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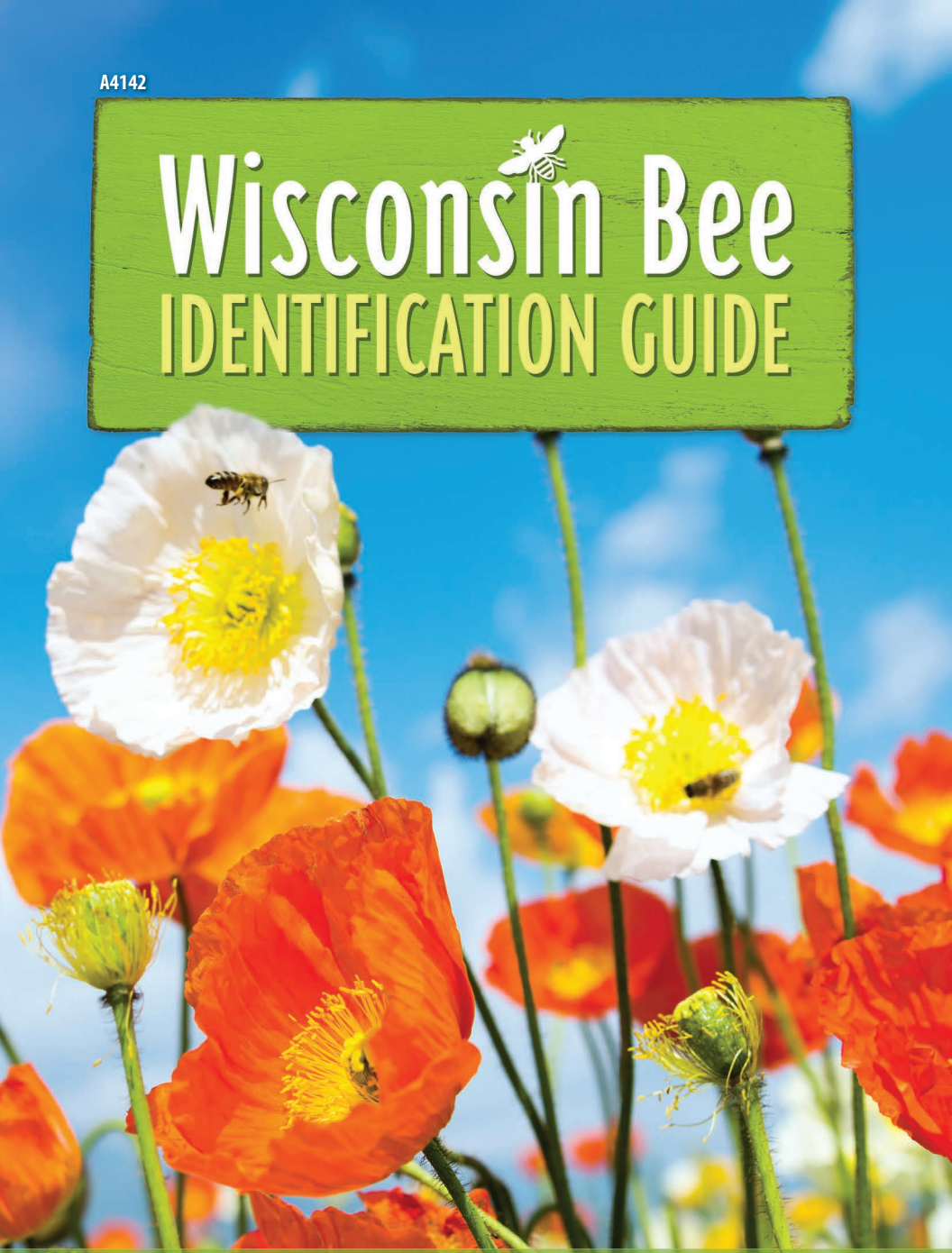
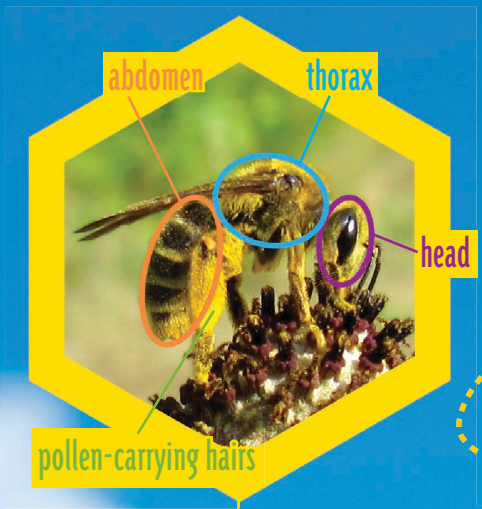
Wisconsin Bee IDENTIFICATION GUIDE



UW Extension
University of Wisconsin-Extension

Patrick Liesch
Christy Stewart
Christine Wen



Basic bee anatomy

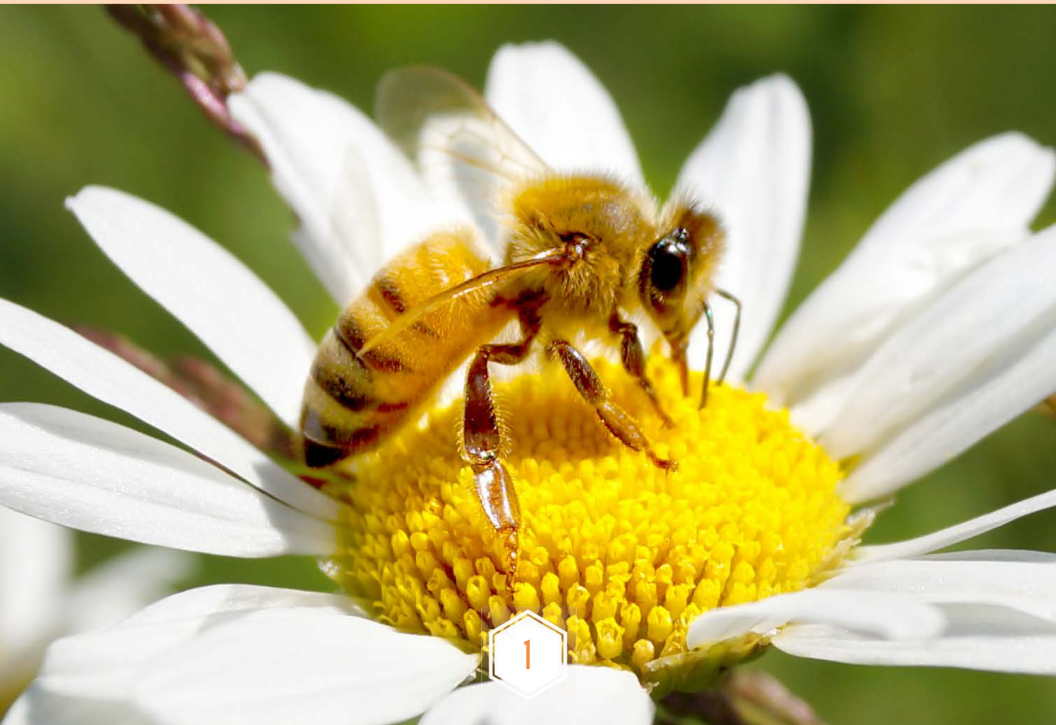
Contents

Honey bee

Apis mellifera

The honey bee is perhaps our best-known pollinator. Honey bees are not native to North America and were brought over with European settlers. Honey bees are midsize bees (about ½ inch long) and have brownish bodies with bands of pale hairs on the abdomen. Honey bees are unique with their social behavior, living together year-round as a colony consisting of thousands of individuals. Honey bees forage on a wide variety of plants and their colonies can be useful in agricultural settings for their pollination services.

The honey bee is Wisconsin's only bee that produces honey, which is used as a food source for the colony during winter months. In many cases, the honey bees you encounter may be from a local beekeeper's hive. Occasionally, wild honey bee colonies can become established in cavities in hollow trees and similar settings.



Bumble bee

Bombus sp.

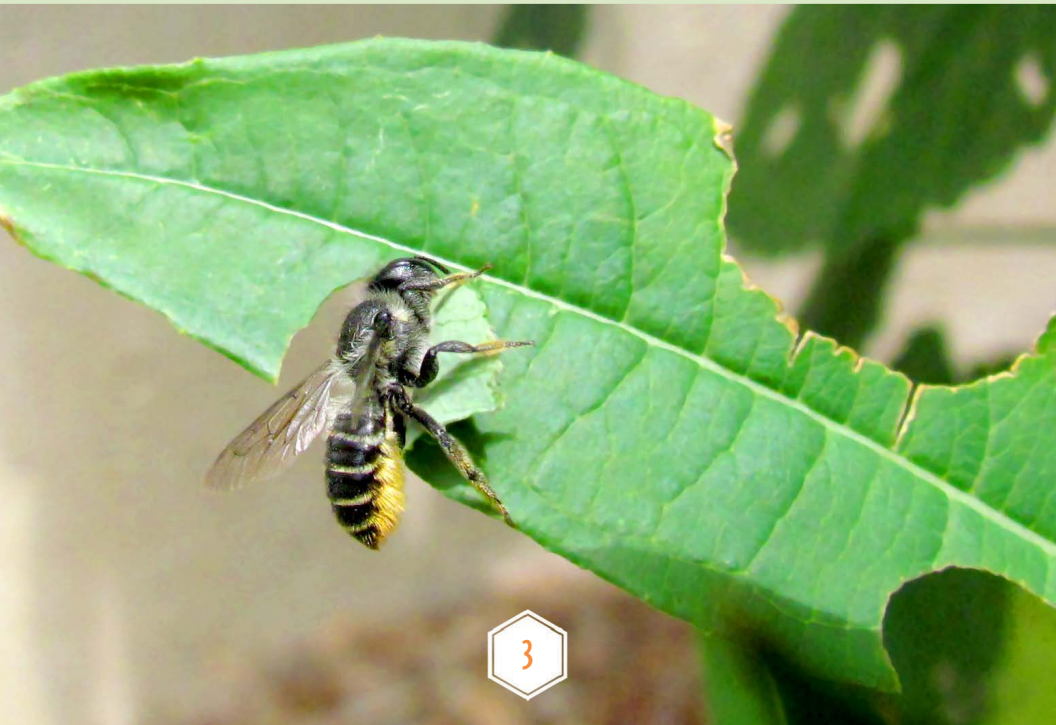
Bumble bees are some of Wisconsin's most recognizable bees. They are among our largest bees and can measure close to 1 inch long, although many species measure between ½ inch and ¾ inch long. There are about 20 species of bumble bees in Wisconsin and most have a robust, fuzzy appearance. Bumble bees tend to be very hairy and have black bodies with patches of yellow or orange depending on the species.

Bumble bees are a type of social bee and live in small colonies consisting of dozens to a few hundred workers. Their nests tend to be constructed in preexisting underground cavities such as former chipmunk or rabbit burrows. Occasionally, bumble bees will nest in hollow spaces within compost piles, hay bales, and similar aboveground spots in yards. Luckily, bumble bees are typically docile and are unlikely to sting unless their nest is disturbed. Bumble bees can be active during cool periods when most other insects are inactive. Bumble bees are great at pollinating certain plants, such as tomatoes, and are often used in greenhouses for pollinating vegetables.

Leafcutter bee

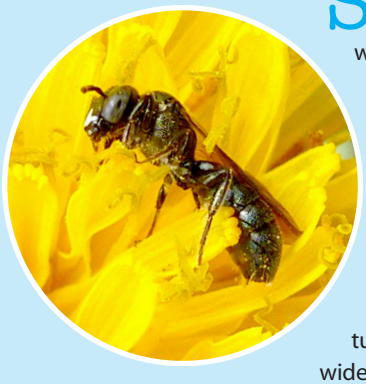
Megachile sp.

Leafcutter bees are small to midsize bees (about ¼ to ½ inch long) that are dark in color. They possess large mandibles which are used like scissors to cut notches out of leaves. Leafcutter bees get their name from the female's behavior of cutting out round pieces of leaves which they use to line their nests. These native bees nest in preexisting holes in wood created by other insects or in hollow plant stems. Females nest individually, although many females can nest in the same general area. While most female bees collect and carry pollen using a patch of hairs on their back legs, leafcutter bees instead carry pollen on the underside of their body.

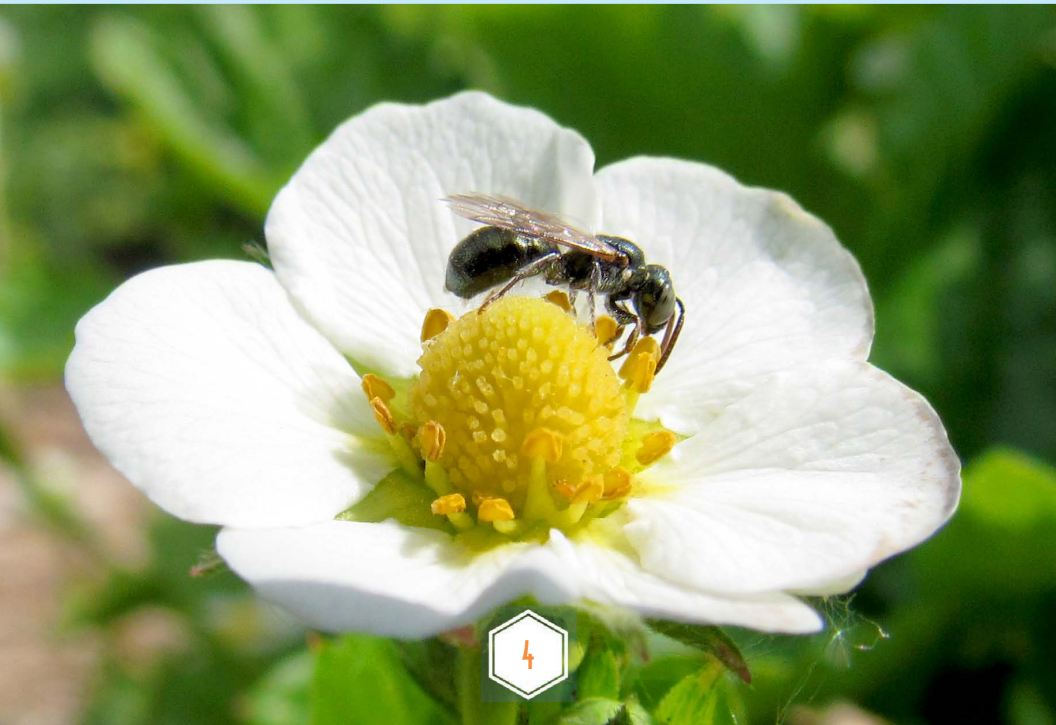


Small carpenter bee

Ceratina sp.



Small carpenter bees are small to midsize bees (about ¼ to ½ inch long) with dark metallic bodies. Males have a distinct white patch in the middle of the head between the eyes. There are just a few species of small carpenter bees in Wisconsin, but these bees can be quite common. Female small carpenter bees typically nest inside hollow twigs and plant stems, digging out the soft, central pith to form a tunnel. Small carpenter bees forage on a wide variety of flowers.



Sweat bee

Halictidae sp.

Sweat bees get their name because some species can be attracted to the sweat on your skin. Many sweat bees are small in size (about ¼ inch long), although some species can be midsize (up to ½ inch long). They have dark or metallic green bodies. In some of the metallic green species, the body is entirely green; in other species, the head and thorax (the first two body segments) may be green while the abdomen is striped with black and yellow. Female sweat bees run the gamut from solitary to social, depending on the species. They often dig nests in the soil, however, some species prefer to nest inside rotting logs. If you ever stumble upon a metallic green bee in a rotting log, it's a sweat bee! Like most bees, these insects are docile and are unlikely to sting.

Long-horned bee

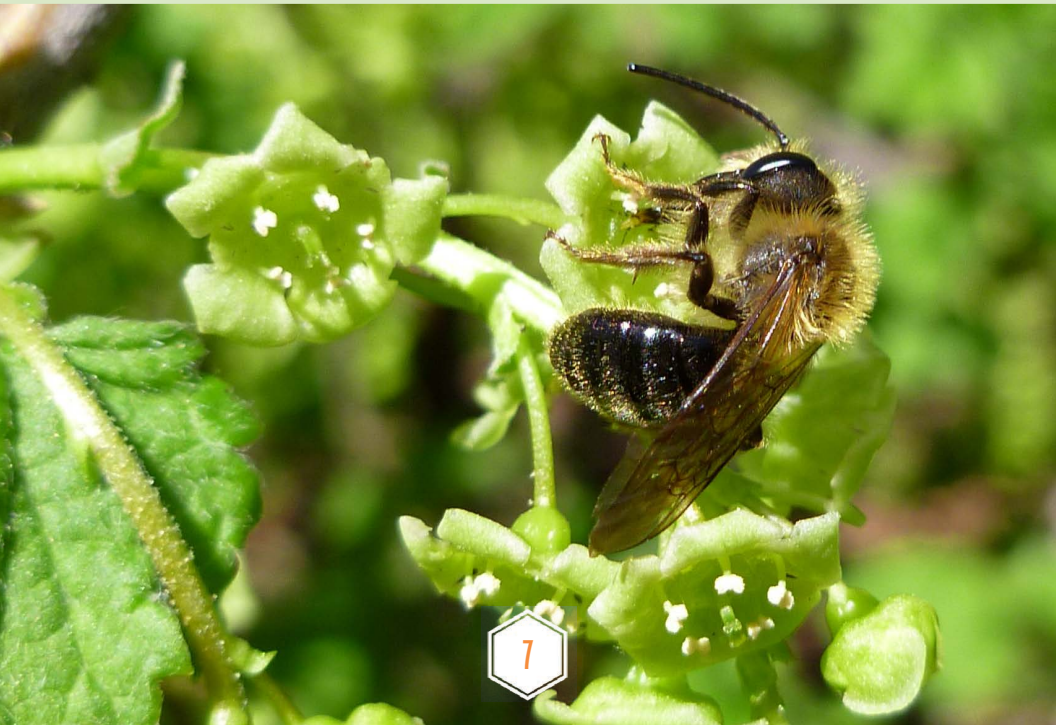
Melissodes sp.

Long-horned bees get their name from the very long antennae possessed by males. These bees are small to midsize (¼ to ½ inch long) with black bodies and bands of pale colored hairs. Long-horned bees are solitary ground nesters and tend to be quite docile. These bees are most often encountered in late summer and fall. Many of the long-horned bees have specialized foraging behavior, and only visit plants from the sunflower or aster family (Asteraceae).

Mining bee

Andrena sp.

As their name suggests, mining bees tunnel into the ground to nest. These are small to midsize bees (¼ to ½ inch long) with dark bodies covered in pale, whitish hairs. Mining bees are among the earliest bees that emerge in spring. These bees can often be spotted in areas with sandy soil, which is easier to dig into and nest in. These ground nests resemble anthills in appearance. Although many nests may be located in the same patch of soil, female mining bees nest separately. These bees are quite gentle and nonaggressive.

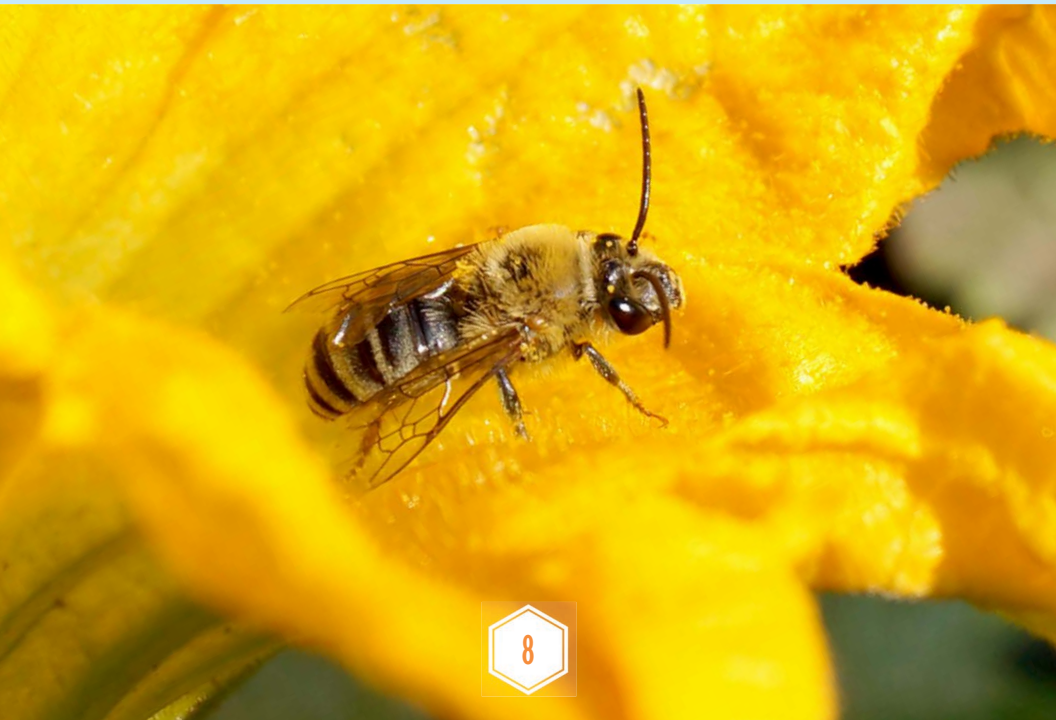


Squash bee

Peponapis pruinosa

Squash bees are roughly the same size and color as honey bees (½ inch long), but have a very hairy thorax (region behind the head). As their name implies, these highly specialized bees only visit the flowers of squash and related plants, such as pumpkins and melons. Female squash bees nest individually in the ground by digging tunnels roughly 12 to 18 inches deep.

These nests are typically located in or near squash and pumpkin fields (i.e., close to the bees' food source). After collecting pollen and nectar, the female stockpiles food in her in-ground nest for her young. Males can often be found sleeping inside of closed squash flowers during the day.



Mason bee

Osmia sp.

Mason bees are small to large bees (¼ to ¾ inch long) with dark or metallic green or blue bodies. Like leafcutter bees, mason bees nest individually in preexisting tunnels in wood or in hollow plant stems, and carry pollen on the underside of their body. Unlike leafcutter bees, female mason bees collect mud instead of leaves to partition their nests. If you ever see a metallic green or blue bee with lots of pollen on its underside, it's a mason bee!

Cellophane bee

Colletes sp.

Cellophane bees make up a large group of bees; depending on the species, they can range in size from small (about ¼ inch long) to large (about ¾ inch long). These bees have dark bodies with pale hairs and pale bands on their abdomen. Like many other native bees, female cellophane bees tunnel into the soil to create their nests. These bees line their nests with a glue-like substance which creates a thin, cellophane-like membrane—hence the name "cellophane" bee.

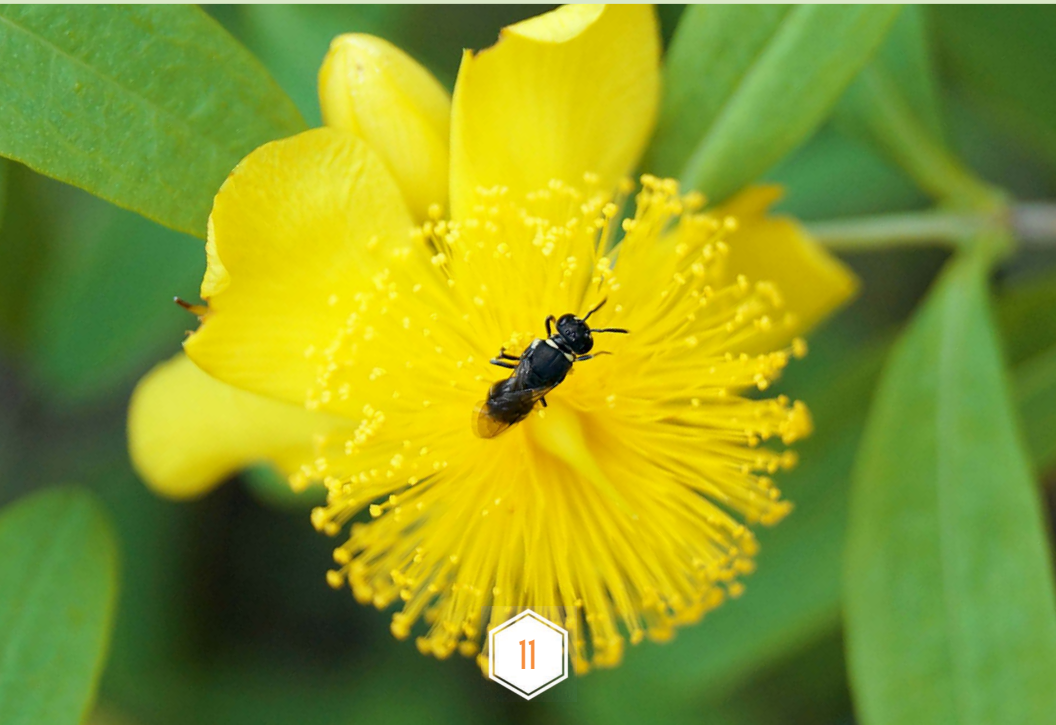
Many cellophane bees are specialists and only visit certain types of flowers. While certain species of cellophane bees are active in the spring, other species aren't active until late summer and fall.

Masked bee

Hylaeus sp.

Masked bees are small bees (about ¼ inch long) and are among the most distinctive bees. Their bodies are almost entirely black except for pale patches on the head and legs. In addition, these bees are sparsely covered in hairs, giving them a wasp-like appearance. While almost all female bees collect and carry pollen in a specialized patch of hairs on their bodies, masked bees instead ingest the pollen they collect and regurgitate it back at the nest.

Masked bees have weak mandibles and are unable to excavate their own nests. As a result, masked bees nest in preexisting tunnels in wood, hollow plant stems, the ground, or even in natural holes in rocks.

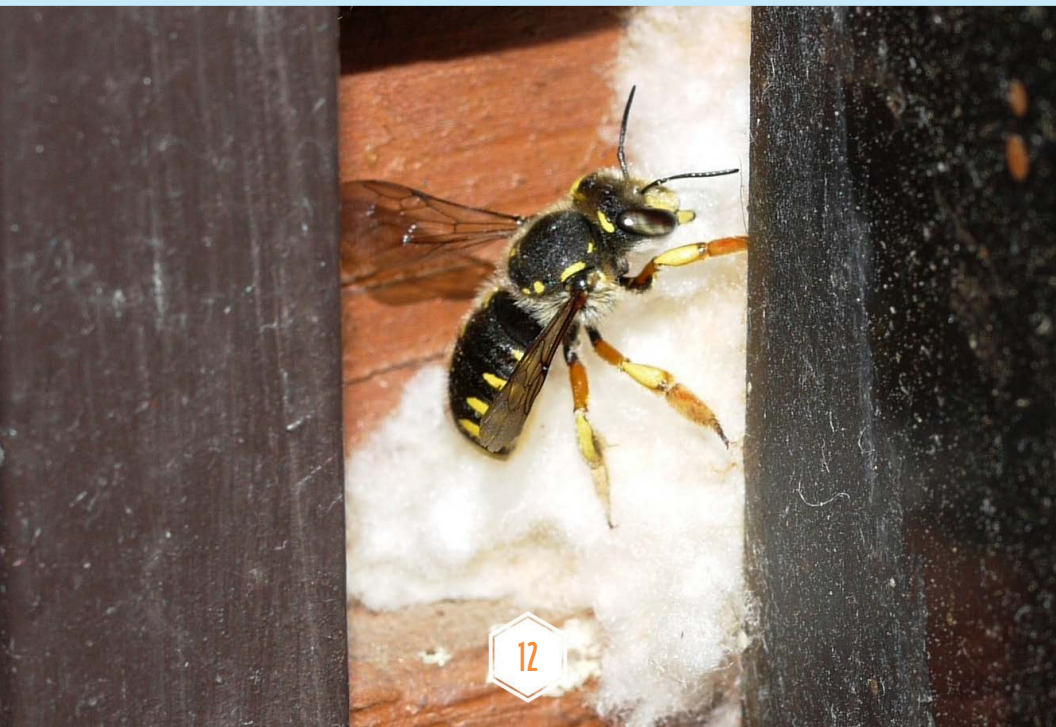


Carder bee

Anthidium sp.

Carder bees (or wool carder bees) are typically midsize bees (about ½ inch long). A distinct black-and-yellow striped abdomen gives these bees wasp-like coloration. Carder bees get their name from the female's behavior of shaving off fine, hair-like material (trichomes) from plant leaves, which they use to line their nests. These bees tend to nest in pre-existing tunnels, which may include hollow plant stems and insect tunnels in wood.

Interestingly, male carder bees are larger than the females and can be quite territorial. While completely harmless, the males can guard their favorite plant while waiting for a female to approach and will attempt to chase off even the largest of intruders!



Cuckoo bee

Nomadinae sp.

Not all bees focus their attention on collecting pollen and nectar. A diverse group of bees ranging in size from small to large (about ¼ to ¾ inch long), the cuckoo bees are sneaky invaders of other bees' nests. There are many different types of cuckoo bees from a variety of bee families. Because these bees don't focus on collecting pollen, they have very few hairs covering their bodies and can resemble wasps. Female cuckoo bees sneak into the nests of other bees when the host is out foraging. Once inside, cuckoo bees lay their eggs near the food supply stored inside. The eggs of the cuckoo bee hatch and the young cuckoo bees live off of the food supplied by the host bee species.

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Authors: Patrick Liesch is an assistant faculty associate in entomology at UW–Madison and an entomology specialist at UW-Extension. Christy Stewart is a research technician with the Vegetable Crops Research Unit, Agricultural Research Service, USDA, UW–Madison. Christine Wen is the horticulture educator at UW-Extension Walworth County. Cooperative Extension publications are subject to peer review.

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Wisconsin Bee Identification Guide (A4142) I-09-2017