Texas/Oklahoma Pollinator Project Identification Guide

Welcome to the Texas/Oklahoma Pollinator Project; and thank you for being a Citizen Science volunteer! The goal of the TOPP is to gather observational data on what plants are most attractive to bees and other pollinators. Based on your observations, we hope to provide good, local data to be used for regional fact sheets, and for efforts to protect and preserve our important pollinator resources.

The data you provide will go into a large database of observations on plant visitation. This identification guide is designed to help ensure that your data is recorded accurately, and that you have the information you need to feel comfortable collecting that data.

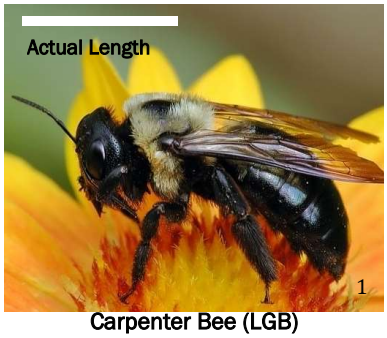
Plant identification is critical for the success of this project. It's important that you accurately identify the plants that you observe. **If you are unsure of the identity of the plant, ask another expert you trust, or take a picture of the plant** and submit with your pollinator observation. Be sure to get close enough to clearly show both leaves and flowers (if possible).

To conduct the study, **choose five kinds of plants** from any Texas or Oklahoma garden to which you have access (we want to know good *and* not-so-good plants for bees, so don't worry if you don't see lots of bees on a given plant). **Conduct your count within a 2 ft by 2 ft patch** of only one kind of flowering plant. **For one minute, count and classify every flying insect visiting your patch**. **Between 10 am – 7 pm is ideal for observing pollinators**; but the important thing is to try and be consistent in when you make your counts. Use the paper data sheet provided or enter your data directly into the website using your computer or phone (type in the URL address or, with your phone, scan the QR code on the reverse side of this sheet.) You are welcome to observe more often than **once a week**, and more than five kinds of plant. Simply choose the level of effort with which you are comfortable.

The patches you choose will bloom and eventually fade. For this reason, feel free to switch patches if blooming has declined. For each observation you make try to estimate how far through the patch has progressed compared to full bloom (less than 25% in bloom, more than 75% in bloom, etc.)

You do not have to know exactly what kind of insect you are seeing. The **data sheet is coded** for general kinds of pollinators (e.g., Large bees, Medium bees, Small green bees, Non-bees, Hover flies etc.). This sheet will help you recognize these categories, including what is meant by Large, Medium, and Small. Also, make sure you know how to tell the difference between a bee, wasp, and fly. Flies often mimic bees or stinging wasps. The pictures on this sheet are designed to help make this easier.

Pollinator Insect Examples

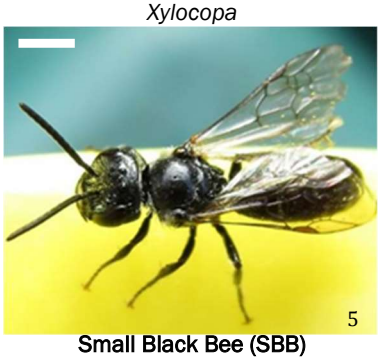


Carpenter Bee (LGB)
Xylocopa

Bumble Bee (LGB)
Bombus

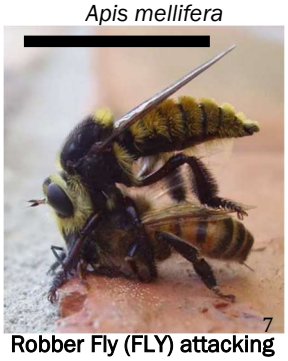
Honeybee (MB)
Apis mellifera

Coneflower Miner Bee (MB)
Halictus ligatus

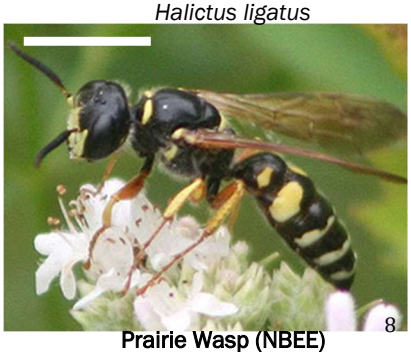


Small Black Bee (SBB)
Lasioglossum

Green Sweat Bee (SGB)
Augochlora pura



Robber Fly (FLY) attacking Honeybee (MB)



Prairie Wasp (NBEE)
Ancistrocerus antilope

Small Black and White Bee (SBB)
Megachilidae

Long-Legged Fly (FLY)
Polycopodidae

Bee Fly (FLY)
Bombyliidae

Garden Webworm Moth (BUT)
Achyra rantalis

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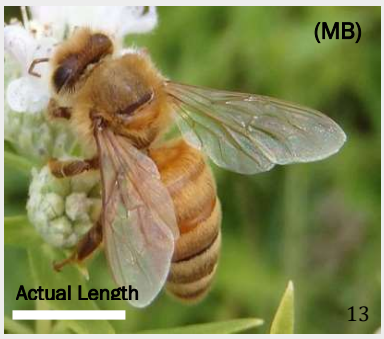
Bee or Fly?



Bee	Fly
Smaller, oval-shaped eyes on sides of head	Larger, faceted eyes meeting at top of head, usually forward facing
Long, elbowed antennae	Short, stubby antennae that can be difficult to see
Four wings (can be hard to see)	Two wings

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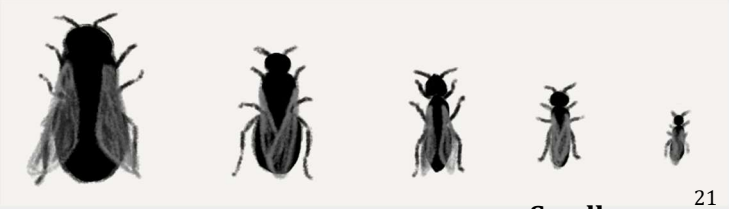
Bee Size Range and Classification



Large ≈ 20 mm

Medium ≈ 15 mm

Small ≲ 10 mm

Photos: 1 Donna Race, 2, 4, 8, 13-14 Mark Brown, 3 Molly Jacobson, 5, 17-19 Ilona Loser, 10 Maurice Whalen, 15 Bill Claff, 6-7, 9, 11-12, 16, 20 Michael Merchant, 21 Danielle Dunn.

Bee or Wasp?

Bee	Wasp
Usually thick-bodied	Defined, narrow waist with a skinny body
Hairy with pollen-collecting hair on legs and abdomen, may carry pollen pellets on hind legs	Generally hairless
Short legs with relatively few spines	Long, thin legs with spines
Typically, yellow and black combo	Striking, vivid patterns and colors like black, yellow, orange, blue, green and white
Wings usually folded over the abdomen while at rest	Folded wings at rest

Entering Project Data

Either scan the QR with your phone or enter the URL to access the online data sheet or use the paper data sheet provided to submit your observation.

sixleggedaggie.com/pollinator