

## Bee in the Know: Fascinating Facts about Pollinators

### POLLINATION POWER

- ✦ Birds, butterflies, bees and other insects provide a very important service to the world as pollinators. For example, when a bee lands on a flower, pollen ends up sticking to the bee's hair (that's why pollinator bees are fuzzy!) As they zoom from flower to flower to gather food (pollen and nectar), bees are also delivering the pollen that allows flowers and many crops to become fertilized and reproduce.
- ✦ Some flowers need their pollen to be "buzzed" out by bees that can vibrate at high frequencies. Bumblebees are great "buzz pollinators" and that is why they are often used as managed pollinators of plants that require buzz pollination (such as tomatoes).
- ✦ In order to reproduce, plants rely on insects and other pollinators, therefore, over time, plants have adapted to become more attractive to pollinators.
- ✦ We have pollinators to thank for many of the foods we eat. Pollination is important to the production of one third of today's food crops. From apples to zucchini, many fruits, nuts and vegetables rely on pollination.
- ✦ Pollinators also affect our food in other ways. For example, since they pollinate many crops (such as alfalfa) they help to feed animals in the dairy and meat industries.
- ✦ There are many factors affecting the health of bee populations that must be managed to minimize risk to these beneficial insects. Risk factors include pests and diseases, poor nutrition, stress, weather, loss of habitat, and pesticides.

### THE BUZZ ABOUT BEES

- ✦ To date, about 800 species of bees have been discovered in Canada.
- ✦ There are over 20,000 different bee species worldwide. Honey bees are social bees that live together in colonies. There can be 50,000 or more all living in one colony. They are the bees who make and store the honey we know and love. Bumblebees also live in colonies and do make a form of honey, but it isn't a type we typically eat. Mason bees are non-social bees and prefer to do their own thing and live alone—usually in places like abandoned bee nests, beetle tunnels, or crevices in buildings. They were given the name "mason" because they use mud to split their nests into compartments.
- ✦ Bumblebees and mason bees are native to Canada, but honey bees (*Apis mellifera*) were originally brought to Canada from other countries.
- ✦ Canada has both wild bees and "managed" bees. Managed bees are raised by people and have their habitat built for them.
- ✦ Wild bees need to find their own habitat. The queen bee chooses the location for social bumblebees. She looks for a safe home that is close to food and water sources but is unlikely to flood. She also considers nest size. She needs enough room for the colony to grow, but can't have too much extra space, because that makes it hard for bees to survive the cold in winter.
- ✦ Managed bees are often studied or given jobs in agriculture. For example, since bumblebees are such great pollinators, tomato growers use them in greenhouses to help pollinate plants.

# Proud to Bee a 4-H'er

## FUN FACTS

- ✦ The earliest known interaction of humans and bees is estimated to be between 6,000 and 8,000 years ago. Evidence was found in cave paintings in Spain. There is also evidence of honey being harvested as far back as 2450 BC.
- ✦ Scientists have only identified about 10 per cent of the world's insect population. There could be additional bee species buzzing around out there waiting to be discovered!
- ✦ Cuckoo bees do not build their own nests. Instead, they sneak into the nests of other bees to lay their eggs. Some even have special "armor" to help protect against stings from other bees if they get caught sneaking around.
- ✦ Sweat bees get their name from the fact that they like to lick sweat off people and animals in order to get some of their salt intake.
- ✦ Bees are the only insects that produce food commonly eaten by humans (honey).
- ✦ On average, to make one pound of honey, 556 honeybees must visit two million flowers.
- ✦ Honey bees divvy up tasks according to age. The oldest bees are the ones who go out foraging. Scientists think this is likely because the oldest bees are closest to the end of their lifespan, so it's less of a risk to the overall hive if they are unable to return.
- ✦ Honey bees are deaf, which makes them unable to communicate through sounds. Therefore, they communicate by doing a "waggle dance." When a bee returns from gathering food, they will perform a dance to show the other bees where to find flowers.
  - Watch them dance at <http://www.youtube.com/watch?v=aUCoLeI5Qxg>.



### Main Sources:

The Canadian Honey Council : [www.honeycouncil.ca](http://www.honeycouncil.ca)

The Canada Agriculture and Food Museum : <http://www.bees.techno-science.ca/english/bees/default.php>

The Xerces Society: [www.xerces.org](http://www.xerces.org)

Agriculture and Agri-Food Canada : [www.agr.gc.ca](http://www.agr.gc.ca)

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