



# THE Bee-Files

Dyce Laboratory for Honey Bee Studies  
Department of Entomology  
Cornell University  
Ithaca, New York

## Stinging Insects: Ground Nesting and Twig Nesting Solitary Bees



Solitary leaf cutter bee, *Megachile rotundata*,  
Karen Strickler, [www.pollinatorparadise.com](http://www.pollinatorparadise.com)

**Common name:** Ground nesting and twig nesting solitary bees

**Scientific name:** *Andrena* spp., *Colletes* spp., *Hyleaus* spp.,  
*Agapostemon* spp., *Augochlora* spp., *Megachile* spp.

**Also known as:** native bees, solitary bees, wild bees, mining bees, plasterer bee, yellow-faced bee, green metallic bees, digger bees, sweat bees

**Size:** varies by species, ranges from ¼ to ½ inch in length

**Commonly confused with:** wasps, hornets and honey bees

**Distinguishing marks:**

- often non-descript; usually small, black, slightly fuzzy
- some, such as the sweat bees, have bright metallic colors

**Distribution:** widely distributed

**Habitat:** variable, prefer sandy or well-drained soil

**Life cycle:** These bees survive the winter in the immature stage, emerging as adults in the spring or summer. Mating takes place within a few days after emergence. After mating, the female excavates a burrow in a sandy bank, soil or wood. She gathers pollen, forms it into a ball and then lays a single egg on it. She may repeat this several times within a single burrow, making separate cells for each egg. Finally, she seals off the burrow with mud or plant material. Inside the burrow, the eggs hatch, and the larvae feed on the pollen balls. Depending on the species, they may spend the winter as an immature or as an inactive adult. Although termed “solitary”, many of these bees build their nests in the same area, forming large, persistent aggregations. Most species are only active for a brief period each season, usually 1-3 weeks, after which, they disappear until the following year.



Solitary bee, *Andrena* spp. collecting pollen,  
Copyright (2001) David L. Green,  
[www.pollinator.com](http://www.pollinator.com), used with permission

**Damage:** Occasionally, a large aggregation of nests may intimidate passersby and cause cosmetic damage to lawns. These bees do little agricultural or structural damage (but see info on carpenter bees). Some bees, known as leaf-cutter bees, cut circles out of foliage for nest construction.

**Benefits:** Pollination of crops and native plants; solitary bees are responsible for several millions of dollars worth of pollination annually in the United States.



Solitary bee, *Andrena* spp., Peter Wirtz, personal web site [www.insectimages.org](http://www.insectimages.org)

**Management:** A homeowner need not be worried if they encounter these bees, since they are beneficial and practically harmless. Unless absolutely necessary, these bees should be left alone. If control is required, it is best to contact a professional.



Bright metallic green sweat bee Copyright (2001) David L. Green [www.pollinator.com](http://www.pollinator.com), used with permission

**Sting:** These bees will not usually sting unless threatened. They can often be observed at close range foraging on a flower or building a nest. Sweat bees received their name from the curious habit of licking sweat from people and animals. If you are stung, cooling the area with ice may be soothing.

**Remember!** Insect stings can elicit a life-threatening, allergic reaction in some individuals. Check with your physician to determine what symptoms require a visit to the emergency room. Never attempt any control measure if you have a known allergy to insect stings.

**Further sources:** O'Toole, C., and A. Raw. 1992. *Bees of the World*. Facts on File, Inc., 192 pages.

Buchmann, S.L. and G. P. Nabhan. 1997. *The Forgotten Pollinators*. Shearwater Books, 397 pages.

**Prepared by:** Kathryn Gardner, Carolyn Klass, and Nicholas Calderone

**Date Prepared:** July 2004