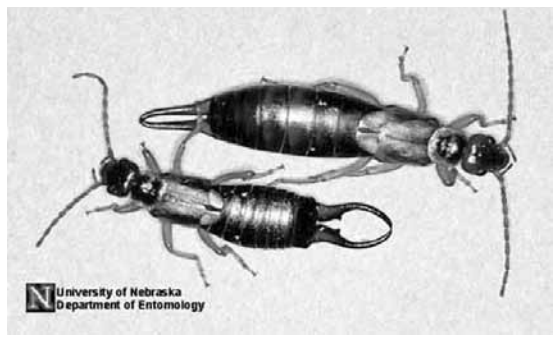
*Notes from a Rogue entomologist:*

# The much maligned and mostly misunderstood European earwig (Part 1)

**BY RICHARD J. HILTON**

Since first arriving in North America during the first decade of the 20th century, this European immigrant has met with a considerable amount of fear and loathing. The European earwig is primarily known for three things: first, it is a pest of home and garden; second, it is considered to be a prime example of maternal care in the insect world; and third, there is that crawling in the ear fear that can cause disquiet among some members of the public. Let's start with the third point. Earwigs are highly thigmotropic, which means that they like to be in tight places, they fit into little crevices which are about the size of one's ear canal and they are most active at night; so it does seem plausible that they might crawl in your ear while you were sleeping. Now, as it turns out, the medical profession does keep track of things which find their way into one's ear. Personally, I have had two such experiences. In kindergarten during nap time I found a small pebble and put it in my ear and was not able to retrieve it. I spent the rest of the day worrying that someone would notice the rock in my ear which would surely lead to mortification. Luckily I made it home and with a little irrigation the pebble was safely removed. Then in college, a friend barged into my room in the middle of the night and demanded that I look in his ear because he was experiencing a bizarre intermittent whooshing noise in one ear. I couldn't see anything and told him to go back to sleep. He visited the infirmary the next day and when nothing was seen he asked that his ear be cleaned out, after his ear was irrigated he inspected the debris and in amongst the earwax he found a very small moth that he was convinced had been the culprit. Certainly, insects do, on occasion, find their way into people's ears. An article published in 2007 by May Berenbaum, a well-respected Entomology Professor at the University of Illinois and author of numerous (and often humorous) insect-related essays, reviewed the published data on ear-invading insects; cockroaches were by far the most common offender while beetles and, surprisingly, honey bees were not uncommon and one tick (not an insect but a close relative) was also retrieved but nary a single solitary earwig. There appears to be no documented evidence of earwigs inhabiting human ears.




*Adult male (bottom) and female (top) European earwigs, Foricula auricularia Linnaeus. Photo: Jim Kalisch, UNL Entomology.*

Now that earwigs have been absolved of that particular sin, let's move on to the virtuous fact that earwig mothers are known for nurturing their young. In the life cycle of the European earwig, the male and female live in a small cell or cavity in the soil during the winter. After mating, the female drives the male from the cell and lays her clutch of 30 to 60 eggs. She monitors the eggs closely and moves the eggs around and removes any mold that may grow in the chamber. When I have reared earwigs in the laboratory I found that when the eggs did become overcome by fungus the mother consumed the batch of eggs and laid another clutch, which is an interesting survival mechanism to say the least. The eggs hatch in the spring and the little hatchlings or nymphs remain in the chamber for at least one molt before leaving. The mother earwig nurses or feeds them by regurgitating food. If a nymph does not eventually leave the chamber then the mother will consume it, apparently maternal care will only go so far when you are an earwig. In fact a colleague, knowing my inordinate fondness for earwigs, alerted me to some new research on earwig mothering which showed that the earwig mothers spend more time with healthy nymphs and less with unhealthy ones, the mother responds to the quality of the offspring not its need. This is a case where the parent definitely has favorites.

So the ear-invading earwig appears to be fiction (but why let facts get in the way of a good story) and reports of the maternal care provided by earwig mothers is a mixed bag bearing little relation to maternal care as we conceive it. As it turns out, there are also some common misconceptions concerning the role of the European earwig as a nuisance and garden pest. The story of the European earwig's arrival and subsequent rise in North America over the last one hundred years and the role it plays in the orchard and garden ecosystem will be discussed next time.

Richard J. Hilton
541-772-5165 ext. 227

*Note: Richard Hilton is Senior Research Assistant / Entomologist at OSU—Southern Oregon Research & Extension Center*