

It's as easy as 1, 2, 3

A successful pollinator garden must provide nectar and pollen-rich **flowers** for food, as well as **nesting sites**. Butterflies also need **host plants** to feed their caterpillars.

1. Flowers

Continuous blooms: Provide flowers from April to October so bees have a constant supply of food. Start with 2 or 3 kinds of flowers for each season. A garden in sun or part-sun is best, but a shady garden works too.

Plant in patches: If possible, plant in groups of 3 to 5 of each species so flowers can be seen by insects from a distance, and so they provide sufficient food.

Nectar and pollen: Plants must provide both nectar for energy, and pollen high in protein to feed the next generation of bees.

Different flower shapes and sizes: Different pollinators need different flowers. Include a variety of shapes and sizes, so there's food for all your insect visitors. Bees prefer blue and yellow flowers.

In my garden, **favourite bee flowers** include:

- **Spring:** native woodland flowers like Bloodroot and Large-flowered Bellwort, flowering trees/shrubs like Pussy Willow and Serviceberry, Prairie Smoke
- **Summer:** Black-eyed Susans, Anise Hyssop, Swamp Milkweed, Blazing Stars, Coneflowers, Wild Bergamot, Joe Pye Weed, and many others
- **Fall:** native asters and goldenrod species
- **Annuals:** Mexican Tithonia, Cosmos, Zinnias, Brazilian Verbena, herbs

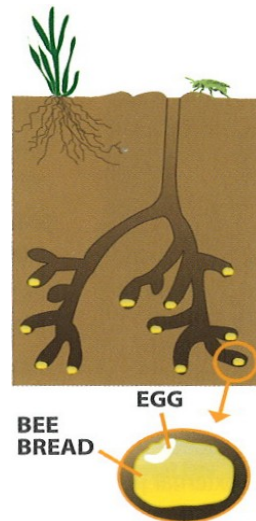
2. Nesting sites

My garden is tailored to meet the needs of native bees. Did you know that most **native bees** are solitary, and that they **nest in the ground or in cavities**? I had no idea either!

I do not have a European Honeybee hive, but honeybees do frequent my garden.

Ground nesting sites: Many native bee species nest in the ground. A pollinator garden must have some areas of **bare ground** where bees can dig out nesting tunnels. On the surface, they look like small ant hills.

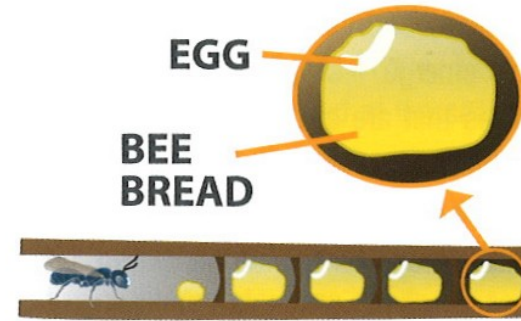
Ground nest
(illustration from *Pollinators of Native Plants* by Heather Holm)



Old stems and bee houses: For cavity nesting bees, you can include a bee house filled with **hollow stems**, or wooden blocks drilled with tunnels. Tunnels must be lined with paper tubes. **Replace stems and paper tubes each year** to prevent the spread of parasites and diseases.

Instead, I leave last year's plant stems to be used as **nesting tunnels**.

Cavity nest in a hollow stem
(illustration from *Pollinators of Native Plants* by Heather Holm)



3. Butterfly host plants

Nectar: Adult butterflies will drink nectar from the same flowers as bees. However, they do prefer brightly coloured flowers in pink, purple, red, orange, and yellow.

Host plants: Butterflies need to lay their eggs on specific host plants that their caterpillars can eat. Without host plants, you will not attract many butterflies, or help them reproduce.

We all know that **Monarch** butterflies need milkweed to feed their caterpillars. However, different butterflies require other, usually native, host plants:

- **American Lady:** Field Pussytoes, Pearly Everlasting
- **Black Swallowtail:** dill, parsley, fennel
- **Eastern Tiger Swallowtail:** Black Cherry, Wild Plum
- **Mourning Cloak:** Willow
- **Red Admiral, Question Mark:** nettles
- **Fritillaries:** violets
- **native trees** host *thousands* of different moths and butterflies

Native plants

Native plants are the best sources of nectar and pollen for native bees, and are host plants for butterfly caterpillars and specialist insects. They've evolved together to be a perfect match. I also grow beneficial non-native plants.

Native plants aren't easy to find in conventional nurseries or big box garden centres. I buy plants from the following:

- **Friends of the Farm Plant Sale,** Experimental Farm, early May
- **Fletcher Wildlife Garden Native Plant Sale,** early June
- **Beaux Arbres Native Plants,** Bristol, QC and at Westboro Farmers' Market
- **Solidago Farm,** Parkdale Market
- **A Cultivated Art,** Vanier
- **Connaught Nursery,** Cobden
- **Naturaide,** Winchester
- **Ferguson Tree Nursery,** Kemptville
- **Native Plants in Claremont,** ships plants
- **Ontario Native Plants,** ships plants

Growing from seed

To **save money**, I also grow plants from seed. Since many **native plant seeds** need to go through winter weather before germinating, it's easiest to sow them in the garden in the fall. You can also **winter sow** them in pots outdoors in the snow, believe it or not!

Plants grown from seed may not bloom in their first year. They "sleep" the first year while they develop roots, "creep" in the second year, and "leap" in the third year with more vigorous growth. Give away divisions and seedlings.

Find seeds at:

- **Ottawa Wildflower Seed Library**, online and at local events
- annual Ottawa **Seedy Saturday**, Ron Kolbus Centre, early March
- **Beaux Arbres Native Plants**, Bristol, QC
- **Wildflower Farm, Botanically Inclined, Native Plants in Claremont, Hidden Habitat, Northern Wildflowers** -- all in Ontario

Don't dig up wild plants

Don't dig up native plants from wild places. Indiscriminate digging of native plants has decimated some natural populations. If you collect seeds in the wild, collect only a few.

No pesticides

Pesticides harm more than just insect pests. Also avoid fungicides and herbicides. Keep pollinators safe and don't use them in your garden. ID insects before you squish them.

Learn more

Now it's time to sit back and observe the beautiful, strange, and educational wonders around you. To learn more:

- **Fletcher Wildlife Garden**, Ottawa
- **Wild Pollinator Partners**, Ottawa
- **Canadian Wildlife Federation**
- ID resources: **Butterflies of Ontario**, **BAMONA**, **BugGuide**, **iNaturalist**
- *Bees: an Identification and Native Plant Forage Guide and Pollinators of Native Plants*, by Heather Holm
- **Xerces Society**
- inspiration: **wildbydesign.ca**, Piet Oudolf
- *Bringing Nature Home and Nature's Best Hope* by Douglas Tallamy

(v. 05/2023)

Garden maintenance

Some conventional gardening practices are harmful to pollinators. Here are tips for maintaining your garden in a pollinator-friendly way.

Mulch wisely

Ground-nesting bees can't dig through coarse wood or bark mulch to make their nests. However, with our increasingly hot and dry summers, mulch has become essential.

Use **un-dyed, fine-particle mulch** (such as composted pine), or **leaves** and chopped up plant debris. You can also use **'living' mulch**, ground-covers that weave between taller plants. These options protect soil from drying out and eroding, yet still allow bees to dig nests.

Watering

Even a native plant garden will benefit from occasional watering, especially for the first few years while new plants are establishing their roots, and during periods of drought.

Water **when bees are not actively foraging** -- at dusk, at night, or at dawn. Bees can detect when it's going to rain and will return to their nests beforehand. Artificial, daytime watering makes it impossible for bees to fly, and can destroy ground nest entrances.

Editing

Native plants do **self-seed**, so you will have to remove some unwanted seedlings. I think of them as free plants to move or give away.

Leave the leaves

Did you know that many **butterflies overwinter** here instead of migrating like Monarchs? They spend the winter as a caterpillar, chrysalis or adult butterfly camouflaged in plain sight or hidden under leaves. When you rake leaves, cut back plants, and stuff it all into leaf bags, you risk throwing away next year's butterflies.

Avoid dead-heading or cutting back plants in the fall to make them look tidy. Standing plant stems may already house cavity-nesting bee larvae or will become next year's **nest sites**.

As a bonus, dried flower heads provide important fall and winter **seeds for birds**. It is delightful to watch Goldfinches and Chickadees hanging on plants, or Juncos hopping on the ground eating seeds.

Less is more spring clean-up

Continue to **leave the leaves** in your garden; they will decompose to become a free mulch substitute. For a tidier look, clean up garden edges and start a leaf compost pile. Loosen up matted leaves or move them elsewhere. Leaf 'litter' is home to many different insects, and keeping it intact boosts biodiversity.

Cut stems to about 15 inches, instead of near the ground, so they can still be used for bee cavity nests. Chop up stem tops and leave them in the garden. New plant growth will soon cover up the awkward stems.

If you do more cleaning up in your garden, do it as late as possible in the spring.

Create Your Own Pollinator Garden

You Can Make a Difference



My name is Berit. Welcome to my corner pollinator garden (corner of Fraser & Sherbourne). In 2017, I got rid of the grass and planted this garden. It attracts **bees, butterflies, fireflies, beneficial insects, and birds**. Plant it and they will come.

Native insect **populations are declining** due to habitat loss, pesticides, and climate change. As the foundation of food chains, native plant and insect declines affect all wildlife. Urban **gardens can provide new, safe habitats** for pollinators and other creatures in need. If I can do it, so can you!

See what's been happening in my garden:

- blog at **cornerpollinatorgarden.net**
- on Instagram **cornerpollinatorgarden**

For a tour or if you have questions, email me at **cornerpollinatorgarden@gmail.com**.