

Cross Pollination

Newsletter of the Halton Master Gardeners



September Garden To Do List

- ❑ **Perennials** – Divide or transplant spring & summer flowering perennials, e.g. iris, peony, phlox, wood poppy, native anemone as the weather cools. Water the new divisions well. Fill gaps in borders with asters, ornamental cabbage, sedum & mums to extend the colour to the end of the season. Leave some goldenrod flowers for pollinators!
- ❑ **Lawn & Weeds**– Choose a rainy day to overseed lawn, then cover seeds with a [top dressing](#) of fine compost or manure-half the height of the blades of grass should still be visible. Fall feeding increases root growth for an early spring green up. Pull, rake or cut off weeds at ground level. Keep pulling bindweed to reduce the seed bank in soil. Tired of your patchy brown lawn? Consider an alternative like ecolawn which requires less water, mowing and feeding. Info including how to convert a traditional lawn [here](#).
- ❑ **Feed the Soil** - [Add compost or manure](#) to garden beds & lawn.
- ❑ **Bulbs** – Plant spring flowering bulbs such as crocus, tulip, hyacinth now, until before freeze up of soil. Water bulbs after planting. Avoid invasive bulbs such as [scilla](#). Consider planting native & endangered [wood poppies](#) instead of daffodils in a shady location- same yellow colour but no dying bulb foliage to deal with!
- ❑ **Leaves** –Attach a grass catcher bag to the mower and collect a ready supply of chopped leaves to layer into the compost pile or use as mulch on your veggie or flower garden.
- ❑ **Roses** - Stop pruning roses to avoid formation of weaker stems which won't survive the winter.
- ❑ **Veggies** – Green tomatoes-harvest & ripen indoors, freeze or use in recipes. Salad Garden - sow seeds to grow lettuce, spinach, arugula and radishes. Mix and sow seed of different varieties into veggie garden, flower bed or pots. Plant [cover crops](#) such as [red clover](#) & [winter rye](#) on bare soil.
- ❑ **Trees** - Plant new trees and shrubs now to allow them at least six weeks before frost to form roots. Water transplanted trees until freeze up.
- ❑ **Collect** seed to start new plants and herbs for drying.
- ❑ **Houseplants** - Check houseplants for pests, then start to move indoors gradually as nights get cool. Prune back tropicals such as hibiscus & move them into some shade to help transition indoors for the winter, where the light levels are lower.
- ❑ See our [August newsletter](#) for any garden jobs that you may have missed

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Great Blue Lobelia (*Lobelia siphilitica*) attracts hummingbirds

What do you get if you divide the circumference of a pumpkin by its diameter?



Pumpkin pi

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A Master Master Gardener!

Master Gardener Kirsten McCarthy

We are very proud of our member Cathy Kavassalis who shares her deep knowledge of plants and the ecosystem so generously in so many ways. In this article, MG Kirsten McCarthy writes about Cathy and her journey to become an expert master gardener.



Catherine Kavassalis, Summer 2021

“It is really important not to see our jobs as transformers, but as caretakers of the earth”

Award winning Master Gardener, Catherine Kavassalis started gardening when she was a child. She learned from her parents that “you had a home, you grew a garden”. Born in Zimbabwe, Cathy’s family immigrated to The US when she was eight years old. She moved extensively as a child, but while doing her doctorate in physical chemistry at MIT she met a Canadian man who wanted to move back to Canada. While raising her family in Ontario, she became interested in science education and started volunteering in schools doing scientific educational programs for school aged children. In the 1990’s she received her teaching certificate and taught small children while working on her Masters in Environmental Education at UofT. Her science background soon gave way to environmental activism where she created an online platform to help her sister in Indiana fight environmental atrocities. Together they fought against confined animal feeding operations, poor water quality and nuclear power plants. Her role in her sister’s project opened her eyes to looking at trees and plants and their role in the environment. She learned that “In biodiversity, protecting the environment was really critically important”.

She began writing and created her own website and blog in Halton Region. People from Oakville Green Conservation took notice of her articles and she was invited to write articles for The Oakville Horticultural Society.

After attending the AGM of the group, she was asked to become the Vice-President of The Oakville Horticultural Society and a few months later she became President. “I really got into it in a big way”, says Cathy looking back on the experience. “I saw an avenue for education, especially environmental education that I hadn’t recognized before.” Her achievements through Oakville Horticultural Society included helping the city create the first native plant garden in Oakville in 2010 and establishing the Heritage Tree Program, an unprecedented bylaw in Ontario and Canada that protects trees on private property. Her work led her to Halton Master Gardeners and together with local Oakville politicians and other horticultural societies, she helped facilitate a bylaw that allowed people to garden on their boulevards.



Every year, Cathy’s goal is to add 3 native plants. *Lobelia cardinalis* (cardinal flower) is one of Cathy’s favourite natives.

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A Master Master Gardener! - continued

Master Gardener Kirsten McCarthy

Over the last ten years, her ideology about biodiversity has gone through its own metamorphosis. Looking back on her first garden in Oakville, she was so excited by the five hundred species of plants that filled her urban oasis. "My original understanding of biodiversity and its impacts on the environment was incorrect", says Cathy. More recently, she has come to realize that creating a foreign biodiversity, full of exotic plants was doing a great deal of harm. From a Master Gardener perspective, this vision is sometimes frowned upon. "Some [Master Gardeners] don't see our role as environmentalists, they see our role as helping people grow whatever *they* want to grow. That is not my attitude", says Cathy. "My attitude is that we are about sustainable gardening, as stated in our mission and mandate and I think it should be stronger".



Our interconnected ecosystem:
Two monarch caterpillars, nine striped hairstreaks, one plume moth and one pale tiger moth enjoying the blossoms on a common milkweed

Photo: C. Kavassalis 2021

On the MGOI Facebook page she answers questions from the public to help people grow what they want, but also suggests a better plant choice and also teaches what other species of insects and birds that choice is supporting. She struggles sometimes helping people understand the complexity of the food web but encourages people to see the beauty of the hole left by the leaf cutter bee or the winding journey left by a leaf miner. "The only way we can make changes that I see critically necessary is to work with the mainstream and try and help people understand that their gardening choices have impacts beyond their little domain", says Cathy.

For Cathy, our role as Master Gardeners is to recognize that it is more important to reach responsible plant choices so that we can continue to produce food and enjoy beauty. "We can use Doug Tallamy's 70% native biodiversity as a target and also have some of the eye candy [exotics] that we crave. Begin to try and find a different aesthetic in gardening", says Cathy. "It is really important not to see our jobs as transformers, but as caretakers of the earth", she says



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Going forward, Cathy encourages MG's and MGIT's to focus our efforts on teaching younger generations and people who are just getting interested in gardening. She encourages MG's to teach how to grow fruits and vegetables because food production is critical and teach the importance of growing a pollinator garden. "Every year, my goal is to plant three native plants for anything I plant. If we want to get people into gardening and be successful, that's the key" says Cathy.



"Transformations are possible if we care to try". MGs Claudette Sims & Janet McKay came to help remove piles of invasive species from Cathy's cottage and two years later the Wild Sarsaparilla (*Aralia nudicaulis*) are beginning to reclaim the space

Looking forward, Cathy worries about how things will be left for humanity. "All I can say to my generation is to try and slow the rate of change down. Without knowing if your choice is going to do harm, make the choice not to do harm." She continues, **"For me, it's a moral imperative that we understand we are not alone on this planet. We share it with other inhabitants and our role has to be to care for everything."**

Cathy remembers a day when a little 12-year-old girl from the neighbourhood came to see her. She was in tears because she was learning about all the negative effects of climate change on the planet and thought the planet was dying. "We sat in the backyard, I have a little pond back there and I scooped up a handful of soil and told her that there are 100 million microbes in my hand, and hundreds of nematodes and bacteria in the soil. I told her that I could not care for all the creatures in the world, but I can take care of the life that is in my hands, and **you may not be able to change what is going on in the world, but you can take your little space and make a difference.**"



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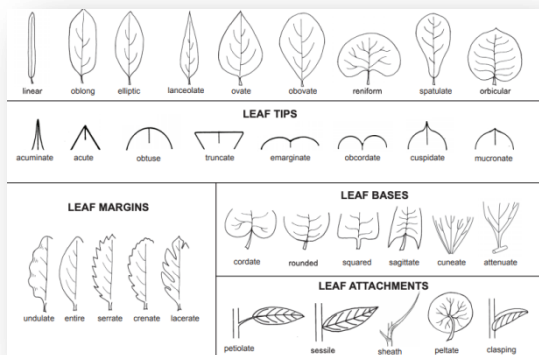
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Google is Your Friend!

Master Gardener Bev Wagar

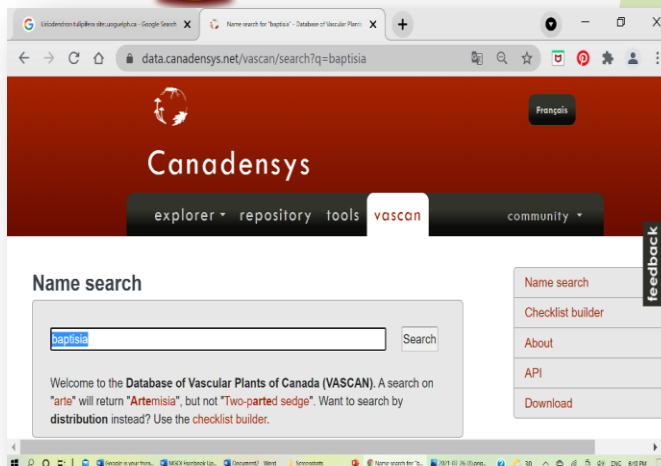
One of the commonest problems gardeners have is identifying a plant in the field. MG Bev Wagar shares her strategies in this article.

Perhaps because I'm not a "phone person" I'm not a fan of plant identification apps that smartphones make so easy to use. Instead, I often use basic Internet searches. Yes, I could post a photo on one of the plant identification Facebook groups but I prefer it old-school. If I have a decent photo, no idea of what I'm looking at, and some time, I enjoy doing plant sleuthing. Maybe it's the thrill of the chase. Maybe I just don't trust technology for the finer points of plant ID—for example, an app can't rule out a species by bloom time. Doing preliminary research via Google before asking in a Facebook group is more than just good etiquette. It will increase the likelihood that someone knowledgeable will respond. It will also help you learn to identify plants without having to be glued to your phone or your laptop.



Just getting the search terms right will often narrow the field. Meaningful search terms (and here's where a bit of botany comes in handy) include the plant type (herbaceous, shrub, tree, fern, conifer for example) as well as leaf arrangement, leaf shape, leaf margin, plant form, and other distinguishing features. For a quick and easy glossary of these terms, visit: [Leaf Shapes](#). You may find that including "Ontario" in the search terms helps.

Now look at the *image* results--start observing and scrolling through the first few pages. When you see an image that's close, open it in a new tab (usually via right-click) and zoom in to see the details. It may be your plant or something close. In either case, note the species name, find the genus (via a quick lookup on the [VASCAN plant database](#) and do another search using "species in [genus name]". You may be able to narrow it down to a point where you can use an online interactive key: [Native Plant Trust](#) (if your plant is native) or [Plant ID Keys](#).



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Google is Your Friend! - continued

Master Gardener Bev Wagar



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When you're reasonably sure of the species name, Google it and double check the results against what you know about your mystery plant. If you'd like Google to behave less like a splatter gun and more like a pea-shooter, **here are a few tips:**

- Use quotation marks to search by a phrase. For example, if you want to learn a species' native range, type ["species name"] "native range". Not including the quotation marks will give you results that include just "native" and "range" as well as "native range".
- Use the minus sign to exclude things from your search. For example, if you want to learn about stinging nettle but don't want recipes or homeopathy, type "urtica dioica" - cook -health.
- Narrow your search to sites in a specific domain type. In the Google search bar, after your terms, type **site:.edu** to obtain results from US educational institutions only-- Canadian universities and colleges are all **.ca**. Using **site:.org** may also be helpful for horticultural research.
- Want to search within a single web site? Google will give you far better results than any site's search bar, if there's one to be found. Simply include **site:.[url]** with your search terms. For example, if I want to search only the University of Guelph web site I'd use [search term] [search term] **site:.uoguelph.ca**. To maximize your results, do not include subdomains (such as "www") in your site search.
- Try using Google Scholar: <https://scholar.google.ca/intl/en/scholar/help.html>. You can also do a regular Google search but include "scholarly" in your search terms. Not only will a Scholar search turn up published papers, it'll show PhD theses as well: [Search PhD theses](#)

More Tips on Using Search Engines

- [Google Search Tips](#)
- [20 Search Tips](#)



Even if it's already the go-to tool in your kit, learning to tame Google's power is worth the time. Despite the irony, don't hesitate to use Google to learn how to use it. With practice and willpower to sidestep the rabbit-holes, Google can be your friend.



I ran out of toilet paper and started using lettuce leaves.



Today was just the tip of the iceberg, tomorrow remains to be seen.

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Jumping Worms- The Stuff of Nightmares

Master Gardeners Cathy Kavassalis & Claudette Sims



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We are seeing credible reports of gardeners finding invasive **Jumping Worms** (AKA *crazy worms* or *snake worms*) in soil and plants from various areas of Ontario. **All earthworms in Ontario are non-native and can disrupt & damage soils.** They arrived during colonial settlement from Europe and most belong to the family *Lumbricidae*. Jumping Worms pose an even more serious threat to our gardens and our environment than other invasive earthworms.

What Are Jumping Worms?

Jumping Worms are from east Asia and belong to the genus *Amyntas*. They have been spreading to various parts of the world & there are at least 3 species of special concern. JWs first appeared in the southeastern U.S. in the 1800s, thought to have been brought to North America on plant material from Korea and Japan. Now they're moving northwards and have recently been spotted in gardens in Toronto & Hamilton. Although they look similar to European earthworms, there are several differences. JWs have a smooth **white** clitellum (ring) in contrast to the raised pink one in other earthworms. JWs also writhe like snakes and can jump around when startled. Their lifespan is one year & there can be two generations. They mature in August to September. The adults die in late fall, leaving behind tiny egg encased cocoons that overwinter and become next year's worms. Jumping worms grow about 8" (20 cm) long, and unlike earthworms which burrow deeper, they only occupy the top 2 inches (4 cm) of soil.

Why are they so damaging?

Jumping Worms eat the top layer of the forest floor ('duff') or garden soil (leaves, etc.) at an alarming rate, excreting (pooping) dry grainy pellets that look like coffee grounds. While earthworm castings can be a good addition to soil, the JWs excrement creates a "disturbed soil [that] erodes easily, dries out quickly, and generally makes poor habitat for many plants." In forests, the 'duff' layer that is home to countless insects, birds, amphibians and native flowers disappears. The invertebrate population that keeps soil healthy collapses. Early studies suggest that

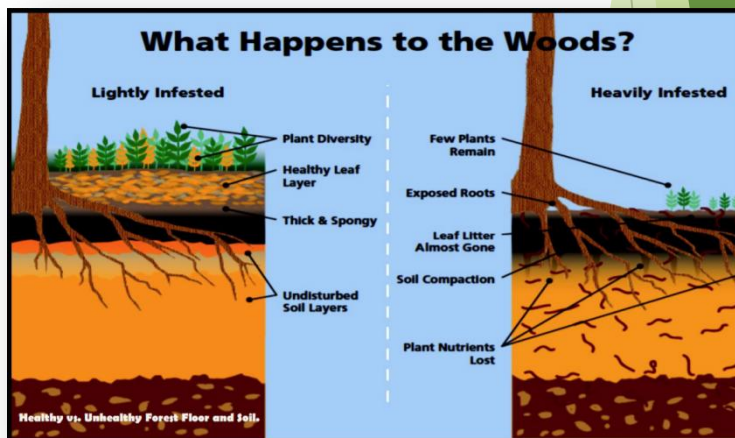
JWs can halt the regeneration of trees. JWs live in denser numbers than earthworms and 'have the potential to dramatically change soil structure, impact forest ecology, and reduce biodiversity.' In the U.S., where they are more common, people are seeing changes in lawns, gardens and even soccer fields, where the JWs damage the roots of turf grass.



The [jumping worm](#) has a smooth, light-coloured ring around its body compared to the raised, ridged, pink ring of a nightcrawler.

Photo: EarthwormWatch.org

Image below: [Cornell Cooperative Extension](#)



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Jumping Worms (continued)



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Best Practices To Slow the Spread

At this time, there is no good way to combat worms, so the best option is to slow the spread.

- Inspect all new plants and soil for these earthworms and their eggs.
- Avoid moving plant material or soil to cottages or other properties.
- Dispose of fishing bait responsibly. Never dump unused bait in local waters or soil.
- Check for worms and eggs/cocoons before sharing and moving plants.
- Clean compost, soil and debris from vehicles, personal gear (including boots and shoes), equipment and gardening tools before moving to new sites.
- Ensure compost has been heated to appropriate temperatures for a sufficient duration.
- Never buy or use jumping worms for bait, vermicomposting or gardening.



Image: Wisconsin pamphlet

How to Check Soil for Jumping Worms

- “Check your property for Asian worms using a dilute mustard solution. Mix 4 L. of water with 40 g. of ground yellow mustard seed, & pour slowly into the soil. This will drive any worms to the surface. If you have jumping worms, report it and avoid moving plants or soil from your yard.” [Cornell Cooperative Extension](#)

What to Do If You Spot Them

- If you find Jumping Worms in your garden or natural areas contact our local Canadian Food Inspection Agency office (CFIA) Tel: 647-790-1100.
- Remove any worms you find and place in a plastic bag and leave them out in the sun for at least 10 minutes. Dispose of the bag in the trash, never in compost.

Click on this
image to watch JW
in action!



Learn more:

- [Cancel Earthworms](#) - The Atlantic
- [GOT WORMS? Introduction to Invasive Asian Earthworms](#) Cornell Cooperative Extension
- [Jumping Worms: The Upcoming Environmental Disaster](#) - Laidback Gardener
- [Invasive in the Spotlight: Jumping Worms](#) University of New Hampshire
- [Jumping Worms and Sleeping Cocoons](#) – U. of Wisconsin-Madison Arboretum

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Question of the Month - Hackberry Mystery



These are on my Hackberry tree. Should I be concerned? Sue – MGOI FB Aug. '21

These hackberry galls are induced by [Hackberry Psyllids](#) (*Pachypsylla*). While they can stress the tree, these psyllids actually support a good deal of life.



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Don't clean up the leaves in the fall, because a natural predator for the psyllids are small wasps that remain in the old galls through the winter. They will emerge the following spring and cut the psyllid population in half. The other half can be food for birds.

"Hackberry psyllids are also common and important prey of many resident and migratory birds. Overwintering psyllids are favorite prey of chickadees, creepers, nuthatches, and other species. Migrating warblers, ruby-crowned kinglets, pine siskins, American goldfinches and chipping sparrows eat many adults in spring. Psyllids within galls are sometimes extracted by house finches and evening grosbeaks."

https://wiki.bugwood.org/HPIPM:Pachypsylla_celtidismamma

Learn more:

[Hackberry Blister Gall Psyllid](#)

[Hackberry Leaf Gall Psyllids](#) – Bug Guide.net

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I don't know whether to add dressing or holy water



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"What's Growing On"

Halton Master Gardener Meetings are still **being held virtually** using Zoom.

Fill in our [online contact form](#) if you're interested in coming to a meeting, joining our group or requesting a speaker for your club or interested group.

We are still answering your garden questions, so send us an email! It's what we do best! HaltonMasterGardeners@Gmail.com



Ask an Expert!

CBC Radio Online Chats - Last Chance!

Join us for our last four weeks of our CBC online chat in September! We've partnered with [CBC radio Hamilton](#) to answer your garden questions. Our award winning live chat team featuring [Halton Master Gardeners](#) Liza Drozdov, Patty King, Janet Mackey and Claudette Sims, and [Toronto Master Gardeners](#) Tina Cesaroni & Tena van Anandel with Royal Botanical Garden experts Jon Peter & Alex Henderson are there for you.

Listen to the call-in show with [Ontario Today's](#) Ed Lawrence while we're answering your garden questions live. Watch our Halton Facebook page for instructions on how to join or go to [CBC radio Hamilton](#) and click on LIVE. Sept 7th, 13th, 20th & 27th 12:30 to 1:30 p.m.



Royal
Botanical
Gardens

What's Happening at the RBG?

Click on images for more info
More activities & courses at [this link](#).



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