

EARWIGS

Dermaptera: Forficulidae

By Eric Day

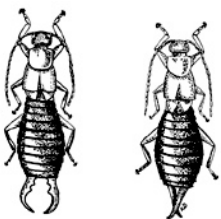
DESCRIPTION: Earwigs can be up to 1 and 1/4 inches (25.4 - 31.8mm). Most are Red-brown to black in color. Adult earwigs are flattened insects, up to 1 and 1/4 inches in length, and light red-brown to black. Some species are wingless but others have a pair of leathery forewings covering a few segments of the abdomen and the membranous hind wings, which have the tips protruding. The forceps-like appendages at the end of the abdomen are strongly curved in the male. The female's appendages are smaller and less curved. The forceps are used primarily for defense and during courtship and cannot harm people. Earwigs are primarily scavengers on dead insects and rotted plant materials. Some species are predators. Only a few of the winged species are good fliers. They are often transported great distances in plant materials and occasionally in other freight. The most common earwig in Virginia is the European earwig, *Forficula auricularia*.



European Earwig. Eric Day, Virginia Tech.

HABITAT: Most commonly associated with mulch and leaf litter, they prefer moist locations with high amounts of organic matter; ironically it's often exactly the same as what is recommended for good plant growth. They are active at night and some species are attracted to lights in large numbers. During the day they usually find shelter beneath stones, boards, sidewalks, or debris. Earwigs are rapid runners and migrate short distances in this manner.

LIFE CYCLE: Eggs are laid in small batches or clutches in a chamber two to three inches beneath the soil surface. The mother guards the eggs and the newly hatched young. After the first molt, the young leave the nest and fend for themselves. They differ from the adults in color pattern, shape and size of forceps, lack of wings, and body size. The young usually mature in one season. Most species in this country have one generation per year, overwintering as eggs or adults in the soil. Eggs and young require moisture. Heavy rains are detrimental to both forms, as are rapid temperature changes.



Pair of Earwigs:
male on left and
female on right.
Approximate actual
size

TYPE OF DAMAGE: Although most are scavengers, some feed on living plants and often become pests in greenhouses and field crops.

CONTROL: Chemical control consists of applications made outdoors, since the problem originates outdoors, a parameter spray 5-10 feet outside the house will reduce the numbers that get inside. Removing debris that shelter earwigs may enhance the effectiveness of chemical treatment. Check to make sure seals on window and doors are intact and not allowing earwigs inside. Rake and reduce mulch so that it's thinner and dries out quicker. If earwigs have gained entrance to a building, indoor treatment may be desirable, although those indoors will die eventually without treatment.

OUTDOOR CHEMICAL APPLICATIONS: Apply insecticides around the building foundation, in sub-floor crawl spaces, and to flower beds and turf within a couple of yards of the building. Mulches in such flowerbeds should be treated thoroughly from top to bottom. Apply sprays in late afternoon if possible so that residues are fresh when the earwigs become active in the evening. Earwigs are protected during the day when they are beneath debris or below the soil surface. Emulsifiable concentrates or wettable powders can be used with good results. Apply insecticides at the rate recommended on the label, but use sufficient water so that the toxicant is carried down to the zone where the earwigs are active.

INDOOR CHEMICAL APPLICATIONS: Indoor treatment is only a supplement to outdoor treatment to eliminate those earwigs already indoors. Indoor treatment alone will not solve the problem. Use aerosol insecticides registered for indoor use. Indoor treatment generally consists of residual sprays applied to baseboards, beneath cabinets, and other hiding places at floor level. For most earwig treatment indoors, insecticides used for cockroaches are effective.

INTERESTING FACTS: Some tunnel as deeply as six feet into the ground to escape the cold. The name earwig is from a European superstition that these insects entered the ears of a sleeping person and bored into the brain. This belief is totally unfounded.