



# MASON BEE



*Scientific family: Megachilidae Genus: Osmia*

**Description:** Mason bees resemble house flies in terms of size and color. They are about 3/8" to 5/8" in length. While typically they have metallic blue, black or green coloring, some species have a coat of golden fuzz and can be mistaken for a honeybee at first glance. Only females have stingers, but they are non-aggressive and rarely sting.

*Mason Bee photo by Robert A. Behrstock*



## FUN FACTS



There are 342 species of mason bees around the world, with 139 being native to North America.



A single mason bee can pollinate 2,000 flowers per day!



They are named for their practice of masonry and building walls in their nests using mud. Female bees seek out narrow, hollow tunnels and construct several "rooms" inside for egg-laying.



Mason bee moms are able to determine the sex of the eggs as they lay them. Because the males emerge in the Spring before females, she lays them last, in the front of the tunnel.

### Mason bees vs. honeybees



Mason bees are solitary bees, which means that unlike the social honeybee, every female lays eggs and raises offspring by herself without the help of an organized colony.



Mason bees are extremely effective pollinators. As they land on blooms, mason bees do a "belly flop" onto each flower, covering their whole bodies in pollen. This pollen is readily transferred to the next flower they visit, resulting in a 95% pollination rate!



In contrast, honeybees collect most of their pollen in baskets on their hind legs, where it's less apt to be transferred to the next flower. The result is a mere 5% pollination rate.

*Osmia Aglaia (male) image by Joe Dlugo*

## FAVORITE PLANTS & COLORS

Mason bees emerge in early spring, making them excellent pollinators of early-blooming fruit trees. Although they're generalists (meaning they'll visit a wide variety of flowers), mason bees are especially attracted to brightly colored native flowers.



**yellow** - sunflower, dandelion, daisy, acacia



**purple/blue** - butterfly bush, catmint, lavender, salvia, canterbury bells, alyssum



**white** - flowers in the rose family, including fruits like apples, blackberries, pears, and strawberries

*Joseph Berger, Bugwood.org*

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## HABITAT

Depending on the species, mason bees can be found in deserts, prairies, shrub lands, deciduous forests, and coniferous forests.

They build their nests in dried sticks/stems, hollow wood, rocks, or other sites that have narrow, open cavities.



*Osmia chalybea (female) by Gretchen L. Grammer*

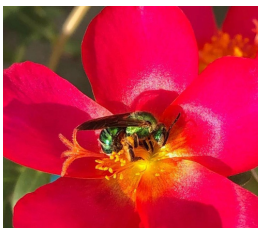
## HELP MASON BEES THRIVE



Mason bees need a nesting place, pollen/nectar from flowers, and a clay-mud source to thrive. If they cannot find a tunnel-shaped cavity in nature for their nest, they are also keen to occupy a human-made structure! You can easily build a mason bee "hotel" using reed tubes, store bought "bee tubes," or wood blocks with drilled holes that are at least 8mm in diameter.



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## CROSS-SECTION OF TUBE

A female bee closes off the end of a tube with mud, packs in a golden mound of pollen and nectar, and then lays an egg. She adds a thin layer of mud to close off the cell, and repeats the process for each "room" she creates. The egg hatches into larva, which eats the readymade food source. When it's ready, it forms a pupa. Inside, the larva metamorphoses into a mature bee and emerges when spring temperatures reach about 55 degrees.

*Mason Bee photo by Lauren Engram, KidsGardening 2021 photo contest entry*

