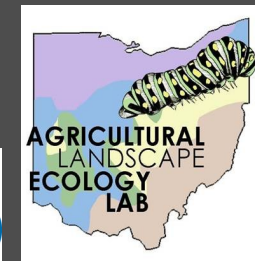
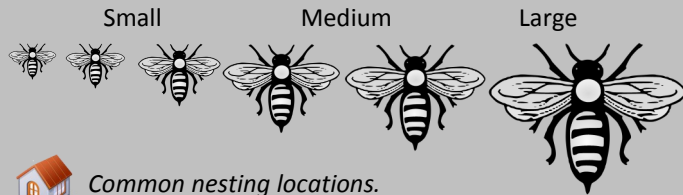


Ohio Bee Identification Guide

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Bees are beneficial insects that pollinate flowering plants by transferring pollen from one flower to another. While the honey bee gets most of the credit for providing pollination, there are actually about 500 bee species in Ohio. Key features needed to identify 10 types of bees are listed for each type.



Common nesting locations.



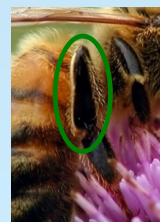
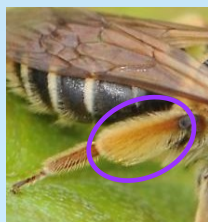
Identifying behaviors to watch for.



Features that may be seen with the aid of a hand lens.

How to Identify Bees

All bees have three body segments, a **head**, **thorax** and **abdomen**. The **head** is where large multi-faceted eyes, long slender antennae, and cutting mouthparts are found. The **thorax** is the middle segment where the wings and legs attach. Last is the **abdomen**, which for female bees ends in a sting. Special **pollen-carrying hairs** unique to female bees resemble dense broom bristles, and are commonly found on the rear legs or the underside of the abdomen. Some carry pollen in an almost hairless, flattened **pollen basket** on the rear legs.



©Donna K. Race

Honey bee (*Apis mellifera*)



©OhWeb

Medium 12-15mm

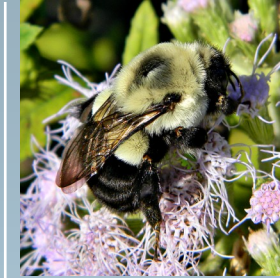
Light to dark brown body with pale and dark hairs in bands on abdomen. Pollen basket present. Abdomen barrel-shaped. Head heart-shaped.



Colonies nest in man-made hives, in the open, and in cavities. Swarm to locate new nest.



Honey bees have hairy eyes.



©Bob Peterson

Bumble bee (*Bombus* spp.)

Large 8-21mm

Black body, extensively covered with black and yellow hairs on all body segments. Pollen basket present. Robust body. Long face.



Colonies nest underground, commonly in old rodent burrows.



Bumble bees pollinate in cool, cloudy weather when most bees are in their nests.



©John Baker



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Leaf cutting bee (*Megachile* spp.)

Medium 7-15mm

Black body with light or dark hairs. Pollen-carrying hairs beneath abdomen. Some have rather pointy abdomens. Head is as broad as the thorax with large mouthparts used to cut leaves.



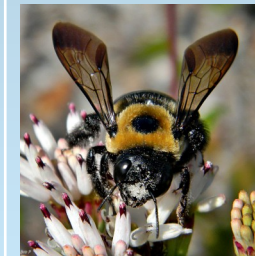
Solitary, but nest in aggregations in above-ground pre-existing holes, natural or man-made.



They cut circular pieces from leaves which are used to line their nests.



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Large Carpenter bee (*Xylocopa* spp.)

Large 15-23mm

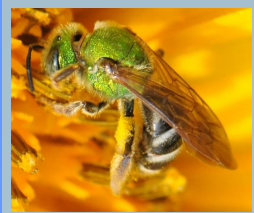
Black body with light or dark hairs. Pollen-carrying hairs on rear legs. Similar body shape to bumble bee, but abdomen shiny and mostly lacking hair. Round face.



Nests are burrowed into wood, often in roof eaves.



Fly fast and erratically like a hummingbird.



©Ted Kropiewnicki



©Juliana Tuell

Sweat bee (*Halictidae spp.*) Small-Medium 3.5-11mm

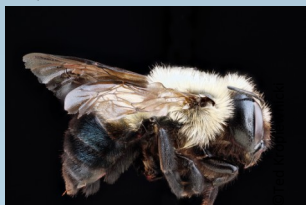
Two forms: 1) bright metallic green or 2) black/brown with light bands of hair on the abdomen. Pollen-carrying hairs on rear legs. Slender body.



Nest in the soil, solitary to communal nesters.



Some are attracted to the salt in your sweat.



©USGS Bee Inventory and Monitoring Lab



Mason bee (*Osmia spp.*) Small-Medium 7-16mm

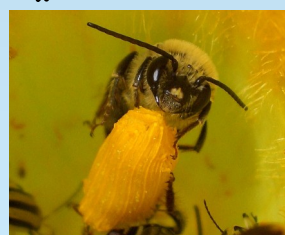
Two forms: 1) black body covered in pale hairs or 2) dull metallic green-blue and less hairy. Pollen-carrying hairs under abdomen. Head as broad as thorax, robust body.



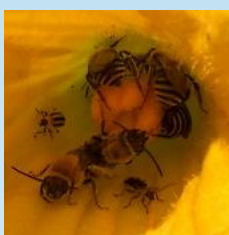
Solitary, but nest in aggregations in above-ground pre-existing holes, natural or man-made.



Collect mud to line their nests.



©Nelson Debarros



©Nelson Debarros

Squash bee (*Peponapis pruinosa*) Medium 11-14mm

Brown body covered in dense light hair on the thorax and in bands on abdomen. Pollen-carrying hairs on rear legs. Long antennae. Appear to have protruding "nose".



Ground nesting, mostly near squash and pumpkin fields.



Only collects pollen from squash/pumpkin plants.



©GideonPisanty



©GideonPisanty

Small carpenter bee (*Ceratina spp.*) Small 5-8mm

Dark blue-green and shiny, appearing hairless on all body segments. Pollen-carrying hairs on rear legs. Slender with shield-shaped abdomen.



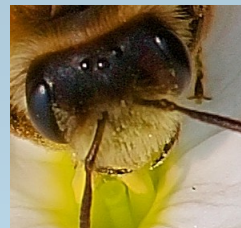
Solitary, nest in twigs and stems.



Pale yellow marks on face. Females have vertical bar, while males have upside-down "T".



©Ted Kropiewnicki



©Luc Viafour

Mining bee (*Andrena spp.*) Small-medium 5.5-15mm

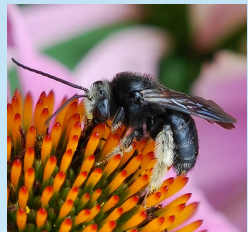
Black with light or dark hairs. Slender. Pollen-carrying hairs on rear legs and side of thorax, appearing to carry pollen in its "armpit".



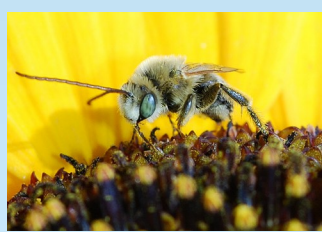
Dig solitary ground nests. Prefer sandy soils.



Shallow depressions between their eyes and antennae hold short velvety hairs.



©Pennsylvania Department of Agriculture



©John Baker

Long horned bee (*Melissodes spp.*) Medium 8-16mm

Black body covered in dense pale or dark hairs. Pollen-carrying hairs on rear legs may be very long. Stout-bodied. Males have extremely long antennae.



Solitary to communal ground nesters.



Some are especially attracted to asters, sunflowers, and daisies.

A Bee, or not a Bee?

Some insects that you will see visiting flowers are **bee mimics**. While they **are not bees**, they may resemble them in appearance. But don't despair!

Common bee mimics are **flies** and **wasps**. A **fly** has only 2 wings, while a bee has 4. Flies have sucking mouth parts, without the jaw-like mouthparts of a bee, and their antennae are not long and slender like a bee, but short and stubby or feathery. Some flies are easy to spot because their eyes meet in the center at the top of their head.

A **wasp** has 4 wings, chewing mouthparts, a sting, and long antennae like a bee. Wasps are smooth and almost hairless, while bees are generally covered with hair on their bodies and legs. Wasps also tend to have slender waists and they will never have pollen-carrying hairs. Certain wasps make paper nests you will find hanging from a tree or building, while bees do not.

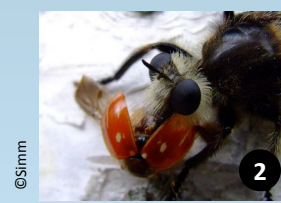
A final clue: If your insect is eating another insect, it may be a fly or wasp. Bees are vegetarians and only eat pollen and nectar from flowers!

Now that you are a bee and bee mimic expert, try your hand at identifying these insects! Answers are at the bottom.



1

©Fabio Brambilla



2

©Simm



3

©Joaquim Alves Gaspar



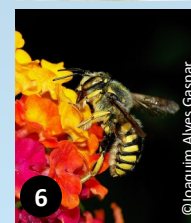
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7

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<http://oardc.osu.edu/ALE>
<http://gardinerlab.blogspot.com>

Answers: 1) Wasp nest, 2) Fly eating lady beetle, 3) Fly, 4) Bee, 5) Wasp, 6) Bee, 7) Fly, 8) Wasp, 9) Leaf cutting bee