

WISCONSIN SPRING BEE GUIDE



THE UNIVERSITY
of
WISCONSIN
MADISON

Wisconsin Spring Bees

- HONEY BEES
- BUMBLE BEES
- GREEN SWEAT BEES
- SMALL CARPENTER BEES
- MASON BEES
- SMALL SWEAT BEES
- DARK STRIPED BEES
- LARGE MINING BEES
- MEDIUM MINING BEES



Bombus ternarius



Colletes inaequalis



Andrena spp.

Bees, Wasps and Flies

BEES



- Two pairs of wings
- Relatively hairy
- Long antennae

FLIES



- One pair of wings
- Relatively hairless
- Large, bulging eyes that cover most of head
- Short, stubby antennae

WASPS



- Two pairs of wings
- Relatively hairless
- Long antennae
- Many have notably long, thin “waist”
- Many have bright yellow or orange coloration (stripes on legs, abdomen or thorax)

Bees, Wasps and Flies



Bees are the most important pollinators of plants worldwide. They collect both pollen and nectar to feed to their young. They have many features including branched hairs that function to efficiently collect pollen. They vary in both size and color.



Some flies are bee mimics. They can be distinguished from bees by their single pair of wings, and their notably bulging eyes and short antennae. Flies do not actively collect pollen, and lack pollen-collecting hairs. They will visit flowers to drink nectar, though, and may thus act as pollinators. While some plant species have evolved to rely on flies for pollination, most plants are better pollinated by bees.



Wasps are often confused with bees. Some look very similar to bees, while others have more obvious wasp-like features. Wasps do not actively collect pollen, but will visit flowers in order to drink nectar. They can thus pollinate, but for most plant species, they are not as efficient as bees.

HONEY BEE

Apis mellifera



- Abdomen “skin” (integument) is yellow-orange
(Note that in some honey bees, this coloration is faint)
- Medium-large, plump bees
- Hairy eyes

HONEY BEE

Apis mellifera



Nesting Requirements: Human-constructed hives

Flight Period: Long. Spring - fall

Foraging Habit: Generalists

Honey bees are a non-native species that originally came from Europe. Most honey bees are managed, though some colonies have established in the wild. They are perennial social bees, with female workers, queens and males (drones).

BUMBLE BEE

Bombus spp.



- Very hairy bodies, including hair on legs and abdomen
- Yellow, orange or white hairs on BOTH thorax and abdomen
- Very large body size: Queens, 17-21 mm; workers, 8-16 mm; and males, 10-17mm

BUMBLE BEE

Bombus spp.



Nesting Requirements: Cavities (i.e. rodents' and birds' nests)

Flight Period: Long. Spring – fall.

Foraging Habit: Generalists

Bumble bees are social bees with annual colonies, started in spring by a single queen. In early spring, you will only see queens, as workers are not born until late spring and summer.

GREEN SWEAT BEE

Agapostemon spp., *Augochlorella* spp.,
Augochloropsis spp., and *Augochlora* spp.



- Bright, metallic green or green-blue coloring on part or all of the body
- Some have white and black striped abdomens, others have green or blue abdomens
- Medium body size: 5-11 mm

GREEN SWEAT BEE

*Agapostemon spp., Augochlorella spp.,
Augochloropsis spp., and Augochlora spp.*



Nesting Requirements: Below-ground
Flight Period: Mid-spring through late-summer
Foraging Habit: Generalists

These bees are called sweat bees as they are attracted to the salt found in human sweat. Some are semi-social or communal, while others are solitary.

SMALL CARPENTER BEE

Ceratina spp.



- Metallic, dark blue bodies
- Longer, slender bodies compared to mason bees
- Relatively hairless
- No hair on the underside of the abdomen as in mason bees
- Some with white or yellow markings on face
- Small to medium body size: 5-8 mm

SMALL CARPENTER BEE

Ceratina spp.



Nesting Requirements: Stems

Flight Period: Mid-spring through late-summer

Foraging Habit: Generalists

They are mostly solitary, though they often nest together in groups. They are called carpenter bees as they will excavate their own nests from pithy stems or reeds.

MASON BEE

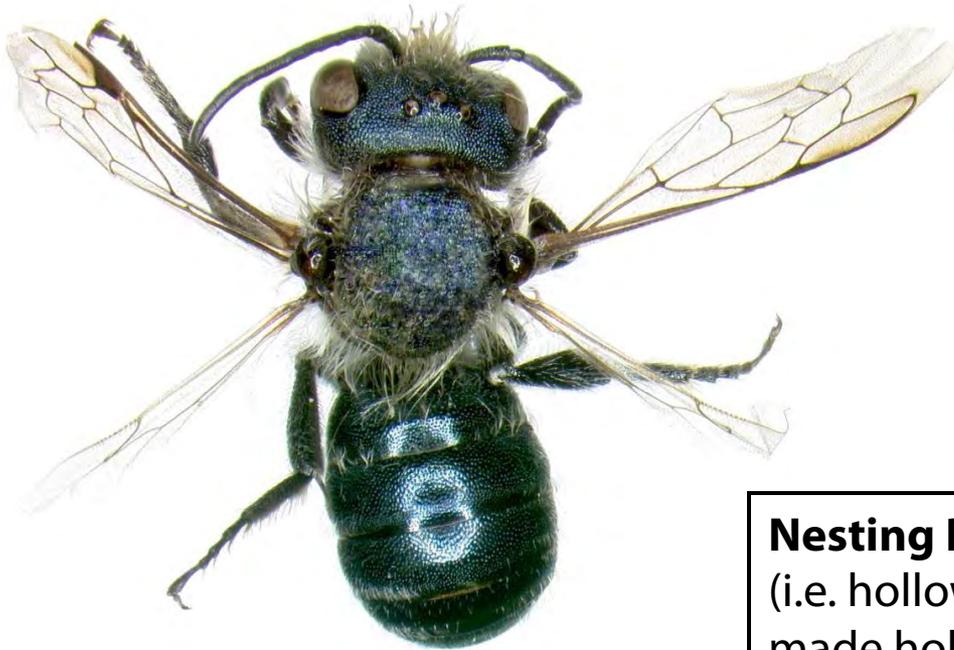
Osmia spp.



- Dark blue, metallic body
- Round thorax and abdomen
- Hair on underside of abdomen
- Medium to large body size: 9-11 mm

MASON BEE

Osmia spp.



Nesting Requirements: Above-ground cavities (i.e. hollow twigs, logs, beetle burrows and man-made holes)

Flight Period: Spring through early summer

Foraging Habit: Generalists

They are known to be effective pollinators of tree fruit crops, including apples. They do not excavate their own nests like carpenter bees, but rather use pre-existing above-ground cavities

SMALL SWEAT BEE

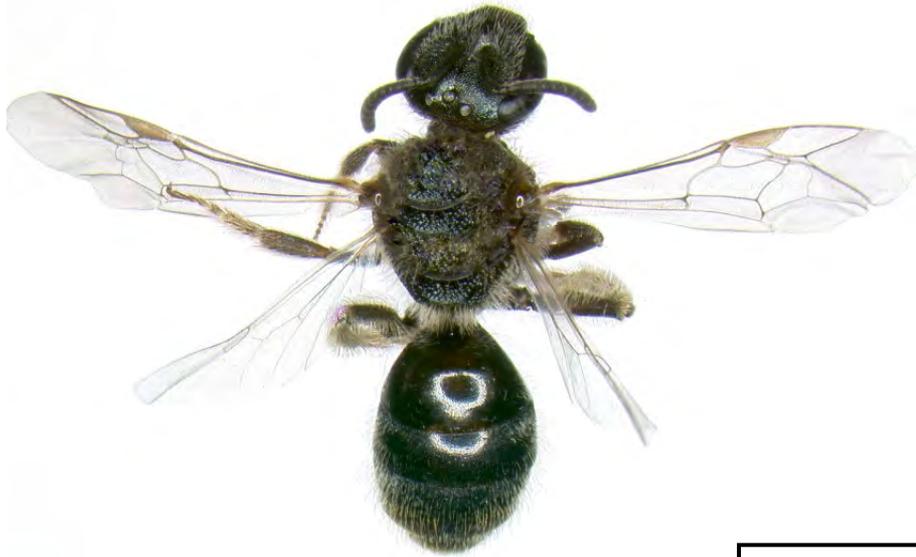
Lasioglossum spp.



- Black or gray bodies, often shiny or metallic
- Some have faint stripes of white hair on abdomen
- Relatively hairless bodies compared to other bees
- Very small to small body size: 3-7 mm

SMALL SWEAT BEE

Lasioglossum spp.



Nesting Requirements: Below-ground
Flight Period: Mid-Spring through late-summer
Foraging Habit: Generalists

These bees may be confused with wasps as they are quite small. Their attraction to the salt found in human sweat gives them their name. Many are semi-social or communal, while others are solitary.

DARK STRIPED BEE

*Andrena spp., Colletes spp.,
Lasioglossum spp., Halictus spp*



- Thin, yellow or white stripes of hair on black abdomen
- Usually with some yellow, orange or white hair on thorax
- Dark bodies, some are slightly metallic
- Medium-large body size: 7-13 mm

DARK STRIPED BEE

*Andrena spp., Colletes spp.,
Lasioglossum spp., Halictus spp*



Nesting Requirements: Below-ground
Flight Period: Variable. Long and short-lived species
Foraging Habit: Generalists and Specialists

This is a large group of bees from 4 different genera that are often difficult to distinguished from each other. They are mostly solitary.

LARGE MINING BEE

Andrena spp.



- Yellow, orange or white on thorax
- Black abdomens without any colored hairs
- Generally less hairy compared to bumble bees
- Large body size: 10-15 mm, but not as robust as bumble bees

LARGE MINING BEE

Andrena spp.



Nesting Requirements: Below-ground
Flight Period: Spring
Foraging Habit: Generalists and Specialists

Large mining bees may be confused with bumble bees, but can be distinguished by the black and relatively hairless abdomen in comparison to bumble bees. These bees are known as mining bees because they nest in long, underground tunnels.

MEDIUM MINING BEE

Andrena spp.



- Black bodies, usually with some yellow, orange or white hair on thorax
- Black, relatively hairless abdomens
- Bodies are smaller and thinner compared to bumble bees
- Medium body size: 7-10 mm

MEDIUM MINING BEE

Andrena spp.



Nesting Requirements: Below-ground

Flight Period: Spring

Foraging Habit: Generalists and Specialists

These bees are similar to large mining bees, but are smaller in size. They are called mining bees because they nest underground in long, tunnels that they excavate