

## Five Native Bees found at the Klamath County Museum

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The Oregon Bee Atlas is a multi-year study of native bee populations in Oregon. Currently in its third of five years, the Bee Atlas will help us gain insight into the variety and abundance of native bees across the state. With growing public interest in bees, gardeners and homeowners are more aware of the need to conserve bees, provide habitat, and use pesticides wisely to minimize impacts on beneficial insects. Yet without some kind of baseline population information, such as will be provided by the Bee Atlas, it would be difficult to tell if any of our conservation efforts were worthwhile in the future.

Because it is impossible to correctly identify many bees without an actual specimen to examine, the Bee Atlas requires the collection and preservation of a sampling of bees from various plants and locations throughout the season. Collecting plant information along with the bee provides more robust information than just the bees alone, and over time may reveal important bee-plant relationships. One dependable site for a wide variety of bees in Klamath Falls has been the native plant garden at the Klamath County museum. The display of native plants on the grounds has at least one plant in bloom all season long. This small urban garden space has proven to be a popular site for native bees, including the favorites described here.

**Pugnacious Leafcutter Bee.** The leafcutters, a large group of bees in the family Megachilidae, include the widely known alfalfa leafcutter. The name “leafcutter” comes from the bees’ habit of chewing perfectly round holes in plant leaves. These leaf discs are placed in nesting sites, becoming chamber walls in a tube: egg, pollen pack, leaf disc. Egg, pollen pack, leaf disc. The pugnacious leafcutter is nearly as large as a honeybee, and is distinguished by large brushes of hair on the underside of its abdomen and extremely large, forward facing mandibles (mouthparts) that give shape to this bee’s face. With practice, it is easily recognizable in flight.

**Longhorned Bees.** Two genera of longhorned bees, *Melissoides* and *Eucera*, have been found on the museum grounds, most frequently on the sunflowers near the main entrance. Longhorned bees resemble honeybees in size and coloration- but the males are distinct because of their super-long antennae, the feature that gives them their common name. Female longhorn bees do not have long antennae, but they do have arrangements of long hairs on their hind legs, known as scopa, on which they deposit collected pollen. These scopa are in contrast to female honeybees, who collect pollen on hairless sections of the rear legs known as corbicula.

**Ceratina Bees.** This group of bees have distinct long, cigar-shaped bodies that are less hairy than many other bees. Most Ceratina are small, and appear metallic or shiny black. Often called “small carpenter bees”, this group has some unusual characteristics. The females are partially social- they do not form hives like honeybees, but have some social behaviors, like dividing the tasks of egg-laying and pollen collecting between mothers and daughters. In some cases, Ceratina are parthenogenic, meaning that they can reproduce without males.

**Agapostemon Bees.** Another common visitor on sunflowers, but more recently found on milkweed and fireweed in the museum’s garden, Agapostemon are bright, shiny metallic green. The streamlined, “race-car” body of Agapostemon distinguish them from the other metallic green bees, which have

stouter, rounder bodies more akin to a Volkswagen Beetle. There are several species of Agapostemon, all of which fly very quickly, making them difficult to catch.

**Tiny Bees that live under rocks.** Maddeningly elusive, these bees, numerous on museum grounds, have proven impossible to catch. The rock-lined plant beds appear to be an ideal habitat: close inspection reveals their tiny nest holes, or even the occupants, entering or exiting. The bees are often seen sunning on the rocks themselves. Their minute size and habit of flying close to the ground make them hard to catch with a net, and their extremely fast flight makes them hard to catch with an aspirator (though several Bee Team members have tried). Although yet to be identified, these bees are worthy of mention: their ground-dwelling is representative of about 70% of the native bees in Oregon! That's right, numerous species of our native bees live right in the ground. If you're looking for a way to increase native bee habitat in your own garden, the mystery bees at the Klamath County Museum suggest that a rock border around your flower bed might be the way to go.

As work on the Bee Atlas progresses, results will be accessible to bee enthusiasts via an interactive website mapping all the bees collected. For more project info, visit <https://www.oregonbeeproject.org/bee-atlas>.