

Control of the

European Earwig



Extension Circular 655

February 1959

*Federal Cooperative Extension Service
Oregon State College
Corvallis*

Control of the European Earwig

H. H. CROWELL AND R. W. EVERY
*Associate Entomologist and Extension Entomologist
Oregon State College*

The earwig, a native of Europe, was first noted in America in Rhode Island in 1911. Since then it has appeared in many parts of the country and is known in most of the western and mountain states. Heavy infestations may damage flowers, vegetables, fruit, and other plant life. The greatest objection to earwigs, however, is their presence in and about the house and in flowers. Dahlias, roses, and other large-blossomed flowers are favorite hiding and feeding places.

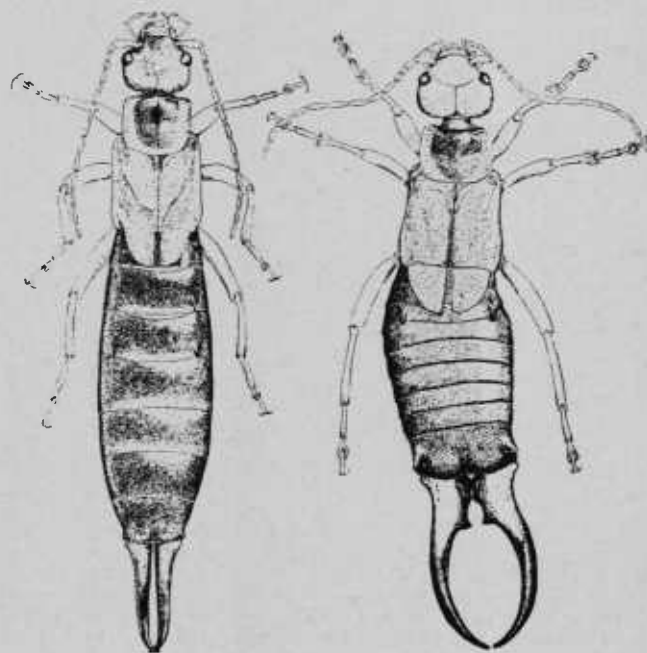
Adult earwigs are reddish-brown insects, about three quarters of an inch long with curved forceps at the rear of the body. The forceps are harmless, although the insect will try to pinch with them when picked up. Young earwigs are much the same shape, but are smaller and greyish-brown in color.

Life History

Eggs are laid in the ground in late fall and early spring. The adult female "broods" over the eggs, and also over the newly hatched nymphs in the spring. After the nymphs have grown slightly they leave the brood chamber in search of food. The adult stage usually is reached by July. Many earwigs live in trees where they feed on young leaves and lichens, but the insects also eat animal matter; in fact, they become cannibalistic when confined. Activity is principally at night, as earwigs seek sheltered hiding places during the day.

Natural Control

When the earwig has become established, its numbers usually increase rapidly. The population stays at a high level for several years, and then subsides, the insect becoming only an occasional nuisance. A number of years ago the earwig's principal European enemy, a small parasitic fly, was introduced, mass reared, and liberated in most counties of Oregon. This parasitic fly is smaller than the housefly, is shortlived, and does *not* seek human habitations and barnyards as the housefly does. It finds hiding earwigs and deposits eggs in their vicinity. The eggs hatch almost immediately and the tiny fly maggots crawl to the earwigs and bore into their bodies. For several weeks the maggots feed on the internal organs of the earwigs then bore exit holes and leave their hosts. This internal injury makes the earwigs incapable of reproducing and they soon die. The parasite maggots seek shelter in leaves and trash where they spend the winter in a resting stage called the puparium. Emergence of the adult



Adult female European earwig (left); adult male (right).

flies takes place the following April and the cycle is repeated.

Although this parasite has helped reduce the number of earwigs, natural control of insects is a fluctuating thing, and the earwig continues to be a nuisance in some years. Prolonged wet periods in the spring when the young earwigs are hatching help keep the earwig population at a low level.

Artificial Control

Poison bait

Earwigs are strongly attracted by fish oil—a fact well known by campers who have slept in tents waterproofed with fish oil-soluble materials. This liking for fish oil and the insect's habit of frequenting sheltered places have been considered in developing a poison bait, which is very effective when properly used. The formula for this bait is as follows:

Bran	12 pounds	(Mix dry bran
Sodium fluo-		and sodium fluo-
silicate	1 pound	silicate; add fish
Fish oil	1 quart	oil and mix again.
		Use no water.)

This amount of material will bait an area of about 8,000 square feet. About 35 pounds are needed to treat an acre. Applications should be made in the evening. The best places to scatter bait are beside fences, hedges, wood-piles, around foundations of buildings, in flower beds, under and in the crotches of trees, along the porches of the house and on the lawn. Avoid sprinkling the lawn for two days after application of bait. In heavily infested areas, only a cooperative community baiting program will be effective for long because of the migratory habits of the pest. Most feed and seed stores sell ready-mixed earwig bait.



Female of the European earwig with eggs and recently hatched young.

Caution—This bait is poisonous and should be kept away from small children. Chickens and birds must eat a considerable amount of it to be harmed.

Insecticides

DDT is effective for the control of the European earwig. This insecticide does not kill rapidly but will remain effective for weeks in sheltered areas. Use DDT as a 10% dust or a spray containing about 8 to 10 pounds of 50% wettable DDT powder per 100 gallons of water (or 1 cup of 50% wettable DDT powder to 1 gallon of water). Do *not* use an oil solution of DDT (such as household fly sprays) in the garden, as the oil will injure plants. Malathion will kill earwigs quickly, but because of

its short residual action, it is most effective as a contact poison. It should be applied in the late evening so earwigs will come in contact with it as they come out of hiding for their nightly foraging. Use malathion as a 5% dust or a spray prepared by mixing 1 cup 25% wettable powder; or 2 tablespoonsful of 57% emulsion concentrate per gallon of water.

DDT and malathion dusts or sprays should be applied to the same general areas suggested for baits, under shrubs, around foundations of buildings, trunks and crotches of trees, edges of walks, etc.

Remember that insecticides are poisonous to human beings, too, and should be handled and stored with caution.

Note: This leaflet is revised from and is to supersede SCI 453, an earlier publication on the same subject.

Cooperative Extension work in Agriculture and Home Economics, F. E. Price, director. Oregon State College and the United States Department of Agriculture cooperating. Printed and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914.