



NEWSPAPER ARTICLES

Caterpillars, Worms, and their Damage, OH MY! (July 15, 2023)

By Pam Wallace, Tulare-Kings Counties Master Gardener

Caterpillars are the larvae (the immature form of an insect) of butterflies and moths. They damage plants by chewing on leaves, flowers, shoots, and fruits or sometimes boring into wood. Most of the damage occurs when the caterpillars are very small, and since most are light green in color, they may be extremely hard to find. But look closer, and you'll likely notice lots of little black specks, which is caterpillar excrement or frass.

Here are some of the common caterpillars you might encounter in the Central Valley.

Hornworms



Hornworms are commonly found on tomatoes, but they have also been found on potatoes, eggplant, and peppers. These are large (4-5 inches long), light green with white stripes down the sides, and a horn-like protrusion on the rear. Their color and shape blend in with tomato leaves and stems, allowing them to escape notice--until you find entire shoots skeletonized or huge gnawed holes in the fruit.

Loopers

Loopers feed on a wide variety of plants. Loopers are light green with white stripes and arch their backs as they crawl. They eat irregular holes in leaves, most often older leaves, but can also bore into fruit or vegetables.



Armyworms



Beet armyworms have many fine, wavy, light-colored stripes down the back and a broader stripe along each side on a dull green background, but the color can vary. Western yellow-striped armyworms are almost black, with fine, yellow stripes on the side. They will feed on both leaves and fruit, causing irregular-shaped holes.

Tobacco budworms

Tobacco budworms (also known as the geranium budworm) are commonly found on petunias, geraniums, and nicotiana but can also damage roses and other plants. The young larvae burrow inside flower buds, leaving irregular or round holes. High densities of larvae of any stage can devour all the buds and flowers, and flower production may cease completely with a severe infestation. The caterpillar is under 1" long, green, yellow, or brown with white or black markings.



Red-humped caterpillar

The mature worm is about 1½ inches long with an orange/red head and a yellow spiny body with white, brown, and black stripes and two prominent spines on the rear. They can consume an entire leaf, leaving only the tough woody veins. Trees most commonly attacked are liquidambar, walnut, and plum, although it is also found on almonds, apples, apricot, birch, cottonwood, cherry, pear, prune, redbud, willow, and others. Even if completely defoliated, trees that are otherwise healthy can be expected to recover.

Corn earworm, Tomato fruitworm

The corn earworm or tomato fruitworm is a common pest found on many vegetables and flowers. It's a small greenish worm with a black head and short, whisker-like spines. They feed on leaves, buds, and flowers of many vegetable crops.





Pinworms

Tomato pinworms are tiny and have a mottled pattern. The color varies from gray to yellowish, with red or purple coloring around each segment. Most will feed between leaf surfaces before attacking fruit, creating a blotch, and they can fold part of the leaflet over, creating a little shelter. They bore into the fruit near the stem. Entry holes are considerably smaller than other worms, and dry brown frass is often visible around the stem end.

Cabbageworm

Cabbageworms are green and very hairy, with an almost velvet-like appearance. Older larvae may be up to 1 inch long and often have faint yellow-orange stripes. Cabbageworms chew large irregular holes in leaves and bore into fruit and vegetables.



Now that we've gone over the different types of caterpillars and worms, what should be done about the damage?

1. Take a closer look.

First, consider the extent of the damage to the plant. Don't forget that caterpillars and worms will eventually turn into some of our most important pollinators: butterflies and moths. Of course, you don't want your entire plant or veggie crop to be consumed, but in our eco-conscious gardening world, it's wise to consider tolerating the damage.

2. Hand-picking

If you are noticing extensive damage to your plant, first try hand-picking. Early morning is best when the worms are most likely to be active. Many worms are small, and their color blends into the plant, making them hard to find. Sometimes a spray of water causes them to wriggle, which will attract your notice.

3. Chemical control

Don't reach for chemicals immediately, but only if your plant is in danger of defoliation or if your veggies are so damaged you can't enjoy them. Please avoid broad-spectrum insecticides that will also damage beneficial bugs like bees, lacewings, and ladybugs.

Bacillus thuringiensis subspecies *kurstaki* (Btk) is a microbial insecticide that kills only caterpillars. Usually sold under trade names such as Worm Ender or Caterpillar Killer, it's safe to use near bees, beneficial insects, and wildlife. To be effective, it must be sprayed every 7-10 days. Bt produces a toxin in the digestive tract of caterpillars and must be consumed by the worm to be effective.

Spinosad is a naturally occurring organism synthetically manufactured and sold under several trade names. Spinosad works by contact with the insect and more effectively by ingestion, as insects feed on the foliage.

4. Natural enemies

Predators of caterpillars include birds, spiders, parasitic wasps, assassin bugs, lacewings, and predaceous ground beetles. Planting herbs such as parsley and coriander or flowers such as sweet alyssum provides a habitat for these predatory insects. Setting out a feeder or birdhouse near the plants you want to protect will encourage birds to pick up a worm for a snack.

In closing, remember that hand-picking and natural enemies often provide sufficient control. Use insecticides only when damage is intolerable and nonchemical methods haven't worked. For more information and pictures of the various caterpillars, visit the UCANR website: <https://ipm.ucanr.edu/PMG/invertebrates/menu.caterpillars.html>

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)

Hanford Farmer's Market – 4th Thursday, May – Sept, 5:30 – 9:00 pm, 219 W. Lacey, Hanford

July 15 - Diseases of Roses Presentation, Tulare Library, 11 am

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

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