



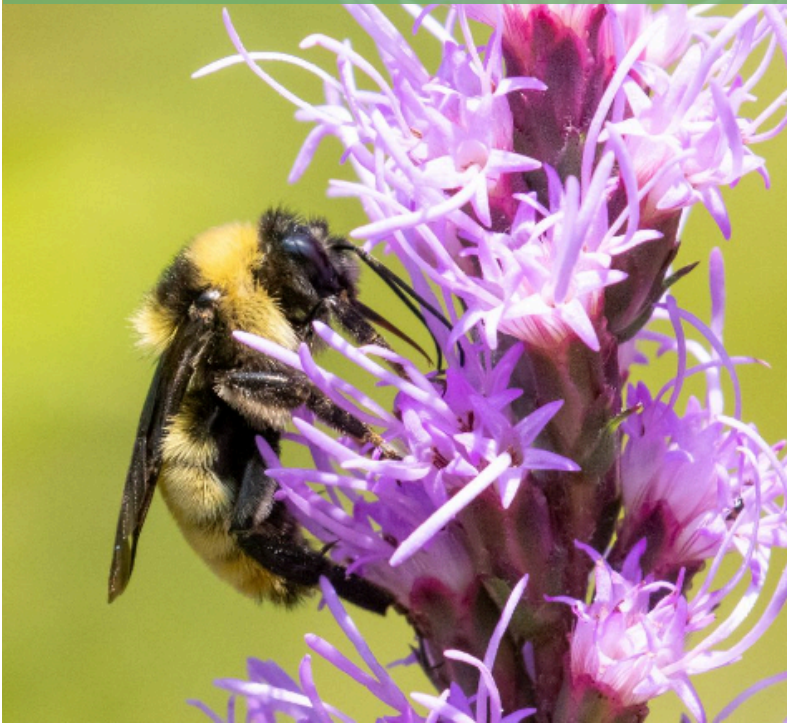
# BUMBLE BEES

## GENTLE GIANTS OF POLLINATION



**Bumble bees** are among the most recognizable and important native pollinators in North America. With their fuzzy bodies, loud buzz, and ability to pollinate a wide range of plants, bumble bees play a critical role in both natural ecosystems and food production. Many species, however, are in decline due to habitat loss, pesticide exposure, disease, and climate change.

American Bumble Bee  
*Bombus pensylvanicus*



### Bumble Bees in Managed Pollination

In recent decades, some bumble bee species have been reared for agricultural pollination, especially for greenhouse and high-value crops that benefit from buzz pollination, including tomatoes, peppers, and blueberries. Managed bumble bees are provided in small boxes that house a colony and are used for a limited time. While important for food production, managed bees do not replace the need for healthy wild bumble bee populations and habitat.

### What are Bumble Bees?

North America is home to about 46 species of native bumble bees (genus *Bombus*), each adapted to different climates, elevations, and plant communities. Unlike most other native bees, bumble bees are social insects that live in small colonies. Their fuzzy bodies and ability to 'shiver' help them stay warm, allowing them to remain active in cool temperatures, such as in the early morning before many other pollinators are out, and to inhabit areas like the Arctic and high up in mountains. Unlike many other bees, bumble bees can buzz pollinate; they vibrate while clinging to flowers to release tightly held pollen from native wildflowers, such as shooting star and snowberry, and crop plants like tomatoes and eggplants.

### How Bumble Bees Are Different from Other Bees

Most North American native bees are solitary, meaning each female lives alone and builds and provisions her own nest.

Bumble bees on the other hand:

- Live socially, with a queen and workers
- Have small, seasonal colonies of 50 to a few hundred individuals
- Are active from very early spring to fall
- Have large pollen baskets (corbicula) on their back legs

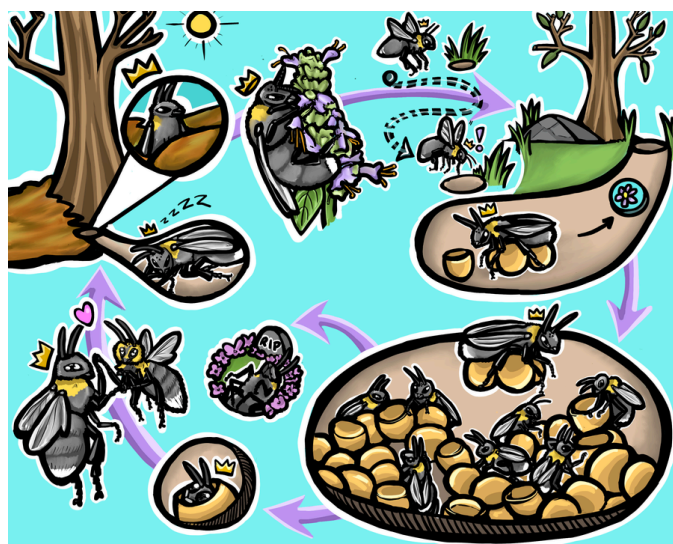


Eastern Bumble Bee  
*Bombus impatiens*

## How Bumble Bees Live

Bumble bee colonies have an annual life cycle. In early spring, a single queen emerges from diapause (similar to hibernation) and searches for a nest site. She collects pollen and nectar to raise the first group of workers, brooding her eggs like a chicken to keep them warm!

By summer, the colony may contain dozens to a few hundred worker (female) bees. Workers take over foraging while the queen focuses on egg laying. In late summer or fall, the colony produces new queens and males. To complete their life cycle, the new queens mate and find a safe burrow where they enter diapause and remain dormant through winter. At the end of the season, the rest of the colony dies off naturally.



Nina Sokolov

## What Bumble Bees Need

### • **Flowers for the Whole Season**

Bumble bees need diverse flowers free from pesticides, from early spring through fall. Early blooms support queens emerging from hibernation, while late-season flowers help build energy reserves for new queens.

### • **Nesting and Overwintering Sites**

Most bumble bees nest underground in abandoned rodent burrows, grassy tussocks, or soil cavities. They also need undisturbed areas with leaf litter or loose soil for overwintering queens.

## How to Help

- Plant native, flowering plants with overlapping bloom times
- Leave leaves and other natural debris
- Reduce or eliminate pesticide use
- Protect natural features like hedgerows, field edges, and forest margins
- Share bumble bee sightings on platforms such as iNaturalist or Bumble Bee Watch

Bumble Bee Colony Queen and Workers



## What to Do If You Find a Nest

If you discover a bumble bee nest, the best action is usually to leave it alone. Bumble bees are not aggressive, and nests are temporary, lasting only one season.

If a nest is in a high-traffic area and poses a safety concern, consider redirecting foot traffic or marking the area.

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