



VARMANT GUARD®

ENVIRONMENTAL
SERVICES INC.



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Common Name: **Solitary ground- / cavity-nesting bees including:**

- digger bees • mining bees
- leafcutting bees • sweat bees

Scientific Name: **see family names below**

SOLITARY BEES



Introduction. The common name comes from the fact that these are solitary and not social bees, and that they usually nest in the ground while some use natural cavities. These solitary bees can become urban nuisance pests when they nest in large numbers near structures, and they can sting. They are found throughout the United States. This discussion will be restricted to those species of these 3 families which nest in the ground.

Recognition. This group includes small to medium-sized bees with females and males that measure 1/8 to 3/4 inch long. They are usually dark; although some are metallic and some have pale bands on the abdomen.



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- Digger bees (Anthophoridae) measure 1/2 to 2/3 inch long, are robust and hairy and are darker than most strains of honey bees.
- Mining bees (Andrenidae) measure 3/8 to 5/8 inch long and are colored dark brown to black. Some species have the abdomen banded with pale hair and/or have pale hair on the body.
- Leafcutting bees (Megachilidae) range 1/4 to 1/2 inch long, are metallic (combinations of green, blue, bronze and copper) or dark colored and nest in existing cavities or excavate slender tunnels in the ground or in soft wood siding (e.g., T-111). These bees line their nests with circular pieces of leaves & chewed petals of blossoms from nearby plants.
- Sweat bees (Halictidae) are 1/8 to 1/2 inch long and often have a metallic (green, blue, bronze or copper) luster. Most species live in burrows they excavate into the ground. Sweat bees are attracted to human perspiration and will light on skin to drink droplets of sweat. They can give a mild sting, especially when being brushed away.

Similar Insects. (1) Honey bees (*Apis mellifera*) usually have the abdomen crossbanded with orange and brown and have fuzzy eyes. (2) Flower flies/hover flies (Syrphidae) are confused with sweat bees because they too will land on exposed skin to sip from droplets of perspiration. However, flower flies have just one pair of wings and can hover nearly motionless in mid-air.

Biology. These are solitary bees that do not live in colonies. Adults are queens or males. Ground burrows usually consist of a long vertical tunnel with lateral branches off of this tunnel to each cell. Sometimes large numbers of these bees will nest close together, particularly in bare-ground areas. They provision each cell with pollen and nectar. Both sexes overwinter in the nests.

Excavations in wood siding and shakes extend horizontally for a few inches and are partitioned into several developmental cells. Sometimes large numbers nest close together, often sharing the same tunnel to the outside. Developmental time (egg to adult) can be about 2 weeks.

Habits. Solitary bees have a habit of nesting in large numbers in the limited bare areas found around the foundation or yard. All of these bees visit various flowers for both pollen and nectar. Some species are very important pollinators of agricultural crops.



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Cultural Control & Precautionary Measures. The areas being utilized by solitary bees for nesting should be roped off and avoided until a Varmet Guard technician can treat the access holes in the soil or structural material that is infested.

A thin layer of mulch or re-seeding with grass will help eliminate the attractive bare-ground areas and serve as a long-term solution to discourage these bees.

Professional Control. These are beneficial insects and control should be avoided if possible. However, if control is necessary, a Varmet Guard technician will treat the bare nesting area and bee entrance holes with an appropriately labeled residual insecticide. Additional treatments are sometimes warranted, especially if treated soil is mechanically disturbed or wetted by rain showers or irrigation.