

DERMAPTERA

These are the earwigs. The order name means skin wing and refers to the hardened, leathery front wings. There is a superstition that these insects will crawl into your ears while you sleep at night. This is only a superstition. This is another order that has historically been lumped with the Orthoptera.

These are small to medium-sized; they are elongate, slender, usually relatively dark in color with well-sclerotized bodies. They are usually easy to recognize because of the forceps-like cerci at the posterior end of the abdomen. The only other insects with this type of cerci are the Japygidae (Diplura), but the japygids are much smaller and they lack wings. They usually have compound eyes although they may be reduced or even absent in some species. The antennae are usually long and slender, filiform. The forewings, if present, are short and leathery; the hindwings are membranous. The tarsi are 3-segmented. The ovipositor is usually absent.

Hebard (1936) in his paper on the Orthoptera of North Dakota reported that there were no native earwigs in the state, but he did note that an introduced species had been found in both South Dakota and Manitoba. Dr. Post, my predecessor twice removed, caught the first North Dakota earwigs at Hector Airport in August, 1946. This was an introduced species, *Labia minor*. Since this time several other species have been reported from the state.

There are about 1800 species worldwide. Because of the shortened front wings, they appear very similar to rove beetles (Staphylinidae), but the rove beetles lack the posterior cerci. The leathery front wings are called either tegmina or elytra in your text book; another text book calls them elytriform. They are actually homologous with the tegmina of the other orthopteroid families, but they are more like elytra. Tegmina usually overlap each other when at rest, but elytra usually meet in a straight line down the middle. Some species have glands on the venter of the third and fourth abdominal segments which emit a bad smelling fluid.

Most species are omnivorous, but some are predaceous, some ectoparasites, and some are considered to be garden pests at times. Earwigs are another group of insects in which the females exhibit maternal care where the females will watch over the eggs she lays in the soil.

Your text book indicates that this order is often divided into 3 suborders: the **Arixenina** (ectoparasites on bats in Malaysia), the **Diploglossata** (parasites of rodents in South Africa), and the **Forficulina** (the only suborder occurring in North America). Your text includes 6 North American families. We will discuss 4 of these.

A. Family Forficulidae: These are the European and spine-tailed earwigs. This family can be easily recognized by the 2nd tarsal segment being lobed on each side on the ventral surface (may be easier to see from the side). Tegmina and wings usually present, sometimes absent; antennae with 12-16 segments. The most common species in this family is the European earwig, *Forficula auricularia*, which is sometimes a pest. The common name comes from some species (*Doru*) having a small spine between the forceps in the male (fig. 15-2C).

B. Family Anisolabididae: These are the seaside and ring-legged earwigs. In previous versions of your text, we learned this family as the Carcinophoridae, but the carcinophorids along with several other small families have now been placed together in this family. The 2nd tarsal segment is cylindrical. Pronotum uniformly colored. The antennae have 14-24 segments; the tegmina are present as rounded flaps not meeting at inner basal margins, or they are absent; right forceps of male more strongly curved than left (they are asymmetrical). Our species are in the genus *Euborellia* and are called ring-legged earwigs. It is a wingless species. An Australian species is the largest in the family (> 55mm in length).

C. Family Labiduridae: These are the striped earwigs. This family contains a single introduced species in the U.S., *Labidura riparia* (Pallas), which is quite common in the southern U.S. It has the 2nd tarsal segment cylindrical, and the antennae have 25-30 segments, with segments 4-6 usually not longer than the first segment; the pronotum is light brown with 2 dark longitudinal stripes, which continue onto the tegmina; it is relatively large (20-30 mm long).

D. Family Labiidae: These are known as the little earwigs. The 2nd tarsal segment is cylindrical. The pronotum is uniformly colored. The antennae have 10-16 segments, with segments 4-6 longer than the first segment; the tegmina are normally developed and meet along the entire midline; the male forceps are symmetrical. Our species is probably *Labia minor*, which has been collected near Hector airport.