



Chewers in the Night (or What Ate My Seedlings?)

by Cathy Ronk, UC Master Gardener

Disappointment only begins to describe my reaction when I checked my newly planted cucumber seedling and my two pony packs of zinnia seedlings. Nearly all the leaves and parts of the zinnia flowers were chewed. Did snails or slugs inflict this damage on my tender plants? Not likely with the lack of spring rain, and because I saw no telltale signs of snail/slug slime paths. Armed with my flashlight and determination, I went out to my garden after dark to find the guilty culprits. There they were – EARWIGS - scurrying around eating like diners at an all-you-can-eat buffet!



Adult earwig

The most common earwig species in California is the fast-moving European earwig, *Forficula auricularia*, accidentally introduced from Europe into North America in the early 1900s. The adult earwig's body is about 1/2 to 3/4 inch long and is a shiny, reddish-brown. The pair of noticeable appendages that resemble forceps (or pincers) at the tail end of its body aids in accurate identification. Most species have wings, but they seldom fly. Juvenile earwigs look like adults, but they are smaller and lack wings.

Female earwigs lay masses of 30 or more eggs in cells dug in the ground in the fall and winter. Eggs hatch into small, light brown "nymphs" that remain in the cell while their mother tends them, feeding and protecting them—very unusual in the insect world. They develop from egg to adult in four nymphal stages through gradual metamorphosis, similar to grasshoppers. Usually only one generation is produced each year. Part of the earwig population hibernates in the winter in pairs beneath the soil. In our hot San Joaquin Valley, earwigs are generally inactive during the summer.



Bowl of earwigs

Earwigs hide in cool, dark, moist places during the day and feed at night. Common hiding places are mulch, wood piles, leaf litter, dense vegetative growth, or under bark. Because European earwigs feed on a variety of dead and living organisms, they are considered both a beneficial insect and a damaging pest. These omnivores can be effective predators of aphids, mites, and insect eggs. Earwigs also eat decomposing plant material.

Unfortunately, earwigs can devastate seedling vegetables, annual flowers (zinnias, marigolds, dahlias, etc.), and damage maturing soft fruit such as apricots, strawberries, raspberries, or blackberries. On sweet corn, earwigs feed on silks, preventing pollination. Contrary to popular myth, earwigs usually don't attack humans, although they can bite if trapped in clothing or sat upon.

Occasionally, earwigs enter buildings when outdoors becomes too dry, hot, or cold. Or, they can hitchhike on laundry baskets, newspapers, cut flowers, lumber, etc. Sweep or vacuum them. Check for entry points and seal them. Earwigs will eventually die indoors due to lack of food.

Damage caused by earwigs is usually minor, unless their populations are high—as in certain areas of my garden. I initiated a very successful trapping plan, using low-sided cans, such as empty tuna cans, and aluminum pie plates. Each night I filled the cans with $\frac{1}{4}$ to $\frac{1}{2}$ inch of canola oil and placed them on the ground, hiding them amongst the plant material. The drowned earwigs were discarded in the morning. A 2:25 minute video entitled “How to Trap Earwigs” is available to watch at www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74102.



Earwig goop

Complement trapping by removing earwig havens like garden debris, wood, and weeds. A sticky barrier, such as Tanglefoot or petroleum jelly, can be applied on the base of woody plants. Birds, ducks and chickens will eat many earwigs. Other natural enemies include toads and tachinid flies. Plant fennel, dill, cilantro, and alyssum to attract the tachinid fly.

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