

CROSS POLLINATION

Halton Master Gardeners Monthly Newsletter
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In this issue:

Rattlesnake Master
Page 01

August Garden 'To-Do' List
Page 03

The Boulevard Transformation
Page 04

*Protecting Our Trees - Asian
Longhorned Beetle*
Page 07

Garden Journeys Open Days
Page 09

*Question of the Month -
Fireflies*
Page 11

Garden Inspiration - Tree Roots
Page 12

What's Growing On
Page 13



Halton Region
Master Gardeners



Rattlesnake Master (*Eryngium yuccifolium*)

By Claudette Sims, Halton Master Gardener

Rattlesnake master (RM) is as striking in appearance as it is in name, and is a stunning architectural plant to add to your pollinator garden.

What's in a Name?

The common name seems to have many origins. Some sources say the boiled roots were mistakenly thought to be an antidote for rattlesnake venom by either Indigenous people or settlers. Others say that the dried flower stalks were used as ceremonial rattles by Indigenous people. The botanical name refers to its yucca-like appearance.

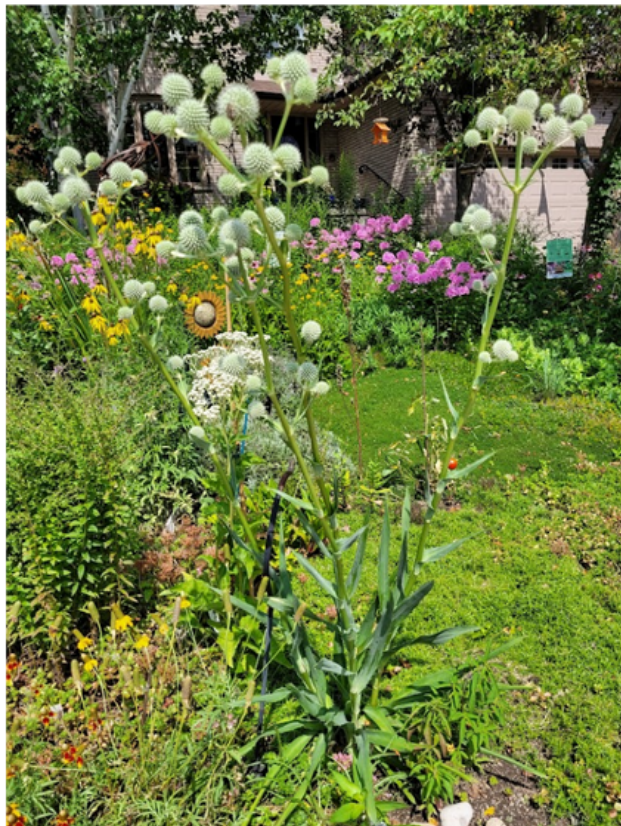
Cultural Conditions and Faunal Associations

Rattlesnake master favours full sun and will grow in moist to dry conditions and just about any soil type, from clay to shallow rocky soil. I grew this plant from seed and it is thriving, now in its third year in my garden. It looks fantastic planted as a feature specimen in the front of the garden and alongside other prairie plants such as blazing star, butterfly milkweed, pale purple coneflower, grey-headed coneflower, and native grasses. It has a wide growing range and is said to be native to southern Ontario and most of the eastern and central U.S. states. It is hardy to Zone 4 and could expand its range northward with changes in climate. The prickly flowers might lead you to believe it's a member of the thistle family,

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Rattlesnake Master (CON'T)

but it's actually an odd-looking member of the carrot family (Apiaceae or Umbelliferae). Crush the stem and you should smell a carrot like fragrance!

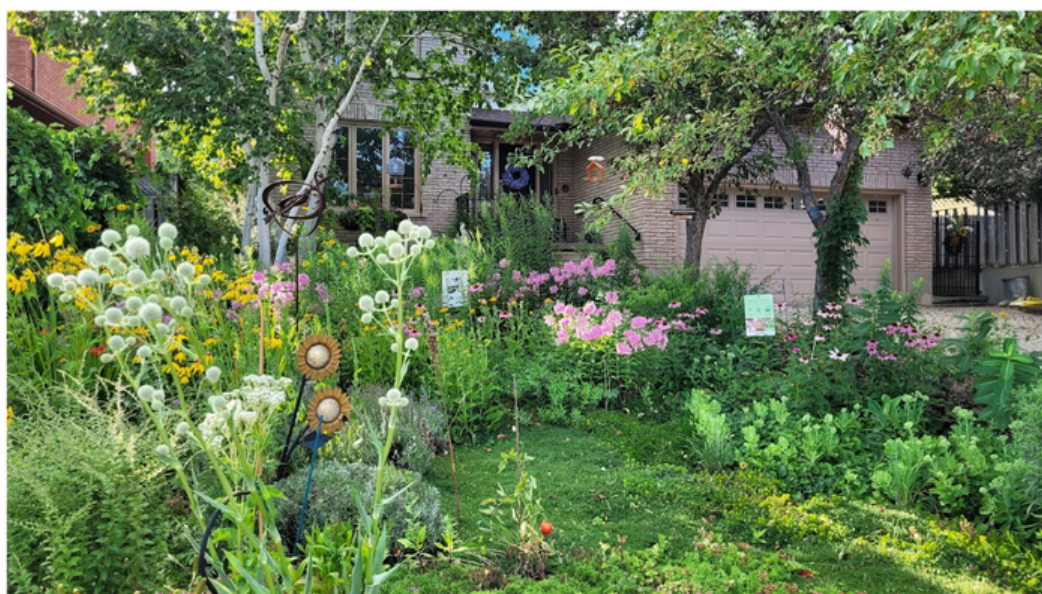


RM makes a bold statement in the garden

Rattlesnake master produces both pollen and nectar and attracts a wide range of insects: long-tongued bees, short-tongued bees, wasps, flies, butterflies, skippers, moths, beetles, and plant bugs. The prickly flowers and coarse leaves are not so popular with mammals so it is not as likely to be browsed by rabbits and other garden critters. RM is one of my favourite pollinator plants!



The prickly flowers are a favourite of pollinators!



*Rattlesnake master loves full sun and looks great with other prairie plants.
All photos: Claudette Sims*



AUGUST 'TO-DO' LIST

by Claudette Sims, Halton Master Gardener

- ☐ **Perennials** – Cut back any tired looking perennials; remove yellowed or dying stems, leaves or flowers, e.g., lavender, [penstemon](#). Remove seed heads to control spread of aggressive self-sowing perennials or to save for winter sowing. If possible, leave seed heads to feed birds in the late summer & fall.
- ☐ **Annuals** – Pinch back old flower heads to keep plants producing flowers. Fertilize as needed.
- ☐ **Amaryllis** – In late August, transition plants to a drier area of the garden (e.g., under an overhang) & gradually stop watering to encourage the leaves to dry out & encourage the bulb to go dormant.
- ☐ **Orchids** – Encouraging healthy new leaves will give your *Phalaenopsis* orchids the energy to bloom this winter. [Fertilize weekly](#) & water carefully.
- ☐ **Strawberries** – August is a good time to [renovate](#) your strawberry beds.
- ☐ **Veggies** – Water during dry or hot weather to reduce plant stress. Remove diseased & damaged leaves/fruit. Do not over fertilize tomatoes as it can lead to [blossom end rot](#). Harvest vegetables & berries regularly so that the plants keep producing. Add new plantings like chard, radishes, carrots, kale, spinach, turnips, beets, basil. [Identify pests](#) troubling your veggie garden to take effective action.
- ☐ **Trees** – Water deeply during dry periods; reduce soil compaction around trees by using mulch or growing perennials or shrubs at the base instead of lawn.
- ☐ **Earwigs** – like to hide in small, dark places so trapping is effective in reducing populations. Scatter rolled cardboard traps in problem areas & check daily. Remove trapped earwigs by shaking into a pail of soapy water. Learn more about [earwig management here](#).

“A well thought-out ecological garden includes a variety of native host plants, nectar plants and shelter plants. Read “[No, we don't need to just plant more milkweed](#)”, a fascinating perspective on what we all should be doing.”



- ☐ **Japanese beetles** – Welcome animals that eat JBs such as birds, raccoons, skunks, moles, shrews as well as beneficial insects. Plants damaged by JB feeding release compounds into the air that actually attract more beetles, so reduce numbers as soon as they appear. Hand pick, vacuum, or knock them into a bucket of soapy water. Read about more [management options](#).
- ☐ **Powdery mildew** – Overhead [watering of leaves](#) during the day may help prevent PMD on susceptible plants such as phlox and squash. Research indicates that a [milk & water spray](#) can also be effective as a preventative. If PMD is present, remove the worst-affected leaves/stems & prune for better air circulation.
- ☐ **Lawn** – Encourage deep roots by watering less frequently, but deeply. Check your local municipality for watering restrictions ([Halton](#)). Yellow (dormant) lawns should bounce back in the fall when there is more rain. Follow these [cultural practices](#) to have healthy lawns & use water efficient practices.
- ☐ **Weeds** – Every weed pulled now is a thousand weeds you won't have to deal with later! Removing flowers before they go to seed will greatly reduce the seed bank in the soil for next year. Don't add flowers or seeds to compost. Watch for these August weeds: [bindweed](#), [purslane](#), [thistle](#), [burdock](#), [plantain](#), [black medick](#), [dog-strangling vine](#), [common buckthorn](#).

The Boulevard Transformation

by Erica Brandt - Guest Contributor

Sharon and Wayne Brandt were interested in adding native plants to their garden. They planned to convert two boulevards from turf grass to native ground covers of silverweed (*Argentina anserina*) on one, and wild strawberry (*Fragaria virginiana*) on the other. These plants were chosen because they are low to the ground, look uniform, have attractive foliage, and have qualities that help them withstand the conditions of the boulevard. To help narrow down their options, they consulted [In Our Nature's Boulevard Gardens plant list](#), which lists plants that are able to withstand drought, compacted soil, urban pollution, foot traffic, and road salt.



Wild Strawberry. Photos: Erica Brandt

The Process

Both boulevards were turf grass with some weeds prior to planting. The Brandts dug out the grass and replaced it with an eight to ten inch layer of garden soil to fill in the gap left from the removal of grass and weeds. They used approximately 500L of soil. The property naturally has clay soil, which silverweed is not supposed to tolerate well, so they also amended the soil layer to benefit the silverweed.



Silverweed.

Photo: Peter Altosaar

The boulevards are 18 inches wide and 80 feet long for the silverweed and 18 inches wide and 20 feet long for the wild strawberry. The property is a corner lot and the silverweed and wild strawberry are along the side of the house and separated by a driveway. Both areas receive full sun, with the wild strawberry receiving more hours of sunlight per day than the silverweed. Silverweed plants were spaced approximately 15 inches apart down the centre. The wild strawberry plugs were planted 18 inches apart down the centre. This allowed ample space for the plants to fill in the sides of the boulevard.

The Maintenance

The groundcovers spread very quickly with runners taking off throughout the bare soil. In order to help the plants spread in the first year they watered the area daily and weeded it weekly. They pinned down the runners of both plants with U-shaped pins to direct the shoots to fill in gaps. In the second year, they decreased watering to every two to three days when it was hot outside, and no longer weeded since the plants had created a dense cover. With no more gaps to fill, instead of redirecting the runners, they snipped them off along the edges of the boulevard for a neat look.

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THE BOULEVARD TRANSFORMATION (CONT'D)

The Progression

During the winter, the wild strawberries maintained their leaves and the silverweed fully died back. They both filled in quickly in early spring and looked filled-out by mid to late April, approximately one month after the last snow melt. The wild strawberries grew small sweet berries that were mysteriously eaten before they could be picked. There was no mess from the fruit.

As the plants were establishing, people and dogs would step on them and crush some plants which recovered quickly. These incidents did not leave lasting damage. In the second year, the plants are thicker, taller, and more lush looking, which seems to make people and dogs step on them less frequently. People appreciated the look more as it filled out. There have been no crushed plants in the second year so far. Unfortunately, city workers may soon tear up part of the boulevard for construction; however, these hardy groundcovers should bounce right back.



Cost of Materials

The silverweed was purchased from Return of the Native in Elmville; 70 plants came to \$210. The wild strawberries were purchased from Sassafras Farms in Welland; 12 plants came to \$12. A large shipment of soil from a local garden centre was used for this project; however, if it were purchased from 25L bags at Canadian Tire, the cost of 2760 L of soil would be approximately \$484.75. No permit was required for the planting. The total cost for this boulevard conversion would be approximately \$706.75 with soil and \$222 without.



Silverweed makes an excellent border plant near the public sidewalk in the garden of Bev Wagar, Halton Master Gardener. Photo: Bev Wagar

About our guest contributor: Erica is a Toronto gardener who is passionate about creating habitat to support biodiversity. In particular, she is interested in spreading the word and making native plant gardening more accessible for everyone, in any space. The garden featured in this article is at her parents' home in Welland, Ontario.

Guidelines and Resources

Different jurisdictions provide guidelines for planting boulevard gardens:

▪ **Oakville:** [Policies Link](#)

Permits are no longer required; invasive species are not permitted. [Further info is available here](#)

▪ **Guelph:**
[Boulevard Gardens](#)

▪ **Mississauga:**
[You need a permit](#) and there is a [List of Acceptable Plants](#)

▪ **How to Design a Boulevard Garden:**
[In Our Nature](#) recommends wild strawberry and silverweed for boulevard plantings



PROTECTING OUR TREES — ASIAN LONGHORNED BEETLE

by Lori Kirkpatrick, Halton Master Gardener



Adult Asian longhorned beetle on a maple leaf. The larvae of these insects will kill a maple tree by feeding on the [vascular tissue](#). Image: [Bugs that Kill](#)

The Asian longhorned Beetle (ALHB) is native to Asia, specifically China and Korea. This insect is assumed to have entered North America in wooden pallets used for shipping and is a threat to a number of hardwood trees in Ontario forests, including the sugar maple (*Acer saccharum*). The species was first discovered in the United States in 1996 and in Ontario in 2003.

Once in our local environment, harmful foreign insects like ALHB are free to feed unchecked as they do not have natural predators to manage their populations. In Canada, the ALHB is classified as **Invasive** due to the high tree mortality impact they cause.

Monitoring and Management

In Ontario, the first infestation was confirmed in parts of Toronto and Vaughan in 2003. Infested and susceptible trees were removed to eliminate the spread to other trees. Canada officially declared itself free of the beetle on April 5, 2013.

Unfortunately, ALHB was rediscovered later in August of 2013 in Mississauga and Toronto, resulting in the *Asian Long-horned Beetle Infested Place Order* being established to quarantine the infested area. After five years of surveys with no detection of the ALHB, the Order was repealed effective June 9, 2020.

When a beetle sighting occurs, a quarantine around the infested area is set up to prevent spread. Infested trees are removed, and the wood is disposed of safely by a professional to avoid transport or spread of ALHB outside of the quarantine area. Ongoing monitoring by annual survey for up to five years following an infestation is needed to confirm an area clear of ALHB.

Adult Asian Longhorned Beetle

This beetle has a large, shiny black body covered with approximately 20 white spots on each wing. The female is 2 to 3.5 cm long and the male 2 to 3 cm long. It has two

long antennae with black and white bands. This beetle prefers maple trees, but will also bore into birch, elm, hackberry, horse chestnut, mountain ash, poplar, sycamore, and willow. An infestation of ALHB in Canada poses a risk to our maple syrup industry, hardwood lumber industry, and both urban and natural forests.

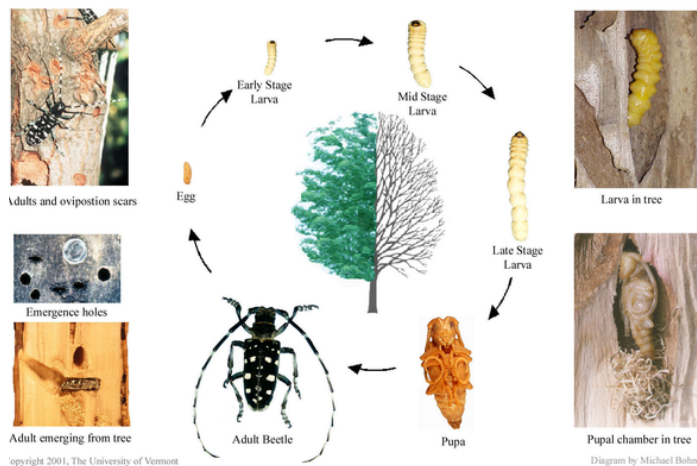
This species of beetle often returns to the same type of host tree they were hatched in to lay their eggs



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PROTECTING OUR TREES — ASIAN LONGHORNED BEETLE (CONT'D)

Asian Longhorned Beetle Lifecycle



Life Cycle of Asian Longhorned Beetle
Image: Univ. of Vermont

Life Cycle

Adults: In Ontario, adult beetles typically appear in early summer and may live through to the first frost of the fall. They feed on leaves, twigs and bark and are visible on the tree on sunny days between mid-morning and early afternoon.

Eggs: The female beetles chew pits through bark crevices into the tree's vascular tissue, the tree's water and nutrient transport system. These oviposition pits can be located on any part of the tree including trunk and branches. They lay a single egg approximately 5-7 mm long in each pit. An egg will hatch in two weeks but may take longer depending on temperature and will over-winter if necessary.

AUGUST IS 'TREE CHECK' MONTH

The Canadian Food Inspection Agency (CFIA) asks Canadians to check for invasive pests on their property. [More Info. HERE](https://www.inspection.gc.ca/pests)



Larvae: Young larvae feed on vascular tissue creating galleries just beneath the bark. As they mature, they migrate from sapwood to heartwood. It can take several months to several years for them to mature, depending on climatic conditions. A mature larva can be up to 5 cm in length. A visual clue that ALHB are present is the appearance of frass or sawdust from the larvae's feeding in branch connections or at the base of an infected tree. There may be numerous larvae in a single tree, and it is the boring that destroys the tree's vascular tissue and results in the tree's eventual death.

Pupae: When larvae have fully matured, they create a pupal chamber just under the bark. They remain in an immobile pupal state for several weeks before transforming into adults.

Adult beetles bore notable round exit holes, typically measuring 10 to 15 mm in diameter, marking the end of the life cycle

WHAT CAN YOU DO?

- Report sightings to the Canadian Food Inspection Agency. Call 1-800-442-2342 or report online [here](https://www.inspection.gc.ca/pests).
- **DO NOT** move trees or firewood into or out of infested areas
- Learn more about these and other pests at www.inspection.gc.ca/pests

More Information:

- [Province of Ontario](https://www.ontario.ca). Invasive Species in Ontario
- [Inspection Canada](https://www.inspection.gc.ca/pests). ALHB Fact Sheet
- CFIA – [Canadian Food Inspection Agency](https://www.inspection.gc.ca/pests) - Asian Longhorned Beetle
- [P. S. Meng, K. Hoover, M. A. Keena. Asian Longhorned Beetle \(Coleoptera: Cerambycidae\), an Introduced Pest of Maple and Other Hardwood Trees in North America and Europe, Journal of Integrated Pest Management](https://doi.org/10.1007/s10841-007-9111-1)
- [Natural Resources Canada. Asian Longhorned Beetle](https://www.nrc.ca/nrc/eng/pests/AsianLonghornedBeetle.html)



Garden Journeys Open Days—new, inspiring, and nature-friendly

by Allyn Walsh and Bev Wagar, Halton Master Gardeners

Gardeners everywhere have begun journeys towards bio-diverse and nature-friendly gardens. Some people are well on their way and others are just getting started. Some have not yet heard about how gardens and residential landscapes can help mitigate the crises of climate change and collapsing ecological food webs. Gardens can be places that support life—not just the birds and animals we enjoy having around, but also the complex, interdependent networks of life we call [ecosystems](#).

A local response to these overarching concerns is [Garden Journeys Open Days](#), a new open-gardens event that celebrates and encourages the growing number of gardeners who are not only consciously doing things differently but also inspiring the community to follow their lead.



Jean Jacobs' Dundas garden
photo: Jean Jacobs ©



Jamie Hunter's Dundas garden
Photo: Jamie Hunter CC BY-NC-ND

Participating gardens, whether we call them ecological, sustainable, pollinator-friendly, re-wilded, or naturalized, have a lot in common. Native plants, for example, are indispensable. They're often the first step in a gardener's journey from traditional to nature-friendly.



Holly Tasker's Hamilton garden
Photo: Holly Tasker CC BY-NC-ND

Supported by the Halton Region Master Gardeners, the event takes place in the City of Hamilton over seven days in mid-August (August 10-12 and 17-20). The schedule offers flexibility for hosts (who choose among 17 three-hour time blocks) and convenience for visitors (who use an interactive map). Because gardeners want to learn from and connect with others, hosts (or their designates) will be home during open times to answer visitors' questions. The event is free for both hosts and visitors.

Other actions include: removing invasive plants, managing rainwater, composting on site, and supporting wildlife responsibly. No step is too small. From the first tiny steps to ambitious treks, all journeys are welcome.

No matter where you live, you're warmly invited to visit these special gardens during the event. No tickets are necessary—just drop by the gardens of your choice on the posted days and times.

Check the web site for details:
<https://haltonmastergardeners.com/garden-journeys-open-days/>



Q & A

By Hariette Henry, Halton Master Gardener

You are right to be concerned about fireflies. There is evidence of [worldwide firefly population decline](#). They face many of the same threats as other insects, including habitat loss and degradation, light pollution, exposure to pesticides, and climate change.

Dr. Sarah Lewis, ecologist, author and professor of Biology at Tufts University, suggests that in order to properly support these insects we need to consider their needs and behaviors at all stages of their life cycle. Most fireflies require moisture throughout their lives, however it is during the first three phases—egg, larvae and pupa—when they live either underground or in moist soil that this is crucial. Recreating these conditions in your backyard by nurturing mosses, leaving woody debris and leaf litter helps the ground hold more moisture.

Eliminating lawns in favour of diverse, layered landscapes of native shrubs, trees and tall grasses will help create a good microhabitat for all the stages of these insects.

Lack of moisture can also affect firefly larvae food sources (the firefly larval stage is the longest, lasting up to two years). Snails, slugs, and other soft-bodied insects need wet areas too. These creatures have a role to play in a healthy ecosystem breaking down organic matter in the soil. Resist the urge to bait or harm them—they are important in the firefly life-cycle.

Firefly larvae and glow-worm females that do not fly, are especially vulnerable to ground disturbances such as trampling. Creating and using paths in your yard should minimize these risks.

I have seen few fireflies in my small backyard this year. I know turning out the lights outdoors will help. Is there anything more I can do right now?

Avoid the use of pesticides, especially lawn chemicals as these can kill firefly larvae and their prey. Seek nonchemical pest-management options only.

[Light pollution](#) is one of the major threats to successful mating in fireflies. Bringing back the night means turning lights off outdoors, using motion-detecting lights, closing the drapes, and using light-blocking fabrics and blinds.



Firefly habitat and behaviour, Xerces Society, 2020.

Planting more native trees such as pines and other native evergreens can provide more darkness at night. The pine needle drop can be an ideal environment for egg-laying and larvae.

As you are thinking 'what can I do to help fireflies?', making as many of the suggested changes in your yard as possible would be the first step. You could learn more about these creatures by reading Dr. Sara Lewis's book, [Silent Sparks: The Wondrous World of Fireflies](#) or Lynn Faust's book, [Fireflies, Glow-Worms, and Lightning Bugs](#). Finally, you could record your firefly sightings and get help with identification through the Fireflies of the USA and Canada iNaturalist project, an initiative of the [Fireflyers International Network](#).



Garden Inspiration!

What we think they're like



TREE ROOTS

What they're actually like



graphic: Bev Wagar, adapted from
Dobson "Tree Root Systems"

Tree roots extend very far—to a distance equal to or greater than the height of the tree. In compacted or infertile soils, roots may extend up to three times the tree height. Roots are located primarily in the upper 60cm (24") of soil. The main structural roots are usually found in the upper 30cm (12"), and taper substantially within about 3m (10') of the trunk.

The vast majority of fine absorbing ("feeder") roots are even closer to the soil surface. Thus any soil disturbance with the rooting zone will damage tree roots.

Source: Martin Dobson "[Tree Root Systems](#)" *Arboricultural Advisory and Information Service* (UK)

See also Thomas O. Perry "[Tree Roots: Facts and Fallacies](#)" *Journal of Arboriculture* 8 (8):197-211, 1982. Reprinted at www.arborcaresolutions.com

Especially avoid:

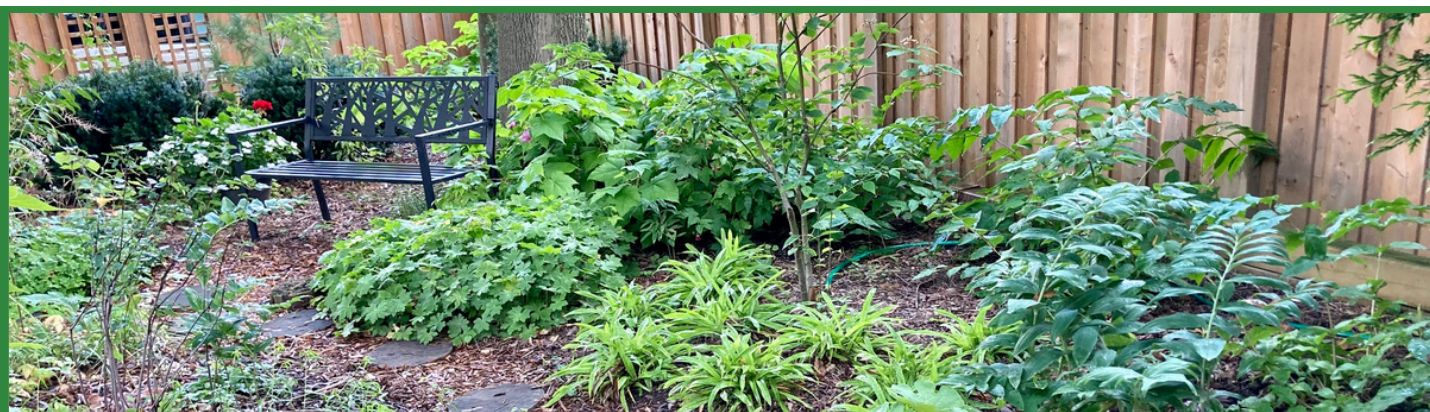
- soil stripping and site grading
- trenching—even a shallow (15cm / 6") trench
- soil compaction from vehicles or materials storage
- impermeable materials
- deposit of toxic materials
- adding excessive soil over the root zone



"A TREE'S BEAUTY LIES IN ITS BRANCHES, BUT ITS STRENGTH LIES IN ITS ROOTS."

MATHONA DHLIWAYO (Canadian based philosopher, entrepreneur, and author)

What's Growing On?



Garden Journeys Open Days (Hamilton)

August 10-12 and 17-20

[Learn more here](#)



Shop Local at Farmers' Markets

[Learn more here](#)



Grow a Row and Share What You Grow

[Learn more here](#)



Saturday, August 19, 2023
Open to the general public
9 AM to 3 PM

[Learn more here](#)

What's Growing On?



Royal
Botanical
Gardens



[Sanctuaries](#)



[Rock Garden](#)



[Bloom Watch](#)



[Fishway Discovery](#)



Master Gardener Advice Clinics at Farmers' Markets



Do you have questions about your indoor plants, veggie garden or other outdoor plants? Halton Master Gardeners are available to answer your questions at farmers' markets.



[Burlington Centre Mall](#)

Advice Clinics: 9 AM to Noon

Wednesdays

August 16, Sept. 20, Oct. 18



[Ottawa Street, Hamilton](#)

Advice Clinics: 9 AM to Noon

Saturdays

August 5, 12 and 19



[Hatt Street, Dundas](#)

Advice Clinics: 2 PM to 6 PM

Thursdays

August 10 and 24



Check our [calendar](#) for events

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.

Your [donations](#) support our work!

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