ENTOMOLOGY NOTES No. 21
PUBLISHED AS A SERVICE OF
THE MICHIGAN ENTOMOLOGICAL SOCIETY

Earwigs in Michigan

Earwigs are members of the Order Dermaptera, a group of insects that are distant relatives of the Orthoptera (roaches, crickets, grasshoppers and katydids). The most noticeable physical characteristic of earwigs is the presence of two pincer-like appendages that emerge from the tip of the abdomen (cerci, or forceps). Males usually have longer, curved cerci than females' shorter straight forceps. Some species can inflict a painful pinch with their cerci, but most species are harmless if handled. The cerci are used for defense and for capturing prey. Contrary to the old wives' tale, they do not crawl into your ears at night.

These insects do not bite humans. They are mainly scavengers, feeding on organic material, garbage, and dead insects. Some herbivorous species can damage young crop plants and ornamentals, especially when the earwigs occur in large numbers. Some species are predatory on other insects, especially larvae. Note that earwigs are somewhat flattened and very flexible. This enables them to hide in all sorts of nooks and crannies by day, and come out at night to feed. Their nocturnal habits explain why many people never see them until they turn over a board, a piece of siding, or almost anywhere that might provide a good hiding place. The adults have a pair of wings beneath the leathery wing covers and are capable of flying.

Species in Michigan

There are three species of earwigs in Michigan; *Labia minor* (L.) (Family Labiidae), *Forficulua auricularia* L., (Family Forficulidae), and *Doru aculeatum* Scudder (Forficulidae). *Labia minor*, a scavenger and a predator, is an introduced species. Its small size (less than 1 cm) and habit of being attracted to lights sometimes gets specimens misidentified as rove beetles (Staphylinidae). *Doru aculeatum*, a native species, hides during the day in leaf bases of sedges and grasses in marsh areas. They apparently are predaceous and also scavenge for food at night.

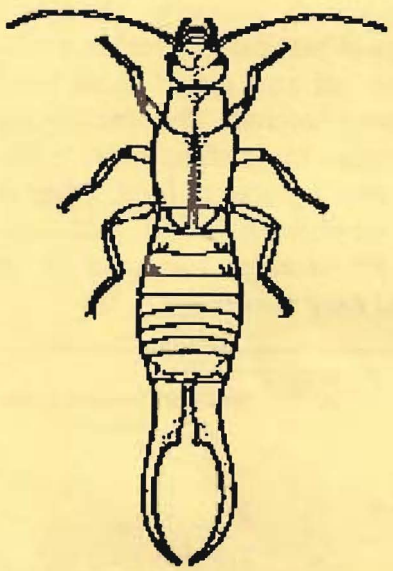
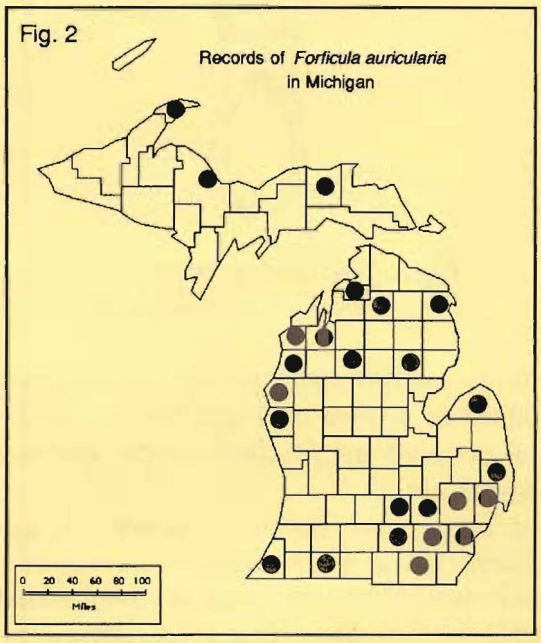


Fig 1. The European earwig, *Forficulua auricularia.*

The European earwig (Figure 1), *Forficula auricularia*, is the most common earwig in eastern North America. It became well established in Rhode Island in 1912, and has since spread throughout the eastern states, and become established in Michigan within the last 20 years (Figure 2). Moist areas with plenty of food favor it, explaining its abundance at seaports, freshwater docks, and suburban areas. Because of its ability to hide in small cervices, *F. auricularia* has spread rapidly in Michigan due to the shipping of commerce, and transport of camping gear and building materials. Many vacationers have arrived at their summer cottage only to find it infested with earwigs descended from those that they inadvertently brought up the year before.

Studying Earwigs

European earwigs can be kept in captivity with a minimum of care. They overwinter in the adult stage, so if you find them in the fall, they can be kept alive over the winter in a terrarium. Any clear container with some moist soil and leaf litter will provide a suitable habitat. Feed the earwigs small pieces of lettuce and dry dogfood. They will probably thrive, and you may be able to see a female earwig hollow out a small chamber in the soil. Watch to see if she lays eggs. She may deposit from 25 - 90 eggs in her small chamber, and will carefully clean them off and guard them until the young earwigs have hatched. The small nymphs will stay in the burrow for a short time, while the female brings in small pieces of food. After the first molt, the nymphs leave their nest. Although few people are fond of earwigs, they can be interesting to watch and easy to care for.



Earwigs do not appear to have many predators, although it was once noted (Kurczewski 1968) that yellowjackets prey upon them. The cerci are used to drive off approaching insects, such as ground beetle larvae and adults. Fulton (1924) made extensive observations on *F. auricularia* and how the females defended their nests from other insects. Other species of earwigs have been observed to capture insects with their forceps and then devour them. If you capture different species and keep them alive indoors, perhaps you too, can observe their habits and come up with some new observations on these seldom-studied insects.

Control

European earwigs are difficult to control. They can build up populations to the point where they are nuisance pests by their very presence. Although somewhat beneficial as scavengers, they can be pests in gardens and very bothersome in large numbers. Removal of hiding places (piles of old boards, debris, sealing of cracks in wood structures, stone walls, etc.) and feeding areas (compost bins, decaying vegetable or animal matter, garbage) can help alleviate the problem. Spot spraying with a recommended pesticide can also be beneficial. Check with your local County Cooperative Extension agent for recommended pesticides and other control methods.

References

For more information on the life history and identification of earwigs, consult the following publications:

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Mark F. O'Brien, University of Michigan,
Museum of Zoology – Insect Division
Ann Arbor, MI 48109-1079

Michigan Entomological Society, c/o Department of Entomology, Michigan State University, East Lansing, Michigan 48824 (December 1990)