

DERMAPTERA

Earwigs

The name Dermaptera, derived from the Greek "*derma*" meaning skin and "*ptera*" meaning wings, refers to the thickened forewings that cover and protect the hind wings.



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Life History & Ecology:

Earwigs are mostly scavengers or herbivores that hide in dark recesses during the day and become active at night. They feed on a wide variety of plant or animal matter. A few species may be predatory. Females lay their eggs in the soil, and may guard them until they hatch. Nymphs are similar in appearance to adults, but lack wings. The front wings are short, thick, and serve as protective covers for the hind wings. Hind wings are large, fan-shaped and pleated. They fold (both length-wise and cross-wise) to fit beneath the front wings when not in use. Some species are secondarily wingless. In most earwigs, the cerci at the end of the abdomen are enlarged and thickened to form pincers (forceps). These pincers are used in grooming, defense, courtship, and even to help fold the

hind wings.

The Dermaptera contains three suborders. Most species belong to the Forficulina. The other two groups, Arixeniina and Hemimerina, live in close association with mammals. The former (five species) live on Asian bats and the latter (eleven species) live on African rodents. All of these insects are adapted for a parasitic or semi-parasitic lifestyle: they are secondarily wingless and the cerci are not well-developed into pincers. Members of the Arixeniina give birth to live nymphs (vivipary).

Distribution:

**Common and widely distributed throughout the world.
Largest diversity is found in the tropics and subtropics.**

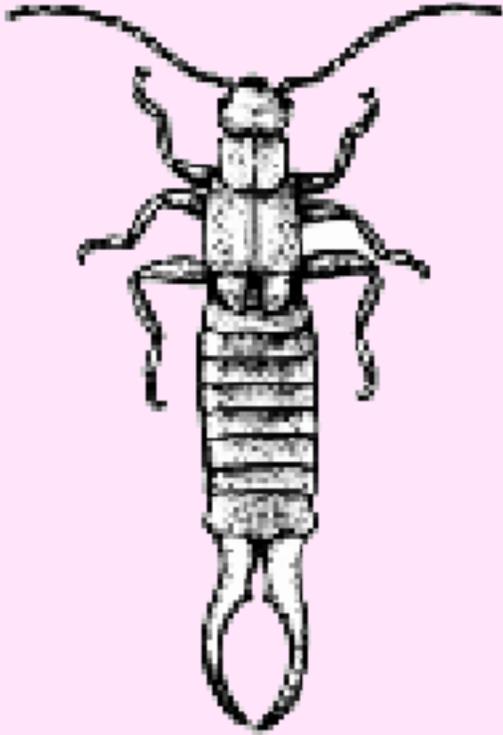
	North America	Worldwide
Number of Families	4	10
Number of Species	20	~1800

Classification:

Hemimetabola
incomplete development (egg, nymph, adult)

Orthopteroid
closely related to Orthoptera and Phasmatodea.

Physical Features:

**Adults:**

1. Antennae slender, beaded
2. Mouthparts mandibulate, prognathous
3. Tarsi 3-segmented
4. Front wings short and leathery
5. Hind wings semicircular and pleated
6. Cerci enlarged to form pincers (forceps)

Immatures:

1. Structurally similar to adults
2. Developing wingpads may be visible on thorax

Economic Importance:

Most earwigs have little or no economic importance. A few species, if abundant, may damage the blossoms of ornamental plants by chewing on stamens or petals. The European earwig, *Forficula auricularia*, was introduced to the United States from Europe around 1900 and has been known to cause economic losses in fruit and vegetable crops.

Major Families:

- **Forficulidae** (Common earwings) -- This family includes several cosmopolitan species, including *Doru eculeatum* and

Forficula auricularia.

- **Labiduridae** -- Reddish-brown earwings with long cerci. *Labidura riparia* is the only member of this family found in the United States.
- **Carcinophoridae** -- Dark brown or black insects with reddish brown legs and small cerci. The family includes one very common species, *Euborellia annulipes*.

Fact File:

- The common name "earwig" is derived from an old superstition that these insects crawl into people's ears at night and burrow into the brain. There is no truth to this myth.
- Some earwigs have defensive glands on the second or third abdominal segment that release a noxious liquid. Some species can squirt this fluid up to 100 mm (4 inches).
- In many earwigs, it is possible to determine an individual's sex by the shape of its cerci: relatively straight in females, more curved in males. In some species, the males have asymmetrical cerci.
- Female earwigs usually remain in the nest burrow and care for their eggs and young nymphs. If the nymphs do not leave the burrow after one or two molts, they are likely to be eaten by their mother.

Hot Links and Illustrations:

- [Ecowatch Dermaptera Page](#)

- [Gordon Ramel's Dermaptera Page](#)
- [Tree of Life Web Project - Dermaptera](#)
- [Discover Life - Dermaptera](#)

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