

Pollinator Friendly Gardening

Prepared by:
Etobicoke Master Gardeners



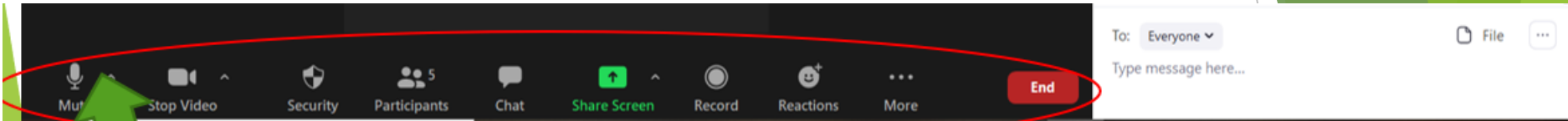
Etobicoke Master Gardeners
www.etobickemastergardeners.ca

Presented with:
Humber Arboretum

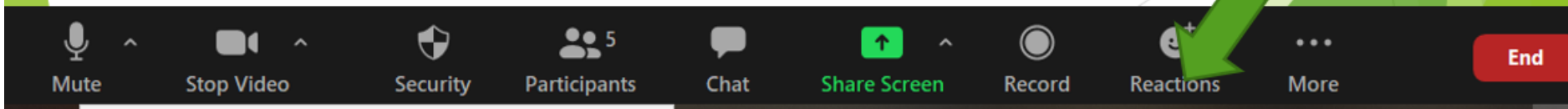


Humber Arboretum
Humber.ca/arboretum

Zoom Tips & Tricks

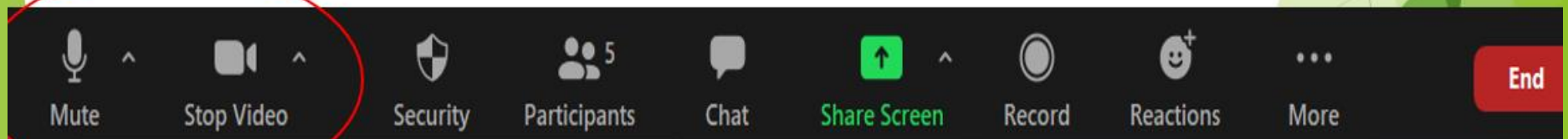


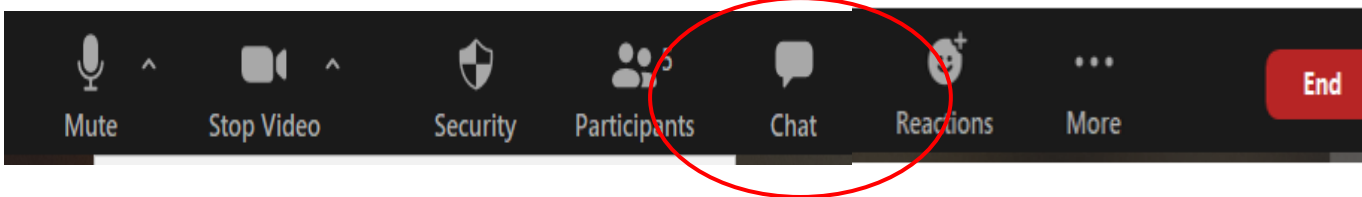
“Mouse over” the screen area to wake up the functions.



KR Your Name

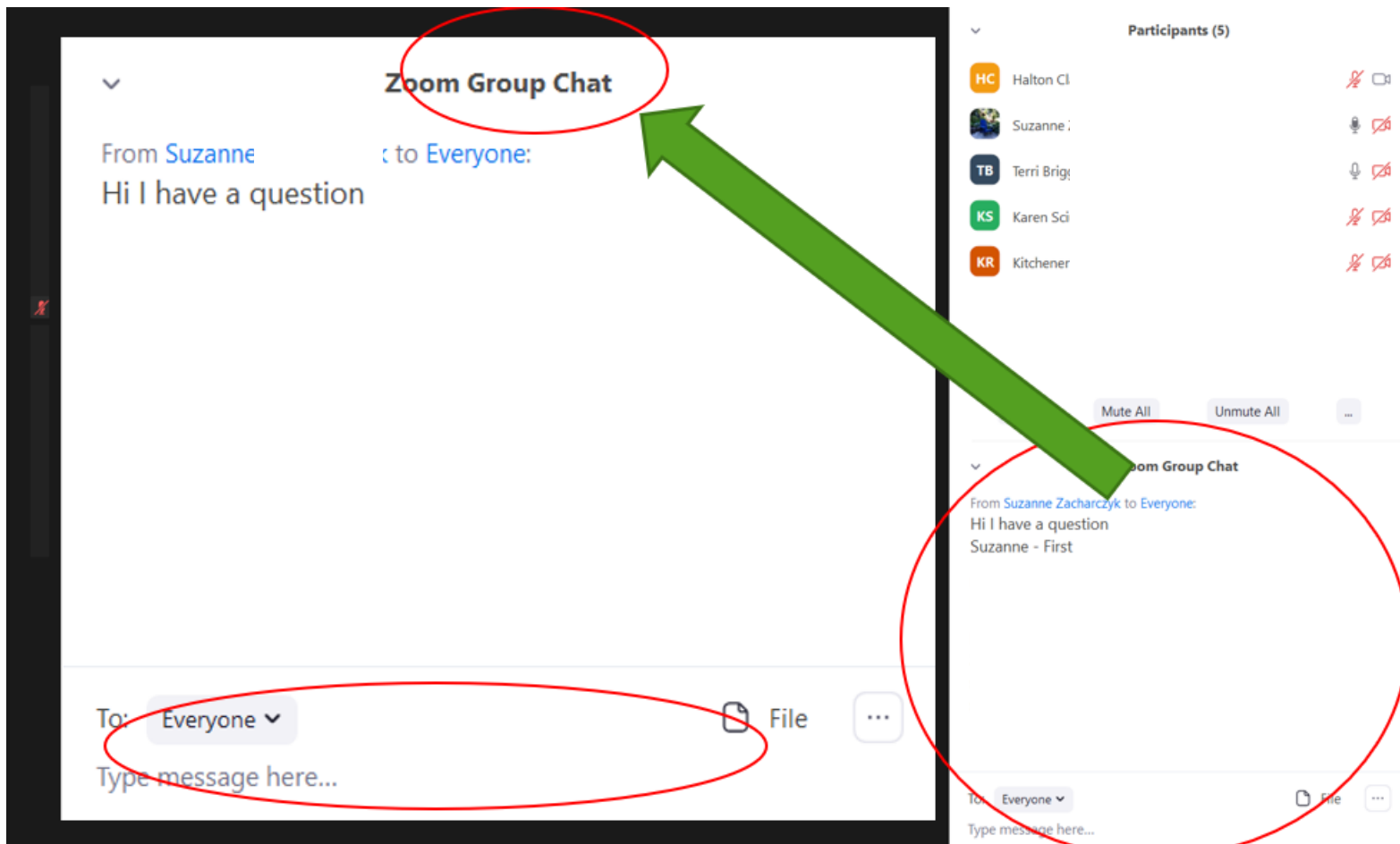
Mute yourself and turn off video unless you are the presenter.





How to ask a question:

- ✓ Click on “Chat” in the functions
- ✓ Type in your question. A moderator will read it.



Master Gardeners of Ontario

[ABOUT US](#)[CONTACT US](#)[CALENDAR OF EVENTS](#)[COMMUNITY ACTIVITIES](#)[EMG MEMBER LOGIN](#)

Etobicoke Master Gardeners

Etobicoke Master Gardeners (EMG) was formed in January 2005 to support and provide valuable resources to the Etobicoke Gardening Community.

EMG members meet at the Kingsway-Lambton United Church the fourth Wednesday of most months from 7 to 10 p.m.

We welcome inquiries from enthusiastic and interested individuals wishing to:

- learn more about joining our group
- studying for Master Gardener (MG) designation
- increasing and sharing their knowledge
- network, share ideas, and work with others who have similar

[NATIVE PLANT WORKSHOP VIDEO](#)

Thank you to everyone who joined the Etobicoke Master Gardeners, and Humber Arboretum at the Native Plant Workshop

Check-out the details on the 2023 Workshop Series!

For full details visit our [Community Activities](#) page

Our upcoming Workshop Topic on April 29, 2023 is "**Invasive Plants, Controls, and Alternatives**" - Virtual Workshop

Join the Etobicoke Master Gardeners and the Humber Arboretum for a free workshop on **Invasive Plants**. Learn the definition of an invasive plant, as well as the ecological problems they cause. Learn how to



The Humber Arboretum consists of nearly 250 acres of public gardens and natural areas located in the Humber River watershed in North Etobicoke. Connected to Humber College North Campus, it exists as a unique tri-partnership between Humber College, the City of Toronto, and the Toronto and Region Conservation Authority (TRCA). The Humber Arboretum is free to visit and offers a variety of programming to both Humber College students and the public.

LAND ACKNOWLEDGEMENT

Humber Arboretum and Humber College are located within the traditional and treaty lands of the Mississaugas of the Credit.

Known as Adoobiigok [A-doe-bee-goke], the “Place of the Alders” in Michi Saagiig [Mi-Chee Saw-Geeg] language, the region is uniquely situated along the Humber River Watershed, which historically provided an integral connection for Anishinaabe [Ah-nish-nah-bay], Haudenosaunee [Hoeden-no-shownee], and Wendat [Wine-Dot] peoples between the Ontario Lakeshore and the Lake Simcoe/Georgian Bay regions.

Now home to people of numerous nations, Adoobiigok continues to provide a vital source of interconnection for all.

Poll Question

Do you have a
pollinator or bird
friendly garden?

1. Yes
2. No
3. Yes, but I want to
learn how to
encourage more
pollinators & birds



Session Topics

- ✓ Ecology in your backyard
- ✓ Importance of Pollinators
- ✓ What is Pollination
- ✓ Meet the Pollinators
- ✓ Threats to Pollinators and Birds
- ✓ Create a Pollinator and Bird friendly garden
- ✓ Plants for Pollinators and Birds
- ✓ Birds of Ontario
- ✓ Get Engaged & Fun projects

Ecology in your backyard

Photo by Shane Kingsley, EMG



Ecology in your backyard

- ✓ Plants and insects have co-evolved in a **symbiotic relationship**
- ✓ Every garden **needs pollinators**; without them there would be limited numbers of flowers, and even fewer fruits and vegetables
- ✓ Pollinators are looking for 3 things when they visit plants: **nectar, pollen, and a host plant**

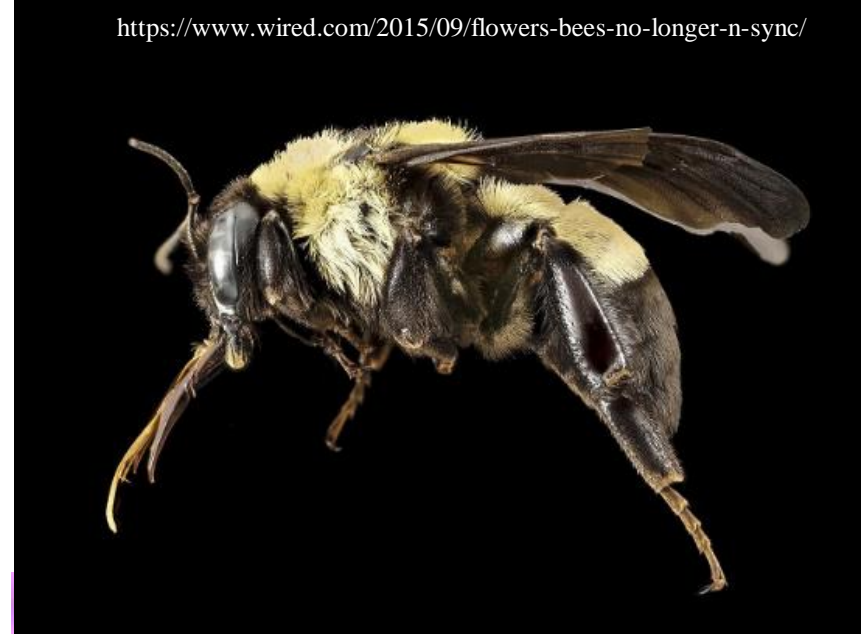
A bumblebee
gathers nectar
from a lily



A tiny halictid
bee is gathering
pollen

Ecology in your backyard

- ✓ **Nectar** is a sweet reward that makes the pollinator move from plant to plant.
- ✓ Scent often advertises the presence of nectar
- ✓ **Pollen** = protein, which is fed to bee larvae
- ✓ **Host Plant** is one which serves as a food source for butterfly larvae
- ✓ Other uses...



Importance of Pollinators



Importance of Pollinators

Worldwide it is estimated that ...

- ✓ 75-95% of all flowering plants
- ✓ 1 of 3 mouthfuls of food we eat & beverages
- ✓ Over $\frac{1}{2}$ the world's diet of fats/oils from oilseed crops
- ✓ More than 1,200 crops grown for medicines, beverages, fibres, condiments, spices and medicines

...are dependent on
Pollinators



Importance of Pollinators

- ✓ Ecosystem service – reproductive success
- ✓ Natural landscape
- ✓ Support wildlife
- ✓ Biodiversity
- ✓ Enhances soil quality



What is Pollination?



Photo by EMG Suzanne

What is “Pollination” ?

- ✓ The process by which pollen grains, the male components that carry a plant’s genetic information, reach the female reproductive parts of another flower of the same species
- ✓ Pollination is necessary for sexual reproduction in plants



The bee is dusted with pollen while moving along the blossom

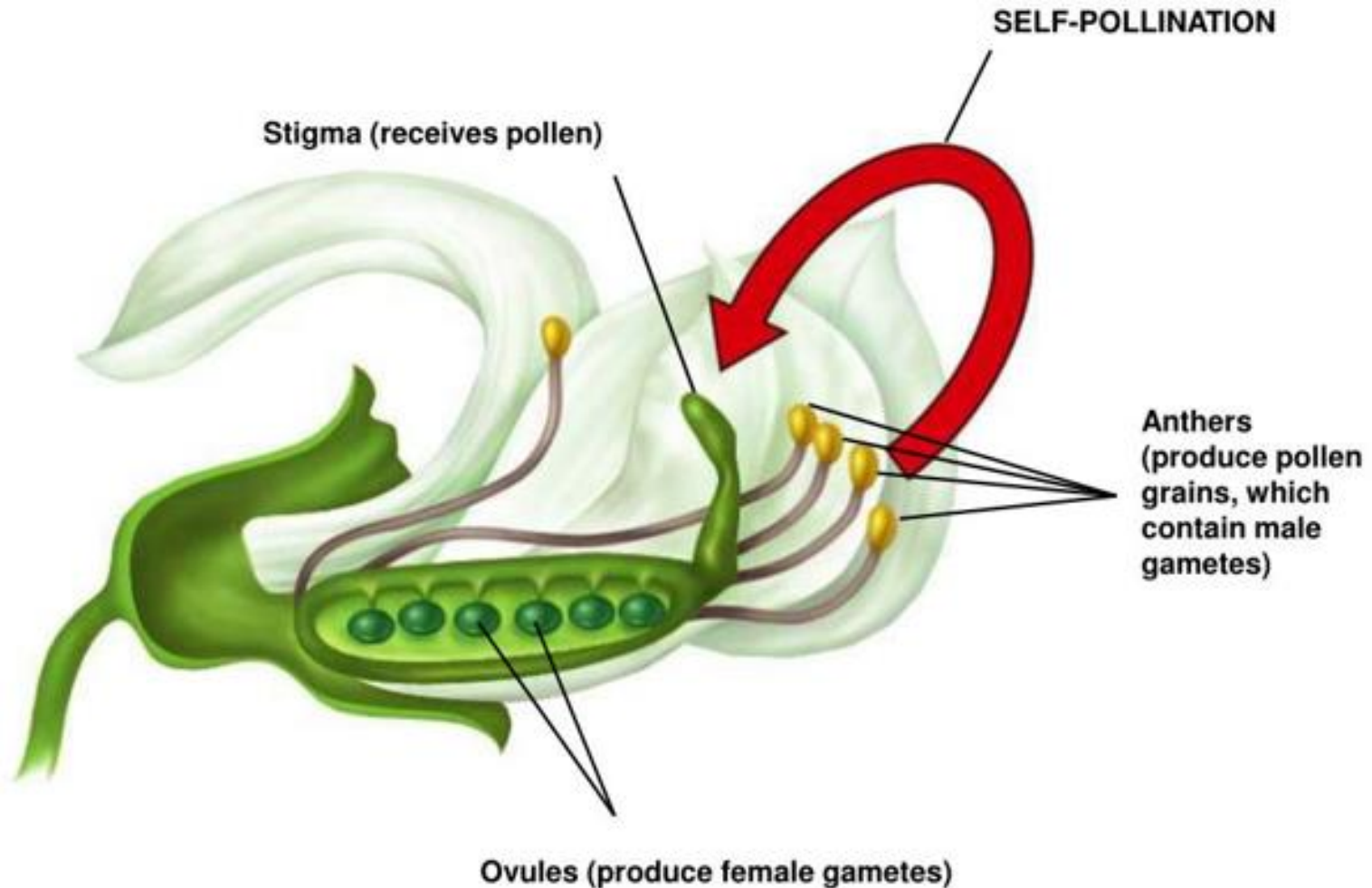


The bee flies to another blossom, while carrying pollen in the her hairs



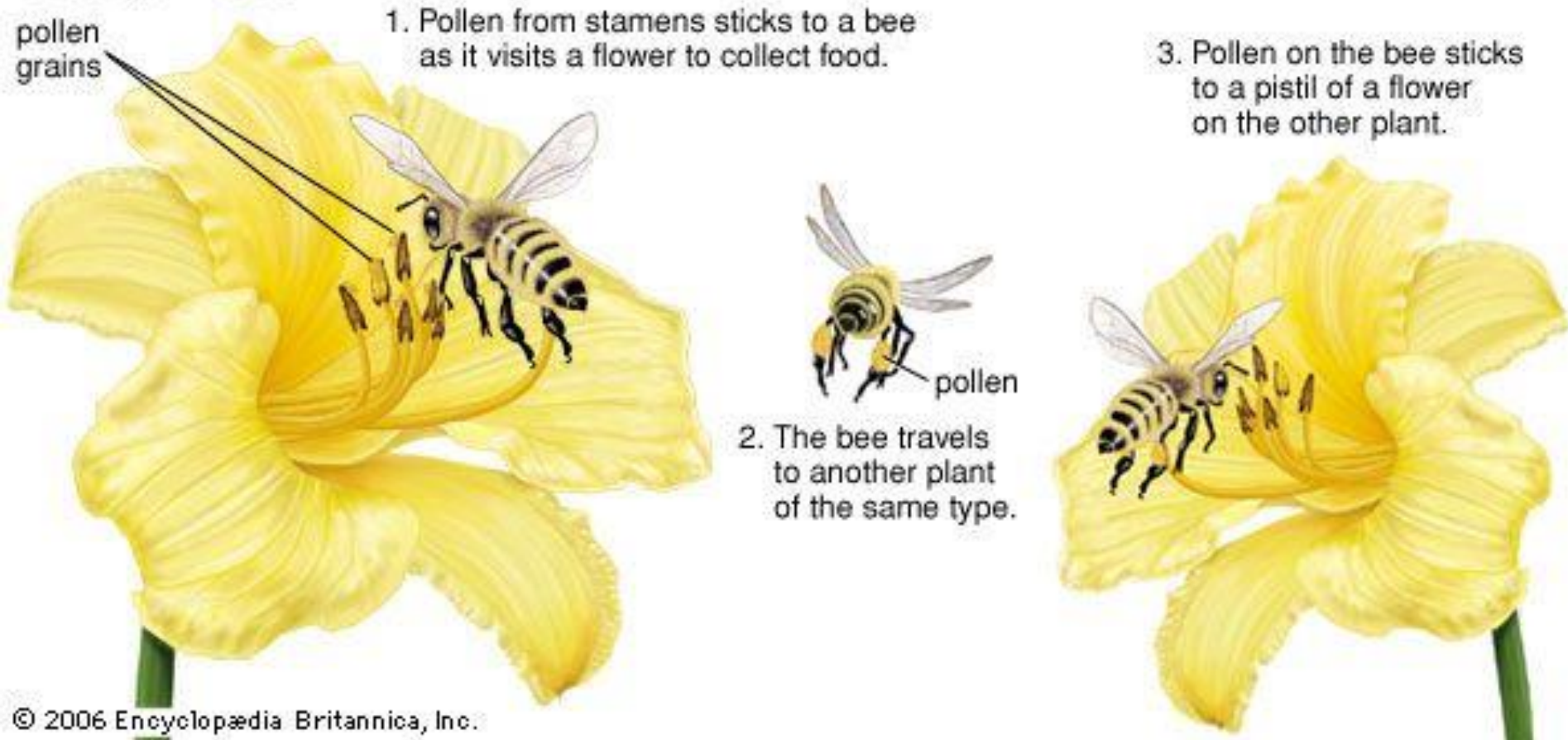
When the bee lands, pollen is transferred to the new blossoms stigma

Plants can be *self-pollinating*



Plants can be *cross-pollinating*

Cross-pollination



How do pollinators see plants ?



Pollen

- ✓ The yellow, white, or brown powder at the center of most flowers
- ✓ There are two types of pollen
 - ✓ Light, dusty pollen
 - ✓ Heavy, sticky pollen
- ✓ Many complex flowers force bees to forage in a restricted position, while some plants stagger the timing of pollen release



Meet the Pollinators



Photo by EMG Suzanne

Pollinators

Bees

(Hymenoptera order)



Flies

(Diptera order)



Butterflies and Moths

(Lepidoptera order)



Beetles

(Coleoptera order)



<http://www.pollinationcanada.ca>

Bees (*Apoidea* or *Apiformers*)

- ✓ There are 4,000 species, with over 800 species native to Canada
- ✓ Are the most important pollinators in North America



Bumble Bee



Leafcutter bee



Mason bee



Carder bee



Honey Bee



Carpenter Bee

Meet Toronto's Official Bee

- ✓ The Metallic Green Sweat Bee (*Agapostemon virescens*) was voted the official bee of Toronto by City Council in April 2018.



Butterflies and Moths (*Lepidoptera* order)

Monarch Butterfly

www.naturecanada.ca



Bumble Bee Hawk Moth



Beetles (*Coleoptera* order)



Flower Longhorn Beetle



Flies (*Diptera* order)

Flower Fly / Hover Fly



Threats to Bees and Other Pollinators

- ✓ Pollinators are in decline throughout the world including North America
- ✓ **Primary reasons for the decline:**
 - ✓ Habitat destruction from human development and agriculture
 - ✓ Overuse of pesticides
 - ✓ Competition from invasive exotic species
 - ✓ Lack of awareness on the role they play
 - ✓ Climate change



www.bing.com/images

Poll Question

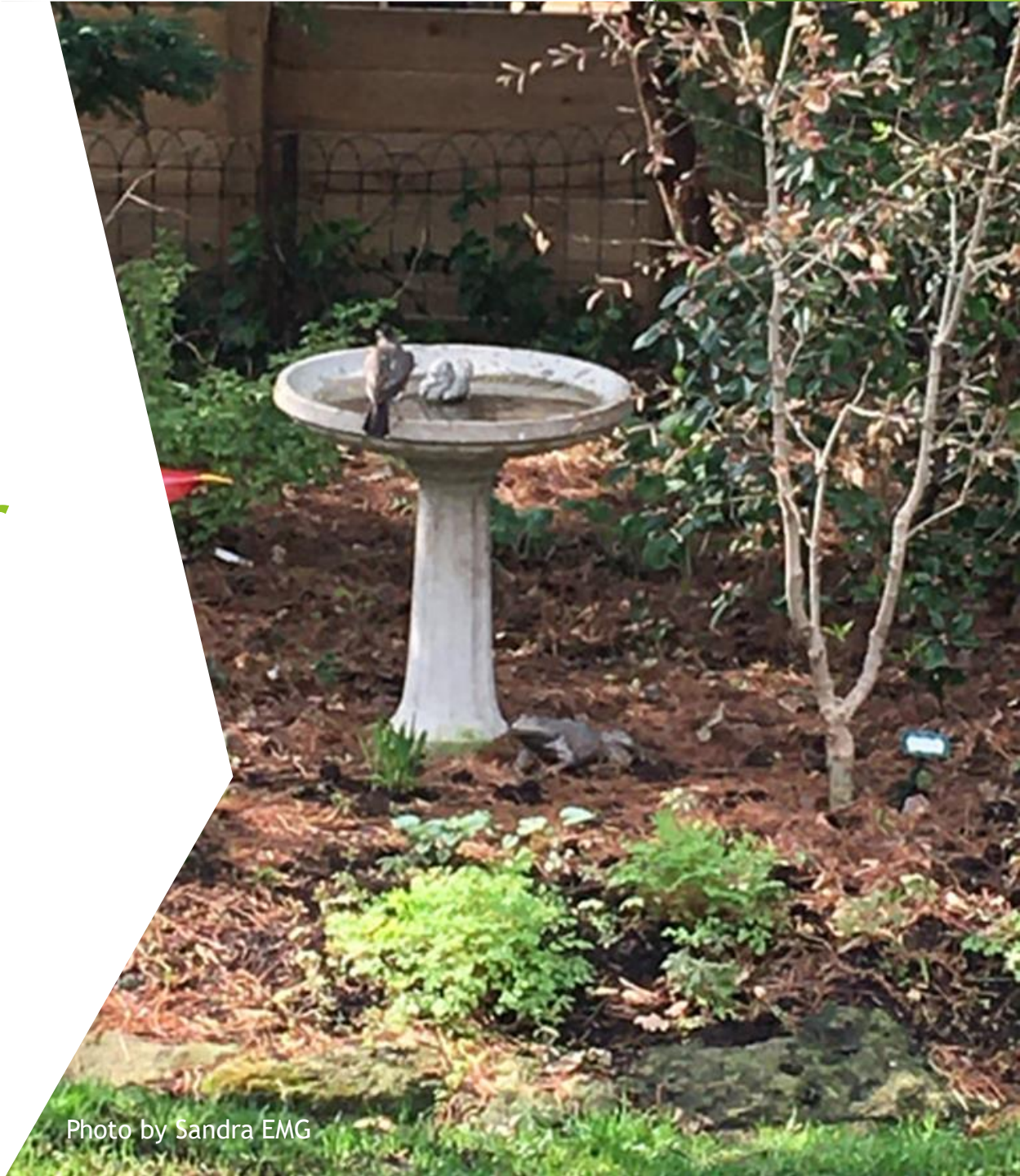
What are the most common pollinators in your garden?

1. Bees
2. Butterflies & Moths
3. Beetles
4. Flies
5. Hummingbirds
6. All of them



Create a Pollinator and Bird friendly garden

Photo by Sandra EMG



What is a Pollinator Garden?

- ✓ where the gardener considers the pollinator potential of a plant
- ✓ where the design and plant choices are focused on attracting pollinators
- ✓ provide nectar or pollen
- ✓ diversity of flowering plants
- ✓ emphasis on native plants
- ✓ imitates nature to attract pollinators



Elements of Pollinator Garden Success

✓ Plant Natives



Elements of Pollinator Garden Success

- ✓ Provide a
succession of
flowers
- ✓ Plant flowers
in clumps

Photo by Shane Kingsley, EMG



Elements of Pollinator Garden Success

✓ Provide a variety of

✓ Colours

✓ Scents

✓ Shapes

✓ Types/species



Elements of Pollinator Garden Success

✓ Reduce Your Lawn



Image source: Flickr/Hideyuki KAMON CC BY-SA 2.0



Elements of Pollinator Garden Success

- ✓ Keep it Natural
- ✓ Don't Use Pesticides
- ✓ Provide fresh Water & nesting sites
- ✓ Plant where pollinators will visit



Elements of Bird Garden Success

All birds require are 3
basic elements;

✓ “*Supper*”

✓ “*Sip*”

✓ *Shelter*



Food! An element for Success

- ✓ Most food sources are natural
- ✓ Augment natural sources with feeders
 - ✓ Tube
 - ✓ Hopper
 - ✓ Tray
 - ✓ Suet
 - ✓ Sugar-Water



Water! An element for Success

- ✓ Needed for drinking and bathing
- ✓ Water Sources
 - ✓ Consider functionality, materials, location, winter heating, accessibility and cleanliness
- ✓ Small ponds or streams



Shelter! An element for Success

- ✓ Trees, shrubs, and hedges
- ✓ Birdhouses
 - ✓ Birds are picky!
Keep size, shape and openings of their homes in mind



Photo by Sandra EMG

Native Plants for Pollinators and Birds!

Legend:



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies



Photo by EMG Janet

Aster (*Aster*)



Photo by EMG Janet



Photo by EMG Janet



Photo by EMG Janet



Attracts bees



Attracts butterflies



Attracts birds

Wild Bergamot (*Monarda fistulosa*)



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies



Photo provided by: Humber Arboretum

Big Blue Geranium (*Geranium maculatum*)



Attracts bees



Attracts butterflies



Attracts birds



Black eyed Susan (*Rudbeckia hirta*)



Attracts bees



Attracts butterflies



Attracts birds



Blazing Star (*Liatris*)

(*Liatris spicata*)



Photos by: Shane Kingsley, EMG

(*Liatris cylindricea*)



<http://www.squidoo.com/blazing-star-liatris>



Attracts bees



Attracts butterflies



Attracts birds

Bunchberry (*Cornus canadensis*)



Attracts bees



Attracts butterflies



Attracts flies

Dogwood (*Cornus*)



Attracts bees



Attracts butterflies



Attracts birds



Gray-headed Coneflower (*Ratibida pinnata*)



Attracts bees



Attracts butterflies



Attracts birds

Photos by: Shane Kingsley, EMG

Milkweed (*Asclepiadaceae*)



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies

Nanny Berry (*Viburnum lentago*)



Photo: St Williams Nursery



Attracts bees



Attracts butterflies



Attracts birds



Red columbine (*Aquilegia canadensis*)



Attracts bees



Attracts butterflies



Attracts birds



Walmart

trees4nc.com/treepics/RedColumbine.jpg

Serviceberry (*Amelanchier*)



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies

Sumac *Rhus* (Anacardiaceae)



Photo by EMG



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies



Sweet Joe Pye weed (*Eutrochium purpureum*)



Attracts bees



Attracts butterflies



Attracts birds

Tall Sunflower (*Helianthus giganteus*)



Attracts bees



Attracts butterflies



Attracts birds



Turtlehead (*Chelone glabra*)



Attracts bees



Attracts birds

Canadian Wild Ginger (*Asarum canadense*)



Attracts bees



Attracts butterflies



Attracts birds



Attracts flies

White Trillium (*Trillium grandiflorum*)



And many others they will love...



Birds Of Ontario

Let's meet some
of them

Photo by Sandra EMG



Ruby-Throated Hummingbird (*Archilochus alexandri*)



American Goldfinch (*Carduelis tristis*)



American Robin (*Turdus migratorius*)



Black-Capped Chickadee (*Carpodacus mexicanus*)



Blue Jay (*Cyanocitta cristata*)



Cedar Waxwing (*Bombycilla cedrorum*)



Dark-Eyed Junco (*Junco hyemalis*)

www.birdforum.net



Downy Woodpecker (*Picoides pubescens*)



Northern Cardinal (*Cardinalis cardinalis*)



Red-Breasted Nuthatch(*Sitta Canadensis*)

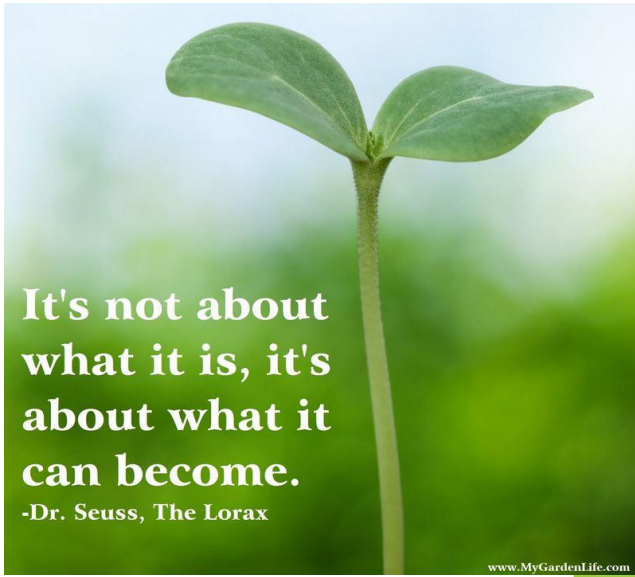


The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

Get engaged & Fun Projects

How can you become involved ?

- ✓ PlantWatch *naturewatch.ca/plantwatch*
- ✓ Global Pollinator Watch
inaturalist.org/projects/global-pollinator-watch
- ✓ Pollinator Partnership Canada *pollinatorpartnership.ca*
- ✓ Ontario Nature *ontarionature.org*
- ✓ Pollination Guelph *pollinationguelph.ca*
- ✓ *And many others...*



It's not about
what it is, it's
about what it
can become.

-Dr. Seuss, The Lorax

Some Fun Projects

Provide an opportunity for entertainment and education

- ✓ Build a:
 - ✓ Pollinator Garden
 - ✓ Solitary Bee House
 - ✓ Pollinator bath
 - ✓ Bird House
 - ✓ Suet & Seed Feeders



Wrap Up



Photo by EMG Suzanne

Resources

- ✓ Etobicoke Master Gardeners www.etobicokemastergardeners.ca
- ✓ Master Gardeners www.mgoi.ca
- ✓ Humber Arboretum [Pollinator Garden \(humber.ca\)](http://Pollinator Garden (humber.ca))
- ✓ City of Toronto “Best Native Plants” lists
<https://www.toronto.ca/legdocs/mmis/2018/pe/bgrd/backgroundfile-113557.pdf>
- ✓ Douglas Tallamy, [Bringing Nature Home](#), Timber Press 2009.
- ✓ Evergreen Native Plant Database www.nativeplants.evergreen.ca
- ✓ Heather Holm, [Pollinators of Native Plants](#), Pollination Press, 2014.
- ✓ Halton Master Gardeners - list of Ontario native plant nurseries.
<https://haltonmastergardeners.com/2020/03/28/native-plants-nurseries-in-ontario/>
- ✓ In The Zone www.inthezonegardens.ca
- ✓ Lorraine Johnson, [100 Easy-to-Grow Native Plants for Canadian Gardens](#), 3rd edition, Whitecap Books.
- ✓ Mississauga Blooming Boulevards <http://www.bloomingboulevards.org/our-plants>
- ✓ Ontario Trees & Shrubs www.ontariotrees.com
- ✓ Ontario Wildflowers <http://www.ontariowildflowers.com/>
- ✓ Pollination Canada. www.pollinationcanada.ca
- ✓ Pollination Guelph. www.pollinationguelph.ca
- ✓ The David Suzuki Foundation www.davidsuzuki.org
- ✓ North American Native Plant Society www.nanps.org



Etotobicoke Master Gardeners



**HUMBER
ARBORETUM**

2023 Eco-Garden Community Workshop Series

Saturdays 10:00 AM to Noon

Virtual Sessions via Zoom

February 25: Plant Identification

March 4: Growing Your Own Food

April 15: Native Plants

April 29: Invasive Plants, Control, and Alternatives

June 10: Pollinator Friendly Gardening

October 14: Pruning

November 18: Indoor Plants

In-Person at the Humber Arboretum

February 4: Winterwood:
Winter Tree Identification Tour

May 6: First-hand Look at
Invasive Plants, Control, and
Alternatives Tour

October 21: Pruning Workshop

Free, but space is limited & registration is required:

[Humber.ca/arboretum/emg](https://humber.ca/arboretum/emg)



You can find a copy of the presentation



Etobicoke Master Gardeners

[ABOUT US](#)

[CONTACT US](#)

[CALENDAR OF EVENTS](#)

[1 COMMUNITY ACTIVITIES](#)

[3](#)

[WORKSHOP MATERIALS](#)

[2](#)

[HUMBER ARBORETUM](#) ►

[EMG PLANT SALE](#)

[LINKS & RESOURCES](#)

[EVENTS/WORKSHOPS](#)

Workshop Materials

Native Plant Gardening (April 23, 2022)



[native_plant_gardening_april_23_2022.pdf](#)
Download File

Poll Question

How did you hear about the event?

1. Humber Arboretum
2. Etobicoke Master Gardeners
3. Facebook
4. Twitter
5. Etobicoke Guardian
6. Toronto Gardeners
7. Lakeshore Environmental Gardening Society
8. Etobicoke Horticultural Society
9. Other

Etobicoke Master Gardeners

Thank you!

Questions

