

Pest Profile



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Leafcutter bees (Megachile spp.) adult
Photo credit: David Cappaert; Bugwood.org



Leafcutter bee egg packets: M perihirta
Photo credit: R. Berg (BugGuide.net)

Common Name: Leafcutter Bee

Scientific Name: *Megachile spp.*

Order and Family: Hymenoptera: Megachilidae

Size and Appearance:

	Length (mm)	Appearance
Egg		
Larva		
Pupa		
Adult	Various	Generally, a dark body with light bands on the abdomen. Highly variable as one of the largest genera of bees

Type of feeder: Adults may feed on nectar, but do not feed on vegetation. Adult female leafcutter bees will cut smooth, semicircular pieces from leaves to use in the formation of nests in which eggs will be laid.

Lifecycle: This solitary bee has a relatively short life span with females living about 2 months and males dying soon after mating. Most leafcutter bees only have a single generation each year. Female leafcutter bees will construct tube-like tunnels from leaf material and within each tube create individual nest cells in sequence in which the female will lay a single egg. Each nest cell is provisioned with nectar and pollen for the larvae to feed after hatching. The larvae will develop and pupate within the nest cell only to emerge the following Spring.

Host plants: Leafcutter bees in North America will cut leaf material from a variety of broadleaf, deciduous plants though they appear to prefer leaves from rose, green ash, lilac and Virginia creeper. Leafcutter bees are effective pollinators of many flowers, fruits, and vegetables. Many species have been partially domesticated for use as commercial pollinators, e.g., the European species *M. rotundata*,

which is a more effective pollinator than the domestic honeybee and was imported into the U.S. in the 1930s to pollinate alfalfa.

Description of Damage: Most adult females of this family will cut leaves of various plants and use the leaf fragments to create nest cells in which eggs will be deposited in the ground, rotted wood or in the stems of pithy plants such as rose. The damage to leaves is generally cosmetic with little impact to the plants overall. The nest excavation behavior often will cause concern but doesn't generally impact the plant's health as the leafcutter bees stay within the pithy region of the stem, and thus will not girdle the plant.

Management: Leafcutter bees are excellent pollinators, thus control measures are not warranted or generally effective. Suspectable plants may be covered with a fine mesh such as cheesecloth. There are many natural enemies of the leafcutter bee including many parasitic wasps, blister beetles, and velvet ants.

References:

Cranshaw WS. Leafcutter bees – 5.576. Colorado State University Extension. December 2012. Retrieved October 3, 2019, from <https://extension.colostate.edu/topic-areas/insects/leafcutter-bees-5-576/>

W Kemp, Bosch J. Development and Emergence of the Alfalfa Pollinator *Megachile Rotundata* (Hymenoptera: Megachilidae). Annals of the Entomological Society of America. 2000;93(4): 904-911.