

# *Invasives and Other Challenges*

Prepared by:  
Etobicoke Master Gardeners



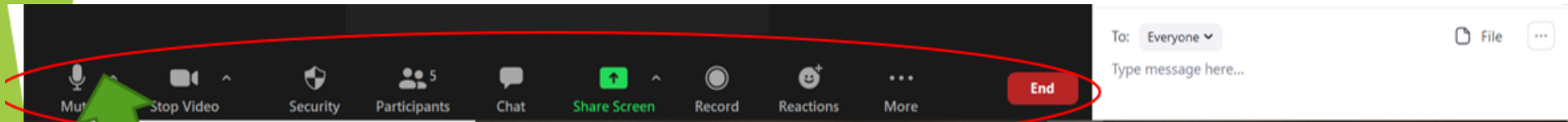
Presented with:  
Humber Arboretum



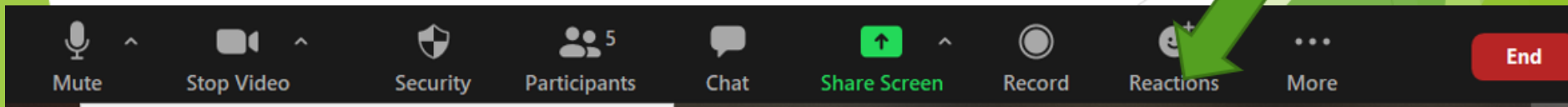
Etobicoke Master Gardeners  
[www.etobicokemastergardeners.ca](http://www.etobicokemastergardeners.ca)

Humber Arboretum  
[www.humberarboretum.on.ca](http://www.humberarboretum.on.ca)

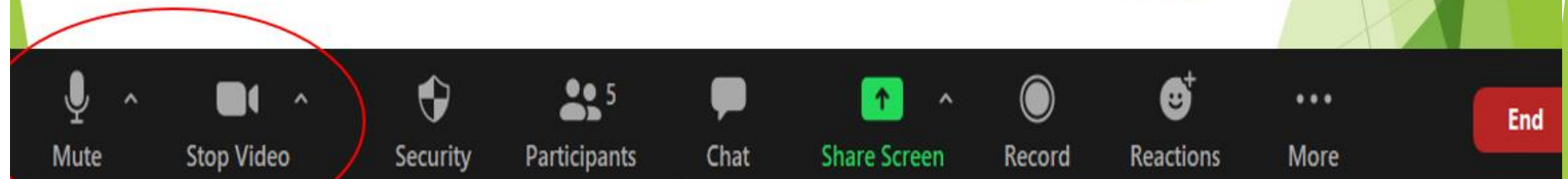
# Welcome to Virtual Tips & Tricks

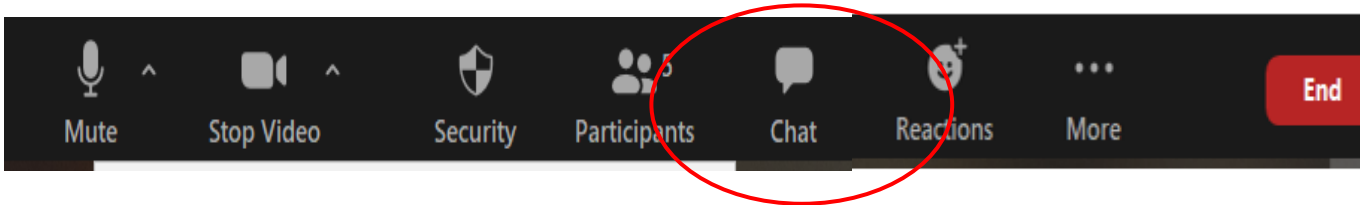


“Mouse over” the screen area to wake up the functions.



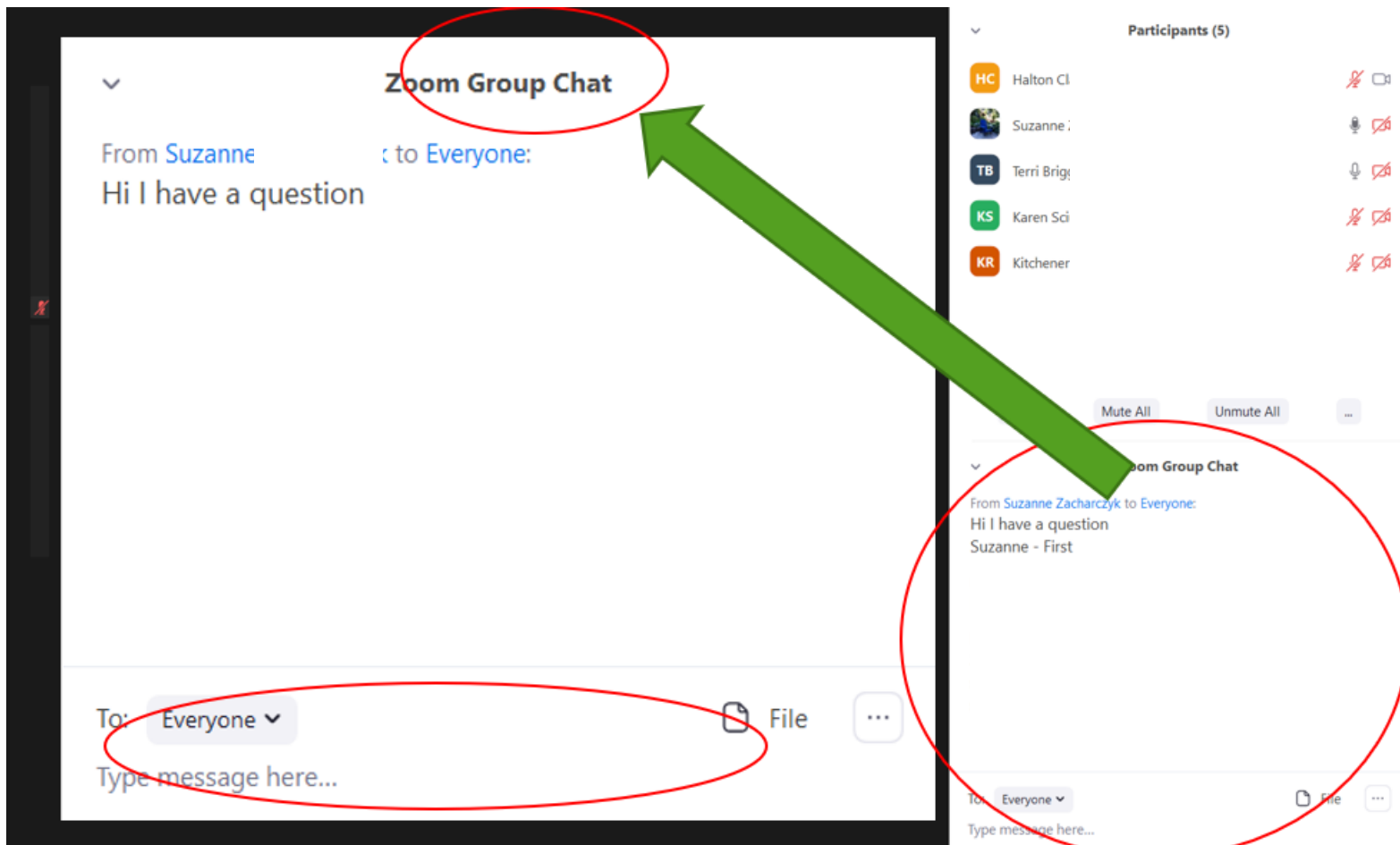
KR





## How to ask a question:

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



# Master Gardeners of Ontario

## 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.

# Session Topics

- ✓ What are Invasive Plants
- ✓ Ecological Impacts
- ✓ Common Invasive Plants
- ✓ Selected Invasive Pests
- ✓ Recent Invasive Pathogens
- ✓ What can I do?
- ✓ Wrap Up



Do you have invasive plants in your garden?

1. Yes
2. No
3. Not sure, as I don't know which are the invasive plants





What are Invasives?



# What is an invasive?

- ✓ An aggressively growing non-native plant or pest
- ✓ More than a common weed
- ✓ Invasive species have 'displacement capacity'



# Did you know?

- ✓ Approximately 500 invasive plants in Canada
- ✓ Over 440 of them in Ontario
- ✓ Invasive plants cause negative impacts to...
  - ✓ biodiversity
  - ✓ natural ecosystems


guardian Search jobs Sign in Search International edition

ion Sport Culture Lifestyle More


15 Asia Australia Middle East Africa Inequality Cities Global development

## 'There's no major city like it': Toronto's unique ravine system under threat

Without urgent action against environmental degradation, the forest ravines covering 20% of the city could be reduced to sterile valleys within decades



Advertisement



Phragmites invasion,  
Ontario Invasive Plant Council

5341

# More negative effects ...

- ✓ Decreasing resilience of the natural environment reduces ability to respond to impacts of climate change
- ✓ Diminishing the aesthetic condition and mental health benefits provided by a diverse environment with a variety of flora and fauna, of colours, of textures and sounds

# And by impacting ...

- ✓ the productivity of the agricultural, forest and fresh-water fisheries sectors
- ✓ recreational use of nature trails, wild areas, urban parks, freshwater lakes and stream
- ✓ In conclusion:
  - ✓ Invasives cause a variety of impacts and costs



<https://extension.entm.purdue.edu/>

# Where did invasives come from?

- ✓ Similar growing areas
  - ✓ Western Europe
  - ✓ China / Japan
- ✓ Many species intentionally brought in
  - ✓ Immigrants bringing familiar plants
  - ✓ Horticultural imports
  - ✓ Incidental Import



# Where did invasives come from?



- ✓ Invasives behaviour
  - ✓ not initially apparent
    - ✓ Not invasive in area of origin
  - ✓ Initially contained in specific areas but then escaped
    - ✓ - spreading before behaviour identified
- ✓ Recent source – milder conditions due to Climate change
  - ✓ allowing invasive species in US to migrate north
  - ✓ Mainly pests and pathogens via air rather than import

# The Invasive Species Act (ISA) Ontario

- ✓ The goal: support the prevention, early detection, response to and eradication of invasive species in Ontario
- ✓ Key elements include:
  - ✓ Providing tools
  - ✓ Banning specific activities
  - ✓ Enabling response actions
  - ✓ Promote compliance





# Turfgrass & Prohibited Plants Bylaw

- ✓ Requires property owners / occupants to maintain their properties
- ✓ Keep properties free of prohibited plants listed under the Toronto Bylaw



Search



A+

A-

I want to...



Services & Payments

Community & People

Business & Economy

Explore & Enjoy

City Government

[Home](#) / [City of Toronto](#) / [City Government](#) / [Public Notices & Bylaws](#) / [Bylaw Enforcement](#) / [Turfgrass & Prohibited Plants](#)

## Turfgrass & Prohibited Plants

Share

Print



### Contact Information

Contact 311

311

Phone outside Toronto:

416-392-CITY (2489)

TTY: 416-338-0TTY (0889)

Email: [311@toronto.ca](mailto:311@toronto.ca)

### Related Information

[Turfgrass & Prohibited Plants Bylaw](#)

# Canadian Food Inspection Agency (CFIA)

- ✓ Mandate includes Protecting Plant Health in Canada, incl biodiversity
  - ✓ Invasive plant diseases and plant pests
  - ✓ Monitors spread of pests
    - ✓ New and existing
    - ✓ Online public reporting platform
  - ✓ Regulates pests, incl invasive pests

Report plant pest sightings



Emerald ash borer



Spotted lantern fly

Ecological  
challenges caused  
by invasives



# Ecological Challenges Posed by Invasives

Threat to biodiversity by damaging the balance of native plant communities

- ✓ Successful competitor for resources such as light, water and minerals, which crowds out native plants
  - ✓ High levels of seed production
  - ✓ Tolerance to a wide range of growing conditions



Buckthorn

# Ecological Challenges Posed by Invasives

- ✓ Ability to spread by roots or runners
- ✓ May hybridize and genetically swamp native species



- ✓ Changes to the chemical composition of soil, inhibiting the germination of native seeds and micro-organisms (allelopathy)

# Ecological Challenges Posed by Invasives

- ✓ Quick recovery when disturbed by pulling, cutting, or fire
- ✓ A lack of natural predators to keep their population under control in their new environment



Successful  
bio-control target  
on Loosestrife

John Pogacnik, Ohio Birds and Biodiversity.

# Ecological Challenges Posed by Invasives

## Impacts on other organisms

### Invasives:

- ✓ Can displace native plants which provide food for specialized eaters, e.g. Monarch butterfly
- ✓ Can change habitat, reducing breeding success of bird species



# Common Invasive Plants





# Which of these invasives do you have in your garden?

- English Ivy (*Hedera helix*)
- Goutweed (*Aegopodium podagraria*)
- Lily-Of-The Valley (*Convallaria majalis*)
- Periwinkle (*Vinca minor*)
- Garlic Mustard (*Alliaria petiolata*)
- Silvergrass (*Miscanthus sinensis*)
- White Sweet Clover (*Melilotus albus*)
- Purple Loosestrife (*Lythrum salicaria*)
- Norway Maple (*Acer platanoides*)
- Japanese Barberry (*Berberis thunbergii*)

# Common Invasives Ground Covers



[highparknature.org](http://highparknature.org)

Photo : EMG Janet

# English Ivy (*Hedera helix*)



# Goutweed (*Aegopodium podagraria*)



# Lily-Of-The Valley (*Convallaria majalis*)



# Periwinkle ( *Vinca minor* )



Photo by EMG Janet



Photo by EMG Janet

# Some Alternate Ground Covers

- ✓ Wild strawberry
  - ✓ *Fragaria virginiana*
- ✓ Wild geranium, cranesbill
  - ✓ *Geranium maculatum*
- ✓ Canada Anemone
  - ✓ *Anemone canadensis*
- ✓ Bearberry
  - ✓ *Arctostaphylos Uva-Ursi*
- ✓ Ostrich Fern
- ✓ *Mattueccia struthiopteris*
- ✓ And many more ...





# Common Invasives Perennials



# Burdock (*Arctium minus*)



# Dog Strangling Vine (*Cynanchum rossicum*)



# Garlic Mustard (*Alliaria petiolata*)



Photo : Humber Arboretum



Photo : EMG Janet



Photo : Humber Arboretum

# Giant Hogweed (*Heracleum mantegazzianum*)



# Japanese Knotweed (*Reynoutria japonica*)



# Silvergrass (*Miscanthus sinensis*)



# Himalayan Balsam (*Impatiens glandulifera*)



# White Sweet Clover (*Melilotus albus*)





# Some Alternative Perennials

Blue Wild Indigo  
*Baptisia australis*



Big Bluestem  
*Andropogon gerardii*



Cardinal Flower  
*Lobelia cardinalis*

Narrowleaf Vervain  
*Verbana simplex*



✓ And many more ...

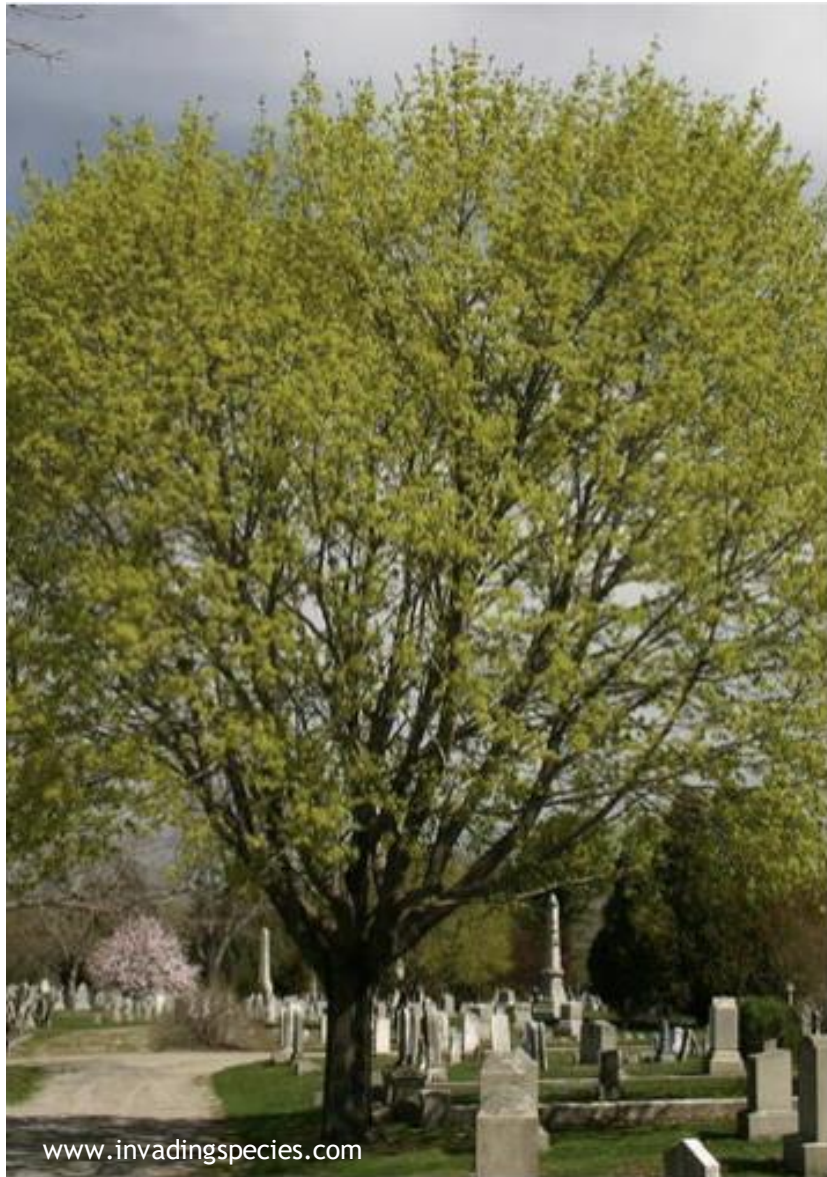


# Common Invasives Trees and Shrubs

# Buckthorn (*Rhamnus cathartica*)



# Norway Maple (*Acer platanoides*)



# Manitoba Maple (*Acer negundo*)



Photo (USDA)

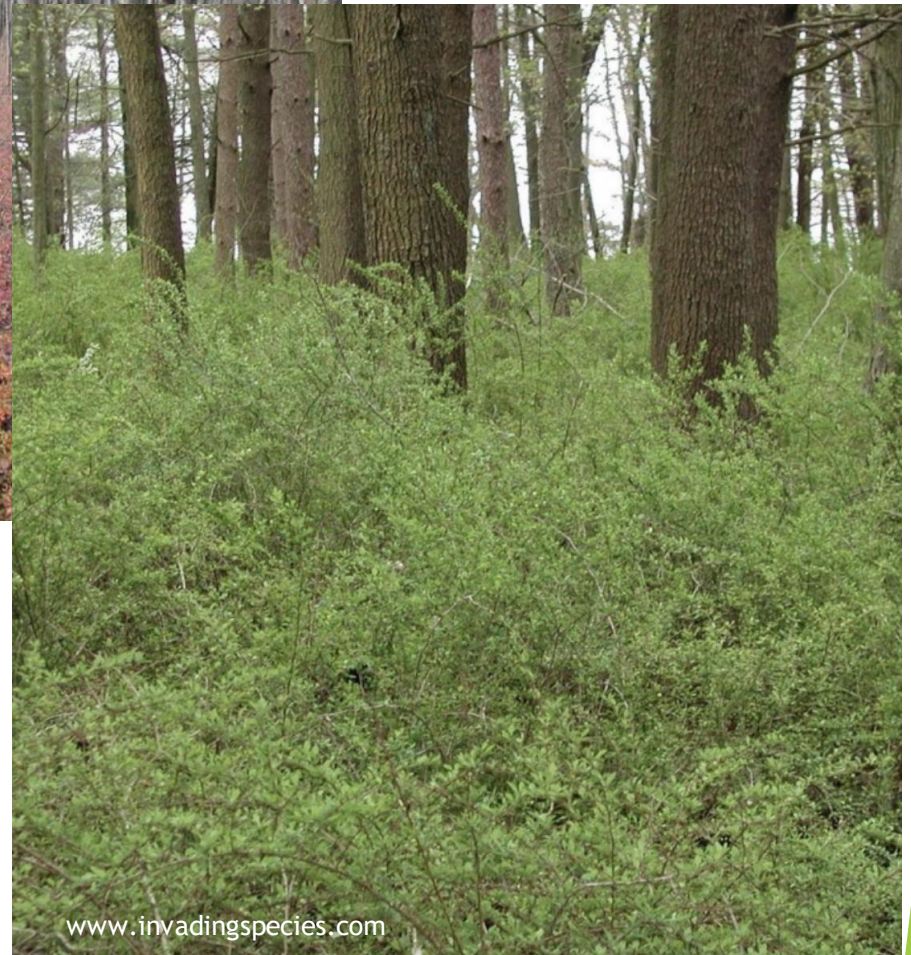


Photo TreeCanada.ca



Photo Natural Resources Canada,  
Canadian Forest Service

# Japanese Barberry (*Berberis thunbergii*)



# Tree of Heaven (*Ailanthus altissima*)

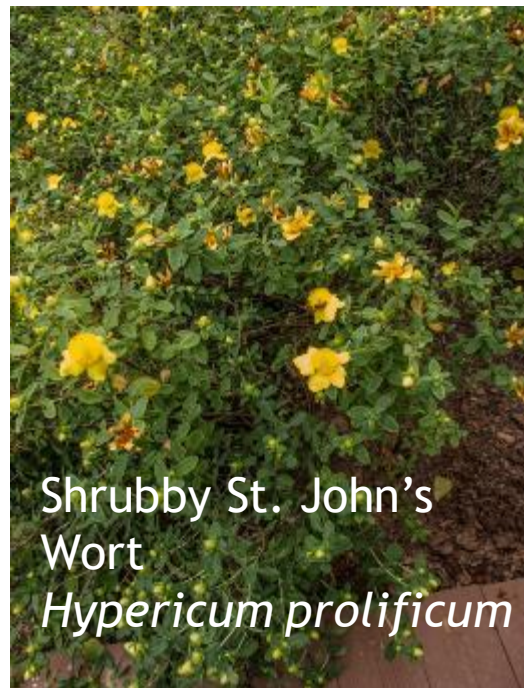


# Burning Bush (*Euonymus alatus*)





# Some Alternative Trees & Shrubs



✓ And many more ...

# Common Invasive Pests



# Japanese Beetle (*Popillia japonica*)



# Spotted Lantern Fly (*Lycorma delicatula*)



Egg Mass



Weeping Wound

# Hemlock Woolly Adelgid (*Adelges tsugae*)

Woolly egg sacs on needles



Dead Hemlock

Source: Ontario Government Web Page

# Spongy Moth (*Lymantria dispar dispar*)



Female LDD  
laying eggs



[www.invasivespeciescentre.ca](http://www.invasivespeciescentre.ca)



Male LDD moth



# Jumping Worms (*Amyntas* spp., *Metaphire* spp., *Pheretima* spp.)



Photo: A jumping worm cocoon surrounded by soil particles. Carly Ziter.

Photo: Dr. M McTavish, U of Toronto

- Jumping Worm appearance in late summer/fall
- Report garden sightings at [www.eddmaps.org](http://www.eddmaps.org)

# Recent Invasive Pathogens





# Oak Tree Wilt: a new pathogen



Fungal mat on Oak sapwood



Oak wilt - symptoms on northern red oak  
(F.A. Baker, Utah State University)

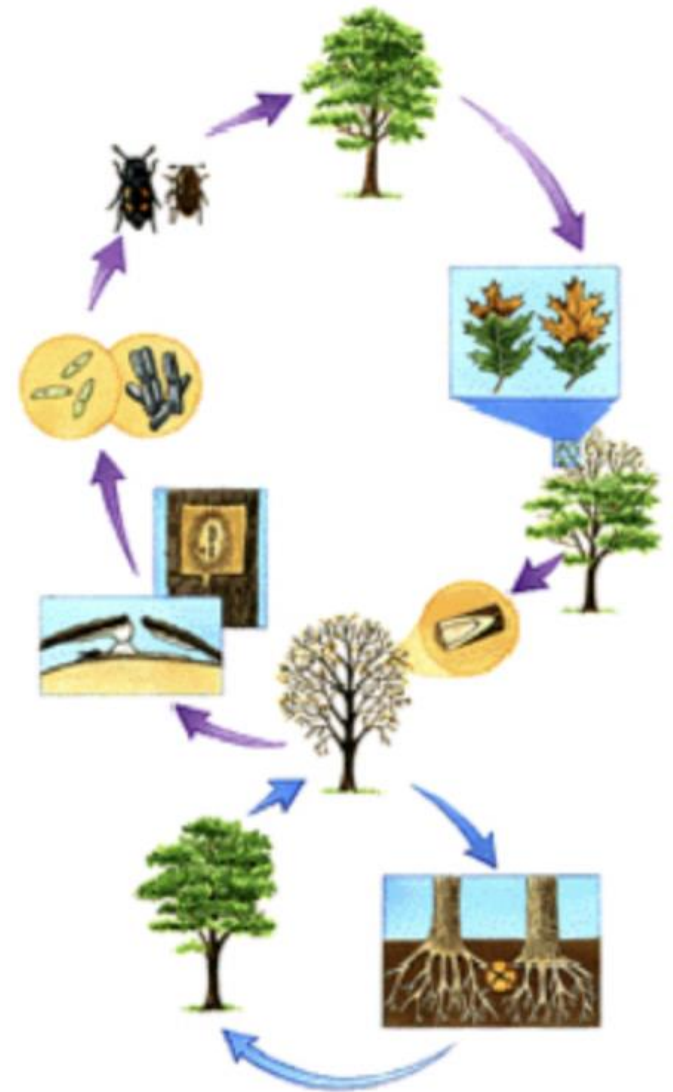
Sap Beetle



Source: Ontario Crop IPM

# Oak Tree Wilt: Pruning Caution

- ✓ Do not prune oaks between April and November; highest risk April to July
- ✓ Paint any wounds on Oaks to reduce chance of infection
- ✓ Disinfect cutting tools used on Oaks between cuts
- ✓ Burn any infested wood
- ✓ Report suspected Oak Wilt occurrence to the CFIA online platform



# Boxwood Blight (*Cylindrocladium buxicola*)



# Beech Bark Disease (*Neonectria faginata*)



What Can I Do?



# What can I do about Invasive plants?

- ✓ Early detection
  - ✓ Learn to identify and manage invasive plants on your property
- ✓ Rapid Response & control
  - ✓ Best Management Practice varies by species
  - ✓ Biological control



Photo : Humber Arboretum



# Plant Non-Invasive Species

## The Grow Me Instead

- ✓ identifies potentially invasive garden plants
- ✓ promote suitable alternatives
- ✓ <http://www.ontarioinvasiveplants.ca/index.php/gardenersandhorticulturalists>



**Beautiful Non-Invasive Plants for your Garden**

# Grow me instead! Groundcovers

Invasive Plants	Non-Invasive Plant alternatives
English Ivy	Wild Strawberry ( <i>Fragaria virginiana</i> )
Periwinkle	Wild Geranium ( <i>Geranium maculatum</i> )
Goutweed	Large-Leaved Aster ( <i>Eurybia macrophylla</i> )
Lily of the Valley	Starry False Solomon's Seal ( <i>Maianthemum stellatum</i> )

**Garden use:** groundcover for shady woodland garden

**Growing conditions:** sun to partial shade; dry to moderate; sand or clay

**Size and shape:** 30 – 60 cm tall; clump-forming

**Flower and fruit:** showy pink or magenta blooms in late-spring and early-summer

**Leaves:** loose mounds of deeply-lobed leaves

**Additional info:** nectar source for hummingbirds; often forms colonies



**Garden use:** groundcover for sunny gardens

**Growing conditions:** sun; sand, loam or clay; dry to average soil

**Size and shape:** low-growing and spreading; 15 cm tall

**Flower and fruit:** small white flowers in late-spring; small edible red berries early-summer

**Leaves:** three-lobed and toothed

**Additional info:** spreads by runners and forms colonies





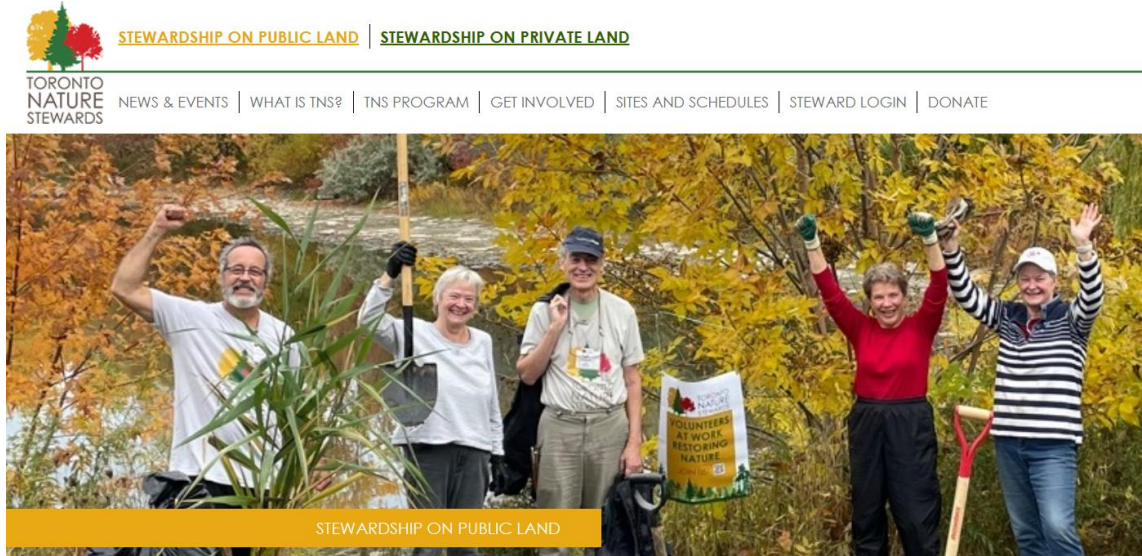
# What can I do about Invasive plants?

- ✓ Prevention
  - ✓ of initial entry into Canada or Ontario
  - ✓ of the spread of a species
- ✓ Select non-invasive or native plants
- ✓ Report Invasives to the Invasives Species Awareness Program



[Gardeners  
action plan](#)

# What can I do about Invasive plants? Be a citizen volunteer!



Check your local community for ways to get involved!

# Canadian Coalition for Invasive Plant Regulation (CCIPR)

- ✓ Formed in early 2022 in response to an outcry from the public, voiced on the 28,500-member Master Gardeners of Ontario (MGOI) Facebook social media platform.
- ✓ To protect our environment, economy and public health from invasive plant species, the CCIPR believes Canada should improve policies, tools, and regulations by taking measures

Canadian Coalition for Invasive Plant Regulation



[Home](#)

[Get Involved](#)

[Blog](#)

[Stories](#)

[Improving Regulations](#)

[Resources](#)

[Invasive Plant Photos](#)

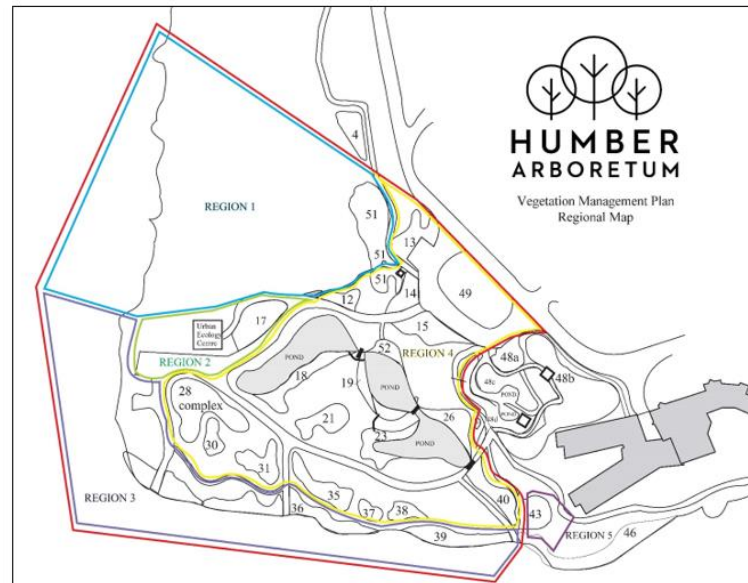
[Search](#)



# Humber Arboretum Activities

- ✓ Control strategies
- ✓ Removal
- ✓ Species removal reports
- ✓ Garlic mustard pulls
- ✓ Phragmites removal techniques video

<https://www.youtube.com/watch?v=0Q94xCSlbBw>



# Wrap Up



# Resources

- ✓ Etobicoke Master Gardeners  
[www.etobicokebergmastergardeners.ca](http://www.etobicokebergmastergardeners.ca)
  - ✓ A copy of this presentation is available under Community Activities, Humber Arboretum Workshop Materials
- ✓ Master Gardeners [www.mgoi.ca](http://www.mgoi.ca)
- ✓ Humber Arboretum ([humber.ca](http://humber.ca))
- ✓ Toronto Nature Stewards (<https://torontonaturestewards.org>)

Ontario Invasive species home page:

- ✓ <https://www.ontario.ca/page/invasive-species-ontario>

Ontario Invasive Plant Council (Invasive plants page):

- ✓ <https://www.ontarioinvasiveplants.ca/invasive-plants/species/>

Ontario Invasive Plant Council – Grow Me Instead

- ✓ <https://www.ontarioinvasiveplants.ca/resources/grow-me-instead/>

# Resources

- ✓ Canadian Coalition for Invasive Plant Regulation
  - ✓ <https://ccipr.ca>
- ✓ Invasive Species Centre (plants page):
  - ✓ <https://www.invasivespeciescentre.ca/invasive-species/meet-the-species/invasive-plants/>
- ✓ Toronto prohibited weeds:
  - ✓ <https://www.toronto.ca/city-government/public-notices-bylaws/bylaw-enforcement/turfgrass-prohibited-plants/>
- ✓ Phragmites removal techniques video (Lynn Short):
  - ✓ <https://www.youtube.com/watch?v=0Q94xCSlbBw>

# 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

EMG Website > Community Activities > Resources

Etobicoke Master Gardeners

www.etobicokemastergardeners.ca





**Etobicoke Master  
Gardeners'  
Annual 2024  
SPRING PLANT SALE**  
Saturday, May 25  
8:30 am-12:30 pm  
**6 Kingsway Crescent**

Advice Clinic, Perennials, Shrubs, Herbs & Tomatoes & more!



Native plants for native pollinators

[etobicokemastergardeners.ca](http://etobicokemastergardeners.ca)



**Etobicoke Master Gardeners**

www.etobicokemastergardeners.ca



**HUMBER  
ARBORETUM**

# 2024 Eco-Garden Community Workshop Series

Saturdays 10:00 AM to Noon

## Virtual Sessions via Zoom

January 27: Good Bug, Bad Bug

February 24: The Edible Garden - Growing Your Own Food

April 13: Invasives and Other Challenges

October 26: Sustainable Gardening and Climate Change Considerations

November 9: Indoor Plants for All Occasions

## In-Person at the Humber Arboretum

Update - May 4: Trees and Shrubs Tour

June 1: Let's Get Growing - Plant Propagation, Seed Saving, and Growing from Seed

September 21: Making the Cut - Pruning Workshop

**Free, but space is limited & registration is required:  
[Humber.ca/arboretum/emg](https://humber.ca/arboretum/emg)**



# Poll Question

How did you hear about the event?

- Humber Arboretum
- Etobicoke Master Gardeners
- Facebook
- Twitter
- Etobicoke Guardian
- Toronto Gardeners
- Lakeshore Environmental Gardening Society
- Etobicoke Horticultural Society
- Other

# Etobicoke Master Gardeners

Thank you!

Questions

