

The Many Bees of Texas

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Walking on the trails at Gulf coast Bird Observatory the other day, I happened to see a stunningly brilliant insect on a flower. It was a metallic green color, so shiny it looked like a jewel. After snapping a few out-of-focus pictures, I headed inside to try to identify it.

It turns out that this bug was actually a bee! It was a Green Sweat Bee, to be exact. This type of bee nests underground in tunnels, kind of like ants. They are generalist pollinators, visiting everything from garden flowers to watermelons, strawberries, and peppers. Some bees of this variety supplement their nectar with a salty snack- human sweat. But they don't usually sting or bite, so I don't mind donating a few drops to their cause.

In researching my Sweat Bee, I realized something: there are a *lot* of bees out there. Worldwide, there are over 20,000 species of bees, with approximately 3,600 species native to North America and about 800 in Texas. Many of these species are difficult to discern from one another in the wild, especially when they're zipping around at top speed, but there are definitive markers that differentiate them at rest.

In Texas, we have a wide variety of species including carpenter bees, sweat bees, bumblebees, and cuckoo bees. The bees that we are perhaps most familiar with are European honey bees, which aren't even native to our area. They were brought over hundreds of years ago by European colonists. But as it turns out, there are hundreds of other bee species doing important work right outside our door.

In Texas, most plant pollination is conducted by bees. In a single day, a female bee can visit hundreds of flowers, spreading pollen to each one as she goes. Pollination is perhaps the most important process behind agriculture and ecosystems. In fact, the bees provide about 3 billion dollars' worth of pollination service to US agriculture annually. So, needless to say, they have a lot on their fuzzy little shoulders.

Unfortunately, many native bees are currently experiencing very concerning population declines. This is largely due to habitat loss, specifically loss of grasslands, savannas, and woodlands. The plants and space that these insects require to live are rapidly disappearing, and non-native ornamental garden flowers can't make up the difference.

So how can we help our buzzy friends? Well, bees have two essential needs that we can help fulfill: food and shelter. Bees need nectar and pollen from native flowers, so try planting some native plants in your yard, including an array of herbaceous and woody species. Bees also need a nice place to lay their eggs. Most Texas bees are ground nesters, like the Green Sweat Bee, so we can help them by leaving open spaces in our yards unchecked. And if you happen to find a one of these insects or it's nest, leave it bee!

If you're interested in learning more about bees and bee conservation, I would recommend taking a look at the at The Xerces Society for Invertebrate Conservation (<https://www.xerces.org/>).

Photo by Gwen M. Caption: A Green Sweat Bee pollinating a Milkweed plant.

