

BLATTARIA

These are the cockroaches. There are about 400 species worldwide. Once again, these have at times been included within the Orthoptera, or as I just mentioned they have at times been lumped with the Mantodea to form the Dictyoptera.

These insects are generally oval in shape with the body somewhat flattened. The head is concealed beneath the pronotum. The antennae are long and hair-like. The mouthparts are mandibulate and they are opisthognathous. The wings are usually well-developed, sometimes they are reduced or absent. The cerci are one to many-segmented. The tarsi are 5-segmented with the 4th segment the shortest; the legs are cursorial (modified for running).

The eggs are laid in capsules called oothecae.

This is an ancient group that has adapted well to living in association with humans. None have been shown to vector diseases, but they can contaminate food simply by walking on it after they have walked on other undesirable substrates. Living specimens seem to have an unpleasant odor. They sometimes exhibit mimicry in which they resemble other insects which are protected. Cockroaches are generally nocturnal. Most species live outside; of the 400 described species, only about 30 species inhabit human dwellings.

There are only 5 families in North America, with only 2 of these common. We will discuss 3 families, plus you should be able to recognize some of the more important pest species.

A. Family Blattidae: In general, these are the larger of the common species you will encounter (except for the species of Blaberidae); they are 18 mm or more in length (most are 25mm or more in length). They have the spines on ventroposterior margin of the front femora of nearly equal length. The female subgenital plate is divided longitudinally (keel-shaped with a seam). The male styli are similar, slender, and straight.

1. *Periplaneta americana* - This is the American cockroach. Actually there are about 4 species of *Periplaneta* that can be found in homes, but *americana* will be the most common. It can be separated from the German and brownbanded cockroaches by its larger size, and from the Oriental cockroach by the fully developed wings. Adults may live up to 15 months.
2. *Blatta orientalis* - This is the Oriental cockroach. This species can be recognized by its large size and the reduced wings. The wings are reduced to small pads in the female, and they are shorter than the abdomen in the male. The adults live from 1 to 6 months.

B. Family Blatellidae: In general, these are the smaller of the common species you will encounter (less than 18 mm - except some wood roaches; most are less than 12mm in length). The spines on the ventroposterior margin of the front femora decrease gradually in size and length distally or there is a row of heavy spines proximally and more slender and shorter ones distally. The female subgenital plate is entire. The male styli are variable, often modified, asymmetrical, or unequal in size. The most commonly encountered species here in the northern states will probably be the wood roaches (genus *Parcoblatta*) which live in litter and debris outdoors. There is a small species (less than 3mm) in the southern U.S. that lives in leaf cutter ant nests (Riley story?). This family includes the following common pest species:

1. *Blatella germanica* - This is the German cockroach. It is easy to recognize by its small size and the presence of 2 longitudinal dark bands on the pronotum. It has the distal spines about half size of basal ones in some specimens; there is a gradual decrease in size in other specimens. The adults may live up to 12 months.
2. *Supella longipalpa* - This is the brownbanded cockroach. This species is also easy to recognize by its small size, the lack of longitudinal dark bands on the pronotum, and they usually have a pale

transverse band on the wings. The spines on the front femora gradually decrease in size. The adults may live for 3 to 11 months.

- C. Family Blaberidae: These are the extremely large cockroaches most of which are tropical. You may be familiar with these as many departments (including ours) has a lab colony of the large hissing roaches from Madagascar. There are several species that do occur in the southern U.S. They have the middle and hind femora without spines on ventroposterior margin, or with hairs and bristles only, or 1 or 2 apical spines.