundant in broccoli—which has been linked to cancer-fighting properties. For those curious about the latest research, a visit to clinicaltrials.gov reveals numerous ongoing studies exploring sulforaphane's effects on conditions like inflammation, certain cancers, and even autism spectrum disorders.

Brassica vegetables are true nutritional powerhouses. A serving of pak choi, broccoli, or cabbage delivers a hefty dose of vitamin C, which boosts your immune system and enhances iron absorption, along with essential B vitamins and vitamin K for strong bones. They also naturally provide vitamin E in the form of tocopherols, which protect your skin and cells from damage by free radicals and UV rays.



Adapted from: [Brassica vegetables—an undervalued nutritional goldmine](#)

These vegetables are also rich in carotenoids—the pigments that give them their vibrant colors and offer benefits like antioxidant protection and vitamin A activity. For example, kale is packed with carotenoids like zeaxanthin, which supports eye health. The carotenoid content varies among *Brassicas*: green and purple broccoli typically contain more than white cauliflower; Chinese cabbage with orange inner leaves is richer in lycopene-like compounds than its yellow-leaved counterparts; and pale green kohlrabi tends to have higher levels of beta-carotene and lutein compared to purple varieties. Even in cabbage, the outer leaves boast more carotenoids than the inner leaves, providing essential nutrients that may help protect your vision and reduce cancer risk.

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Nourish Your Garden, Nourish Your Health: The Power of Brassica Vegetables (CONT'D)

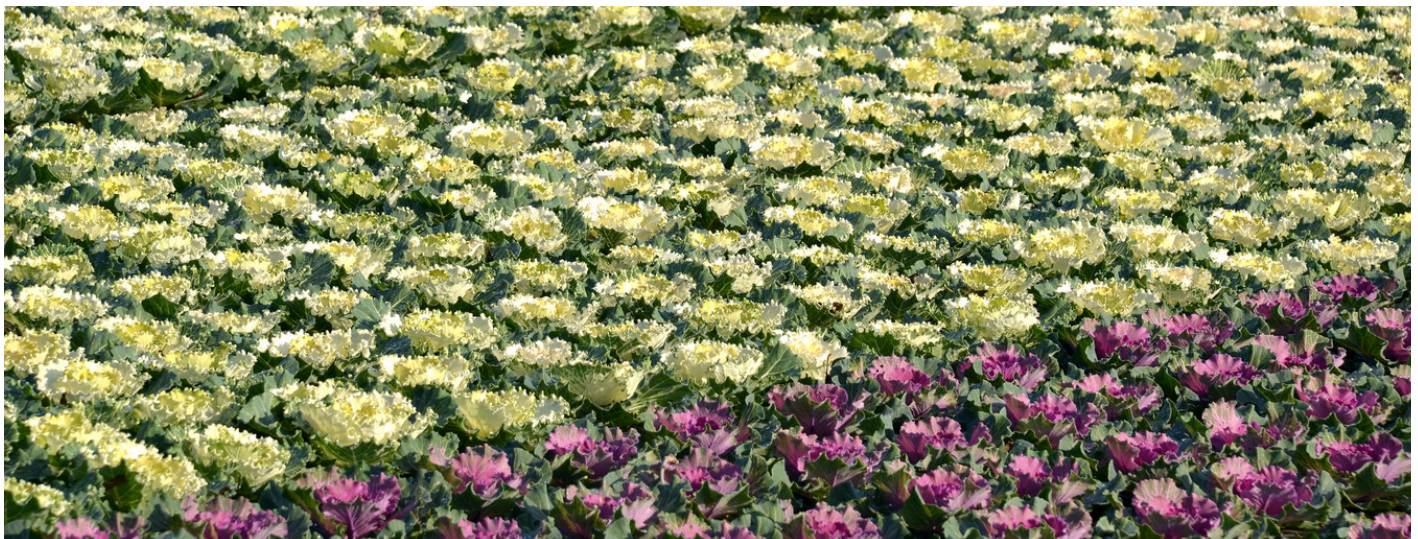
In addition, *Brassicas* are loaded with antioxidants such as polyphenols, flavonoids, and anthocyanins, which work together to neutralize harmful free radicals, reduce oxidative stress, and even offer antimicrobial benefits. Red-pigmented varieties—like purple cauliflower, red cabbage, purple pak choi, purple kohlrabi, and red curly kale—are particularly rich in anthocyanins, adding not only a burst of color to your plate but also extra protection against chronic diseases like cancer, heart disease, and type 2 diabetes.

Brassicas also provide essential minerals like calcium, iron, potassium, and selenium. For instance, kale is renowned for its high calcium content, while Chinese cabbage is an excellent source of both calcium and iron.

How you prepare your homegrown *Brassicas* can also affect their nutritional value. Light cooking methods such as steaming or quick stir-fries help preserve vitamins and antioxidants, while enjoying these vegetables raw in salads or smoothies ensures you capture all their natural goodness.

Looking ahead, future research is paving the way for even more nutrient-rich *Brassica* crops. Scientists are exploring agronomic practices, traditional breeding, and advanced biotechnologies like [CRISPR/Cas9](#) to enhance beneficial compounds and reduce less desirable ones. Innovations like "super broccoli" with high anticancer glucosinolate levels and hybrid kale varieties rich in eye-protective zeaxanthin are just the beginning, offering great promise for developing even healthier *Brassicas* to support better nutrition worldwide.

The latest scientific findings affirm the nutritional benefits of *Brassica* vegetables and inspire innovative gardening practices. By including these nutrient-dense crops in your garden planning, you're not just adding variety—you're investing in a healthier lifestyle. Whether you're an experienced gardener or just starting out, consider dedicating a special section of your garden to *Brassicas* and enjoy the many rewards they bring to your table and your health.



Q & A

By Hariette Henry, Halton Master Gardener

Having an ailing houseplant can be distressing particularly if you put a lot of effort into caring for your houseplant. Rather than being discouraged, consider learning more about what your plant needs to thrive.

You have a pothos plant, sometimes called Devil's Ivy. Its scientific name is *Epipremnum aureum*, and it is native to Southeast Asia to the western Pacific Ocean. In tropical regions pothos is grown as a ground cover or as a scrambler up trees. It does best in filtered light with high humidity and temperatures between 70 - 90°F. It can survive a wide range of environmental conditions but does not like drafts or direct sunlight. Its growing medium should be well aerated and the plant should be allowed to dry out and watered only when the soil surface feels dry. It should be fertilized every other month, and not at all in winter when it will not be actively growing. Low light can result in a loss of variegation. Low temperatures or an abrupt change in temperature can cause scattered brown patches in the centre of the leaf.

The number one reason for dying houseplants is overwatering. I believe that this is what's causing your plant to fail. I have killed many succulents (plants in the cactus family) because I was slow to understand the succulent's far lower need for water compared to other houseplants. Too many people assume that plants should be watered on a weekly basis rather than when they need it. This is where accurate monitoring of the moisture around the root zone becomes critical. Most plastic pots dry from the top down. Clay pots lose moisture from the



Images: Carrie Johnson

“ Can someone please tell me what's wrong with this plant and what I can do to save it? ”

sides as well as the top. Clues that the soil has dried out include shrinking, which leaves a gap between the soil and the pot perimeter, and a gradual decrease in the weight of the plant pot.

Often experienced gardeners can tell by weight how much remaining water the plant can use before rewatering. You can develop these skills by holding plant pots just after a thorough watering to feel how heavy the pot and the plant feel when freshly soaked. Then repeat the hand weighing process over the course

of the next week to see how much lighter the pot becomes as the plant uses the water and the soil dries over the course of the week. While testing for watering needs, pay attention to the potting media. If your finger can't penetrate the soil to two inches deep, you may need a more porous potting mix or the plant may be root bound.

Overwatering of indoor plants will ultimately lead to root rots caused by fungi or fungal-like organisms. Symptoms of root rot or crown rot include yellowing, browning, and dieback of the leaves and browning or blackening of the crown and/or roots, as well as poor growth. Root rots also cause wilting because the roots are so damaged they cannot transport water to the leaves.

Additional Reading

- [Watering Indoor Plants - University of Maryland Extension](#)
- [Diagnosing Houseplant Problems from Improper Environmental Conditions](#)
- [Symptoms of Overwatered Indoor Plants](#)
- [Troubleshooting Common Problems: Houseplant How-To](#)



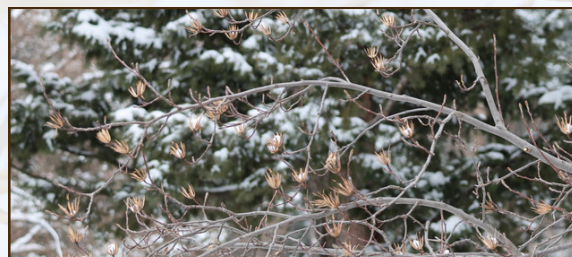
Garden Inspiration!



A bird feeder watching the bird feeder. Cooper's/Sharp-shinned Hawk. Photo: Pam MacDonald



Anise Hyssop (*Agastache foeniculum*). Photo: Morag Johnston



Tulip Tree (*Liriodendron tulipifera*) seed remains against the backdrop of Douglas Fir trees (*Pseudotsuga menziesii*). Photo: Isabel Belanger



Bigleaf hydrangea (*Hydrangea macrophylla*). Photo: Christina Bilobrk



Northwind Switchgrass (*Panicum virgatum* "Northwind"). Photo: Janet Mackey



Purpletop vervane (*Verbena bonariensis*). Photo: Carolyn Van Sligtenhorst



Red Osier Dogwood (*Cornus sericea*) cultivars. Photo: Jauron and Klein. Iowa State University



New Jersey Tea (*Ceanothus americanus*). Photo: Janet Mackey

Winter Interest

Enjoy your garden year round by including [winter interest](#). Start boldly, using native plants with large seed heads, and [shrubs](#) that keep their berries over winter. Layer in native grasses for colour contrast, movement, and texture. Even better, beneficial insects can overwinter in hollow stems, and birds love these plants too, as do birds who love birds...



Note the Dark-eyed Junco footie prints under the Canadian goldenrod (*Solidago canadensis*). Photo: Morag Johnston



What's Growing On?

By Trish Moraghan, Halton Master Gardener



It's the sweetest time of year



Weekends, Holidays and March Break

[Learn more here](#)



It's never too early to start planning your garden !

Discover beautiful, local native plants and unearth helpful gardening hints.

The Garden Post

Prairie, Meadow and Woodland Plants for Landscaping

[Learn more here](#)



[Outdoor Storytelling](#)



[Restoring Fruit Trees](#)

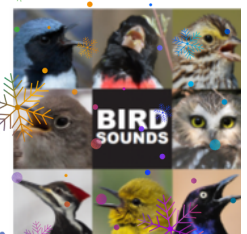


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BIRD SOUNDS

What's Growing On?

Plan your
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Royal
Botanical
Gardens

Activities for all
AGES



[Alice in Bloomland](#)



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Check our [calendar](#) for events

Halton Region Master Gardeners

Come Grow with Us



EXCITING NEWS WILL BE
COMING SOON!

Halton Region Master Gardeners will be making an
announcement in the coming months about a new
initiative!

About Our Newsletter

Cross Pollination is published monthly from February to December and is written and prepared by our dedicated volunteers. Halton Master Gardeners are experienced gardeners who have studied horticulture extensively and continue to upgrade their skills through technical training. We strive to provide science-based, sustainable gardening information to the general public. The information in our newsletter has been verified by our volunteers to the best of our abilities, but given the scope of horticulture and science some concepts may not reflect current knowledge. The content displayed in our newsletter is the intellectual property of Halton Region Master Gardeners and their authors. It can be shared in its entirety, but specific content should not be reused, republished or reprinted without the author's consent.

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