

Montana  Pollinator
Education Project

Bumble Bee



social and solitary nester

Background: Tomato blossoms
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Bumble Bees - *Bombus* spp.

Genus: *Bombus* Family: *Apidae*

Robust and hairy

10-23 mm long

Almost 50 species in North America!



Bumble bees nest in woodpiles, old rodent and bird nests, and grass tussocks. They can pollinate at lower air temperatures than honey bees, which makes them a very important pollinator in Montana and in agriculture in general.

Bumble bees can provide their own body heat by vibrating their wings rapidly. It is common to see the large queen bumble bee early in the spring and again in the fall. Hearing the buzz from a bumble bee is common too.

Bumble bees buzz pollinate by vibrating their muscles without flapping their wings; this vibration is necessary to release pollen in flowers of the Solanaceae family like tomatoes.

To simulate the rapid vibration of bumble bees use a battery powered sonic toothbrush and hold against your cheek, feel the vibration? This is approximately the same vibration rate it takes bumble bees to get the pollen from certain flowers.

The life cycle of the bumble bee depends upon the queen bee as it is only she who survives the winter. After nesting over the winter with other females, she comes out in early spring to start a new colony of bumble bees. She begins by finding or digging a chamber, finding nectar or pollen for the chamber, and laying her eggs in pots which she has made from her wax glands. The nectar provides carbohydrates for the young and to fuel her flights, the pollen provides protein rich food for the young.

The females carry pollen moistened with nectar in stiff hair baskets (corbiculae) on their hind legs. The queen bumble bee mates in the fall. The first eggs she lays will all be females; the males are not laid and hatched until fall when they are needed.