

Bee Facts



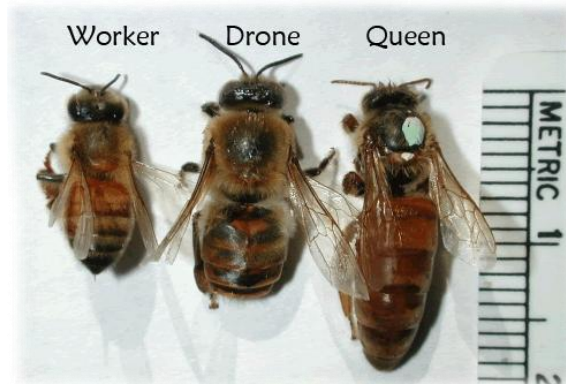
- There are 16,000 recognized species of bees, nine of which are honey bees (genus *Apis*.)
- Most bee species are reclusive and solitary; however, the honeybee (*Apis mellifera*) is highly social. They are the species most commonly raised by people for honey and their pollination services.
- A hive consists of three types of bees: one queen, the worker-bees (all female) and the drones (all male)
- A queen bee will lay 1,500 eggs per day, or 225,000 per breeding season.



Bee Facts



- Worker-bees perform age-based tasks, from cleaning the hive to foraging for food. These bees die when they sting.
- Drones have one task: to mate with a young queen. At the end of the season, drones are pushed out of the hive by the worker-bees. Drones do not have stingers.
- When a bee swarm is seeking a new home, a few hundred worker bees will scout out new locations. Each bee returns to the swarm and advocates their find by dancing. The entire swarm joins the “discussion,” makes a decision, and flies to the new home.



Bee Misconceptions



Honey Bee



Wasp



- **Bees vs. Wasps** Bees are often confused with wasps. Wasps are carnivorous hunters and are aggressive in nature while honeybees are strict vegetarians deriving their nutrition from pollens and nectar. Honeybees are generally not attracted to food and garbage containers near barbeques and picnic sites.
- **Swarms** A swarm of bees looks frightening, though bees are not aggressive at this stage in their life cycle. Bees are more docile in a swarm than when they are in a hive because they do not need to protect the hive. Swarms generally move on to their new hive within a day or two.
- **Killer Bees** “Killer Bees” (Africanized Honey Bees) are much more aggressive than regular honeybees. There have been no reports of these bees in Canada.

Benefits of Bees



- **Pollination**

- Every 3rd mouthful of food is produced by bees pollinating crops. Flowering plants rely on bees for pollination so that they can produce fruit and seeds. Without bees pollinating these plants, there would not be very many fruits or vegetables to eat.
- Honeybees contribute to the production of fruits, vegetables, and seeds which then provide a food source for birds and other insects, contributing to the health and biodiversity of an urban environment.



Honeybee pollination in BC is responsible for more than \$160 million per year in agricultural production. In Canada, the value of honeybee pollination is estimated at over \$750 million per year, while in the U.S. this value is estimated at between \$14 billion per year (B.C. Ministry of Agriculture)

Benefits of Bees



- **Honey**



- The average yield of honey in Canada is 133lb of honey per hive each year. The diverse sources of honey within an urban area, found in back yards, community gardens and public parks, support a long pollination season and therefore productive hives.
- Honey contains natural preservatives; bacteria can't grow in it, so it never goes bad
- Honey is purported to have many health benefits including easing sore throats, soothing wounds and sunburns as a salve, and promoting better immunity.

- **Royal Jelly, Pollen and Beeswax**



- Bee pollen and royal jelly are collected and sold as dietary supplements.
- Beeswax can be used to make candles, and is also a natural moisturizer used in lotions and balms.

Threats to Bees



- Canada has lost 35% of its bee population for the past three years.
- There are a number of diseases and pests that can affect the health of a hive, including fungal bacterial diseases, viruses, and infestation by mites.
- Colony Collapse Disorder (CCP)
 - CCP is a phenomenon in which worker bees from a beehive or colony abruptly disappear. For example, in 2009, 90% of the honey bees on Vancouver Island disappeared. No cause for CCP has been found yet. It has been suggested that CCD may be the result of a combination of many factors, including disease, pests, pesticides, and stress resulting from migratory beekeeping.



Potential Concerns and Solutions



- **Bee stings and allergies:** As long as hives are properly maintained, honeybees are generally not aggressive and rarely sting. Honeybees have been domesticated for centuries for their gentleness. Bee stings account for $\frac{1}{4}$ of all insect stings, most of which are caused by wasps.



- **Flight paths:** The flight paths of bees from hives can interfere with neighbouring properties and pedestrians if the hives are not positioned appropriately. Setbacks from property lines allow bees to achieve height in their flight. Fences can also force bees to fly higher.

Water sources: Honeybees may hover at the edges of swimming pools, bird baths and ponds while seeking water. This can be mitigated by ensuring an adequate water source is available near the hive.



- **Swarming:** Bees are not aggressive when swarming, but swarms can be frightening to people. Experienced beekeepers can gather swarms fairly easily, and a list of local beekeepers is available to manage swarms in neighbourhoods.



Beekeeping Regulations in the Lower Mainland



- These Metro Vancouver municipalities permit urban beekeeping:
 - District of North Vancouver (1992)
 - Surrey (1974)
 - City of North Vancouver (2009)
 - Vancouver (2005)
 - Burnaby (2009)
 - Richmond (2008)
 - New Westminster (2001)
- Bylaws and / or guidelines include some or all of the following considerations:
 - Zones where bee keeping is permitted
 - Minimum lot size for bee keeping
 - Maximum number of hives
 - Minimum distance of hives to property lines
 - Fencing requirements
 - Provision of water sources
 - Minimizing the potential of a hive to swarm (re-queening)



Local Beekeeping Resources



- **Ministry of Agriculture – Apiculture**
www.agf.gov.bc.ca/apiculture
 - Acts, Regulations and Policies – The Bee Act
 - Apiary Registration and Inspections
 - Source of useful information
 - Ministry Apiary Inspectors
- **BC Honey Producers’ Association**
www.bcbeekeepers.com
 - Supports local beekeeping associations
- **Canadian Honey Council**
www.honeycouncil.ca
 - Bee keeping courses
 - Honey bee research
 - Information on beekeeping
- **Honeyland Canada (Pitt Meadows)**
www.honeylandcanada.com
 - Courses and workshops
 - Bee keeping supplies
 - Honey and other honey products
 - Candles
 - Pollination Services
 - Special Events
- **The Honey Bee Centre (Surrey)**
www.honeybeecentre.com
 - Courses and workshops
 - Wasp nest and bee hive removal
 - Bee keeping supplies
 - Honey and other honey products
 - Pollination services

