

insect answers



EUROPEAN EARWIG PREVENTION AND CONTROL

The European earwig, *Forficula auricularia*, is sometimes a serious pest in various parts of Washington. It is a pest chiefly because of its disagreeable habit of concealing itself in and around houses. It is also destructive to garden vegetables and flowers and is occasionally a pest of bush and tree fruits.

The damage to gardens is often serious. Frequently, seedling vegetables are completely destroyed. Among the common plants subject to severe foliage injury are bean, potato, beet, cabbage, cauliflower, pea, dahlia, zinnia, sweet william, and fig. Many flowers are injured by earwigs feeding on the petals and stamens.

Typical injury of earwigs appears as numerous, small, irregular holes in the leaves. Earwigs occasionally eat numerous holes in the leaves of orchard trees and berry bushes. Adults tunnel into ripe apples, prunes, and peaches. They may also damage ornamental trees and shrubs.

Earwigs feed on decaying plant material and on occasion demonstrate predaceous behavior. For

example, European earwigs are known to feed on the apple aphid, an orchard pest. This behavior has been investigated by some Washington State University researchers as a potential for biological control.

Appearance

Full grown earwigs are about $\frac{3}{4}$ -inch long and reddish brown. The young look much like the adults. A distinctive feature is the pair of prominent forceps at the rear of the body. Those of the male are strongly curved.

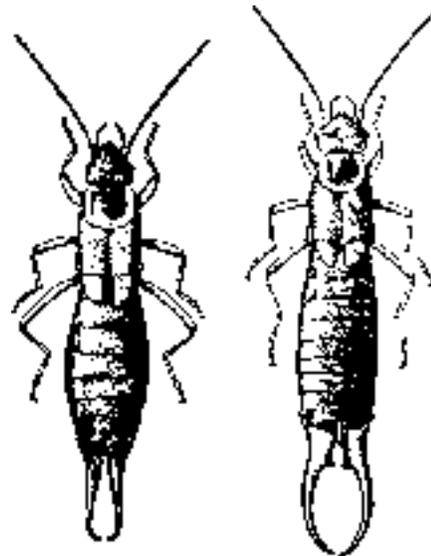
Earwigs have short leathery forewings under which are tucked the rear pair of radially plaited membranous wings. When expanded, these rear wings look like tiny fans.

Dispersion and Habits

The earwig is active at night and hides by day. It occurs in the pantry, garbage can, and garden. In its search for a hiding place or for food, it gets into baskets of fruit and garden vegetables, cut flowers, laun-



An earwig and the foliar damage it caused.



Adult European earwigs. Male, right; Female, left.

dry baskets, and cushions. Thus, earwigs are easily transported from the garden into buildings where they are extremely annoying.

Some species of earwigs have scent glands on their abdomens. A foul-smelling odor can be released from these scent glands, and is probably used for defense.

Incidentally, the name earwig comes from an old superstition that the pest invades the ears of humans. This is unfounded. Earwigs are basically harmless except for the minor nip that they can inflict with their abdominal forceps when disturbed.

Life History

Female earwigs lay small, pearly white eggs in masses of 20 to more than 50. Eggs are laid in the fall and spring. The eggs are deposited in the upper 2 to 3 inches of soil. Female earwigs and some males survive the winter. Shortly after hatching in spring, the young pure-white nymphs may be found in the soil. As they get larger, they take on an olive greenish color and venture forth at night during the balance of the warm season. In late summer, the nymphs become adults.

It is interesting to note that some earwigs are semisocial and demonstrate parental care. Females will not only stand guard over their egg clutches, but will constantly lick them, presumably to prevent fungal infections. Even after hatching, the mothers will guard the young “earwiglets” until they wander away.

Control

Earwig control should be carried out wherever this pest becomes numerous. Pest management options cover a range from partial control (physical methods) to near-complete control (extensive insecticide application program). Both physical (crushing) and chemical meth-

ods can be used inside or outside of the home. Select the method or combination of methods best suited to your circumstances. For serious infestations, contact a commercial pest control operator.

Home Indoor. Use a cyfluthrin-containing pesticide registered for indoor home use. Apply according to the directions, and only in areas where earwigs have been seen and physical control has only been partially successful.

Home Outdoor. Use either carbaryl (Sevin) as a spray or bait, or cyfluthrin as a spray or granular treatment, outside the home. Apply to the ground or only to earwig hiding places. Be cautious with carbaryl baits that also contain metaldehyde, because this substance is toxic to pets. If baits are used, place them in areas that are not accessible to pets.

Earwigs naturally collect under boards, trash, or other similar outdoor hiding places. This behavior makes the use of artificial hiding places, such as burlap bags, newspapers, or cardboard, particularly successful. Place the artificial hiding places near areas where the earwigs have been known to occur. Whether they utilize natural or artificial hiding places, the earwigs will congregate in numbers based on the size of the hiding place. Quickly remove the cover of a hiding place, and then either physically destroy the earwigs or rapidly spray the area with a suitable pesticide. On tree trunks, wrap corrugated cardboard around the trunks to collect earwigs as they travel from ground to tree branches. At a suitable time (when they have collected inside the cardboard), remove it from the tree and physically destroy the earwigs.

For apricots, cherries, peaches, plums, and prunes in home orchards, apply carbaryl (Sevin) as manufacturer suggests around bases of trees and on trunks. In commercial orchards, use carbaryl as listed in EB0419 *Crop Protection Guide for Tree Fruits in Washington*.



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Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin and keep them out of the reach of children, pets, and livestock.

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