

## The Importance of Fruit Trees to Pollinators

When hiking the trails at Cold Creek Conservation Area one comes along a stand of old apple trees that will be flowering soon and be 'abuzz' with pollinators. Pollinators could be bees, butterflies, flies, beetles, hummingbirds, bats etc.

Fruit trees bloom early in the spring when there are fewer perennials in bloom. Rather than a few flowers, fruit trees are covered in blooms containing nectar and pollen. They not only provide food but they provide also protection from the elements and a wind screen for our small friends when flying. We all know what a honey bee is, honey bees make honey. They live in colonies, have one queen and a bunch of worker bees and most importantly, they make honey. Honey bees (*Apis mellifera*) are not native, they were first introduced to North America in the early 1600s by European Settlers.

Do all bees make honey, you might ask? No, not all bees make honey.

There are about 21000 bee varieties in the world and 4000 bee species are found in North America alone. These bees, called wild or native bees were here long before the honey bee arrived. The term WILD BEE is used for those species that don't produce honey and even though they don't do that, they are extremely important pollinators of our crops. Native bees are vital to Ontario's ecosystems and economies since fruits and vegetables require animal propagation, so they are important crop pollinators. Fruit trees need pollinators and pollinators need fruit trees.

So, let's take a look at one of the largest native bees, the Bumble Bee.

Of those 4,000 native, wild bees about 50 species are Bumble Bees in North America. Bumble Bees mate in the fall and the inseminated females called gynes, (destined to become queen) hibernate over winter. In the early spring when temperatures warm up, they emerge and start to forage. It is very important to not start cleaning up the yard and flower beds too early, because one might disturb an overwintering Bumble Bee. The gynes will find a suitable nesting site, normally a ground nest and start to build nesting pots from secreted gland wax. They then gather pollen and moisten it with nectar and lay eggs and cover with more wax. They incubate the pollen ball and the eggs hatch in 3 – 5 days. The Bumble Bees continue to forage, gathering more pollen and nectar to continue building the nest.

The Bumble Bee's size and strength allows them to work with a variety of flowers that would be difficult for other bees to work with. Not only are they larger, they are fuzzy. They collect pollen and nectar in sacks or baskets on their hind legs. Bumble Bees buzz-pollinate by vibrating their flight muscles. By landing in the centre of a flower they "shake out large amounts of pollen in one flower visit". This makes them six to seven times more efficient than honey bees.

Ontario's pollinator populations have declined for various reasons, such as habitat loss, pests, disease, pesticides and climate change.

Fruit trees and pollinators have a mutually beneficial relationship - they benefit each other by providing food, by providing the future existence as well as protection. But the plants and the bees aren't the only ones benefiting from this relationship. Every time you eat any Foodland Ontario fruit, remember our fuzzy – buzzy friends, made it happen.



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