



# CAES

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## GROUND NESTING BEES

### Summary:

- Many bee species, both solitary and social, create nests in the ground.
- These bees, many of which are native, are important pollinators.
- Pesticides should not be used to control ground-nesting bees.
- Most ground-nesting bees are only active for a short time and can be safely ignored.
- Deter bee-nesting in problem areas by tilling soil, adding organic content and building up turf and vegetation density.



Most people are familiar with honey bees, which are social and live in man-made hives or in hollow trees. There are many other bees in Connecticut, nesting in the ground, in hollow stems, in wood, or in other habitats.

These are mostly native insects, and are very important pollinators. Over 80 species of these wild bees visit apple blossoms, and 20

species visit tomatoes and 12 species visit melons.

Often these bees are more efficient pollinators than honey bees, so the pollination benefit of having only few bees nesting in your yard can be significant. With the frequent die-offs of the European honey bee in recent years, preserving our native pollinators has increased in importance.

Among the bees that make nests in the ground, are bumble bees, in the family Apidae, which mostly nest in pre-existing cavities, dug by rodents or other small animals. Bumble bees are social, with colonies started anew each year by an overwintered queen bee.

There are many other bee species that nest in soil. The ones most commonly encountered in lawns are the colletids (cellophane bees) and halictids (sweat bees). The ground-nesting females in these families typically



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dig 1/4 to 1/2 inch wide, cylindrical tunnels in areas where vegetation is sparse and the soil is loose, sandy, and dry. The females construct chambers at the end of their tunnels, and provision them with nectar and pollen, to feed their offspring.



Cellophane bees are solitary – each female makes her own nest, although the nesting sites are often aggregated close together. Sweat bees may be solitary or social, with tunnels interconnecting underground. Andrenids (mining bees) are also ground-nesting solitary bees, and are important pollinators of fruit trees. Additionally there are ground nesting yellowjacket wasps and the difference, is that there will be many individuals entering and exiting a single entrance while with ground nesting solitary bees, just one individual using their one entrance.

In most situations, it will not be necessary to eliminate ground-nesting bees. These ground nesting bees rarely sting, choosing to withdraw from an encounter. These bees will only sting when stepped on or are cornered. It is better to ignore the bees and their tunnels. Usually their activity lasts three to four weeks, but if there are different species taking turns nesting at the same site, bees may be present throughout a summer season.

To discourage activity, or deter them on lawns or open ground, change the site conditions by tilling the soil, adding organic matter, and building up turf density. For foot paths, driveways, and plant beds, add mulch, pea gravel, or increase vegetation density using ground cover or other plantings.

**Pesticide treatment is not encouraged because these are important pollinating insects.**



If you want to encourage bees and other pollinators on your property, the most important things to do are: 1) avoid use of insecticides as much as possible, particularly when flowering plants are present to attract bees and other pollinators, and 2) plant a diversity of flowering plants, blooming over the entire growing season. The Xerces Society ([www.xerces.org](http://www.xerces.org)) provides lists of trees, shrubs, perennials, and annuals appropriate to our region that benefit bees, butterflies, and other native pollinators.

**Photos by Dr. Kimberly A Stoner**

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