

COCKROACHES AND MANTIDS

ORDER DICTYOPTERA

Cockroaches are broad, flattened, robust insects, with long antennae. The broad pronotum covers the thorax and most of the head. Hindwings leathery, usually shorter in the female than the male. The mantids are closely related, but look rather different, with slender bodies, a long neck, and enlarged front legs. They are highly predatory, and females often eat the males during copulation. The eggs are laid in frothy masses which harden, and may often be found when the adults are no longer visible.

Cockroaches Suborder Blattodea

Several tropical species have become well established in N Europe in houses and other buildings, as pests. There are also several native species, which have no association with man.

Australian Cockroach

Periplaneta australasiae

A large, highly active insect, up to 40mm long, with long antennae. Brown, with yellow markings on the wings, and a distinct yellow margin to the pronotum. Nocturnal in habits, fleeing rapidly from light.

Habitat Usually confined to warm buildings, occasionally outside.

Status and distribution Widespread in suitable places throughout. Probably originally native to Africa, despite its name.

Season Variable, depending on temperature regime.

Similar species

American Cockroach *P. americana* is usually slightly larger, up to 45mm. The yellow markings on pronotum and wings are barely visible. Probably also African in origin, but now very widespread in similar places to the Australian Cockroach.

Common Cockroach or Black Beetle

Blatta orientalis

Females are squat, blackish, about 25mm long, with greatly reduced wings. Males are similar in size, but are browner, with longer wings, although they are still flightless. The egg-case is white, darkening to black, and the female carries it for the first few days. Nocturnal.

Habitat Native to tropical Asia or Africa, but now widespread in houses, bakeries, and anywhere warm but dirty.

Status and distribution Common in suitable places throughout.

Season At any time, depending on the warmth of the habitat.

Similar species

German Cockroach *Blattella germanica* is paler and more slender, fully winged and able to fly, though rarely does so. Similar habitats and distribution.

Tawny Cockroach

Ectobius pallidus

One of the native cockroaches, which are much smaller than the introduced species. This species reaches 10mm in length, is fully winged in both of the sexes, and can fly in warm weather. It is basically pale brown, with the pronotal disc edged with yellow.

Habitat In rough grassland, woods and heaths.

Status and distribution Widespread, local and more southern in the UK, and throughout the Continent.

Season 4-10.

Similar species

Dusky Cockroach *E. lapponicus*. The females are flightless, and both sexes are more slender. In similar habitats.

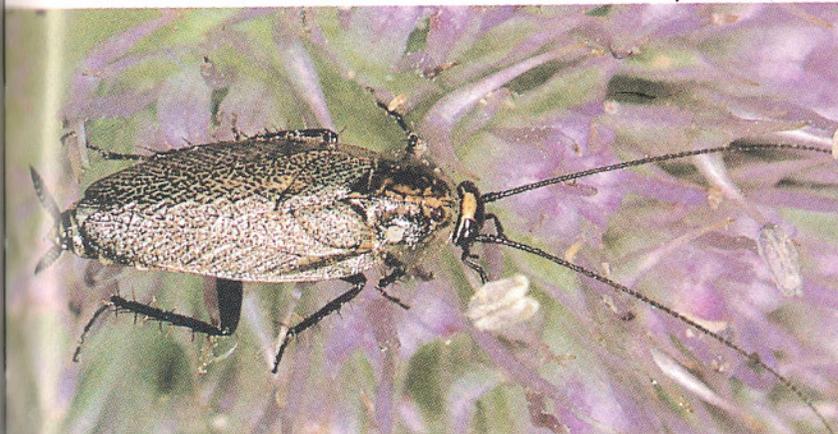
Lesser Cockroach *E. panzeri* is smaller (less than 9mm long) and variable in colour but usually speckled. Males can fly, and have narrow forewings; females are flightless, squat, almost bug-like. Local and mainly coastal in the UK.



Australian Cockroach



Tawny Cockroach



Dusky Cockroach, male

Mantids
Suborder *Mantodea*

A southern, warmth-loving group of insects, of which only one representative reaches N Europe.

* **Praying Mantis**

Mantis religiosa
A predominantly green species (rarely brown), long and slender – up to 60mm long excluding antennae – yet surprisingly inconspicuous. Both sexes are winged and can fly, but the male is more slender.

Habitat Prefers rough grassy places and scrub.

Status and distribution Throughout southern Europe, reaching northwards to the latitude of N France.

Season 7–11. The frothy egg-cases may persist over winter, and indicate where adults may be found.

STICK INSECTS
ORDER PHASMIDA

A predominantly tropical group, numbering thousands of species, but only just reaching into S Europe. One species, described below, is frequently kept in homes and laboratories, and occasionally naturalizes. These are well-camouflaged, slender insects, with stick-like bodies and short to medium-length antennae.

Laboratory Stick Insect

Carausius morosus

A characteristic and well-known stick insect, almost always seen as the female, which can reproduce parthenogenetically (without the eggs being fertilized). Green or brown, up to about 10cm long.

Habitat Usually in laboratories, but may escape into gardens and waste ground, though rarely lasting long. Originally native to SE Asia.

Status and distribution Unpredictable.

Season All year indoors, surviving outside only in warm weather.

EARWIGS
ORDER DERMAPTERA

Slender, flattened cylindrical insects, with pincer-like cerci, usually markedly curved in males. Some species are wholly wingless, others have much-reduced forewings and very thin hindwings. The winged species can fly, but rarely do. Generally nocturnal. There are over 30 species in Europe.

Common Earwig

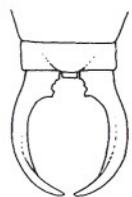
Forficula auricularia

The only earwig that is commonly seen. It is 10–13mm long, shiny brown, with reduced forewings (elytra), and hindwings that project from below the elytra. The male pincers are broad and flat at their base. Young are like miniature adults, and the female guards them until they disperse.

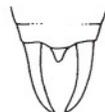
Habitat In many habitats, wherever there is sufficient food, and some humid hiding places.

Status and distribution Very common throughout.

Season Mainly summer, but may be seen in almost any month as the adults hibernate.



pincers of Common Earwig



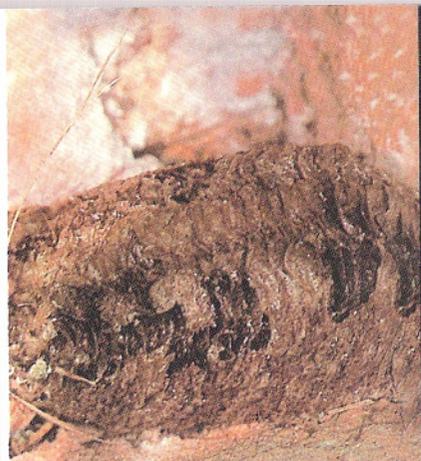
pincers of Lesser Earwig



Praying Mantis



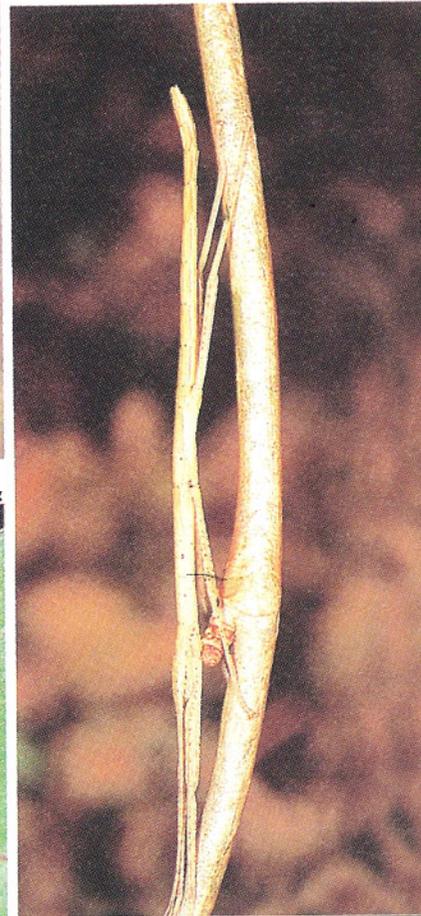
Common Earwig



Praying Mantis, egg-case



Laboratory Stick Insect, female



PSOCIDS OR BOOK-LICE ORDER PSOCOPTERA

Tiny soft-bodied insects (not true lice), which live on plants or dried cellulose-based materials. Some are wingless, others winged; these hold their wings over the body in a roof-like structure, resembling aphids, but distinguishable from them by their longer antennae. Numerous species occur, with more yet to be described. Only the book-louse is at all familiar, through the damage it causes.

Book-louse

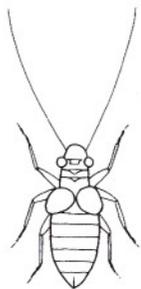
Trogium pulsatorium

One of several similar species that occur in books, stored paper, and food. They are wingless, about 2mm long, with antennae almost as long as the body. They eat the paste from the binding of books, eventually causing considerable damage.

Habitat Old books, paper, stored food, insect collections and so on.

Status and distribution Very common wherever there are suitable conditions, throughout.

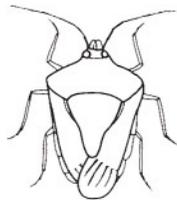
Season All year indoors.



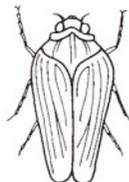
Book-louse

they usually only consist of a few segments which are clearly visible. There are generally 2 pairs of wings, with the forewings modified by hardening to a greater or lesser degree, though some species are wingless.

The Hemiptera are divided into two major groups on the basis of their wing characteristics, and some authors give each the status of a separate order. The **Heteropteran Bugs** have the forewings clearly divided into two separate areas – a tough, leathery basal area, and a membranous tip. The hindwings are always membranous, and both pairs are folded flat over the body at rest. The heteropterans also have their rostrum arising from the front of the head, and the antennae never have more than 5 segments. The scutellum, which is part of the thorax, is often prolonged backwards as a triangle, occasionally covering the whole body.



Heteropteran bug



Homopteran bug

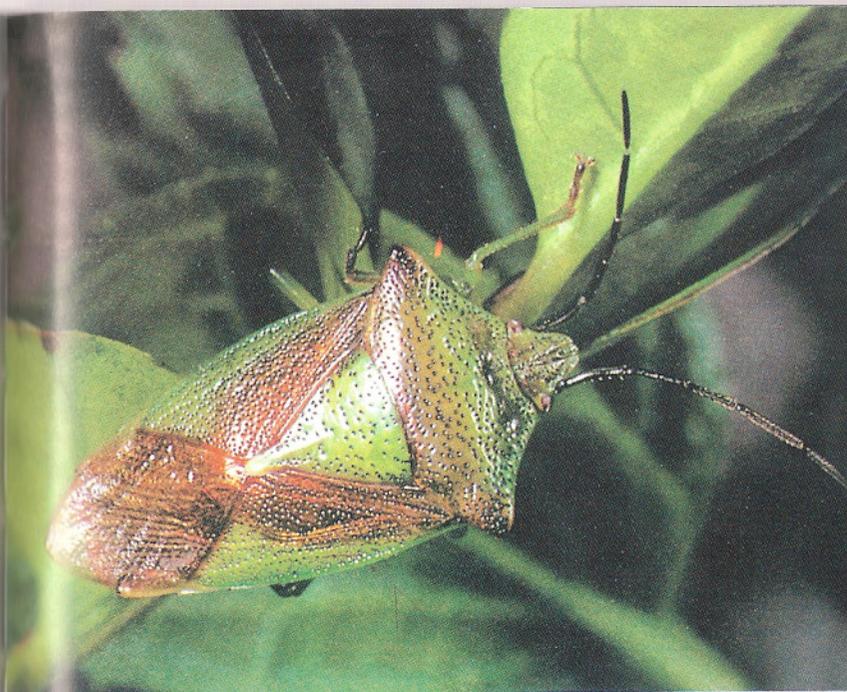
Homopteran Bugs have forewings that are of the same texture throughout, whether membranous or leathery, and they are commonly held roof-wise over the body rather than flat. The antennae have at least 4 segments, sometimes many more. All homopterans are vegetarian, and many are slow-moving, passive species; in contrast, some heteropterans are animal feeders, and may be highly mobile.

All bugs pass through nymphal stages, and there is no pupal stage. The young may resemble the adults, though in many cases they are quite unlike them.

There are about 1,700 species in Britain, and 4,000 or more in N Europe.

TRUE BUGS ORDER HEMIPTERA

A huge family of insects, covering a wide range of forms, but generally having the shared characteristic of mouthparts modified into a beak (rostrum), with which they suck their food from plants or animals. This is usually held horizontally under the body when not in use. The antennae vary from short to quite long, but even when long,



Hawthorn Shieldbug

Heteropteran Bugs Suborder Heteroptera

Common Flat-bug

Aradus depressus

A small flat bug, about 6–8mm long, with a very narrow 'neck' just behind the head. Thorax dark brown, abdomen reddish. The body shape is adapted for feeding under tree bark, living mainly on fungi.

Habitat Under bark of deciduous trees, on stumps, and among leaf litter.

Status and distribution Widespread and frequent in the south, absent from further north.

Season Adults visible all year.

Similar species

Pine Flat-bug *A. cinnamomeus* is more orange-coloured, with narrow forewings. Occurs mainly under the bark of conifers. Absent from the north.

SHIELDBUGS The following bugs on pages 87–91, from several families, are known collectively as shieldbugs because of their shield-like shape. Most hibernate as adults.

Hawthorn Shieldbug

Acanthosoma haemorrhoidale

A large bug, about 15–17mm long when adult, typically triangular in shape. Essentially green in colour, but with a broad triangle of red on the back.

Habitat Most common on the leaves and fruits of Hawthorn, though also on other deciduous trees.

Status and distribution A southern species, common in England and over most of the Continent, but absent further to the north.

Season Adult most of the year, most frequently seen in spring and autumn.

Parent Bug

Elasmucha grisea

A small shieldbug, less than 10mm long, greyish-brown tinged with orange. The female guards the eggs and newly hatched young against predators and parasites – hence the name.

Habitat Most frequent on Birch, but also on other deciduous trees.

Status and distribution Widespread and moderately common throughout, though easily overlooked.

Season Most visible 5–9, but adults are around all year.

Similar species

Birch Shieldbug *Elasmotherus interstinctus* is larger, green and red with yellow on the wings, and common on Birch.

Pied Shieldbug

Sebirus bicolor

A medium-sized bug, about 10mm long, very distinctive with its black head and scutellum, and piebald wings. The overall body shape is more oval than triangular.

Habitat Rough herbage, hedgerows and woodland edges, mainly on White Dead Nettle and Black Horehound.

Status and distribution A southern species, moderately common in England, but absent from Scotland and N Scandinavia.

Season Adult all year, hibernating in cold weather.

Similar species

S. dubius is a similar shape, but metallic bluish-black all over. Similar habitats and distribution.

Negro Bug

Thyreocoris scarabaeoides

A small bug, about 6mm long, roughly oval-rectangular in shape. As the name suggests, it is black in colour, and the enlarged scutellum covers most of the body.

Habitat Mainly dry grassland, occasionally open woodland.

Status and distribution A southern species, absent from northern areas.

Season 5–9.

Blue Bug

Zicronia caerulea

About 8–10mm long, dark metallic blue or green in colour. Mainly carnivorous, attacking larvae and young insects.

Habitat On dry, usually calcareous or sandy soils, in grassy places.

Status and distribution Widespread and moderately common in the south, absent from Scotland and the far north of Europe.

Season Most of the year.

Eysarcoris fabricii

An undistinguished medium-sized bug, about 8–10mm long, greenish-grey marked with brown (though variable in colour), heavily dotted.

Habitat Woodland edges and scrub, on Hedge Woundwort and other Labiates.

Status and distribution Common in the south, rare or absent in the north.

Season Most noticeable in spring and autumn.

Bishop's Mitre

Aelia acuminata

A narrowly oval brown bug, about 9mm long, with short brown wings. The body and wings are often lightly striped with yellow.

Habitat Rough dry grassland, and occasionally in cereal fields (where it may attack the grain, in southern areas).

Status and distribution A southern species, frequent in S England, rare elsewhere in the UK; widespread on the Continent.

Season All year.



Parent Bug



Blue Bug



Bishop's Mitre

* *Graphosoma italicum*

A large, conspicuous shieldbug, up to 12mm long. Whole body boldly marked with red and black stripes, legs red or black. Its conspicuous colours warn of its unpleasant taste, and it tends to sit in the open more than other bugs.

Habitat Many types of dry grassland, scrub, and woodland edges.

Status and distribution Widespread on the Continent, except in the north; absent from the UK.

Season Most visible 5–10.

Forest Bug

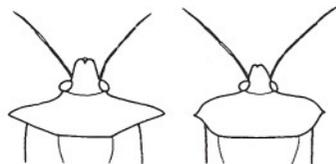
Pentatoma rufipes

A large shieldbug, about 15mm long, with square pointed shoulders (see illustration below) and a short broad pronotum. Ground colour brownish, edged with yellow or brown, with a spot at the base of the pronotum.

Habitat Woodland, scrub and orchards, on various deciduous trees.

Status and distribution Widespread and frequent throughout.

Season 6–10.



Picromerus bidens

Forest Bug

Similar species

Picromerus bidens is similar, but with very pointed shoulders to the pronotum (see illustration above). Widespread and common throughout.

Green Shieldbug

Palomena prasina

Probably the archetypal shieldbug, distinctly shield-shaped, about 12–14mm long. Predominantly green, apart from the membranous section of the wings, but becomes bronzey-red in autumn before hibernating, re-emerging bright green in spring. The young nymphs are more rounded.

Habitat Trees and shrubs, especially Hazel.

Status and distribution Widespread and common almost throughout, except in N Britain.

Season 4–11.

Gorse Shieldbug

Piezodorus lituratus

A typical shieldbug in shape, and about 10mm long. Varies in colour, but tends to be yellowish-green in spring, becoming darker later; young adults have a reddish tinge, especially on the wings, from their emergence until hibernation time.

Habitat Most frequent on Gorse, less often on Broom and other shrubby legumes.

Status and distribution Widespread, but local and commoner in the south of the area.

Season 4–10.

Similar species

Sloe Bug *Dolycoris baccarum* is similar in shape and size, but more yellowish-brown in colour, tinged with red, and distinctly hairy. Common on Sloe, Plums and other related trees, throughout.



Graphosoma italicum



Picromerus bidens, mating



Sloe Bug



Green Shieldbug, eggs
Green Shieldbug, adult



Forest Bug



Gorse Shieldbug

