Just do it! **Beginner** Native Plant Garden Design for Urban Ottawa

Berit Erickson

Essentials review

It's easy. If I can do it, so can you. **Just get started**. Begin with a small garden. You can add to and improve it gradually.

- Provide food plants (flowers for nectar and pollen from spring to fall, host plants for butterfly caterpillars) and water.
- Create habitat: provide nest sites for bees, safe shelter and overwintering spots, adjust maintenance practices so some areas are less tidy
- Use 'mostly' native plants (70%). They are the 'it' in 'plant it and they will come'.
- Native plants provide insects/berries/seeds for birds, nest sites.
 - * = non-native

Prep work

Ingrid's goals

- Native plants to attract bees, butterflies, insects, and birds!
- Add a few bushes, maybe with berries?
- A few native grasses?
- Mix of colours
- A **path** through the garden so I can fill the bird feeders hanging from the cedar trees
- Front corner (south-west) could be a more densely packed little area, with a large rock

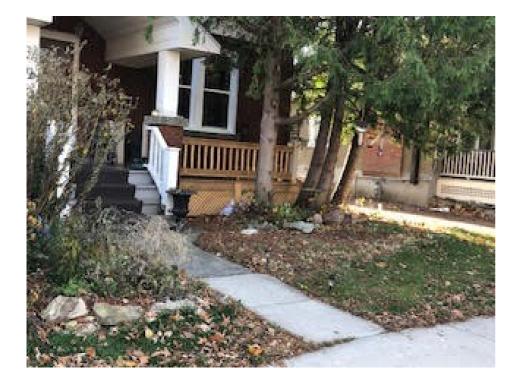
Inspiration: Ingrid's existing garden

Find pictures of gardens you like to help **guide your design and plant choices**, such as a particular **garden style** (formal, naturalistic), plants you like. You can **substitute** non-natives for native plants (or other pollinator plants) with a similar look.



Site conditions

"When you are looking at my house from the street, the garden area to the right, in front of the new porch, is where I'd like start planting."



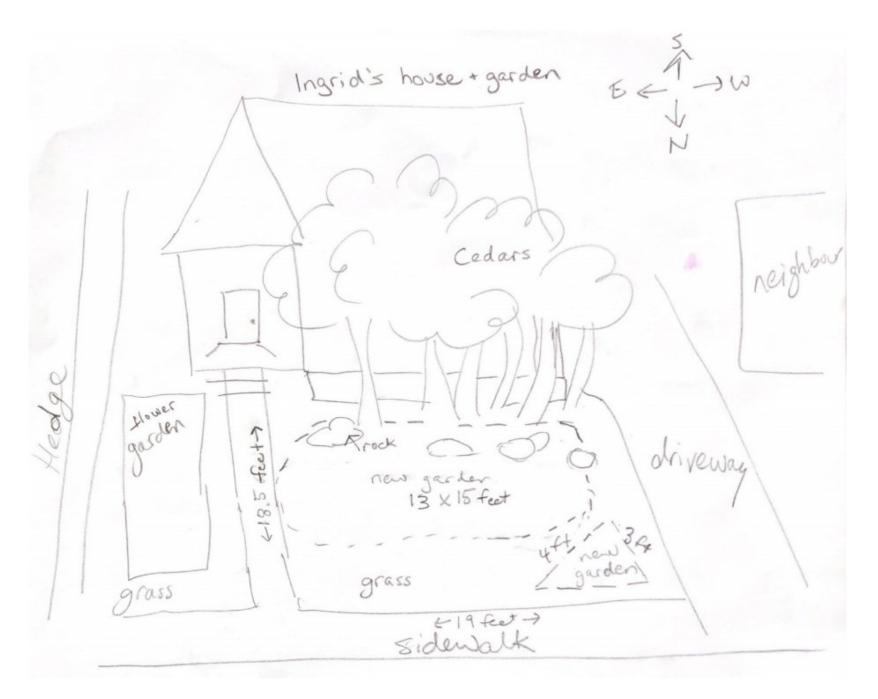
Assess **site conditions** (light, soil, moisture)

There are 7 cedar trees. The exposure is **north facing**, and for most of the summer the grassy area in front gets sun from about 3 pm to sundown, and gets pretty hot. It's always shady under and around the cedars. A hose is connected under the porch.

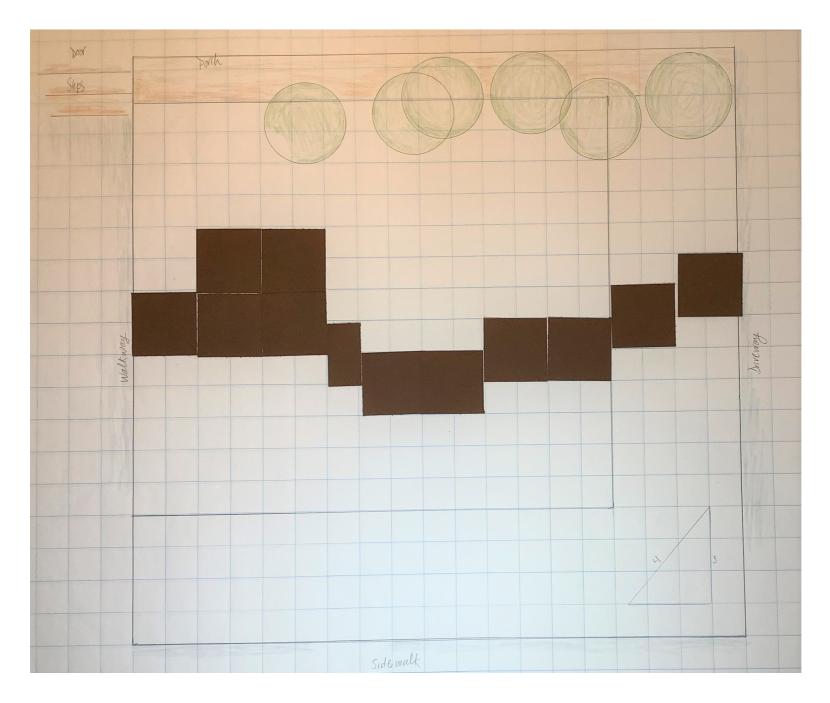
Shady pollinator garden

- Mimic layers of deciduous woods using understory shrubs, and spring blooming native plants.
- In areas of part-shade, use plants that naturally grow in woodland edges and clearings.
- Some woodland native plants aren't as easy to find or grow yourself from seed. Connaught Nursery is where I've bought a good variety, but you can find some at other native plants nurseries.
- Native canopy trees are important host plants for many kinds of butterflies and moths, such as native oaks, wild cherries and plums, willows, birches, maples, pines. (see Douglas Tallamy books)
- Leaves/mulch increase organic matter and moisture

Garden sketch



Graph paper plan



Squirrel-proof feeders







Use shelled sunflower seeds, no peanuts Local stores: Wild Birds Unlimited, Gilligallou

Notes on the garden plan

- You don't need a plan. I usually just choose my plants and wing it.
- I am not a professional designer. I read a lot about design and look at lots of photos. I prefer the naturalistic garden style. For examples, see wildbydesign.ca, The New Perennialist blog, gardens by Piet Oudolf, Nigel Dunnett, Roy Diblik. **My plan is one idea/starting point.**
- **Plant in sections** to spread out the cost and work. First half: I recommend planting between the house and path first. Then, do the second half next year. (13 x 15 = 195 plants @ \$5 = \$975)
- In the plan, I **repeated the same** plants to keep it simple. The first ones will self-seed and spread, and seedlings/divisions can be used to complete later sections of the garden.
- **Diversity instead of simplicity.** Since the 2nd half of the garden will be planted next year, different plants can be used instead of repeating first year plants.
- Sleep, creep, leap. Grow annual flowers or vegetables from seed to fill in the garden while native plants are establishing.

Prepare the site ahead (plan for **1 plant for square foot**)

- At least 3 species of flowering plants for spring, summer and fall = 9
- 3 of each to provide lots of each type of food = min. 27 plants
- If soil is compacted loosen up with a pitchfork. Add compost to shade gardens to mimic rich, woodland soil.



Smothering the last of the front lawn with layers of newspaper, cardboard (tape removed), and mulch.

 Add mulch on top of newly-planted gardens to conserve moisture and add organic matter, especially for shade/woodland gardens.

Remove invasives



- Identify and remove invasives or other unwanted plants. Invasive plants are non-native plants that **spread out-of-control in wild spaces**, crowding out the native vegetation that insects, birds and animals depend on.
- Ingrid has already started getting rid of **Goutweed** and **Lily of the Valley** – dig out the plants and roots, stick to it by pinching/cutting off new shoots to starve remaining plants.
- Others: Buckthorn, Dog-strangling Vine, Japanese Barberry, Japanese Honeysuckle, Periwinkle, Creeping Charlie, Garlic Mustard

Choosing plants

What plants do you already have to work with?

My 3 questions for deciding which existing plants are pollinator garden-worthy:

- **1.Is it harmful** (nut allergies, poison ivy and stinging nettle)? *Remove invasives*.
- 2.Is it beneficial to wildlife (nectar, pollen, host plant, berries or shelter for birds) or just a pretty 'plastic plant'?
- **3.Just for me:** do I simply love a 'plastic plant' and want to keep it? 70% natives is a good goal

Narrow down your plant options

What do I have already? Light Soil Inspiration Colour scheme Bloom time Height

Helpful lists of pollinator plants

Great Lakes Region



The Gorat Lakes region includes an incredibly diverse range of plast communities from wild Masherry Surrous and sorthers bornd fromt in Ontario and northern Manasuta, to talgroup preirie in Wincomin and Othe, and mixed breadled forces in Ohin. Michigan, Penneybranta, and New York.

Consequenting to this striking diversity of plant communities is an equally remarkable many of pollinators including the endengered Kenner Han burnerly (2)possile replaced and the strike the strike strike the strike type)--anduling the indexelly endengered rusty-patched bushle bee (2), affersi)--and the northermost population of migrating meansch butterfilms (Disman plexipped), As a progtemated other pollinators maintain healthy, productive plant, communities in provide from that matains wildlife, and play an emential nice is comp prediction.

Providing vehicles excludents is the most significant action you can take to support pollination. Adult bees, butterflue, and other pollinations require necture an their primary fixed source. Formake bees also collect pollens as fixed for their offspring. Native plants, which are adapted to local soft- and dimetes are usually the best neurons of necture and pollen for native pollination. Excorporating native wildflowers, wheads, and trees into are indecised presenters local biological drensity and provides shelter and fixed for a diversity of wildfile. Additional advantages of native plants are that they reflues regular lens where then non-neutrons, do not require



fortilizers, and are less likely to become weads.

This goale features regional native plants that see highly attractive to pollastics and are well-suited for small-scale planting its gordens, on business and scheel compares, in subas generapsion, and in farm field borders. In addition to supporting native been and bases yours, and you fit force plants that a constraint of the state of the second scale of the struct nector series botterflees, notice, and humaninghold, and some are host plants for butterfly and notic correptiles. With few exceptions, there species occur bready across the region and can be purchased as used or transplants. Plans coundit regional Frence, the Boots of North Americal Sorth American Plant Ada (http://totah.und.got), or the USDA FLANTS database (http://totah.und.got) for details on speciely databases.

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The Great Lakes region encompaness earners Minnesota, Wisconsin, Michigan, Olin, northern Presanghunia, and most of westeen and central New York, Within this area hes wart fagrees pretries, spreading wetlands, and mixed benedied forest. These communities are bone to an impressive diversity of batterflaw, including the northern migratory population of the mosarch butterfly, which depends on the flored resources smithele within these habitats for its survival.

MONARCH NECTAR PLANTS

Great Lakes

Each spring, momenths lower overwinnering sites in countil California and the mountains of central Mexico and fine out across North America to brend and lay eggs on millowed, the mountain host plant. Several generations are produced over the course of the spring and summer. In late summer and early full, shalls neighter back to the overvitatoring sites, where they generally remain in neproductive dispute watth the spring, when the cycle bapts again.

Measurdus at overwinteeting sites in Menico and Gultterain have disclased desenationly since monitoring began is the bide 1990. Account their seque in North America, monarcha are threatenaed by a variety of facture. Loss of estilisened from estimative herbicide use has been a major contributing factor, and habitat loss and degradations from other cosmo, natural disease and prediction, climate change, and widespread insecticide use am probably also contributing to monarch declares. Because of the monarch magniture life to monarch declares. Because of the monarch magnitures life cyclic, it is important to predict and centure habitat across their

of the split. Monuch or waters public confidence smooth sector, and whether indicated

entire rouge. Adult messarchs depend on diverse nacture sources for food during all stages of the year, from spring and summer benching to fill mignitude and overwritering. Catery2llars, on the other hand, are completely dependent on their milliword host plants. Inadequate milleword and notar plant food sources at any point may impact the number of measures that macconfully active at overwritering sites in the full.

Providing milliously and other pactice eich flowers that blicen where and when measurds need them is one of the most significant actions you can take to support measurch butterfly populations. This guide features Great Lakes native plants that have documented meansch visitation, bloom during the times of year when meansthe are present, are commercially setalable, and are known to be hardy. These species are wellsuited for widdower gardens, urban greenspaces, and farm field borders. Beyond supporting motanile, many of these plasts attract other sectus- and/or pollen-seeking butterflies, been, suchle, and humminghirds, and some are host places for other butterfly and moth caterpillan. For a last of native plasts that host butterflies and moths specific to your ap-code are www.awf.org/anti-oplantifa.dor. The species in this guide are adaptable to growing conditions found across the state. Please consult regional fleron, the Basta of North Americals North American Plant Atlas (http://bonap.ast/aupu), or the USDAs PLANTS database (http://plants.usda.gov); for details on species' distributions in your area.







Pollinator plants for different conditions

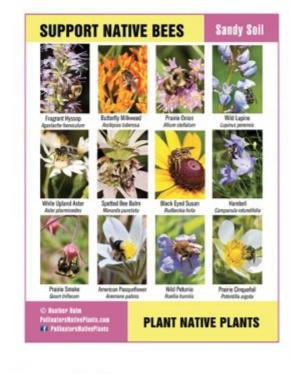
SUN/CLAY SOIL



SUN/WET SOIL



SUN/SANDY SOIL





PDF guides by author Heather Holm, from https://www.pollinatorsnativeplants.com/

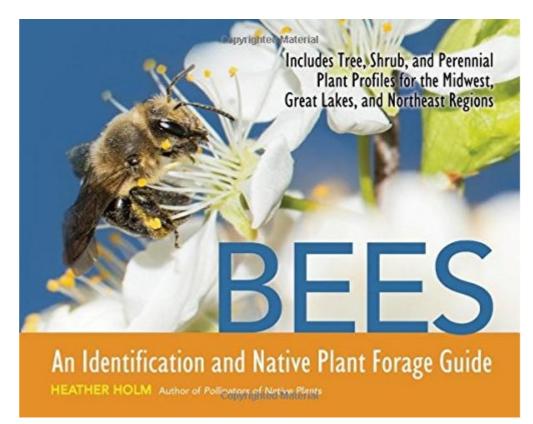
Best pollinator ID and gardening books



OF NATIVE PLANTS

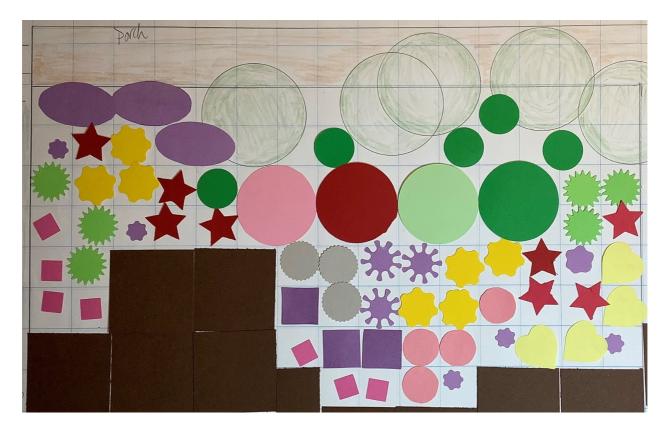
Attract, Observe and Identify Pollinators and Beneficial Insects with Native Plants

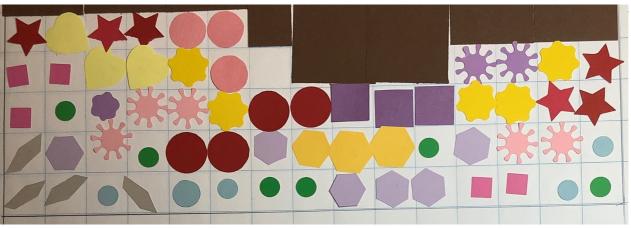




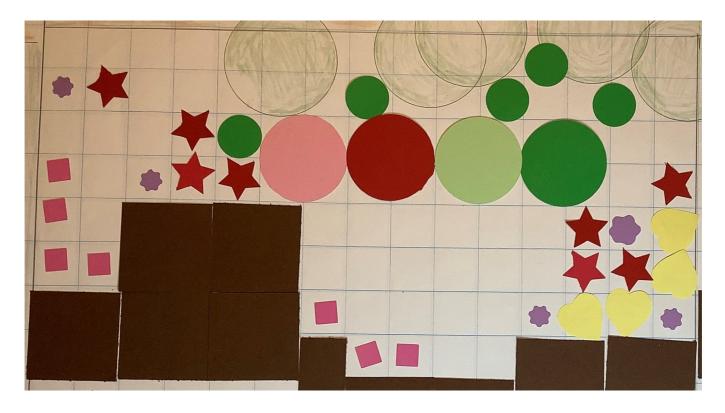
Both of these books are at the Ottawa Public Library.

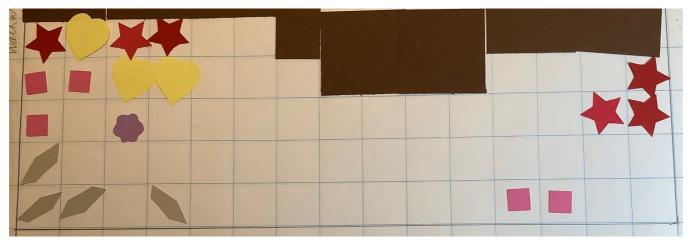
Complete garden plan





Spring





Spring legend



Bloodroot (Connaught Nursery, spread easily once you have one plant)





Wild Geranium

All these plants are widely available to buy, are easy to grow from seed, and selfseed.





Field Pussytoes

*



Wild Columbine





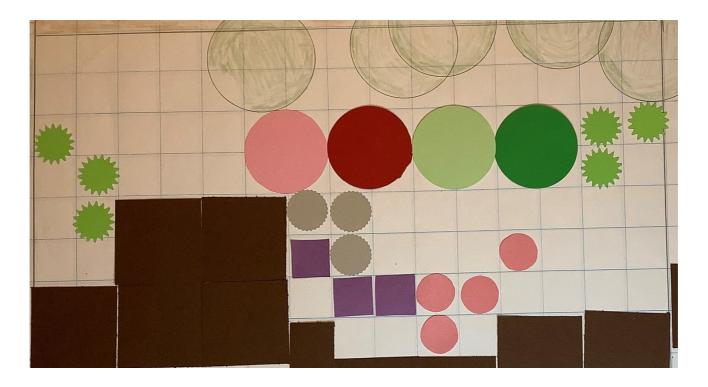
Common Violet

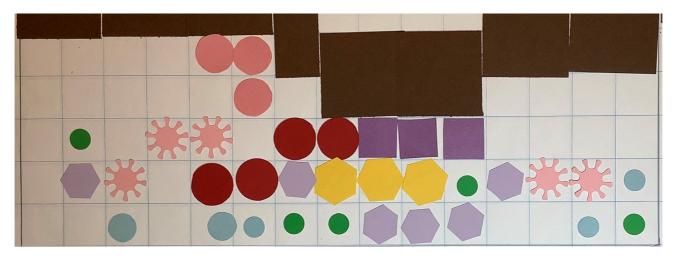




Golden Alexanders (label in the garden)

Summer





Summer legend





Purple Coneflower*



Swamp Milkweed





Harebells









Hairy Beardtongue







Great Blue Lobelia





Bottlebrush Grass



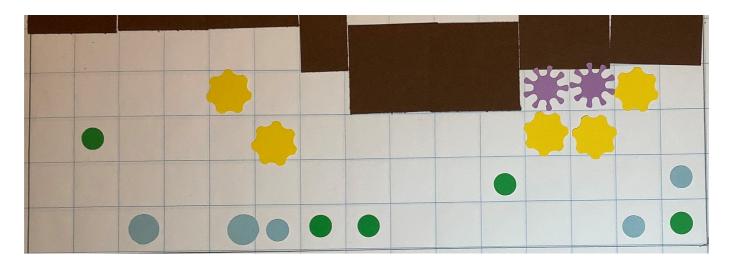
sedge



Cardinal Penstemon* (seed from Botanically Inclined)

Fall





Fall legend + shrubs



Zigzag Goldenrod



Fly Honeysuckle





Large-leaved Aster



Climbing Bleeding Heart *or* native honeysuckle vine (Beaux Arbres)



Heart-leaved Aster



Red Elderberry (Connaught Nursery)





Pagoda Dogwood (easy to find) *or* Round-leaved Dogwood (hard to find)

Budget-friendly gardening tips

Create a smaller garden:

- Start small. Your garden doesn't need to be perfect from the beginning. The most important thing is to get started.
- **Complement neighbours' gardens:** If there is another garden close-by with some pollinator-friendly plants, choose plants that bloom at different times.

Save money on soil/compost:

- Use leaves instead of buying mulch.
- Make your own compost to use as potting soil.
- Don't amend soil with purchased soil plant the right plant for the right place. However, shade gardens will benefit from extra compost or leaves to increase organic matter/moisture retention.

Save money on seeds:

Share: there are usually many more seeds in a packet than one person needs, so you can share extra seeds with others. You could also join with other gardeners, each growing one or 2 species, and then share the seedlings.

• In the fall, collect seeds from plants in your garden to grow more.

Save money buying plants:

- Buy smaller plants, or divide up larger ones into 2 or 4 plants.
- Focus spending on trees, shrubs, woodland plants that are hard to grow from seed or take a long time to mature. Grow the rest from seed.
- Instead of buying 3 or more plants of each species, buy 1 or 2 and let them spread/self-seed over a few years to form a larger patch. Your garden doesn't need to be perfect from the start.
- You can buy a few mature, more expensive plants for some instant results while your seedlings are small. You can also grow annuals to fill the garden in while native plants are small.
- Do purchases in the fall when shrubs etc. are often 30-50% off -- however selection might be limited.
- Fill in with annuals that are easy to grow from seed while the native plants fill in.

Pollinator plants 2 1/2 ft tall or less

- **Yellow:** Lance-leaf Coreopsis (seed from Wildflower Farm), Black-eyed Susan (Wildflower Farm), Heart-leaf Alexander (looks like short dill, prairie plant), Alumroot
- White: Heath Aster (plants from Native Plants in Claremont), White Bottle Gentian, Silverrod (from Beaux Arbres Native Plants), Dwarf and Whorled Milkweed (from Beaux Arbres), Pussytoes, Pearly Everlasting, Mountain Mint (Wildflower Farm), Pasque Flower (prairie plant, plants from Beaux Arbres)
- **Purple:** Cylindrical Blazing Star (Native Plants in Claremont), Hairy Beardtongue, Sweet Alyssum (non-native annual, Purple Prairie Clover (Beaux Arbres), violets
- **Red:** Blanket flower (Wildflower Farm)
- **Blueish purple:** Aromatic Aster (prairie plant), Wild Lupin (Wildflower Farm), Lesser Wild Indigo (Beaux Arbres), Harebells (Wildflower Farm), Calamint (non-native), Narrow-leaved Vervain (plants from Ontario Native Plants), Downy Wood Mint, Wild Petunia (prairie plant, seed from Wildflower Farm)
- **Pink:** Poppy Mallow (prairie plant, Wildflower Farm), Nodding Onion (Wildflower Farm) or Prairie Onion, Prairie Smoke (plants from Beaux Arbres), Purple Coneflower (might grow taller, seed from Wildflower Farm), Bradbury's Monarda (prairie, seed from Prairie Moon Nursery), Spotted Beebalm (short-lived but self-seeds, Wildflower Farm), Zinnias (annuals that come in many colours, 'Pinwheel' is short)
- **Orange:** Butterfly weed, Calendula (non-native annual, also come in yellow)

Native pollinator plants for dry shade

Small trees and shrubs:

- White flowers: Pagoda Dogwood (blue berries), Serviceberry (blue to red berries), Red Elderberry (red berries), Fly Honeysuckle (red berries)
- Yellow: Witchazel (late fall), Bush Honeysuckle
- Pink: Purple-flowering Raspberry (red berries)
 Perennials:
- **Red:** Canada Columbine, Limber Honeysuckle
- **Pink:** Wild Geranium, Hepatica,
- **Purple:** Violets, Blue Woodland Phlox, Heart-leaved Aster, Big-leaved Aster,
- **Yellow:** Large-flowered, Bellwort, Barren Strawberry, Wood Poppy, Zigzag Goldenrod, Blue-stemmed Goldenrod, Woodland Sunflower, Brown-eyed Susan (*Rudbeckia triloba*)
- White: Foam Flower, False Solomon's Seal, Poke Milkweed, Canada Anemone, Bloodroot, White Wood Aster, White Snakeroot, Robin's Plantain

Grasses/foliage: sedges, Bottlebrush grass, Wild Ginger

Buying native plants

Buying native plants, local ecotypes

- Fletcher Wildlife Garden annual sale, online early June 2021
- Beaux Arbres Native Plants, Bristol QC & Ottawa (order online, Ottawa pick-up)
- Ottawa Wildflower Seed Library seedling exchange/giveaway
- A Cultivate Art, seedlings for \$1 while supplies last
- Ecology Ottawa fundraiser is selling native plants until May 30, 2021
- Ferguson Tree Nursery, (order online, pick-up in Kemptville)
- **Connaught Nursery**, Cobden (on Facebook)
- Ontario Native Plants (onplants.ca), Native Plants in Claremont, Origins Native Plants (order online, ship plants)
- Further afield: Grow Wild Native Plant Nursery, Natural Themes Farm
- Local, conventional nurseries are hit or miss. (such as Ritchie's Feed & Seed *and* Green Thumb ask for native species, Make it Green in Kanata is carrying more native plants)
- Plant swaps, local horticulture societies (such as Ottawa Horticulture Society, Nepean Horticulture Society)

Use caution when buying plants from large chain stores: Friends of the Earth plant testing

Banned pesticides found on flowers sold at Ottawa garden centres

ERIC ATKINS > TRANSPORTATION REPORTER PUBLISHED APRIL 18, 2018

An environmental group says it has found banned pesticides on flowers sold at major garden centres in Ottawa, and it has asked the provincial government to investigate possible violations of the Ontario Pesticides Act.

Friends of the Earth Canada, a charitable group based in Ottawa, says garden plants purchased at Canadian Tire, Rona and Home Depot in 2017 have traces of chemicals banned for human health concerns, including a neonicotinoid shown to harm aquatic insects.

Beatrice Olivastri, chief executive officer of Friends of the Earth, said the group bought a range of common garden flowers known to be favoured by native, wild bees – daisies, asters, lavender and others – from five major retailers. The samples were sent to the University of Guelph to test for neonicotinoids, a class of insecticide that includes varieties whose use is banned or restricted in TRENDING

GM rejects union proposal to save Oshawa plant

2 This year, these are the only two market forecasts I'm willing to mak

GORDON PAPE

3 Hold on to your seats: Here comes t Mercedes-Benz EQC, the automake first electric vehicle

4 OPINION

A recession could be different this time – for workers and the unemployment rate

LINDA NAZARETH

Be wary of cultivars: Coneflowers example



Few insects visit my 'PowWow' White Coneflowers* compared with the wild Purple Coneflowers*.

More information

cornerpollinatorgarden.net



My garden * Blog Brochure Basics * Start * Design * Grow * Maintain * FAQ More

More books and web sites

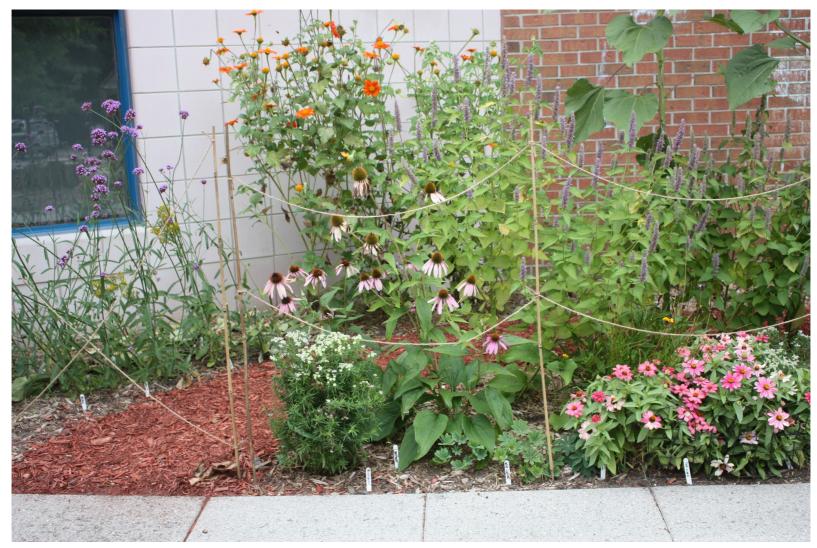
- Wild Pollinator Partners https://wildpollinators-pollinisateurssauvages.ca/
- Canadian Wildlife Federation
- Ontario Native Plant Gardening, Butterflyway Ottawa/Gatineau Facebook groups
- Identification:
- Pollinators of Native Plants: Attract, Observe and Identify Pollinators and Beneficial Insects with Native Plants and Bees: An Identification and Native Plant Forage Guide by Heather Holm
- Bumble Bees of Eastern United States online PDF
- BAMONA web site (Butterflies and Moths of North America)
- The ROM Field Guide to Butterflies of Ontario
- iNaturalist

Gardening with Ontario native plants:

• Grow Wild! Native Plant Gardening in Canada and The New Ontario Naturalized Garden by Lorraine Johnson

Example 1: School butterfly garden

Not a fluke: successful new school butterfly garden, 2019



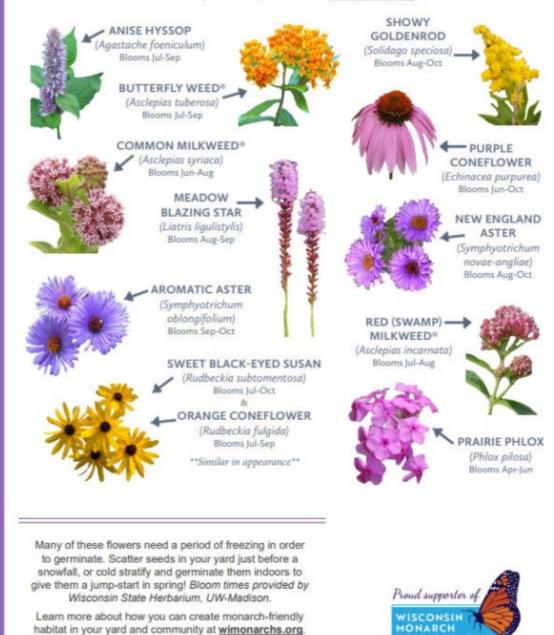
The new butterfly garden in September of its first year. Plants include: Verbena Bonariensis* (purple, left), Mexican Tithonia* (orange, back), Mountain Mint (white, front), Purple Coneflower* (pink, centre), Anise Hyssop (blue spikes, right), 'Pinwheel' Zinnias* (front, right)

Inspiration

This poster is missing spring flowers because Monarchs don't reach this far north until June.

SUPPORTING OUR MONARCHS

Turn your yard into a monarch oasis! These 12 species are some of monarchs' absolute favorites. Three species of milkweed (a plant on which monarchs 100% depend, denoted by *) are included! Learn how you can help monarchs at <u>wimonarchs.org</u>.



COLLABORATIV

August 2020



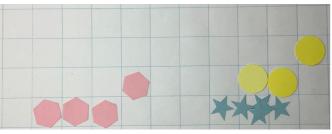
Lance-leaf Coreopsis (yellow, left), Lindley's Aster (blue, centre), Ohio Goldenrod (yellow, centre, Verbena Bonariensis* (annual, purple balls, right)



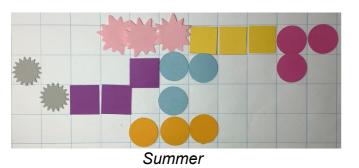
Anise Hyssop (blue spikes, left), Purple Coneflower* (pink, left), Mountain Mint (white, centre), Ohio Goldenrod (yellow, right) Cup Plant (yellow in back), Rocky Mountain Bee Plant* (pink annual, right)

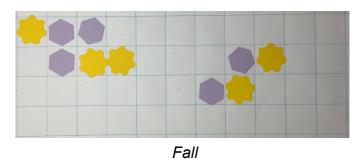
Example 1 plan











- Garden is roughly 11 x 4; 40 plants
- Plant height ranges from 2 to 4 feet, except for Cup Plant, which is 6 feet tall

Example 1 Legend

Spring



5 x Wild Lupine



4 x Hairy Beardtongue



3 x Heart-leaved Alexanders

Summer



3 x Joe Pye Weed

3 x Anise Hyssop









Summer



3 x Brown-eyed Susans



3 x Swamp Milkweed



2 x Pearly Everlasting

Fall



5 x Smooth Aster



5 x Ohio Goldenrod

3 x Cup Plant

3 x Spike Blazing Star

Sept. 2020: backyard mini-meadow



Early Goldenrod (yellow, front), 'Little Joe Pye' * dwarf cultivar of Joe Pye Weed (right), Muhly Grass, Little Bluestem grass.

Examples 2: Sidewalk butterfly garden

Inspiration for a short pollinator planting with general appeal





nigel.dunnett Grey to Green Phase 2, Sheffield. Street bioswales, cycle ways and pedestrian routes. Planted late spring 2020. Still under construction with the final planting being completed in the autumn. I spoke with some of the contractors on site and they were really enthusiastic and proud of the construction and landscape, and rightly so. A planting design collaboration with @zac tudor #plantingdesign #suds #raingarden #landscapearchitecture #shefplanting #greenstreet

29w

Liked by tinycanadiangarden and 4.223 others

(+

AUGUST 16, 2020



Front pollinator garden expansion: July 2020



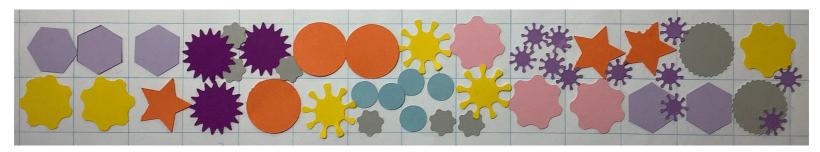
Butterfly Milkweed (orange), Lance-leaf Coreopsis (yellow), Wild Petunia* (pale blue), Common Rue* (far right with small yellow flowers), 'May Night' Salvia* (dark blue, right)

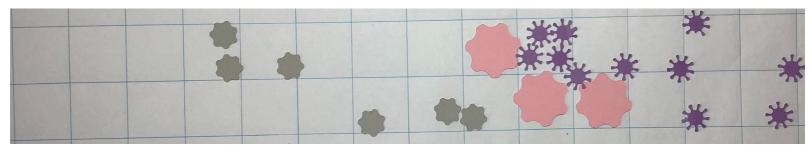
September 2020



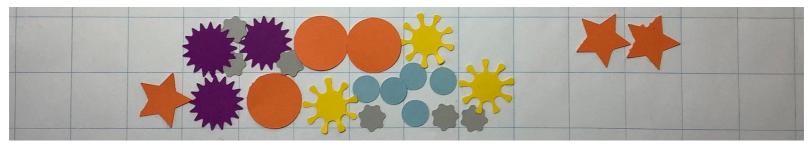
Rough Blazing Star (purple), Lance-leaf Coreopsis (yellow in back), California Poppy* (orange, may spread aggressively), Prairie Dropseed grass

Example 2 plan





Spring



Summer



Example 2 Legend

Spring



3 x Violets (let them self-seed)



3 x Ontario Blazing Star





3 x Field Pussytoes

3 x Prairie Smoke



3 x Butterfly Milkweed

Fall



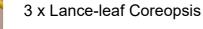
5 x Aromatic Aster



3 x Old Field Goldenrod

Summer







3 x Harebells (let them self-seed)



3 x Cosmos

Garden is $14 \times 2 = 28$ square feet; 32 plants Plants are about 2 feet tall or less.