

Backyard Guide to Common Bees in Houston

Extra Large Bees (Around 1 inch long or more)



American Bumble Bee (*Bombus pensylvanicus*)

Description- The main bumble bee living in this area. The upper portion of the thorax has a yellow band and the remainder is black. On the abdomen, the first 2-4 segments have yellow bands. Males tend to have more yellow bands on the abdomen.

Size- “Walnut” (Around 1 inch or more)

Season- Late emerging, mostly May - Oct

Nesting- Social bees; nest in rodent burrows, tree cavities, or leaf piles

Image ©Camia Lowman with Urban Harvest, Inc.



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Did you know bumble bees are the only **warm-blooded** insect? Since they can regulate their own body temperature and generate heat, they are **endothermic**.

Having trouble distinguishing bumble bees and carpenter bees? **Bumble bees** have a hairy thorax AND abdomen. **Carpenter bees** have a hairy thorax, but shiny abdomen. So **“if it’s shiny on the hiney, it’s a carpenter”**.



Female

Image ©Lauren Simpson at St. Julian's Crossing - Wildlife Habitat



Male

Image ©Camia Lowman with Urban Harvest, Inc.

Southern Carpenter Bee (*Xylocopa micans*)

Description- Southern carpenter females are bluish purple (In contrast to Eastern carpenters which are black). Males have distinctive large, greenish yellow eyes.

Size- “Walnut” (Around 1 inch or more)

Season- Mar - Sept

Nesting- Cavity-dwelling, usually in wood

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Large Bees (Around ¾ inch long)



Horsefly-like Carpenter Bee (*Xylocopa tabaniformis parkinsoniae*)

Description- This fast-moving carpenter bee has four distinctive “racing stripes” on the lateral portions of the abdomen.

Size- “Popcorn” (3/4 inch)

Season- Mar - Aug

Nesting- Cavity-dwelling, usually in wood

Image ©Camia Lowman with Urban Harvest, Inc.

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Carpenter bees get their name because they often nest in **wood**. Females use their strong **mandibles** to chew a round hole in wood. They do not eat the wood, but **shove** it out or use it to make **walls** between nest cells.

Xylocopa is Greek for “**wood-worker**”, referring to this bee’s ability to make homes in wood.



Eastern Carpenter Bee (*Xylocopa virginica*)

Description- Eastern carpenters have a large, black shiny abdomen with a yellow ring of hair on the thorax. Males have a yellow/white patch on their face.

Size- “Popcorn” (3/4 inch or more)

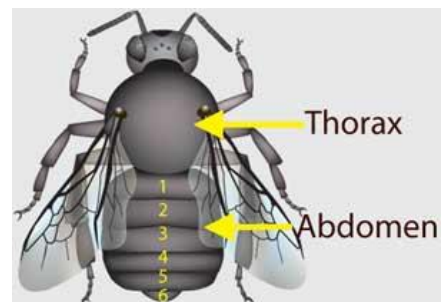
Season- Mar - Aug

Nesting- Cavity-dwelling, usually in wood (conifers are preferred)

Image ©Camia Lowman with Urban Harvest, Inc.

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Female bees have an **even** number of antennae segments, while **male** bees have an **odd** number. Of course, you probably need a microscope to be able to count them! It is easier to look for **hairs** covered in **pollen** on the legs or underside of the abdomen. **Only females collect pollen.**



From Xerces Society’s Bee Identification Guide



Medium Bees (Around ½ inch long)



European Honey Bee (*Apis mellifera*)

NOT NATIVE

Description- The most well-known bee. Honey bees have brown and black stripes on their abdomen. The abdomen tapers towards the thorax, and hair covering eyes suggest “long lashes”. Unlike other bees, honey bees often dangle their legs down as they fly.

Size- “Jelly Bean” (1/2 inch)

Season- Year-Round

Nesting- Social, living in hives

Image ©Camia Lowman with Urban Harvest, Inc.

Honey bees are not native to the western hemisphere, but their value for producing **honey** and **wax** led to their introduction by **European colonists** in the 1600’s.

The **European Honey Bee** is the only bee whose **stinger** comes **loose** when they sting.



Leafcutter Bee (Genus *Megachile*)

Description- Very marked abdominal segments with scopae (*pollen-collecting hairs*) on the underside. In females, this hairy belly is often loaded with pollen. The posture of leafcutter bees is unique - they bend their abdomen upward when they are resting.

Size- “Jelly Bean” (1/2 inch)

Season- May - Sept

Nesting- Cavity-dwelling, lining nests with leaf cuttings

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Leafcutter Bees use their mandibles (*jaws*) to **snip** pieces of leaves and **carry** them back to their nests to use as wallpaper. Talk about an interior decorator! Leafcutters often prefer plants with **antimicrobial chemicals**, such as **rose plants**.

Megachile means “**big-lipped family**”, referring to the **enormous mandibles (jaws)** with heavy-duty teeth for **cutting leaves**.

Medium Bees (Around ½ inch long) Continued



Female

Image ©Camia Lowman with Urban Harvest, Inc.



Male

Image ©Lauren Simpson at St. Julian's Crossing - Wildlife Habitat

Carpenter Mimic Leafcutter Bee (*Megachile xylocopoides*)

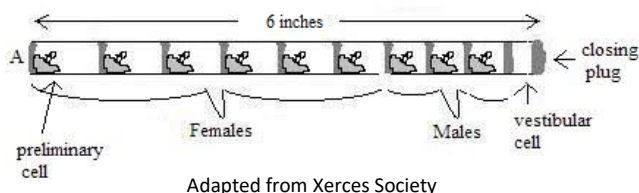
Description- A very dark body resembling a carpenter bee, especially the bluish-purple Southern Carpenter Bee. Males have large “love mitts” on their front legs, which the male uses to cover the eyes of the female during mating (indicated with arrow on image).

Size- “Jelly Bean” (1/2 inch)

Season- Mar - Nov

Nesting- Cavity-dwelling, lining nests with leaf pieces

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Bee blocks are a great way to create **nesting** homes for **leafcutter bees**. Make sure holes are drilled **6 inches** deep to encourage development of **female** bees. Mother leafcutters place female eggs **deep** and male eggs **closer** to the entrance.



Cuckoo Leafcutter Bee (Genus *Coelioxys*)

Description- Abdomen is cone-shaped and pointed, ending in spines in males. There are no hairs since this bee does not collect pollen, instead parasitizing leafcutter bee nests.

Size- “Jelly Bean” (1/2 inch)

Season- June - Sept

Nesting- Cleptoparasitic (*parasitism by theft*) on leafcutter bees

Image ©Camia Lowman with Urban Harvest, Inc.

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Coelioxys is Greek for “**sharp-belly**”, a reference to this bee’s **pointed abdomen**.

Cuckoo bees use their **pointy abdomen** to break a hole into leaf nest walls of leafcutter bees. They lay an egg inside, and when it hatches, the baby **cuckoo bee** uses its sharp **mandibles (jaws)** to snip the host egg in half, so that it can eat the food the **leafcutter bee’s** mother stored for it.

Medium Bees (Around ½ inch long) Continued



Two Spotted Long Horned Bee (*Melissodes bimaculata*)

Description- All black with two white spots near the tip of the abdomen.

Size- “Jelly Bean” (1/2 inch)

Season- May - Oct

Nesting- Ground-dwelling

Image © Lauren Simpson at St. Julian's Crossing - Wildlife Habitat

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Cuckoo Bee (Genus *Triepeolus*)

Description- Striking black and white bands, most have a signature “smiley face” on the back of their thorax.

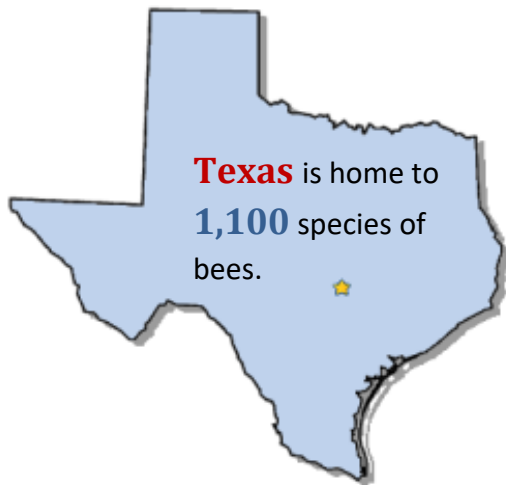
Size- “Jelly Bean” (1/2 inch)

Season- May - Oct

Nesting- Cleptoparasitic on ground-dwelling bees

Image © Lauren Simpson at St. Julian's Crossing - Wildlife Habitat

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70% of bees nest in the **ground**.

Bees **cannot** nest if there is **mulch**.



Female Sweat Bee peeking out from her nest

Image © Lauren Simpson at St. Julian's Crossing - Wildlife Habitat

Small Bees (Around 1/3 inch long)



Metallic Green Sweat Bee (Genus *Augochlorella* & *Agapostemon*)

Description- Most females are completely green, while males have yellow and black stripes on the abdomen.

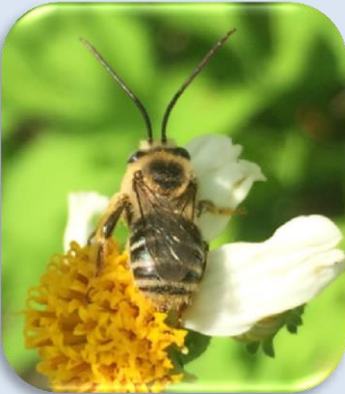
Size- “Pea” (1/3 inch)

Season- Mar - Nov

Nesting- Ground-dwelling

Image ©Camia Lowman with Urban Harvest, Inc.

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Long Horned Bee (Genus *Eucera*)

Description- Pale brown hairs on thorax and banded abdomen. Females have scopae (*pollen-collecting hairs*) on their hind legs, while males have noticeably long antennae.

Size- “Pea” (1/3 inch)

Season- June - Sept

Nesting- Ground-dwelling (preferring sand or clay soils)

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Tiny Bees (Around 1/4 inch long or less)



Sweat Bee (Genus *Lasioglossum*)

Description- Very small and ranging in color from all black to gray to brown. Females carry pollen on scopae (*pollen-collecting hairs*) on their hind legs. Often mistaken for gnats or flies.

Size- “Grain of Rice” (1/4 inch or less)

Season- Mar - Sept

Nesting- Ground-dwelling

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Common Flower Visitors that are **NOT Bees**

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**Bee Fly (Family
Bombyliidae)**

Image © Lauren Simpson
at St. Julian's Crossing -
Wildlife Habitat



**Black and Yellow
Mud Dauber
(*Sceliphron
caementarium*)**

Image © Lauren Simpson at St.
Julian's Crossing - Wildlife Habitat



**American Hover Fly
(*Eupeodes
americanus*)**

Image © Lauren Simpson at St.
Julian's Crossing - Wildlife
Habitat



This symbol means this bee, or a bee in this family, is a Species of Greatest Conservation Need (SGCN) in Texas Parks and Wildlife Department's (TPWD) Texas Conservation Action Plan.