

Gardening for Bees



Native bees are one of our most important pollinators. They help increase yields in our vegetable gardens and farm fields, and support the life cycles of wild plants. There is a huge diversity of native bees, with 800 species in Canada and 364 species in the Greater Toronto Area! Unlike the European Honey Bee, our native bees do not produce honey.

What is a pollinator? A pollinator is an organism that aids the transfer of flower pollen to fertilize plants for fruit and seed production.

Native bee life cycle

Many native bees are solitary, meaning they nest alone. The adult female lives for one season, preparing a nest with food provisions (pollen), and then laying her eggs. Solitary bees provide little further care to their offspring, and are very unlikely to sting. Other native bees like Bumble Bees are social, and form temporary colonies. Bumble Bees can sting if they feel threatened by something like a nest disturbance. Most native bees nest in the ground in rodent burrows, while some nest in cavities created by excavating pithy stems and chewing through wood. *See the chart on the following page for bee life stages and activity by season.*

Support native bees in your garden

Native bees collect nectar and pollen from flowering plants for energy and to feed their offspring. Bees cannot see the colour red and are attracted to blue, purple, white and yellow flowers. Here are some ways to support wild bees in your garden:

- Plant a diversity of flowers with various heights, bloom sizes and bloom structures. This will help meet the needs of different bees, including generalists and specialists (for example, short-tongued bees require shallow flowers to access nectar). Also consider adding flowering trees and shrubs!
 - Be careful with cultivars and avoid double or triple bloom varieties (hybrids). The pollen and nectar sources can be low or non-existent and difficult for bees to locate.
 - Group species of plants together so bees can move from one flower to another in a patch.
 - Bees also need water, nesting sites and overwintering habitat to survive.
 - It is safe to watch bees flying from flower to flower! Take part in *Bumble Bee Watch* and report your sightings!
- See the chart on the following page for information on plants blooming each season, and suggested habitat features.*



Honey Bee
(*Apis mellifera*)







Bicoloured Agapostemon
(*Agapostemon virescens*)



Common Eastern Bumble Bee
(*Bombus impatiens*)



Ligated Sweat Bee
(*Halictus ligatus*)

	BEE LIFE CYCLE	PLANTS	HABITAT
	WINTER Native bees are in diapause, a type of hibernation, as adults or full grown larvae. Ground nesting bees are below the frost line and cavity nesters have an anti-freeze compound in their blood to prevent them from freezing solid.	Do not trim and discard hollow stemmed plant stalks such as Cup Plant, Joe-Pye Weed, Sunflower, Goldenrod, Milkweed, Echinacea, or Wild Bergamot.	Leave hollow or pithy plant stems standing over the winter. For a tidier look, cut back the stems, bundle and leave in the garden.
	SPRING In March, some larvae pupate and some adults begin emerging. In April, the first bees forage to replenish their energy and then begin building a nest. Different species emerge through May and June.	<ul style="list-style-type: none"> • Early Meadow Rue (<i>Thalictrum dioicum</i>) • Golden Alexander (<i>Zizia aurea</i>) • Wild Geranium (<i>Geranium maculatum</i>) • Snowberry (<i>Symphoricarpos albus</i>) • Black Raspberry (<i>Rubus occidentalis</i>) • Purple Coneflower (<i>Echinacea purpurea</i>) <p>TIP: Leave early flowering “weeds” like dandelion and coltsfoot as important early sources of nectar.</p>	<ul style="list-style-type: none"> • Make small depressions in your garden to allow rainwater to puddle. • Leave patches of bare soil for ground nesting bees. They prefer well drained sites with southern exposure, and close to plants to forage on.
	SUMMER Species continue to emerge in July and August. Many bees are foraging for nectar and pollen and promoting pollination. Some solitary species still have not emerged as adults.	<ul style="list-style-type: none"> • Staghorn Sumac (<i>Rhus typhina</i>) • Blue Vervain (<i>Verbena hastata</i>) • Evening Primrose (<i>Oenothera sp.</i>) • Milkweed (<i>Asclepias sp.</i>) • Beardtongue (<i>Penstemon sp.</i>) • Wild Bergamot (<i>Monarda fistulosa</i>) • Lance-Leaved Coreopsis (<i>Coreopsis lanceolata</i>) 	<ul style="list-style-type: none"> • Keep a source of water during the summer. Add shallow containers with small pebbles and sand so bees can easily land and drink. • Drill holes in dead trees or untreated blocks of wood and leave it in your garden to create nesting sites.
	FALL Bees that emerged in summer are nesting. Bees are foraging to store nectar for the winter, and looking for an overwintering site. By November most bees are in their overwintering chambers and are less common to see.	<ul style="list-style-type: none"> • Joe-Pye Weed (<i>Eutrochium maculatum</i>) • Goldenrod sp. (<i>Solidago sp.</i>) • Tall Sunower (<i>Helianthus giganteus</i>) • Woodland Sunower (<i>Helianthus divaricatus</i>) • Tall Blazing Star (<i>Liatis aspera</i>) • Aster sp. (<i>Symphotrichum sp.</i>) 	Avoid mulching new areas that can cover bee nests or block bees from new nesting habitat.

Resources

- Bees of Toronto, City of Toronto Biodiversity Series: www.toronto.ca/wp-content/uploads/2017/08/8eb7-Biodiversity-BeesBook-Division-Planning-And-Development.pdf
- Bumble Bee Watch: www.bumblebeewatch.org
- Gardening for Pollinators, Canadian Wildlife Federation: cwf-fcf.org/assets/pdf/en/wag/polle.pdf
- A Landowners Guide to Conserving Native Pollinators in Ontario, Susan Chan: feedthebees.org/wp-content/uploads/2013/03/A-Landowners-Guide-to-Conserving-Native-Pollinators-in-Ontario.pdf
- Native Plants for Pollinators, Credit Valley Conservation: cvc.ca/wp-content/uploads/2017/04/17-uo-nativeplantsforpollinators-booklet-v8-web.pdf

For more information please contact:

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