

WHAT IS THIS STUFF IN MY SOIL??

By Cindy Bruecks, San Diego Master Gardener and Hotline Nerd

We are used to getting questions on our Master Gardener Hotline about plants, why plants won't grow, what's wrong with my plant, what is this plant, and what is this bug? But recently we had two items that addressed "What is it?" with a healthy plant, or no plant at all. It stumped us for a little while. So let's see what you think of the following two photos

Photo #1 "Stuff" in the middle of the healthy turf



And Photo #2, little holes in the middle of nothing:



Bear in mind, the photos we receive typically have little-to-zero clues as to the relative size of the item in the photo, without benefit of a ruler, human foot, or even a dime.

It turns out, two very different organisms created these symptoms. Photo #1 is a pile of earthworm castings. That's good! Whether you have earthworms in your turf or your garden, earthworms help to aerate the soil, leave castings (their poop) as fertilizer, leave essentially invisible pee which helps green up your plants, and generally make no trouble. That is, unless you think a little pile of (unsightly) brown stuff in the middle of your lawn is trouble. Earthworms are silent and generally do their work unnoticed.

The second photo (from Google images not the original sender) was created by an insect, a native bee. It shows the nest of the Colletid, one family of about 3,000 species of primitive wasp-like ground-nesting bees. They belong in Apoidea, a superfamily within Hymenoptera. (It is important to understand where they fit into the grand scheme of things when you want to understand more about how they might behave.)

About 70% of native bees nest in the ground. We weren't sure what creature might make a neat but small hole in the ground that was too small for a mouse or other vertebrate and too big for most plant-inhabiting insects. While not apparent, native bees' burrows can extend a foot or more into the soil.

Many of us have seen what is billed as a "native bee house", which usually has some narrow long tubes (think small bamboo) in a cute little birdhouse-type structure. It turns out some native bees much prefer to make their own holes, and in the ground. That is one reason why, for ecological reasons, it is nice to keep a bit of your landscape as bare earth NOT covered in benefit-producing organic mulch. It's even better, if it's in sun as you will be giving solitary bees an opportunity to build their choice of burrows.

Our hotline expertise covers plants, plant marauders from fungi to vertebrates, plant conditions, and other "garden unknowns". Got a question? Use the Hotline experts to answer it. We're always up for a game of "Stump the Experts". Send your clearly focused and scale-correct photos to help@mastergardenerssandiego.org. We'll work to get back to you promptly with a well-researched solution to your mystery.