

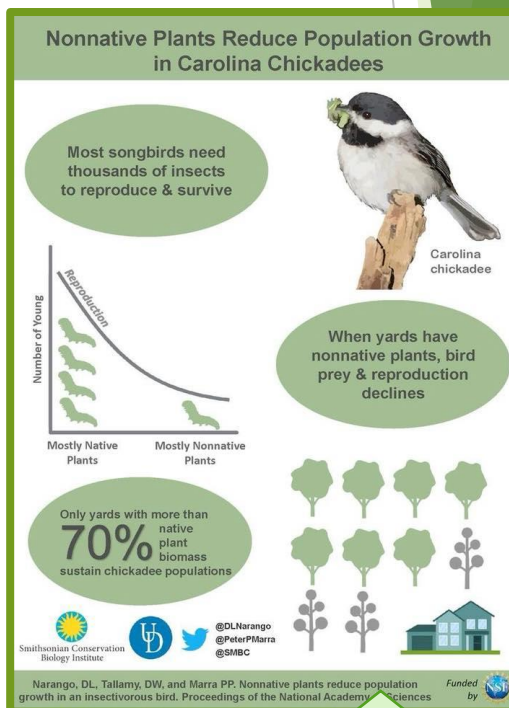
# Cross Pollination

Newsletter of the Halton Master Gardeners



## November Garden To Do List

- ❑ **Stems & Seedheads** - 4 Good reasons why you should leave them on your perennials & grasses: 1. Shelter for beneficial insects 2. Seed heads for birds 3. Winter interest 4. Insulation - stems collect snow & protect your plants!
- ❑ **Bulbs** – There's still time to plant spring flowering bulbs such as crocus, tulip, hyacinth & daffodil until before freeze up of soil. Water bulbs after planting. You can also divide & replant overcrowded spring bulbs and [fall crocus](#) which have finished blooming.
- ❑ **Lawn & Leaves** - A few leaves on lawn? Simply [mow & mulch and leave in place](#) (plus keep weeds down!) Lots of leaves covering the lawn? Rake or mow leaves (with grass catcher attached) and remove to garden beds or bags for use in spring. Be aware that using a mulching mower on leaves can destroy overwintering beneficial insects.
- ❑ **Bare Soil** – Cover bare soil with organic matter such as compost, leaves, straw, mulch or manure to protect soil from damage due to rain & erosion. [Avoid tilling](#) which destroys soil structure & soil organisms and encourages weeds to germinate. ☹
- ❑ **Garden Ponds** – Remove fallen leaves in pond with a bamboo rake to prevent them from decaying and affecting water quality.
- ❑ **Houseplants** - Decrease watering as the days become shorter. Increase humidity by misting plants. Check for pests weekly & treat as needed. Increase lighting with [grow lights](#) or reflective surfaces.
- ❑ **Trees** – Deciduous trees can be planted now until freeze up of soil. Follow this [tree planting guide](#). Find native tree suggestions for our area in the Ontario [Tree Atlas](#).
- ❑ **Invasive plants & Weeds** - Remove any [Common Buckthorn](#) and [Garlic mustard](#) seedlings. Continue to hand pull, rake or cut off weeds at ground level with a sharp spade or garden tool. Remove seed heads to reduce seed bank in your soil.
- ❑ **General Garden Care** – Empty & store/cover pots & watering cans to avoid damage from freezing. Turn off outside water connections & remove hoses. Hang garden hoses to drain before storage.
- ❑ See our [October newsletter](#) for any garden jobs that you may have missed!



Cartoon: Scott Hilburn

Aim for 70% native plants in your garden to sustain native bird populations.  
Image: D. Tallamy

# Cross Pollination

## Seed Collection of Native Plants

### COLLECTION, CLEANING AND STORAGE OF SEEDS

Brenda Van Ryswyk – Terrestrial Ecologist, Conservation Halton

*This is Part 2 of a two-part series on the collection, preparation and storage of native plant seeds. Please refer to the [October 2020 issue of cross-pollination](#) for Part 1.*

**Collection Methods:** The method used to collect the seed will depend on the seed type/species you are collecting. Always try to collect only one species at a time and do not mix species (unless you want that mix for reseeding at the restoration site). It is best to collect after the weather has been dry for a few days to ensure seed heads are dry. (Wet seed heads do not yield up their seeds well at all).

- I typically will use a clean bucket or paper bag. I grab a seed head, tip it into the bucket/bag and give it a good shake. A hard-sided bucket works best for species like monarda and mountain mints as they have fairly hard seed heads with small seeds inside small tubes.
- For fluffy seeds like asters and goldenrods, I will shake them into a bucket or a bag, but often find holding the stems with one hand and flicking a finger against the portion in the bag works well. It shakes the branch in the bag and knocks seeds off. Fluffy seed must be thoroughly dry.
- Sometimes I collect asters by hand plucking each seed head off one at a time. This works well as sometimes asters grow in mixed bunches and picking by hand ensures I get only the species I want. I do this for New England Aster especially since it sometimes 'hangs on' to its seed a bit longer. It also has nice dense flowers so I can pluck quite a few seeds with each pick.
- Careful collection also means there is less chaff in with the seeds.
- For some species such as Echinacea you will have to clip the entire seed head and work to get the seeds out by breaking it apart.
- When possible, collect in paper bags, and always transfer *bucket collected seed* to a paper bag as soon as possible. Paper 'breathes' and allows air flow. This is vital for the seeds to continue to dry after harvest. Seed stored in plastic will often go rotten, or have its viability lowered. For seed that is moist at time of collection, lay it out in a thin layer on a piece of cardboard or newspaper for at least a few days to allow it to dry out.

**Cleaning:** Cleaning may or may not be needed. Careful collecting may result in clean seed, needing little cleaning. Some seeds will just need a quick run through a kitchen sieve which will remove all the extra seed head, stem and leaf. For other seeds, if they have lots of tiny chaff, I will place them in a bowl and gently blow on them, not too hard or you'll blow your good seed away, but just hard enough so the chaff will go flying out leaving you with (mostly) clean seeds. Bad, non-viable, seed is also much lighter and so they may blow away easily as well.



*Cont'd on next page.*



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## Seed Collection of Native Plants – Cont'd

Brenda Van Ryswyk – Conservation Halton

### Cleaning cont'd:

- For larger seeds you can use a series of large and small sieves. A small sieve will hold back the seed but allow small chaff to pass through, and the larger sieve will remove larger chaff and allow seed to pass through.
- I do not try to clean the fluff off of aster or goldenrod seeds. It is just not feasible without expensive or complicated equipment. Dry well and store with the fluff attached. Grass seed is similar, I do not try to remove the outer seed coating of grass seeds, it is too time consuming and labour intensive.
- For some species you can remove the outer seed shell if you only have small amounts to clean by gently rubbing between sandpaper, until the outer seed casing is broken, then rub in your hands to remove any remaining seed coating.
- Sandpaper can be used for seed scarification if your species needs scarification seed treatment.
- Tree or shrub seeds often have a fleshy coating and this should be removed before storage. If you have a fair amount of seed to clean one method to do this is in a blunt blender. Find a used blender and cover the blades with a few layers of duct tape, put the seeds in with some water and blend for a short time. You want to remove the seed pulp/fruit, but you do not want to damage the seeds! Do it in short, few seconds bursts.
- But also do your research as some species, such as dogwoods (Cornus), should be kept moist at all times and are best planted right away. If dried and stored these species may enter an extreme dormancy that will take longer to break (often needing a period of [warm moist stratification](#) followed by cold moist stratification).
- Tree and shrub seeds can also be checked for viability by floating them in water. Good (viable) seed will be heavier and will sink to the bottom whereas bad (non-viable) seed will float on the surface.



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Watch Brenda's [Fluff Free Milkweed Seed Harvesting](#) video

YouTube



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Spotlight on Beneficial Insects  
Create the right habitat & They Will Come!

by Halton MG Hariette Henry

[Syrphid flies](#), commonly known as [hover flies](#) or flower flies are members of the **Syrphidae** family of the order **Diptera**.

There are approximately 6,000 species in 200 genera globally, and more than 25 species have been identified in Ontario's apple orchards. Farmers use Syrphid flies for biological control as many species are natural enemies of pests.

As Syrphidae is a very large family there is a lot of variation in their appearance. Most commonly they are between 8-12 mm long with yellow and/or orange and black stripes on the abdomen. All members of the Syrphidae family have a distinctive squiggle or false vein (spurious vein) running through the middle of their wing. It is thought that this vein strengthens their wings allowing them to hover in one spot and twist their wings 45 degrees over 300 beats/per second. Hence the common name Hover Fly.



Image: [alchetron.com](http://alchetron.com)

[Batesian mimicry](#) is a form of **mimicry** where a harmless species has evolved to imitate the warning signals of a harmful species directed at a predator of them both. It is named after the English naturalist Henry Walter Bates, after his work on butterflies in the rainforests of Brazil.

Source: Wikipedia

Hover flies like to mimic bees and wasps. This behaviour is referred to as Batesian mimicry and they are often mistaken for bees and wasps. There are some very significant differences between these insect groups however. For one thing, hover flies do not have stingers and cannot sting humans. They only have one set of wings whereas bees and wasps have two, and hover flies have very fly-like eyes with many small segments, unlike bee eyes which are solid and dark in appearance. Hover flies and wasps can be distinguished by the cinched waists of wasps. The thorax and abdomen of the hover fly is divided by a less narrowed section.



Hoverfly eyes (left) are huge and cover much of the head, bee eyes (right) are smaller and on the side of the head.

Image: Ted Roger Carston

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## Beneficial Insects...continued

Hover flies can be found in all regions of Canada where there are pollen and nectar rich plants. They are common throughout the world and can be found on all continents except Antarctica.

### Hoverfly vs Wasp



### What's The Difference?

Cinched waist of the wasp on the right  
Image: [inspiringplans.com](http://inspiringplans.com)

**Why do hover flies hover?** They do it while feeding and to attract mates. The length of time they can hover and the stability of their flight (staying in the same location even when it is windy) are thought to be key components in mate selection. Female hover flies lay their eggs near colonies of pests, such as aphids, thrips and leafhoppers and their slug-like larvae hatch a few days later and start chowing down. Some hover fly larvae eat decaying matter (the [detritivores](#)). The larvae then retreat into a cocoon and hatch around 10 days later. Many generations are produced over the course of a summer.

Hover flies are not thought to be at risk, however we should encourage their presence in our gardens as they are important pollinators and predators of pests. They prefer open flowers as their mouthparts make them not that well adapted to tubular flowers. They prefer plants in the Asteraceae (sunflower) family, the Rosaceae (rose) family and especially the Apiaceae (carrot) family. They have a preference for yellow and white flowers and scented flowers. Most are generalists, a few are specialists and only visit one plant such as the *Cheilosia albitarsis* which only visits buttercups (*Ranunculus repens*).



Hoverflies mating, mid-air  
Photo: Wikipedia



Syrphid larva eating aphids  
Photo: Beatriz Moisset, Wikimedia Commons



Hoverfly on an umbellifer (carrot family)  
Photo: David Short, Wikimedia Commons

### Further Reading:

[One Fly Gardeners Should Learn to Appreciate Plants to attract Hover Flies to the Garden](#)



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## Questions of the Month - Garlic and Clematis!

*Can you Garlic Gardeners or Experts Describe this and what took place?*  
Donna B. MGOI FB Forum

Garlic is an interesting crop. After centuries of breeding, cultivated forms of this allium have lost their ability to properly flower. (There are some wild types that can still do so). They are naturally biennial. Hardneck types send up a hard flower stock the second year. Rather than producing flowers, it produces a topset of tiny bulbils. (Softneck varieties never produce the stems.) It appears your garlic has formed a meager stem in an effort to bolt. It did not have much energy and it could only form bulbils, a small underdeveloped bulbil, that could never emerge from the soil.



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*I planted my garlic too early as I saw sprouts yesterday. First time I've tried this and clearly should've read more. Any chance of still having a harvest next year?*  
Erin MGOI FB Forum

According to one of our Halton MG garlic experts: "You may see the cloves sprouting a bit in the fall already but do not worry, they will not be harmed or freeze. In the spring they will start growing vigorously."

*I'm wondering what the general consensus is on my clematis. Cut it down now and let it grow fresh in spring or leave all the growth as it is?*  
Denice C. MGOI FB Forum

For those overwhelmed with pruning groups:  
"Prune clematis when new growth first appears in early spring. This is how it works. I wait for new growth to appear on my vines. Clematis break bud very early, in late winter. Once the growth has appeared I am ready to prune. Usually you will find a tangled mess of vines with live and dead growth interwoven. Keep in mind the stems of live and dead wood look alike. It is the leafy growth from the buds that indicates a vine is alive.

The simplified method starts at the top of the plant and works down. Start by cutting out the deadwood on each vine of the plant. Work down each vine until you find a live bud or growth. Once you find it stop. Continue to prune all the vines until each is either pruned back to a new growth or to the ground if that shoot is dead. Once this is complete, secure each of the vines to the trellis and move on to the next plant." K-State Research and Extension.

Cathy Kavassalis  
Halton Master Gardener



For further reading:  
[The Stinking Rose – Growing your Own Garlic](#)  
[Organic Garlic Production](#)  
[Growing Garlic from True Seed](#)  
[Clematis Pruning Made Simple](#)



# Cross Pollination

## The Indoor Veggie Garden A Wonderful Activity for Kids Learning from Home

by Dar Corrigan - Halton Master Gardener

*Already dismayed watching your kids stare into the screen of their computers while learning remotely? An indoor veggie garden is one way to incorporate math and science themes through experiential learning. It may even help with snack time needs!*

### Enriching the 'study at home' experience

Despite some of the best intentions, online educational delivery can be flat. Gardening can get kids doing, thinking and learning, particularly if they are part of the design process in setting up the garden. Gardening can include thinking about our ecosystems, math, engineering principals, nutrition, equity issues and food insecurity. At a minimum, just talking about gardening can stimulate interesting conversations that would benefit children.

### What you need, to set up your own indoor veggie garden:

There are some set up costs involved in this project but consider what you may have saved by not having to pay for regular extra-curriculars that have been cancelled due to the pandemic (maybe an art class or judo lesson).

- **Soil** - buy soil especially for seeds - approx \$9 for a 2.5kg bag – more than enough!
- **Seeds** – Start with easy-to-grow vegetables, such as lettuces, kale, herbs and micro-greens. About \$3/packet, e.g. [Westcoast Seeds](#) or [William Dam](#) in Dundas.
- **Trays, pots, & a watering/spray bottle:** Save money by recycling outdoor gardening pots, re-purposing some everyday household items, or asking to borrow gardening pots from neighbours or family in the off season.
- **Indoor Garden Structure** – 2 choices
  - **Ready-made structures** – Attractive but expensive (\$239+) See [Westcoast Seeds, Amazon](#)
  - **Build your own structure** – Make the whole project a rewarding DIY experience in partnership with your children! It can be as simple as attaching grow lights to an existing shelf that you may already have in your home – see here what I have done to this Ikea shelf:



Ikea shelf (\$16) + two sets of lights (\$95) = \$114



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## The Indoor Veggie Garden -continued

•**DIY with simple cut of wood and four legs.** Open the tool box and teach your children to use a screwdriver, the measuring tape or even the saw (if age appropriate).



Wood (\$15) + Light (\$47)= \$62

When building your own, the biggest cost will be the lighting. It's unavoidable when you live in Ontario and want to grow indoors over the winter months. Grow lights are available at your local garden store, or online. For a review of light options, see [HERE](#).

### A Note on Safety

Of course, parents need to supervise the building and use of these indoor gardens. While I encourage you to think outside the box to drive down set up costs, safety comes first and one must remember to always use caution and read all the instructions for use of grow lights and tools.

### Compliment your children's growing/learning journey

- For another article on the Indoor Veggie Cart read [Cross Pollination April 2020](#)
- Watch [The Science of Gardening and Ecosystems](#) PBS (for older children)
- [Resources for Growing Gardeners](#)
- [Activities](#) for young gardeners

### Conclusion

An indoor garden can be an amazing learning tool during these months of remote learning. Instead of the flat experience of staring at a screen, gardening can encourage kids to get their hands dirty and minds stimulated. In addition to all that they can learn, the exposure to greenery may help with some of the winter blues that might be heavier this upcoming winter and fall. Finally, who knows? You might even get a salad or two out of it.



Mouth watering lettuce from Dar's Indoor Veggie Garden





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## "What's Growing On"

Halton Master Gardener Meetings continue to be held **virtually** until further notice. We are still accepting new members! Interested? Email us!

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



### Take part in an Ecocise Invasive Plant Removal

with Hamilton Conservation Authority  
Friday, November 6<sup>th</sup> 2:00- 4:30 p.m.

- 48 Market Street North, Dundas
- Saturday, November 7<sup>th</sup>
- 10:00 a.m. 1241 Govenor's Road, Dundas
- 2:00 p.m. 1285 Wilson St. E., Ancaster

For more [information or to register](#)



### Shelter in Place Activities

Short Engaging Videos for YOU!

- [How a single-celled organism almost wiped out life on Earth](#) (A. Willis, 4 min)
- [Can plants talk to each other?](#) (Richard Karban, 5 min)
- [The simple story of photosynthesis and food](#) (Amanda Ooten, 4 min)
- [Orchids: The Masters Of Lying, Cheating & Stealing](#) (4 min)
- [Plant Science Investigation \(PSI\)](#) (CSI spoof) (7 min)

BBC TV

- [Gardeners World episode 29 2020](#)
- [Gardeners World episode 30 2020](#)
- [Gardeners World episode 31 2020](#)
- [Gardeners World episode 32 2020](#)



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