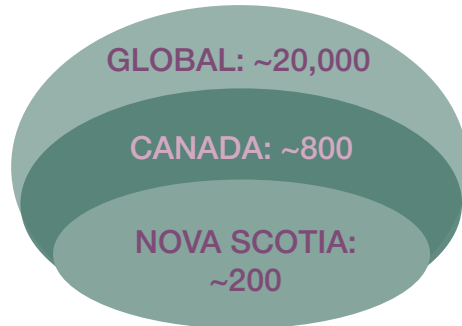


## NATIVE BEE SPECIES DIVERSITY

Nova Scotia is home to over **200 native bee** species. This does not include the honey bee, which is non-native.



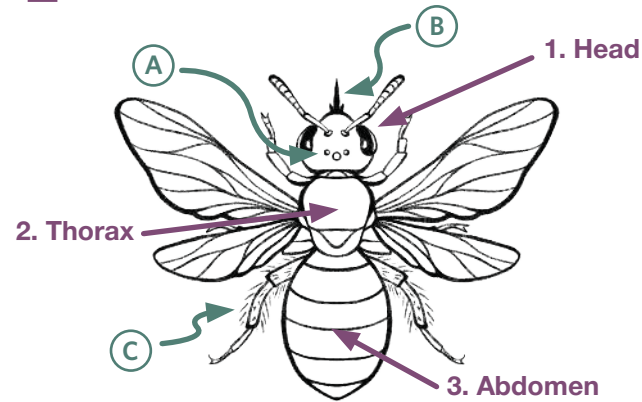
## TAKE ACTION: GIVE BACK TO NATIVE BEES

- ☒ Plant a diversity of **native species** in your garden. Choose species that have overlapping bloom times from spring to fall.
- ☒ **Avoid pesticides** as they are toxic to pollinators. Pesticides disrupt larval development, change foraging behaviour, and cause fatalities.
- ☒ **Keep fallen leaves** in your garden. 70% of bees nest in the ground, leaves help keep bees warm as they overwinter.
- ☒ **Avoid cutting back** plants with hollow stems. Many bee species use stems to nest in.
- ☒ Contribute to **community science** by using iNaturalist. Scientists can use these data to monitor changes in bee populations.
- ☒ **Purchase organic** seeds and food. Organic farming tends to promote healthier ecosystems and support biodiversity.

## BEE ANATOMY

Learn about the unique parts of bees that help them navigate, forage, and pollinate.

■ Three main body segments, four wings, six legs



- (A) **Ocelli** (“oh-SELL-eye”): Simple eyes that detect the orientation of the sun for navigation.
- (B) **Proboscis** (“pro-BOSS-KISS”): A specialized tongue for reaching into the flower to forage nectar.
- (C) **Scopa** (“SKOH-puh”): Dense hairs for collecting and transporting pollen.

### Acknowledgments - June 2025

In partnership between K.C. Irving Environmental Science Centre, Harriet Irving Botanical Gardens, Acadia University Department of Biology, and Agriculture and Agri-Food Canada Kentville Research and Development Centre.

Cover photo: Samuel Jean.  
All other photos: CC0 from iNaturalist.  
Iconography: Freya Emery.  
Brochure design: Terrell Roulston.

Harriet Irving Botanical Gardens  
32 University Avenue, Wolfville, NS | (902) 585-4252  
[botanicalgardens.acadiu.ca](http://botanicalgardens.acadiu.ca)  
[biology.acadiu.ca](http://biology.acadiu.ca)

@harrietirvingbotanicalgardens

# BEEES

## NATIVE BEE DIVERSITY AT HARRIET IRVING BOTANICAL GARDENS



*Bicoloured Striped  
Sweat Bee visiting  
Cut-leaf Coneflower*



## WHAT DO BEES EAT?

Bees eat **nectar** (sugar for energy) and **pollen** (protein for development).

Native bees have different foraging styles. Some are **specialists**, visiting only a single genus (type) of flower. While others are **generalists**, visiting a diversity of flowers.



Specialist



Generalist

## ARE ALL BEES SOCIAL?

While honey bees and bumble bees are **social** with a queen, workers and males living together, most native bees are **solitary**, each female builds her own nest and raises her young all by herself.



Solitary



Social

## WHERE DO BEES LIVE?

Bees nest in all kinds of places, but **70% nest in the ground**. Some dig their own tunnels in soil, others use existing cavities, nest in hollow stems, or burrow into wood. Honey bees are the exception, they're managed as livestock in hive boxes.



Ground



Cavity



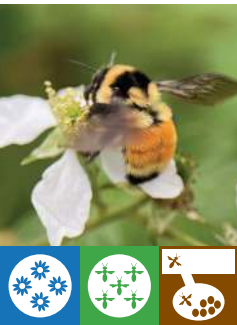
Stem /  
Wood



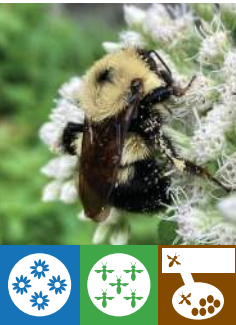
Hive

# BEES OF HARRIET IRVING BOTANICAL GARDENS

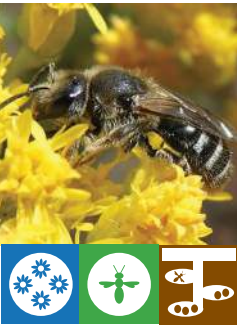
The Harriet Irving Botanical Gardens is home to over 250 species of plants native to the Wapna'ki/Acadian Forest. These 6-acres of gardens are rich in biodiversity as they were intentionally planted in diverse ecosystems. These ecosystems support a myriad of flora and fauna, including these 16 bee species you can see here at Acadia.



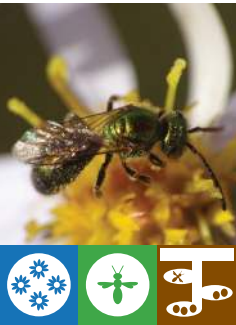
**Tri-coloured Bumble Bee**  
*Bombus ternarius* (native)  
The only bumble bee with a bold orange band sandwiched between yellow and black. Very common in fields and gardens.



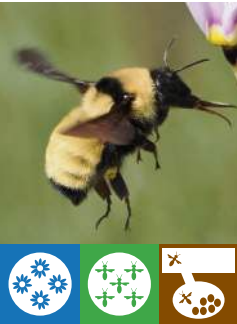
**Two-spotted Bumble Bee**  
*Bombus bimaculatus* (native)  
Often mistaken for *B. impatiens*, but look for two yellow “spots” on the second abdominal band to tell it apart.



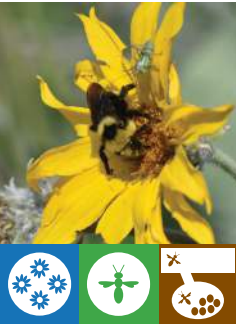
**White-banded Sweat Bee**  
*Lasioglossum leucozonium* (native)  
These black metallic sweat bees are tiny (2-5 mm long) but effective pollinators. Often seen on dandelions and fall asters.



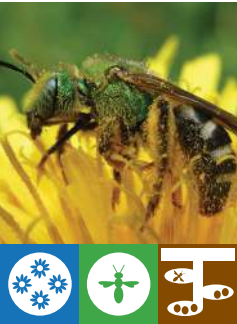
**Golden Sweat Bee**  
*Augochlorella aurata* (native)  
Metallic and mesmerizing! These green jewel bees shimmer gold in sunlight, and nest in the ground in forest edges.



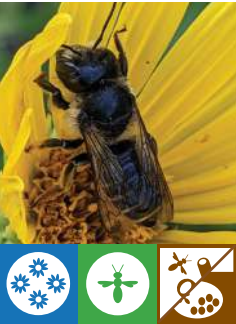
**Golden Northern Bumble Bee**  
*Bombus fervidus* (native)  
This bee is hard to miss with its golden-yellow fuzz and long body. Abundant in late summer, often seen on goldenrod.



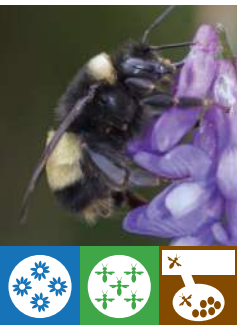
**Indiscriminate Cuckoo Bumble Bee**  
*Bombus insularis* (native, rare)  
Like cuckoo birds, this bumble bee lays its eggs in the nests of other bumble bees and relies on them to raise their young.



**Bicoloured Striped Sweat Bee**  
*Agapostemon virescens* (native)  
These beautiful bright metallic bees have a green head and thorax, with black and yellow (or white) striped abdomens.



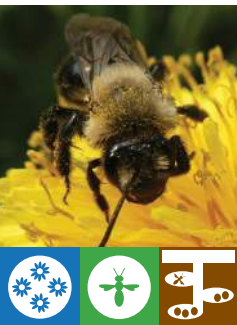
**Unarmed Leafcutter Bee**  
*Megachile inermis* (native)  
A common leaf cutter bee that lines its nests with bits of leaves it cuts off with its serrated mandibles (jaws).



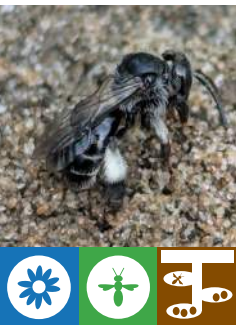
**Yellow-banded Bumble Bee**  
*Bombus terricola* (native, rare)  
Once widespread, now vulnerable. Look for yellow abdominal bands, an amber-orange tip, and a fuzzy black face.



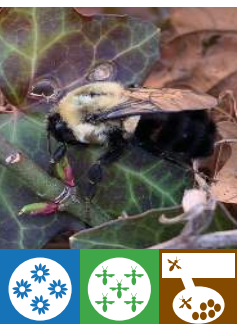
**Western Honey Bee**  
*Apis mellifera* (non-native)  
While important for agricultural pollination, honey bees have the potential to compete with native bees and impact native ecosystems.



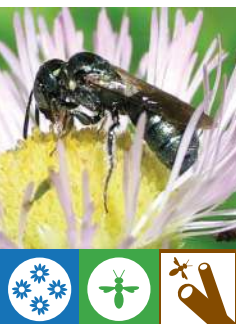
**Carlin's Mining Bee**  
*Andrena carlini* (native)  
A large, fuzzy bee active in early spring. She nests in the ground and forages on a variety of spring flowers, especially willows, maples, and cherries.



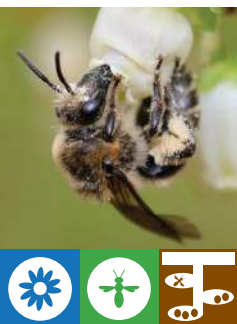
**Dark-footed Yellow Loosestrife Bee**  
*Macropis nuda* (native)  
This small bee collects floral oils instead of nectar from yellow loosestrife. A specialist with slick black and white colouring.



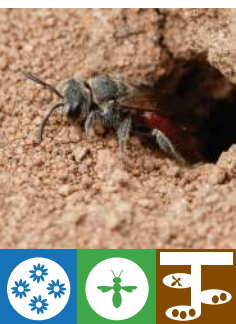
**Common Eastern Bumble Bee**  
*Bombus impatiens* (non-native)  
This non-native bumble bee was introduced to NS by humans, and is now abundant in urban and agricultural areas.



**Spurred Ceratina**  
*Ceratina calcarata* (native)  
A small, blue-metallic bee that nests in hollow stems. These bees are sub-social, providing extended care to their offspring.



**Blueberry Cellophane Bee**  
*Colletes validus* (native)  
This ground nesting bee is a blueberry specialist, foraging almost exclusively on lowbush blueberry (*Vaccinium angustifolium*).



**Cuckoo Blood Bee**  
*Sphecodes confertus* (native)  
These blood-red, antlike bees don't collect pollen, they sneak into other bees' nests and lay their eggs.