

Bumble Bee



Appearance:

The adult worker body length is 1/2 to 1 inch, while queens measure 3/4 to 1 inch or more long. Bumble bees are robust in form with an overall fuzzy appearance, including the top surface of abdomen. They are broadly banded with black and yellow (rarely orange) patterns. The stinger is usually not left behind when used.

Habitat:

Bumble bees are social insects which live in nests and colonies. The adults are represented by workers which are sterile females, queens, and males (drones) which come from unfertilized eggs and usually appear in late summer.

Typically, only inseminated queens overwinter and do so underground. In the spring, the *Bombus* queens select a suitable subterranean cavity, surface grass clump or fiberglass insulation in a structural void as a nesting site. Then the *Bombus* queen fashions a honey pot of wax scales near the nest entrance into which she regurgitates nectar. Next she makes a pollen clump on the nest floor and lays 8-10 eggs on it. The queen will periodically add pollen and nectar to the peripheral edges of the clump, and eventually more eggs.

Developmental time (egg to adult) is 16-25 days, with 4 larval molts. Workers live about 2 weeks. Most first brood workers are small due to nutrition. The queen will increase the number of eggs laid as the number of workers to care for them increases. Workers assume the task of creating wax honey pots, which have the appearance of yellowish-brown grapes in flat clusters.

In late summer, a mature bumble bee nest ultimately contains about 50-400 bees and brood (larvae and pupae) at any given time. In the late summer only males (drones) and new queens are reared in the nest. Once these new queens emerge, they mate and find a suitable place to overwinter. The males, workers, old queen, and any virgin new queens die with the onset of cold weather.

Overwintered queen bumble bees will select an appropriate nesting site the following spring. Some queens locate a small, dark cavity containing fine plant fiber, in which to nest. The abandoned underground nests and burrows of mice, voles and chipmunks are favorable sites. Other queens select a dense clump of grass on the surface or sheltered pile of grass clippings for a nest.

Bumble bees foraging for nectar fly at 7-12 mph and spend only 2-4 minutes inside the nest between trips. Probably they will travel at least 3 miles if necessary for nectar. They orientate by the sky's polarized light via their 3 ocelli (simple eye spots clustered on top of the head), so they can forage at early dawn and at dusk when objects and landmarks are not well-lighted. They use their thermo-regulation procedure to warm up flight muscles before the sun rises and to also forage when temperatures are below 50° F. Each worker forages independently, and bumble bees never exchange food. Old cocoons are used to store both pollen and nectar. Only enough food (honey and pollen) for a few days is stored at any given time which helps discourage nest predation by skunks, foxes, etc.

Defense is usually done by using their relatively smooth stingers which can be used repeatedly. Some species will also spray feces, and some cover the intruder with regurgitated honey. People sensitive to insect venom should exercise care around bumble bee nests. The sting of bumble bees is sharply painful and usually results in considerable swelling.

Diet:

Bumble Bees feed on nectar.

Solutions:

What you can do: During the day find the location of each nest by observing where the bees disappear into the ground, grass clump, or structure. The location of the entry hole can be marked with a small, brightly colored object placed near it to facilitate discovery by the pest management professional who comes to treat the colony. Under no circumstances should the entrance hole to a structural nest be closed off until the colony has been destroyed.

Professional Solution: Bumble Bees are considered beneficial insects because they pollinate the flowers of many plant species. However, if their nest is located in or close to an occupied structure or recreational area, then control is warranted. A Quik-Kill service technician will inject into the nest entrance. For structural nests, the cavity will be treated but the entrance will not be sealed until the colony has been destroyed. Treated structural nests will be removed, if accessible, to prevent future problems with secondary pests, such as dermestid beetles, wax moths and psocids.



Bumble bee nest comprised of oval or spherical wax cells

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