



NEWSPAPER ARTICLES

A Different Kind of Bee (May 27, 2023)

by Anne Skinner, Tulare/Kings Counties Master Gardener

Have you noticed precise half moon shaped “bites” in the leaves of an ornamental plant or tree? The plant is otherwise looking healthy and there is no evidence of a visible insect on or under the leaves. Who is the mystery leaf cutter? Before expecting the suspect to be a pest and applying an insecticide, check out possible culprits on the UC IPM (Integrated Pest Management) website. Two of the most common plants with this leaf issue are redbud trees and roses. When you look up the plant on the website, there are lists of common problems with pictures.



The most likely suspect here is the leafcutter bee. California has 1600 identified bee species, with only a few nonnative species, such as the European honey bee. The leafcutter bee is from the family *Megachilidae*, which also includes mason and cotton bees. Leafcutter bees are solitary, meaning they do not form colonies. They do not have a hive to protect and are not aggressive toward people or pets. They also are well-adapted to our area and are great pollinators. This all sounds like the perfect critter to have in your garden. The leafcutter bee does have that one distracting habit of “cutting”- actually, biting – half-moon shaped pieces from plant leaves.



The Use for all those leaf pieces

The cut leaf fragments are used to form nest cells. The bee forms this nest for its eggs in a hollow tube such as a tunnel from wood-boring insects, hollow plant stems, tree holes or even manufactured tunnels. I have heard of a perfectly formed tube of leaf cuttings found in the tubing to a fountain pump when the homeowner wondered why it was clogged after sitting unused for the winter. The leaf pieces are cut using 3-5 teeth and special areas on the mandible (jaw). A leafcutter’s head is larger than most bees for the extra muscles to chew through the leaves. Leafcutter bees only tunnel in soft rotted wood, thus do not damage houses or structures. The tunnel is the diameter of a pencil and 4-8 inches long. Starting in late spring through late summer the nest is carefully lined with 1/4- to 1/2-inch pieces of leaves or petals.

Each egg is laid in a cup shaped chamber, left with a pollen ball and capped with more leaf material. The female lives about 2 months and lays 35-40 eggs during her lifespan. Each nest site can have 20 cells tightly packed. The larvae feed on pollen in the nest and pupate over the winter, to chew their exit from the nest as an adult in spring.

The leafcutter bee is an important pollinator

The bee is mainly black and similar in size to a honey bee, but has pollen collecting hairs on its abdomen rather than hind legs. The pollen can be seen as cream, pale yellow or orange on their underside as they fly. They are an essential pollinator of wild plants. The non-native alfalfa leafcutter bee is raised commercially to pollinate alfalfa grown for seed. A study in alfalfa by the US Agricultural Research Service noted one leafcutter bee can do the pollination of 20 honey bees. They also pollinate blueberries, legumes, carrots, onions and sunflowers. They prefer soft, flexible leaves and flower petals for their nests, but will use almost any broad leaf deciduous plant. Some favorites are alfalfa, clover, buckwheat, roses, peas, lamb’s quarters, lilac, redbud tree and hosta’s.

The bee does not feed on the leaves, only pollen, so the leaf cuts are cosmetic.

The leafcutter bee always makes very neat circular cuts in the border of the leaf. If the leaf has jagged or ripped edges, this is another insect and bears more research.

The bees can be kept from susceptible plants with floating row cover in late summer when they are most active. When pruning roses, sealing the exposed pith in the center of the cane with white glue reduces nesting in rose canes.

How can you help the leafcutter bees?

Add a diverse selection of flowering native plants to your garden which provides nectar and pollen sources for the bees and their young. Avoid spraying pesticides or insecticides in the morning when native bees are most active. A resident population of native bees can be maintained by growing sunflowers, blueberries and other of their favorite crops every year. For more information:

<https://ipm.ucanr.edu/PMG/GARDEN/PLANTS/INVERT/leafcutbes.html>

A log drilled with 1 cm sized holes or bundles of hollow canes provide bee condos. Avoid using any wood with varnish, preservatives or chemicals. The Xerces Society, a nonprofit insect preservation group, has other suggestions for maintaining a habitat for native bees.

We need good pollinators, so some missing leaf pieces are a small price to pay to keep these industrious and helpful bees around.

The Tulare-Kings Counties Master Gardeners will answer your questions in person:

Visalia Farmer's Market- 1st & 3rd Saturdays, 8-11 am, 2100 W. Caldwell Ave (behind Sears)

May 27 – Go Native! @ Kaweah Oak Preserve, 29979 Road 182, Exeter, 9:30 am – 3:30 pm

June 3 -Visalia Farmers' Market, 2100 W. Caldwell Ave (behind Sears) - 8-11 am

June 3 - Ace Plant Clinic, 2230 W Walnut, Visalia - 10 am - 1 pm

Questions? Call the Master Gardeners:

Tulare County: (559) 684-3325, Tues & Thurs, 9:30-11:30;

Kings County: (559) 852-2736, Thursday Only, 9:30-11:30 a.m

Visit our website for past articles, sign up for our e-newsletter, or email us with your questions:

http://ucanr.edu/sites/UC_Master_Gardeners/

Facebook: <https://www.facebook.com/mgtularekings14/> ; Instagram at: @mgtularekings

NEW! Signup for our E-Newsletter on our Home Page! https://ucanr.edu/sites/UC_Master_Gardeners/