

Community IPM

Earwigs: No Big Deal

Virtually harmless to humans, earwigs do not spread diseases and their mouths are too small to bite. Some species will use their rear pincher-like appendages to protect themselves, giving them a fierce reputation exaggerated beyond their actual threat. Most earwig species live in moist areas outdoors where they feed on decaying vegetation and other arthropods. These common insects are found worldwide, with the greatest diversity located in the tropics. Their diversity includes species that are blind and feed on the dead flakes of skin on giant rats in Africa, while other species live on hairless bats in the Philippines.

Did You Know... ?

- **Folklore:** Earwigs are so named for the superstition that they enter ears of sleeping persons and burrow into the brains. Fortunately, this is an urban myth with no supporting evidence. These insects may appear menacing, but in reality are harmless.
- **Namesake:** Earwigs belong to the insect order Dermaptera, which literally means “leather wing”, and refers to their thickened or skin-like forewings. The European earwig, common in the northeast, belongs to the family Forficulidae, which means “little scissors” and refers to the pincher-like structures extending from their abdomen.
- **By the numbers:** There approximately 1,800 species of earwig in the world. Twenty-two species are found in the United States, 12 of which are introduced from other countries. Five species represent pests in homes.
- **Mother Knows Best:** Most female earwigs show maternal care for eggs and early instar nymphs. Females may “lick” eggs to keep them moist and free of mold, and may feed regurgitated food items to early instar nymphs.

Identification

Earwigs are long, slender, somewhat flattened, brown or black insects. Species present in the northeastern United States range in size from 1/8 to 3/4 of an inch and have short wings that do not cover their entire abdomen. The defining trait for this group is the presence of pincher-like appendages extending from the rear of both males and females. These structures likely play a role in mating, parental care and may be used in defense against predators.



European earwig (*Forficula auricularia* Linnaeus) male. Photo: G. Alpert.



The male has strongly curved pincers. Photo: G. Alpert.



The female has straight pincers. Photo: G. Alpert.

Earwigs are active at night and can be found during the day in dark, moist places. Outdoors this includes under rocks, boards, and decaying wood, while indoors earwigs are common in damp basements, overwatered potted plants, and in bathrooms.

Biology

Adult earwigs overwinter and mate in the spring. Females dig a burrow and create a cell in the soil where she will lay between 20 and 60 eggs. Before depositing eggs, the female will drive out her mate, later providing maternal care for her offspring by keeping eggs mold-free and feeding early instars.

Most earwigs feed on decaying plant material at night, but a few species feed on live plants and yet others are predaceous. The European earwig, which is common in the northeast, prefers to feed on green plants and can cause minor damage to garden plants.

Earwigs can become a problem in urban areas when they invade buildings. Several dozen to several hundred individuals can be found in one place due to aggregation pheromones. However, for this to occur, the conditions for earwig survival must be present. This includes a high moisture content and a suitable food source.

Management

The key to managing earwigs in buildings is to eliminate moisture conditions that favor their development. These conditions are most often found in basements, crawl spaces, and associated with mulch in landscape plantings or other organic debris adjacent to the home. Increasing ventilation and using thick plastic in basements and crawl spaces can help remediate moisture problems. Outdoors, a vegetation free zone of

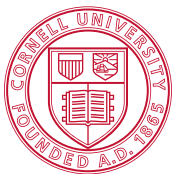
two feet around the building with no plants, mulch or organic debris (such as leaves, wood, or compost) can be used to reduce moisture around the foundation and deter pest populations.

Cracks and crevices in the foundation or gaps around windows and doors are common entry points for earwigs and other pests. Because earwigs typically breed in moist areas outdoors, sealing openings on both the inside and outside is an important step to preventing pest entry. Sticky or glue traps can be used in basements and other areas to monitor for earwigs, and to determine if entry points have been successfully sealed.

Occasionally earwigs are carried directly into a facility with the delivery of potted plants, firewood, or other materials. When the substrate dries out, earwigs leave in search of a more humid environment and food. In this case, it is important to screen and identify temporary sources of infestation to avoid unnecessary pest introductions.

In earwig management, the use of pesticides as either an outside perimeter treatment or as an interior treatment is not advised. Although pesticide applications can be timed to enhance contact with pests, product breakdown over time may limit its effectiveness, especially in the moist conditions favored by earwigs. Therefore, efforts to reduce moisture, seal entry points and trap earwigs on sticky traps represent the best course of action. In areas with very high earwig populations, homeowners can place a rolled up newspaper outside over night. This may attract earwigs looking for a moist hiding place. In the morning, the newspaper can be bagged and discarded to remove earwigs from the site.

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Produced by the New York State Integrated Pest Management Program, which is funded through Cornell University, Cornell Cooperative Extension, the New York State Department of Agriculture and Markets, the New York State Department of Environmental Conservation, and USDA-NIFA. Design by Karen English, New York State IPM Program. Cornell Cooperative Extension provides equal program and employment opportunities. © 2015 Cornell University and the New York State IPM Program. Posted 2/2015 at www.nysipm.cornell.edu/factsheets/buildings/earwigs.pdf

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