To Be or Not to Be a Bee

Leafcutter Bee

Metallic Bee

Digger Bee

By Cindy Murray

A few weeks ago, as I was browsing through “The Lookout” store in Prescott, I came upon a small yard sign embellished with a lovely bee and stating, “Don’t Mind the Weeds, Just Feeding the Bees.” I couldn’t resist it—I had the perfect spot for it bordering the ditch in our front yard. In truth, we don’t have actual weeds along our ditch; we have multitudes of wild sunflowers. While many folks choose

not to allow them to proliferate, Hugh and I view them as both attractive and beneficial, seeing that they serve as pollinator magnets for our vegetable gardens and flowers.

Today I am writing about one of my favorite subjects: bees, specifically those native to Northern Arizona. Our native bees range in size from gravity-defying bumblebees and carpenter bees to minuscule ones like metallic bees. Many native bees are too small to sting humans. Fortunately for Arizona bee aficionados like myself, our state is home to the highest concentration of bee species worldwide!

Like ants and wasps, bees belong to the order Hymenoptera, which have two pairs of membranous wings. Perhaps surprisingly, many fly species also pollinate plants, and some closely resemble bees. Detecting all four wings on a bee is difficult, so I rely on the fact that bees are endowed with fairly long antennae, whereas flies bear short ones. Additionally, bee eyes are set near the side of their heads, while fly eyes are bigger and approach the midline.

Although the majority of food crops requiring a pollinator rely on European honey bees, some native bee species are more efficient at pollinating certain plants.

Mason Bees

While most mason bees are about the size of European honey bees, they lack brownish-black and yellow abdominal stripes. Rather, mason bee bodies often display a dark metallic sheen. And while they don't produce honey, they are invaluable pollinators across much of North America. Mason bees crave fruit tree nectar and inadvertently pollinate while foraging from one blossom to another. Like many of the native bees I'll be covering here, mason bees their make nests inside hollow stems and various small burrows and crevices.

Leafcutter Bees

Leafcutter bees, as their name suggests, cut out small, nearly circular holes in leaves for constructing their nests. They are non-aggressive but sometimes damage plants like roses, grapes, and some leafy herbs. Their diet consists of pollen and nectar. Because their abdomens are covered with dense hair, their bellies turn sunshine yellow when carrying loads of pollen. Leafcutter bees are extraordinary pollinators for various ecosystems and crops including alfalfa, fruits, and vegetables.

Yellow-faced Bees

You may not have paid much heed to yellow-faced bees, because they are miniscule, 5-7mm. And if you did, you may have thought they were tiny wasps, because both insects are slender with black and yellow or white stripes on their abdomen. These are the most regular guests in my bee "hotel."

Metallic Bees

Often clad in jewel-like metallic greens and blues, these bees are utterly gorgeous! Better still, they pollinate wildflowers, apples, stone fruits, and alfalfa.

Long-horned Bees

Because summer squash blossoms produce sticky pollen, honey bees may avoid them, which seems to be the case with my zucchini plants. Longhorn bees, on the other hand, are drawn to squash flowers, and I sometimes ponder whether we would get the prolific crops we do most years without them. I believe these bees are drawn to our property because of their voracious appetite for wild sunflower pollen.

Digger Bees

Because they briefly helicopter before zooming in on a blossom, digger bees are a joy to photograph! Some are as big and hairy as bumble bees, and similarly practice "buzz" pollination. That is, their vibrating wings loosen pollen from the anthers of a flower, allowing the bee to gather pollen while simultaneously pollinating.

These are merely a few of my favorite bees. I hope these descriptions help you identify them. Stay tuned for my upcoming article on one of my most cherished butterflies: the marvelous monarch.

Cindy Murray is a biologist and co-editor of Gardening Etcetera and has been a Coconino Master Gardener since 2010. She is married and has two amazing grown children and two grown grandchildren. Cindy enjoys photographing Arizona's great outdoors, especially sunsets, birds, and insects. She is a member of Arbor Day Foundation, Audubon Society, The Nature Conservancy, and The Cornell Lab of Ornithology.