

RUSTY-PATCHED BUMBLE BEE

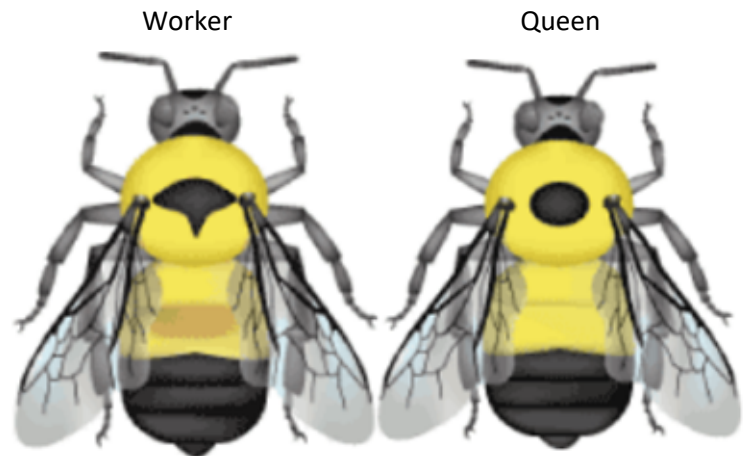
Bombus affinis

Physical characteristics



The rusty-patched bumble bee tolerates cold better than other bumble bee species, enabling it to emerge earlier in the spring and fly at higher altitudes and latitudes. Only queens overwinter.

It is distinguished by a rust-coloured patch with a yellow border on its abdomen. Queens, however, lack this marking.



Rusty-patched bumble bee © Elaine Evans

Diet



This bumble bee collects nectar and pollen from a wide variety of plant species and forages in various habitats, including mixed farmland, dunes, and marshes.

Habitat



The rusty-patched bumble bee can be found in a range of open environments, including mixed farmland, dunes, marshes, urban areas, and woodlands. Its habitats must provide large quantities of floral resources with continuous blooming from spring to fall. Workers can travel up to 2.5 km to forage for pollen and nectar.

Nest locations change from year to year. Queens may travel between 3 km and 5 km to find a suitable nesting site.

The rusty-patched bumble bee requires three types of habitat throughout its life cycle:

- Overwintering habitat: loose soil, fallen dead wood, garden compost heaps
- Nesting habitat: nests located 30 cm to 120 cm underground, in hollow stumps, or sometimes above ground in dead wood or tufts of grass
- Foraging habitat: areas with abundant wildflowers under forest cover or in open areas

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Periods of vulnerability



- The rusty-patched bumble bee emerges around mid-April, earlier in the spring than other species.
- It stops foraging in late October.
- New queens and males are born between mid-July and September.
- Early spring is a critical period, as floral resources are less abundant and queens emerge in early April.

Threats



- Increased mortality rates due to pesticides used to control weeds and insect pests.
- Increased mortality rates due to harmful pathogens transmitted by commercial bumble bee species used in Canada for honey production or fruit crop pollination.
- Increased mortality rates due to climate change and severe weather events.
- Poorer nutrition due to absent or poor floral diversity in buffer and riparian zones.
- Habitat fragmentation due to urban and suburban development.

Sustainable practices



- Reduce the use of pesticides and favour those with low environmental impact.
- Create or expand natural riparian buffers so that native herbaceous plants can provide perennial floral resources.
- Enhance riparian buffers by planting species that bloom in early spring (e.g., sow thistle, buckwheat, yellow and white sweetclover, sunflowers, clover, and flowering fruit trees).
- Leave wooded areas undisturbed so that favourable elements, such as litter and dead trees, remain in their natural state.
- Mitigate stress factors through ecological management of commercial bumble bee and honey bee populations to minimize pathogen transmission and competition.

- As of 2023, **endangered** species listed on Schedule 1 of the *Species at Risk Act*
- Recovery strategy: wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/rs_rusty_patched_bumble_bee_e_final.pdf

Sources

Wildlife Preservation Canada. (n.d.). "Rusty-patched bumble bee." wildlifepreservation.ca/species/rusty-patched-bumble-bee/

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