

Upcoming events

~~Getting started with native plants~~

NOW! How to lose the lawn: Making a garden from scratch

Feb. 10: What is a garden 'pest'? Making peace with wildlife

Feb. 24: Invasive species-- Dump the thugs you used to love

March 10: Keep it close, slow it down: water management for gardeners

March 24: Read your way to a green thumb: best books for ecological gardening

April 7: Plant ID minus the app: getting up close and personal with plants

April 21: Designing with trees and shrubs: the REAL low maintenance garden

May 5: Reliable online info: sourcing and researching for gardeners

May 19: Getting over the "pretty flowers": designing for ecological function

Master Gardeners of Ontario (MGO)

WHAT WE DO

- give presentations, workshops, courses, webinars, and guided tours
- provide written gardening information via articles, blogs, social media
- hold public information sessions & advice clinics at malls, fairs, farmers' markets
- offer advice to individuals through telephone, email, help lines and social media



- a volunteer organization
- certified horticultural experts
- providing in-depth, science-based, sustainable gardening information to the public

www.mgoi.ca/support

Choose "Group 1000 Islands"

Loose threads from last time

Naturalized plants often mistaken for native

Blueweed

Buttercups

Wild Carrot

Common Burdock

Tall Beggarticks (bidens)

Ox-Eye Daisy

Chicory

Dandelion

Common Mullein

Spreading Atriplex (goosefoot)

Lamb's-quarters

Common Yellow Woodsorrel

Tufted Vetch

Cleavers/ Bedstraw (stickyweed)

Common Mallow

Purple Deadnettle (*lamium*)

Field Bindweed

Pigweed / redroot

Bladder Campion (*Silene vulgaris*)

“wild” honeysuckles

Narrow-Leaved Plantain

Broad-Leaved Plantain

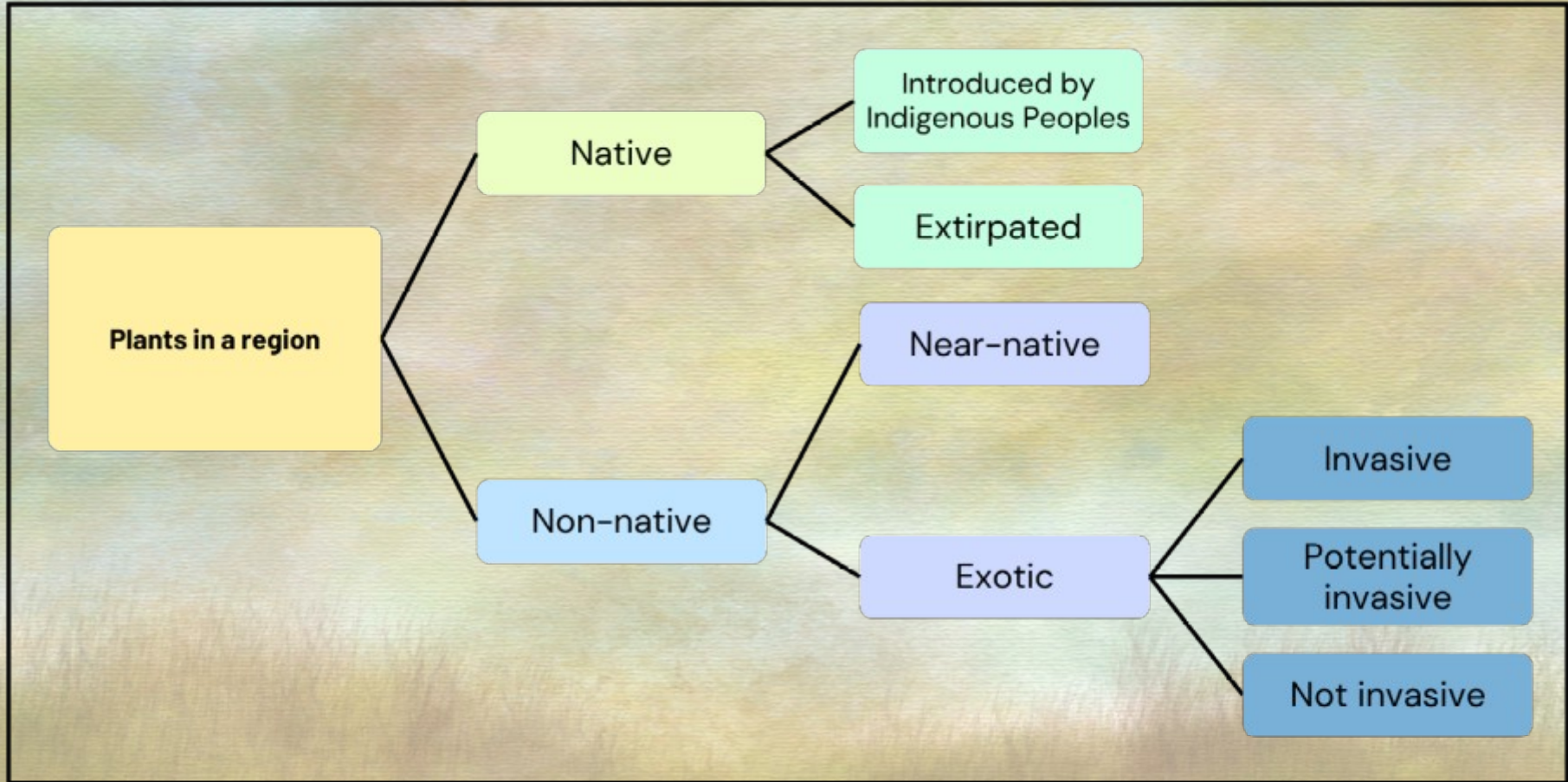
Lady's Thumb (smartweed)

Teasel

Foxtail

Field Violet

Terminology



Boulevard Gardens - resources

Blooming Boulevards <https://www.bloomingboulevards.org/> (Mississauga based)

Native Plants for Boulevard Gardens
<https://www.inournature.ca/boulevard-gardens>

Native Plants for boulevards—tough, tolerant, and low growing
<https://www.naturalthemes.com/native-plants-for-boulevard-gardens-tough-tolerant-and-low-growing/>

How to add native plants to existing gardens

- **Inventory your existing plants (trees, shrubs, herbaceous)**
 - List in logical order (by location/east to west etc)
 - sketch
 - Photos (big picture “before” shots)
 - Photos for plant ID
 - ID everything- use online keys, social media groups, apps
- **Check plants against invasive lists (Ontario, Auditor General, CVC)**
 - Remove invasives and dispose of properly
 - Identify non-natives for future removal
- **Choose plants (shrubs/trees) to replace ones removed**
 - “Grow Me Instead” resources from Ont. Invasive Plant Council
 - Keystone species
 - Evergreen shrubs/trees
 - Berries for wildlife
 - Diversity in bloom time, colour, flower form, plant form (8 diff. species)
- **Source plants from native plant nurseries, or grow from seed**
- **Bare-root potted plants into unamended soil.**

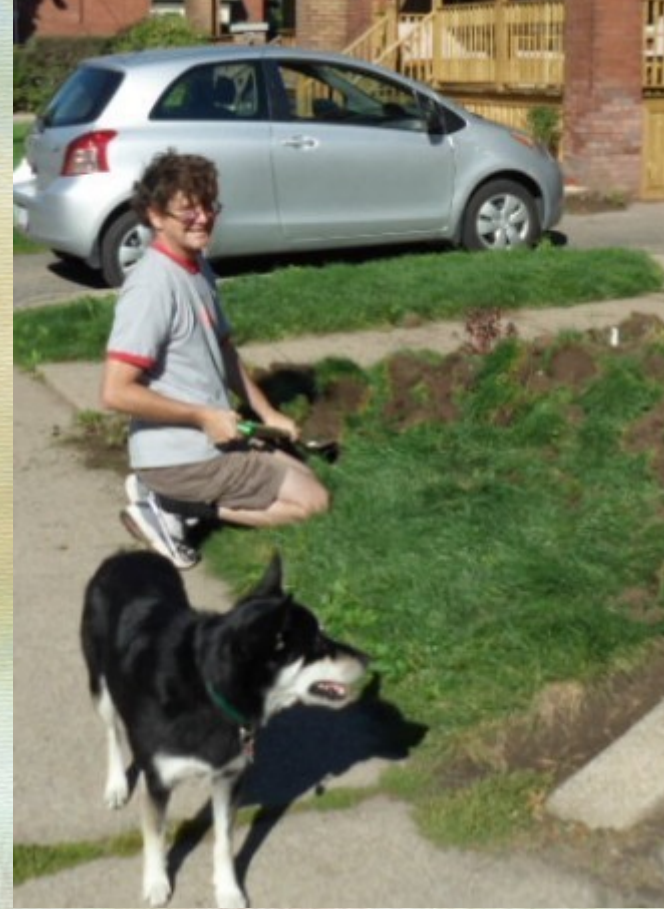
Invasive plants (Ont. Auditor General's list)

https://www.auditor.on.ca/en/content/annualreports/arreports/en24/1-11FU_mgmtinvasive_en24.pdf

- Amur maple (*Acer tatarica* ssp *ginnala*)
- Autumn Olive (*Elaeagnus umbellata*)
- Creeping jenny (*Lysimachia nummularia*)
- Dame's rocket (*Hesperis matronalis*)
- Daylily / ditch lily (*Heemerocallis fulva*)
- English ivy (*Hedera helix*)
- Glossy buckthorn (*Frangula alnus*)
- Goutweed (*Aegopodium podagraria*)
- Italian honeysuckle (*Lonicera caprifolium*)
- Japanese barberry (*Berberis japonica*)
- Japanese honeysuckle (*Lonicera japonica*)
- Pachysandra, Japanese spurge (*Pachysandra terminalis*)
- Lily of the valley (*Convallaria majalis*)
- Manitoba maple, box elder (*Acer negundo*)
- Miscanthus, silvergrass (*Miscanthus sacchariflorus* and *M. sinensis*)
- Multiflora rose (*Rosa multiflora*)
- Norway maple (*Acer platanoides*)
- Oriental bittersweet (*Celastrus orbiculatus*)
- Ornamental honeysuckles including: Tatarian (*Lonicera tatarica*), Amur (*L. maackii*), Morrow, (*L. morrowii*) and Bells (*L. x bella*) honeysuckles.
- Periwinkle (*Vinca minor*)
- Russian olive (*Elaeagnus angustifolia*)
- Sea buckthorn (*Hippophae rhamnoides*)
- Spearmint (*Mentha spicata*)
- Tree-of-heaven (*Ailanthus altissima*)
- White mulberry (*Morus alba*)
- Winged burning bush (*Euonymus alatus*)
- Euonymus, Wintercreeper (*Euonymus fortunei*)
- Yellow archangel (*Lamium galeobdolon* syn *Lamiastrum galeobdolon*)



Lose the Lawn!



**Making a garden
from scratch**

Your new native-plant garden step-by-step

- Sketch/ map your property
- (Inventory existing plants) ?
- Identify sun conditions
- Identify water conditions
- Identify soil type
- Views / pollution (light) / noise
- Choose native plants
 - Trees first, then shrubs, then “pretties”
 - Aim for diversity, lepidoptera support (Tallamy)



sketch your property...

- Tracing paper over surveyors map
- GIS maps (access from brockville.com)
- Sketch over a printed grid (download from <https://incompetech.com/graphpaper/>)

Things To Do ▶ Maps

from <https://brockville.com/things-to-do/maps/>

Maps


GIS mapping system online tools choose "City Explore"

Search and Explore the Maps

Enter search terms


Grid View Count

ITEMS: 10




City Explore

Explore the City of Brockville, see [additional information](#)



Brock Trail Web App

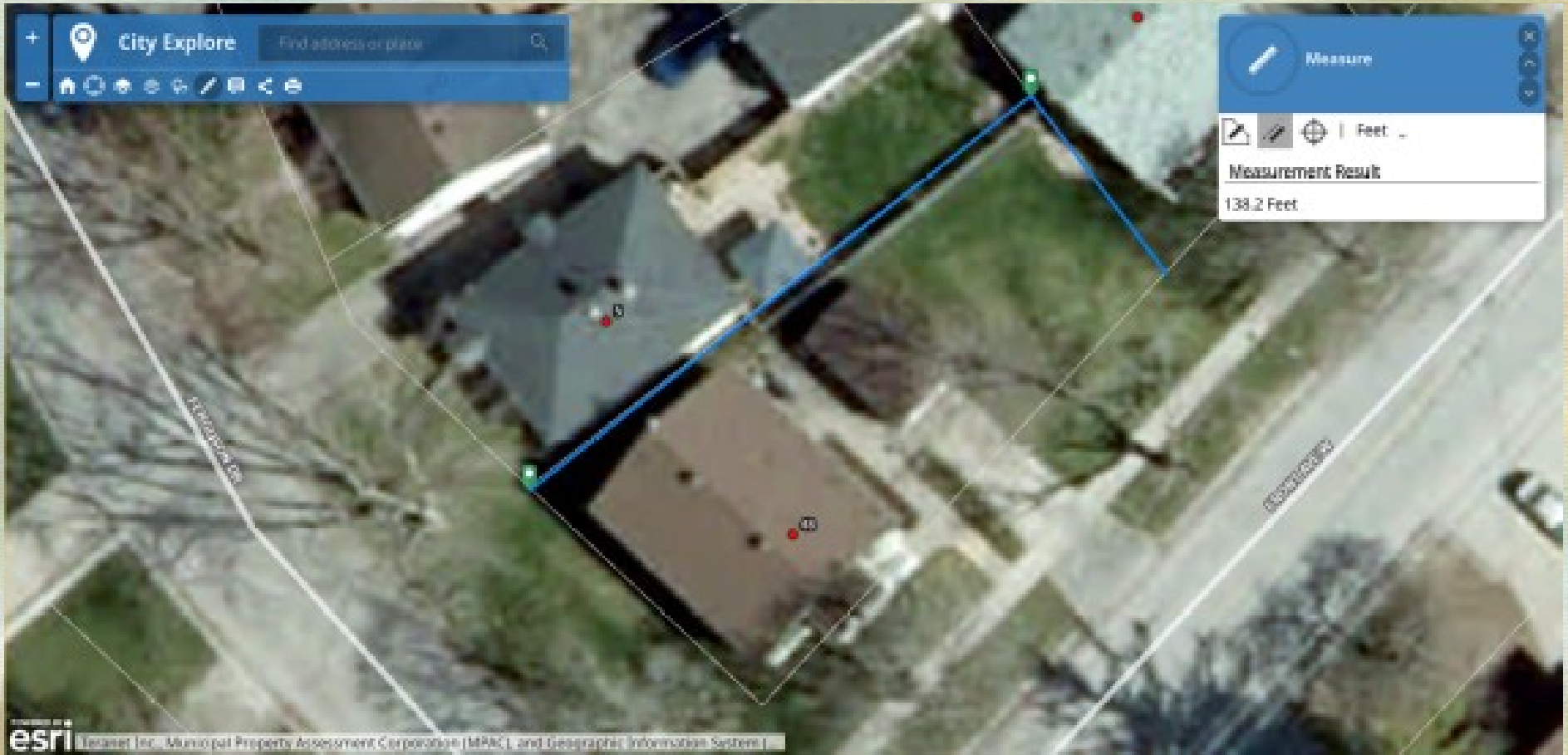
Interactive map of the Brock Trail, and [additional information](#)



Brockville Heritage Plaque Tour

[Download of e-Trail content for users from this](#)

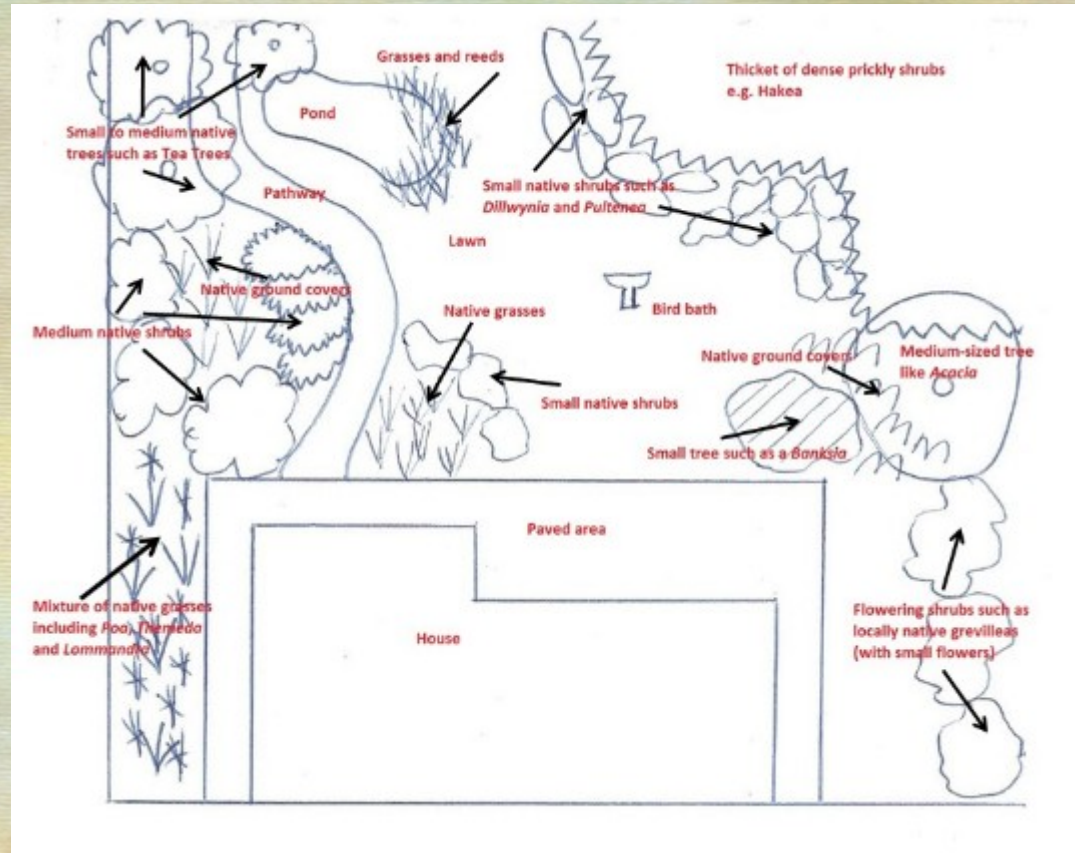
The image shows a screenshot of the 'Maps' section on the City of Brockville website. A black arrow points from the text 'GIS mapping system online tools choose "City Explore"' to the 'City Explore' map thumbnail. The 'City Explore' thumbnail features a globe icon and a small map of Brockville. The other two thumbnails, 'Brock Trail Web App' and 'Brockville Heritage Plaque Tour', also feature globe icons and small maps. The 'Brockville Heritage Plaque Tour' thumbnail includes a small map with black markers indicating plaque locations.



GIS lets you see and measure your property from satellite photos.

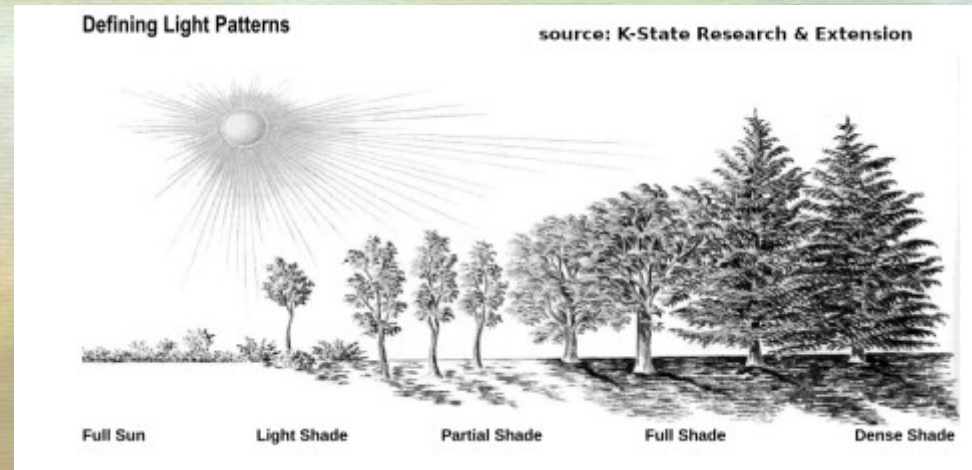
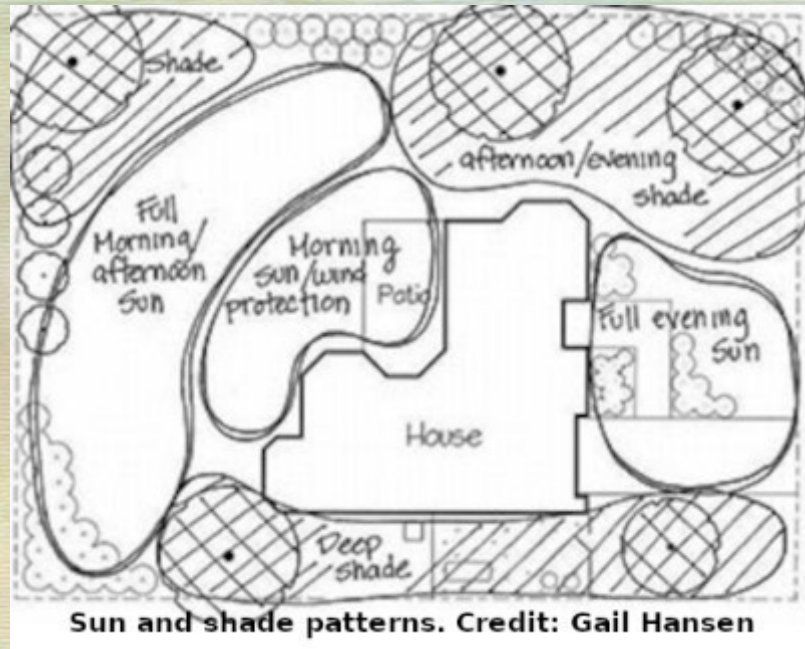
Size / shape

- Analyze your sketch, consider areas for your garden
- Plan for intended uses (family, entertaining, pets etc)
- How big?
 - “Island”: min. 3' x 3' (for tiers & enough plants)
 - Border / rectangles: min. 4' wide (for weeding access/reach)



Sun / Shade

- Full Sun
 - 6+ hours of direct sun per day
- Partial Sun
 - 4 – 6 hours of sun
- Partial Shade
 - 2 - 4 hours of sun
- Full Shade
 - Less than 2 hours of sun
- Dappled shade: partially filtered sun, as through deciduous canopy trees (small leaves)
- Dense shade: no direct sunlight (base of north-facing wall, under evergreen tree)



Water

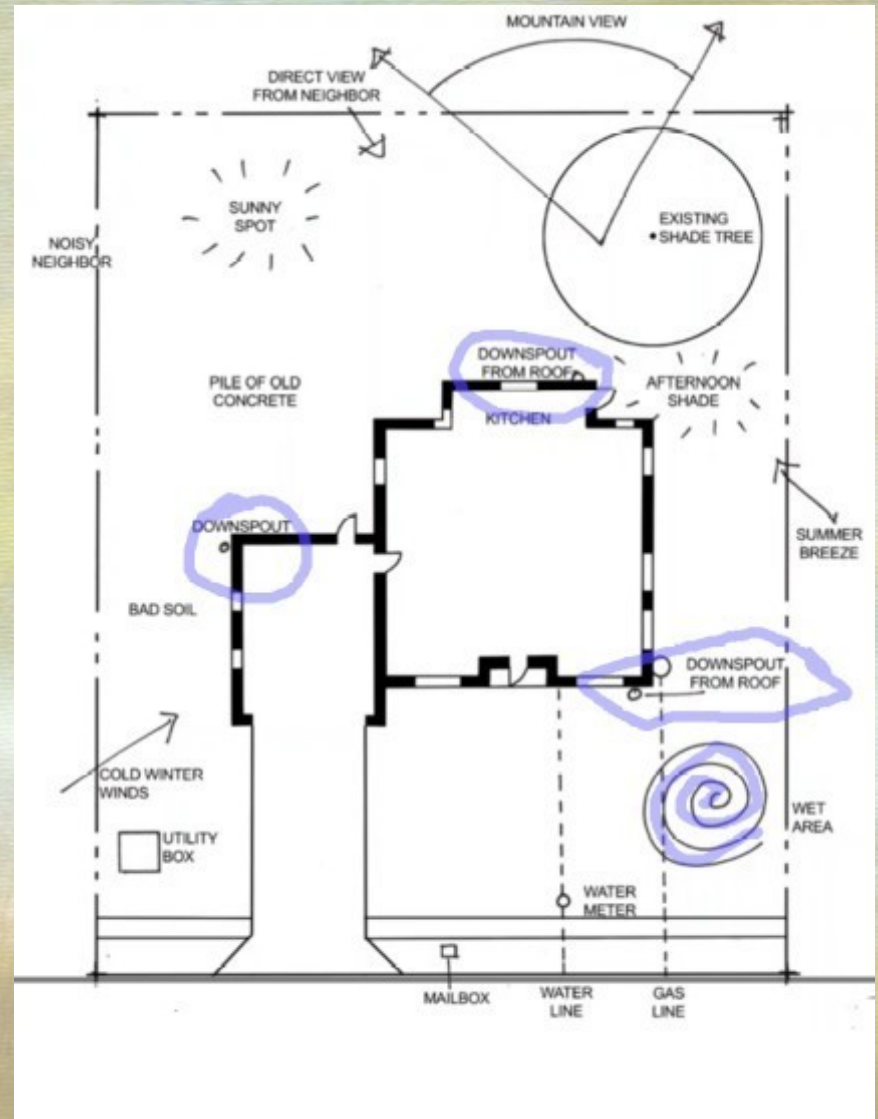
“We produce bacteria-free drinking water at high cost, and a third of it is used for lawns. It’s crazy, right?”

- *Hans Schreier, professor emeritus of watershed management at UBC, 2026*



Where is the water in your landscape?

- Note locations of downspouts (house & garage)
- Wet / low areas
- Spigot / tap locations



What soil type(s)?

Simplified...

- Clay
- Silt
- Sand

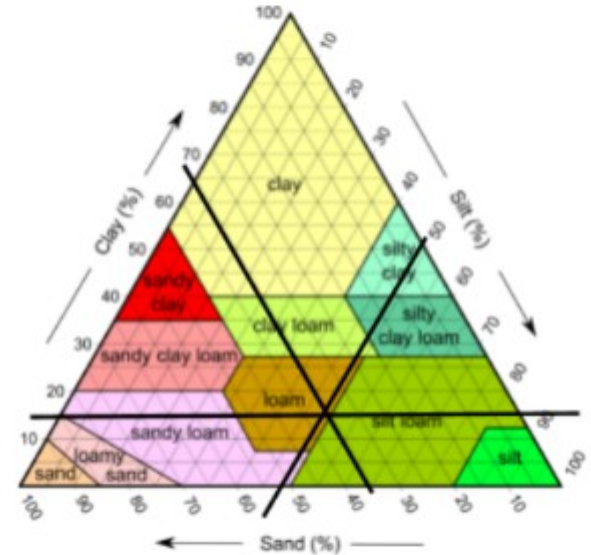
Soil triangle
Jar test

Site:

This sample was taken from the middle of my backyard, which is located in the North End of downtown Hamilton. For the past four years this area has been used for growing annual crops of some sort. Prior to that, it was lawn. I've been led to believe that one of the previous owners put a load of fill and raised the level of the yard. It does lay higher than several neighbours, so this is likely to be the case.

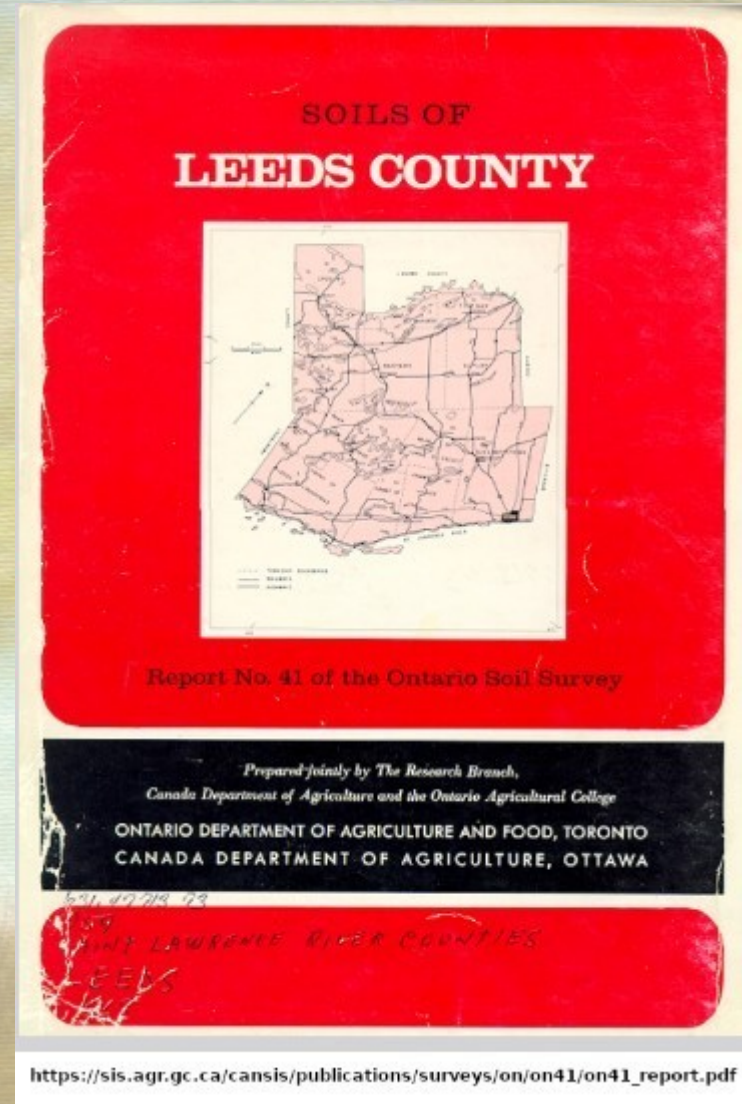
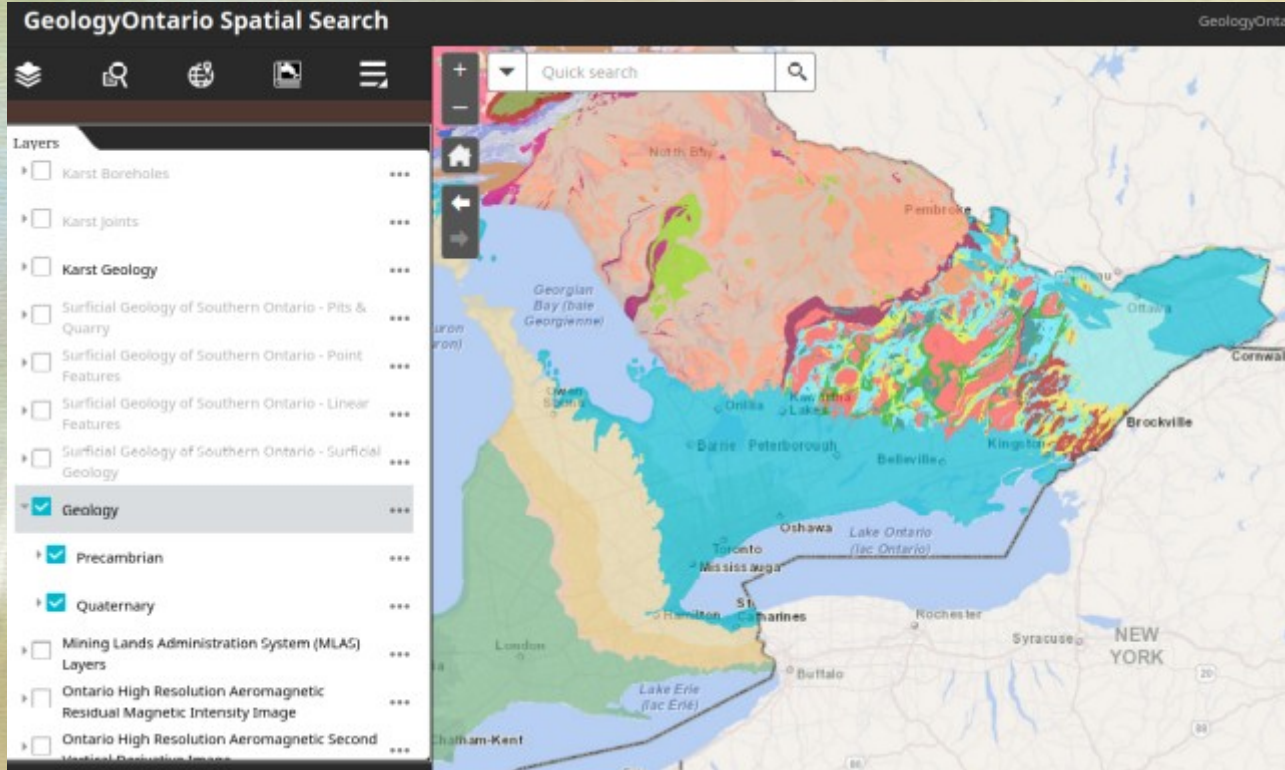


Clay: 5mm/33mm= 15.1%
Silt: 16mm/33mm= 48.5 %
Sand: 12mm/33mm= 36.4

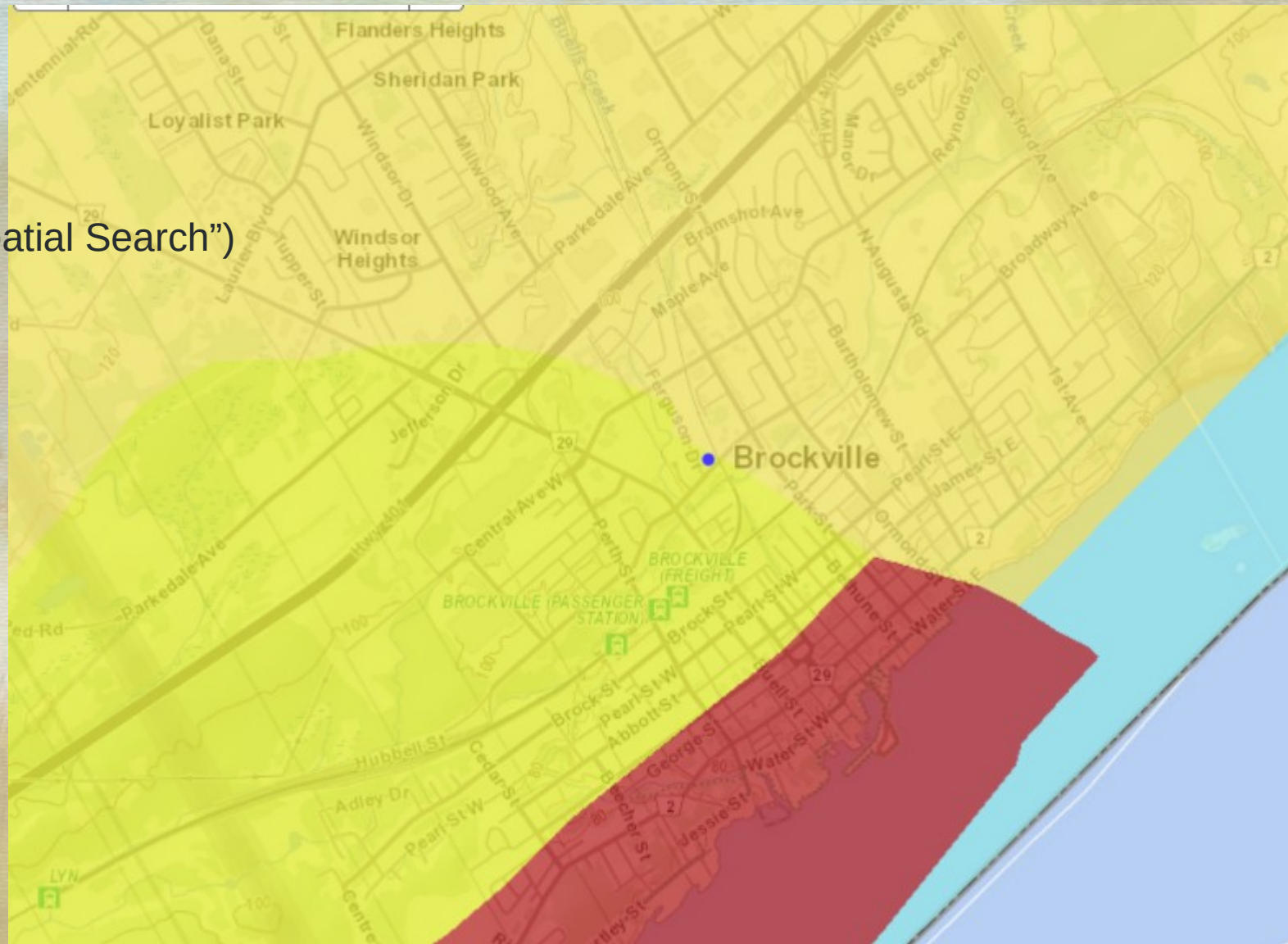


At 36.4% Sand, 48.5% Silt and 15.1% Clay, the Soil Texture Triangle indicates this is "Medium Loam".¹

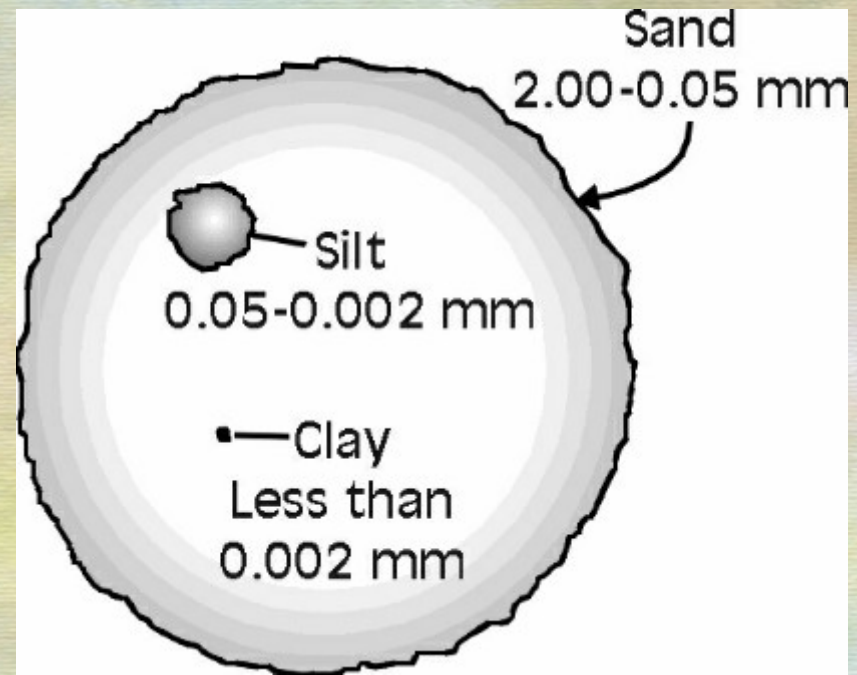
What soil type(s)?



Soils of Brockville
(detail from
"Geology Ontario Spatial Search")



	SAND "coarse texture"	LOAM "medium texture"	CLAY "fine texture"
Water & nutrient holding capacity	LOW	MED.	HIGH
Infiltration & drainage	FAST	MED.	SLOW
Leaching potential	HIGH	MED.	LOW
Aeration	GOOD	MED.	POOR

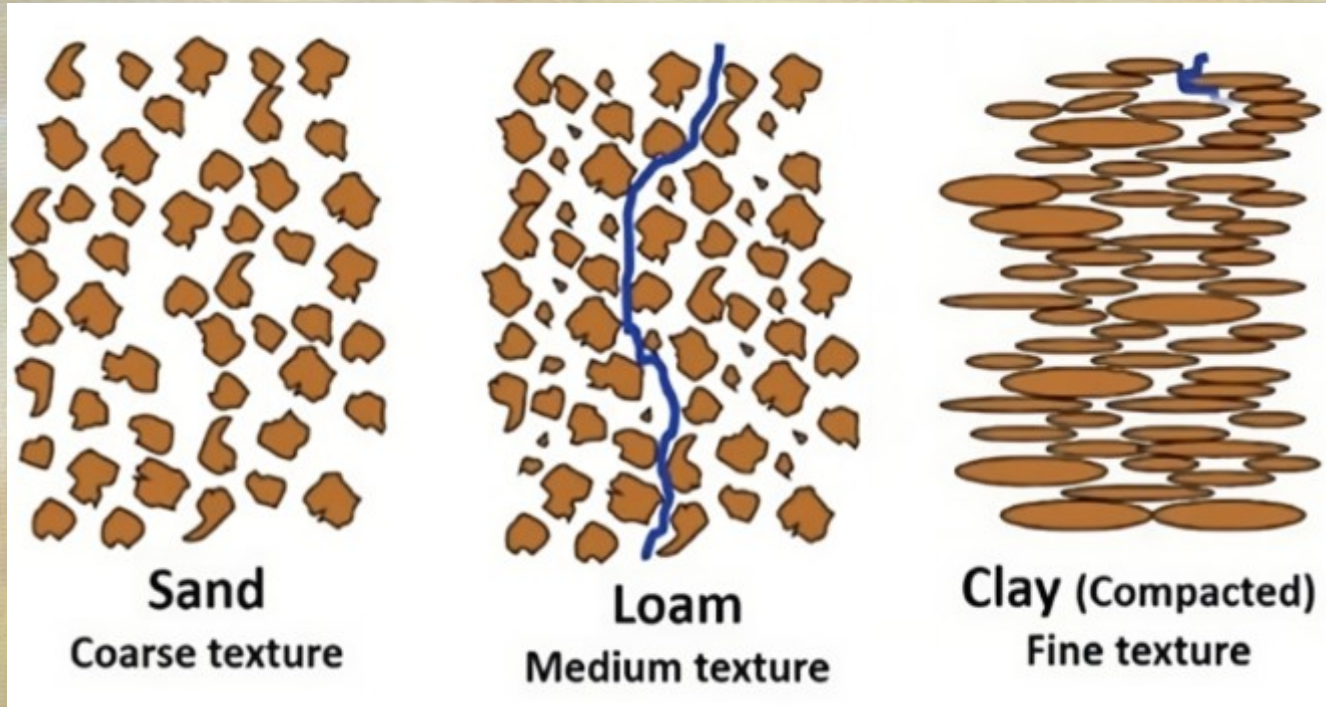


Credit: Melissa L. Wilson, Ph.D & Patricia Steinhilber, Ph.D.

Source: Univ. Of Maryland Extention <https://extension.umd.edu/resource/soil-basics/>

SOIL TEXTURE

Pore size affects water movement



FINALLY! The Plants!



Right Plant-- Right Place

- Use Tallamy's list to prioritize lepidoptera support

“A single pair of breeding chickadees needs to find 6,000 to 9,000 caterpillars to raise one clutch of young. The non-native ginkgo tree supports just five.”
- *Univ. Of Maryland Extension*

Doug Tallamy's Top 12 for butterfly / moth support
(from *Bringing Nature Home*)

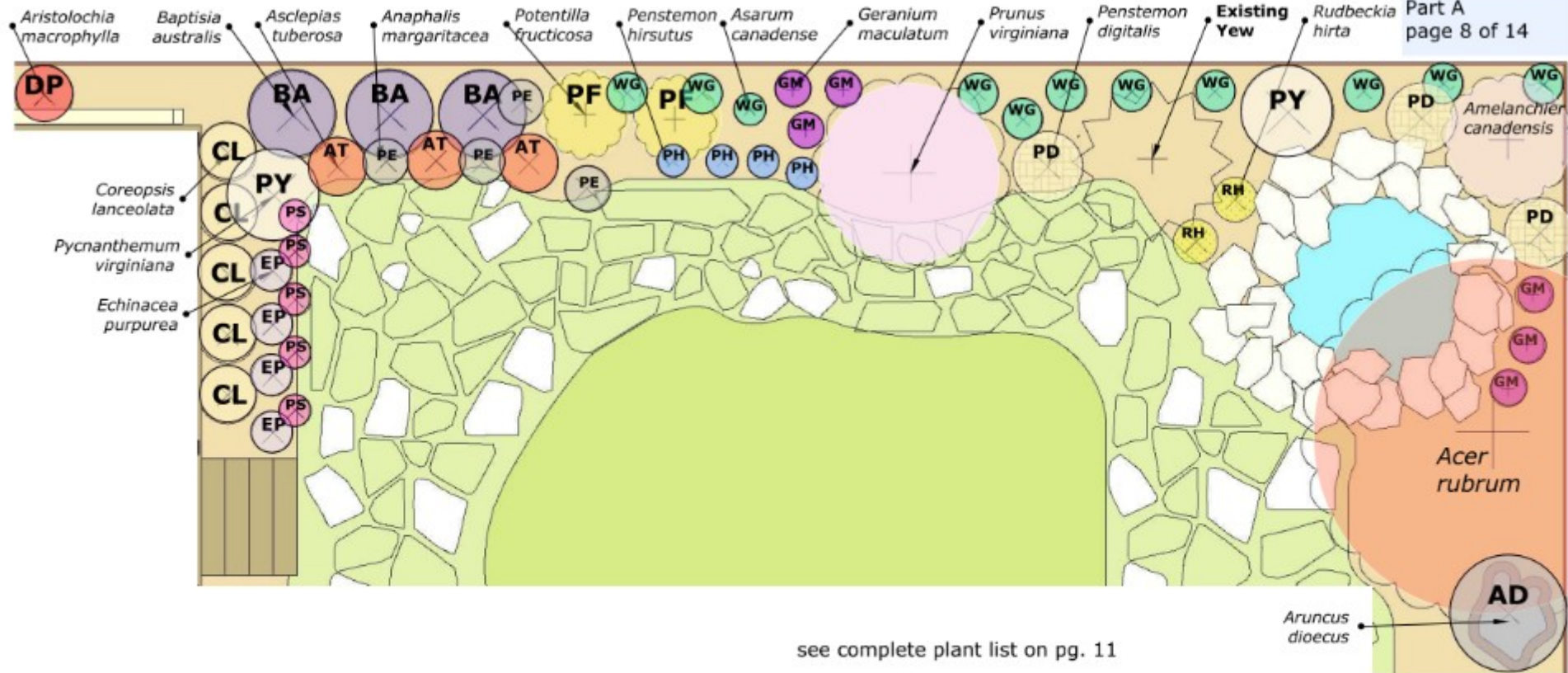
Oak	<i>Quercus</i>	534
Willow	<i>Salix</i>	456
Cherry / Plum	<i>Prunus</i>	456
Birch	<i>Betula</i>	413
Poplar / Cottonwood	<i>Populus</i>	368
Crabapple	<i>Malus</i>	311
Blueberry / Cranberry	<i>Vaccinium</i>	288
Maple / box elder	<i>Acer</i>	285
Elm	<i>Ulmus</i>	213
Pine	<i>Pinus</i>	203
Hickory	<i>Carya</i>	200
Hawthorn	<i>Crataegus</i>	159

Right Plant-- Right Place


- Choose & site woodies (trees, then shrubs)
- Match to existing soil moisture, hours of sun, soil type
- Know & plan for mature size (!)



A hand-drawn design
source: wildpollinators.ca



A professional design using software

<p>Planting Plan - Back North Scale: 1/4"=1' (1:48) November 30, 2018 drafted by: Beverley Wagar</p>		<p>74 Kensington Ave. N. Hamilton ON</p>
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Native plants

- Regionally native (eastern Ontario)
- “near native” (across river, PEC & west)
- Plants restricted to Carolinian zone ≠ native
- It’s YOUR garden, your choice



***Vernonia gigantea* / tall ironweed
native range in Ontario (Gray / Booth)**

What species are native to Eastern Ontario?

- VASCAN (Vascular Plants of Canada-- the “official” list)
- FGCA – east (Forest Gene Conservation Association-- for trees & shrubs)
- Gillett & White (Checklist of vascular plants of the Ottawa-Hull region. 1978
<https://archive.org/details/checklistofvascu00gill/mode/2up>)
- Rideau Valley Conservation Authority (Landowners Guide to Native Plants
<https://www.rvca.ca/docs-annual-reports/a-landowners-guide-to-native-plants-eastern-ontario/download>)
- BONAP (Biota of North America) range maps by genera-- bonap.org US-based but good for understanding ranges)
- Inaturalist.org (search ‘wild’, by species, by region)
- Soper & Heimberger “Shrubs of Ontario” 1981 (archived at
<https://archive.org/details/shrubsofontario00sope>)
- Gray & Booth “Gardeners’ Guide to Native Plants of the Southern Great Lakes Region” softcover book 2022

But make an informed choice

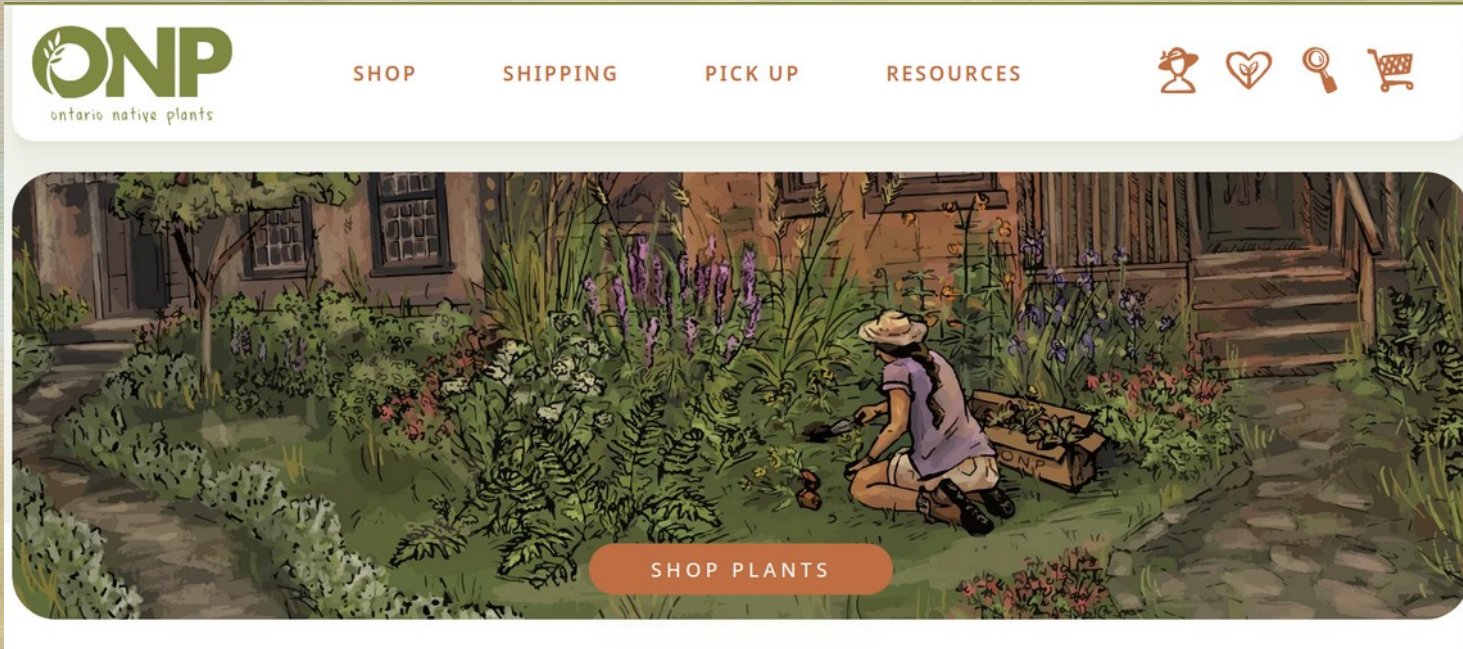
- Do not accept mystery gifts
- Quarantine plant gifts (watch for hitchhikers)
- Can (will) you contain an aggressive plant?



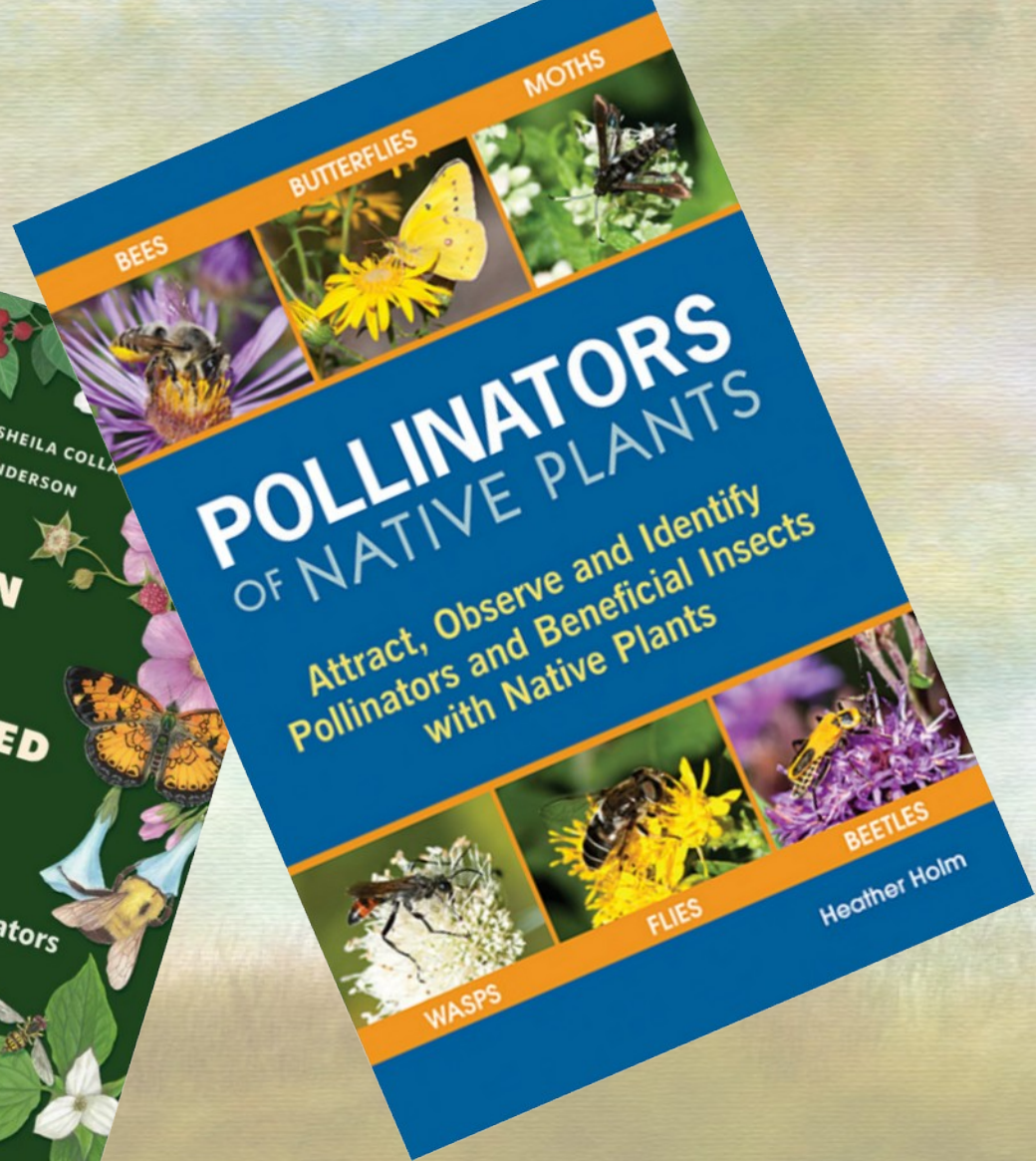
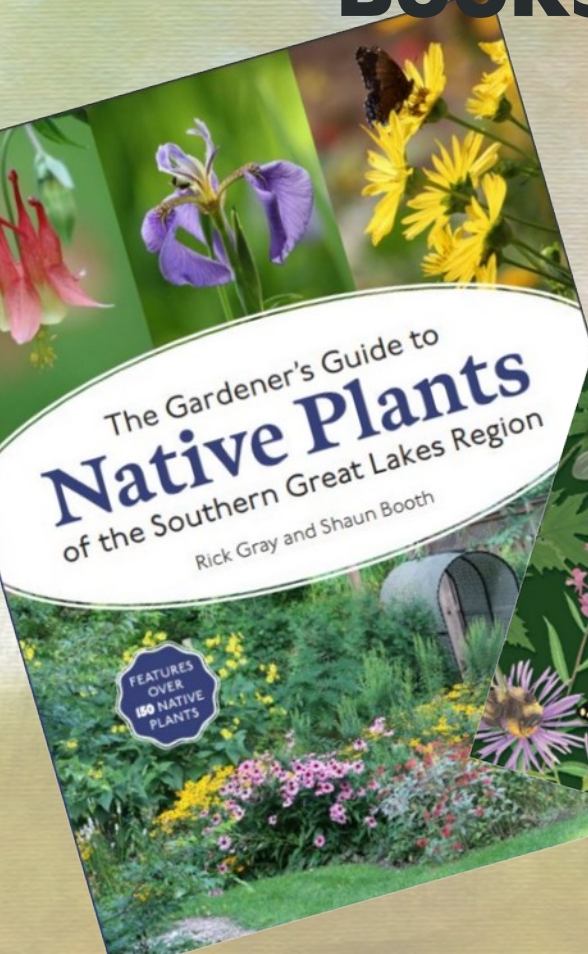
Butterbur / *Petasites japonica* – a mystery gift to a gardener in my neighbourhood. Now spreading to Buell's Creek.

Learn about the species

- <https://www.wildflower.org/plants-main>
- <https://catalogue.wildflowerseedlibrary.ca/en/>
- <https://www.prairiemoon.com/>
- <https://networkofnature.org/>
- <https://onplants.ca>



Recommended Books



Kill the grass / existing weeds...

	PRO	CON
Sheet mulch & similar light-deprivation methods	<ul style="list-style-type: none">• Preserves organic matter• Permeability supports soil biome	<ul style="list-style-type: none">• Takes several months• Resource-intensive (mulch, sheet material)
Sod-cutting, spading	<ul style="list-style-type: none">• Fast• Can relieve compaction	<ul style="list-style-type: none">• Possible loss of OM• Labour intensive• Destructive to soil biome
glyphosate	<ul style="list-style-type: none">• Only option for certain noxious weeds (ex. Jap. knotweed)	<ul style="list-style-type: none">• Lethal to garden life• Serious health concerns• Expensive to hire certified professional
rototilling	<ul style="list-style-type: none">• Fast	<ul style="list-style-type: none">• Destructive to soil biome• Not useful for compaction• polluting

Sheet Mulching

- Cut lawn as low as possible
- Cover it with cardboard or wet newsprint (~10 sheets) overlap edges
- Dampen the cardboard
- Top with 4 – 6” mulch (woodchips or compost)
- Wait until fall to plant
- No more mulch, except paths



Img: UC Davis arboretum



Source:
epicgardening.com

Sheet Mulch (cont.)

- Do not use plastic sheet
- Do not use landscape cloth
- Secure the edges with stakes / rocks (wind!)
- Monitor for perennial weeds breaking through (thistle etc)



Using newspaper (but wet it first)
Image: UW Bothel

Cutting sod

- wet/irrigate area the day before
- Sharpen a flat spade
- Cut squares ~12" to 6" depth
- From kneeling, slice horizontally ~1 – 2" from surface
- Cut through roots
- Remove & invert slices on tarp until dry
- Use in garden as mulch



© Turf Mechanic via YouTube

with a sharp flat spade, from kneeling, slice horizontally ~ 1-2" from surface. Pry the 'layer' up, invert on tarp to kill roots. Use as garden mulch. Image: GrowItBuild-It.com via YouTube

Health & Safety

- Use sharp tools
- Steel-toe boots
- Trousers, no shorts
- Take it slowly, lots of breaks
- Do not underestimate the effort (!)
- Water, sunscreen, hat, sturdy gloves

Materials

- Compost from City Operations Ctr off Augusta
- Mulch from
 - Lawnscape (Stewart N of Centennial)
 - Tim Allens, St. Lawrence or other arborists/tree cutters
- Chipdrop (?)



Arborist's wood chips (all parts of the tree, rough sized pieces)



Wood mulch (more uniform chunks, mostly heartwood, no leaves)

**Let's
talk!**



9 MONTHS LATER...