



**I** Illinois Extension  
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



### 1. Honey bee – *Apis mellifera*

These bees are native to Europe, the Middle East, and Africa. Honey bees are social insects and colonies can reach 50,000 individuals. They nest in cavities and are commonly kept by humans in beehives. They use the nectar they collect to create honey, which is used to sustain the colony during winter. They are generalist pollinators; however, they are often inefficient pollinators of native plants. They are active from early spring to late fall.

Medium sized bees (0.4–0.6 in), moderately hairy with a long abdomen with black and gold stripes.

Photo: *Apis mellifera* (honey bee), Alejandro Santillana, Insects Unlocked

### 2. Sweat bee – Halictidae

Sweat bees are composed of several genera in the family Halictidae. Depending on the species, sweat bees range from solitary to social insects with most nesting in the ground. Many species are attracted to human sweat which they will consume for the salt contained in it, thus their common name. Sweat bees can be found from spring through fall, with most species being active during the summer. They are generalist pollinators. Small to medium sized bees (0.1–0.6 in), can be brightly colored or dark; metallic; with markings varying from green to red to yellow, often with bands.

Photo: *Agapostemon texanus* (green sweat bee), Alejandro Santillana, Insects Unlocked

### 3. Yellow-faced bees – *Hylaeus* spp.

These bees resemble wasps and are commonly mistaken for them. Unlike many other bees yellow-faced bees do not have pollen carrying structures (scopae), instead, they carry pollen in their stomachs (crop) and regurgitate it once they return to their nests. They are solitary bees, nesting in pre-existing tunnels in wood-like stems and twigs. Yellow-faced bees can be found from late spring through late summer. They are generalist pollinators. Small slender bees (0.2–0.3 in), hairless and black with yellow (sometimes white) markings on face, thorax, and legs.

Photo: *Hylaeus* sp., David Cappaert, Bugwood.org

### 4. Leafcutter bees – *Megachile* spp.

These bees cut pieces of leaves or petals to line the walls of their nests. They prefer to use leaves with few veins such as rose, ash, lilac, maple and Virginia creeper and the damage is cosmetic. These bees are solitary nesting and create their nests in pre-existing cavities such as beetle galleries, hollow plant stems and will readily nest in man-made nesting blocks. Leaf-cutter bees are active from early to late summer. Most species of leaf-cutter bees are generalists, some species specialize on plants in the aster and pea families. Pollen is carried in a patch of hair on the underside of their abdomen. Medium to large bees (0.4–0.8 in), smoky colored stout bodies with pale bands with an upturned abdomen.

Photo: *Megachile texana* (leafcutter bee), Ansel Oommen, Bugwood.org

### 5. Mason bees – *Osmia* spp.

Many of these bees collect mud to build walls in their nests to create brood (larval) cells giving them their common name, mason bees. These bees are solitary nesting and create their nests in pre-existing cavities such as beetle galleries, hollow plant stems and will readily nest in man-made nesting blocks. Mason bees are active from spring through early summer. These bees will visit a wide variety of plants and are important pollinators of many fruit crops like apples, cherries, and plums. Pollen is carried in a patch of hair on the underside of their abdomen. Small to medium bees (0.2–0.4 in), most are metallic in color (blue, green) and round wide abdomens with few, if any, markings or hair bands.

Photo: *Osmia lignaria* (blue orchard bee), Scott Bauer, USDA Agricultural Research Service, Bugwood.org

### 6. Bumble bees – *Bombus* spp.

Bumble bees get their name due to the audible buzz they produce while collecting pollen. Certain flowers, such as tomatoes, must be vibrated in order for their pollen to be released (buzz pollination). Bumble bees will grab onto flowers and vibrate their flight muscles to release the pollen. Bumble bees are social insects and colonies can have 50–4,000 individuals. At the end of summer, colonies die off and mated queens hibernate. They nest in cavities such as abandoned rodent burrows. Bumble bees are active from spring through late fall. They are generalist pollinators and are important pollinators of many food crops. Medium to large bees (0.4–0.9 in), robust, hairy with yellow, black, white, brown or orange bands.

Photo: *Bombus bimaculatus*, T'ai Roulston

### 7. Eastern carpenter bee – *Xylocopa virginica*

Eastern carpenter bees are commonly considered pests due to their tendency to construct nests in exposed wood of homes and other buildings. They will use their strong jaws to chew into soft wood and plant stems to construct tunnels for nests. Painting the wood often deters this activity. They are mostly solitary, occasionally groups of two to five females will nest together. They are active from spring through fall. Due to their large size, they primarily visit large and open-faced flowers. They will rob nectar from smaller flowers by chewing a hole in the side of flowers to access nectar. Large bees (0.7–0.9 in) that look similar to bumble bees. However, the top of the abdomen of carpenter bees is bare and shiny while a bumble bee's is hairy.

Photo: *Xylocopa virginica*, Rebekah D. Wallace, University of Georgia, Bugwood.org

### 8. Small carpenter bees – *Ceratina* spp.

Small carpenter bees have weaker jaws than the larger Eastern carpenter bee. While they still excavate their own nests, due to their weaker jaws they don't inhabit solid wood. Instead, they nest in the pithy centers of dead stems such as sunflowers, elderberry, sumac, and blackberries. They are solitary nesters. Small carpenter bees are active from early spring through fall and visit a wide variety of flowers. Small to medium sized bees (0.1–0.6 in) that are shiny and sparsely haired and black, blue, or green commonly with yellow or white markings on their faces. Their abdomens are unique in being almost cylindrical.

Photo: *Ceratina* sp., T'ai Roulston

### 9. Long-horned bees – *Melissodes* spp.

Males of these bees have relatively long antennae (females do not) giving them their name. Long-horned bees are solitary ground nesting bees, with most species preferring flat ground. Adult bees are present from mid-summer through fall and are most active in the morning and early afternoon. They have a preference for sunflowers and many species also visit asters. Males often patrol sunflowers for mates and commonly sleep in groups on the heads of sunflowers. Small to medium sized bees (0.3–0.7 in) that are robust and hairy commonly with abdominal bands of pale hairs.

Photo: *Melissodes communis*, Johnny N. Dell, Bugwood.org

### 10. Mining bees – *Andrena* spp.

Mining bees are commonly encountered nesting in lawns. These solitary bees nest in the ground, typically in sandy or other loose soils near or underneath shrubs. They often build a small mound outside the entrance of their nests. Mining bees are among the first bees to emerge in spring and are commonly seen in woodlands visiting flowers. Depending on the species they may be specialists or visit a wide variety of flowers. Small to medium sized bees (0.3–0.7 in), commonly black, dull metallic blue, or green and somewhat hairy with bands of hair on their abdomens.

Photo: *Andrena* sp., Alex Wild, Insects Unlocked

### 11. Cellophane (polyester) bees – *Colletes* spp.

These bees get their name from the waterproof lining of their nests, allowing them to nest in moist soils unavailable to other bees. They are solitary ground nesting bees; however, some species may nest in large aggregations. They are active from early spring through summer. Many cellophane bees are specialists and only visit a small range of plant species. Small to medium sized bees (0.3–0.6 in) that are slender and hairy with pale hair bands on their abdomens. When looked at head-on their face looks heart-shaped.

Photo: *Colletes inaequalis* (vernal plasterer bee), Michael Veit

### 12. Squash bee – *Peponapis pruinosa*

The squash bee gets its name because it is a specialist on squashes, pumpkins, and gourds. They are much more efficient at pollinating these plants than many other bees such as honey bees. They are solitary ground nesting bees, often right next to squash plants. Adult bees are active from dawn until midday while squash plants are blooming (mid-summer). The squash bee is a medium sized bee (0.4–0.6 in) that is similar in appearance to honey bees. However, the squash bee is larger, thicker with longer antennae and a rounder face.

Photo: *Peponapis pruinosa* (male and female), T'ai Roulston