



Grey Bush-cricket



P. tessellata



P. affinis

△ **Grey Bush-cricket** *Platycleis albopunctata*. Fully winged and flies readily. Sometimes green on top. Central keel on posterior half of pronotum: side keels converge towards the front. Ovipositor (left) 8-11mm long. Song a prolonged series of short (½ sec) buzzing sounds like winding a watch. Active mainly afternoon and evening. Dry, scrubby places. 7-10. S & C: mainly coastal in B. One of several very similar species, often difficult to separate.

P. tessellata is smaller and distinguished by heavy markings in centre of forewing: female easily recognised by 4-6mm ovipositor (left). Song a few well-spaced chirps, followed by several rapid ones and then a few more well-spaced ones: harsh and scratchy like drawing a comb over a finger nail. 7-10. Dry places. S and most of France.

P. affinis is like a large *albopunctata* (20-25mm long), but vein running along sharp fold of forewing just behind the pronotum is distinctly yellow. Ovipositor (left) 13-16mm. 6-10. Rough and cultivated land. S.

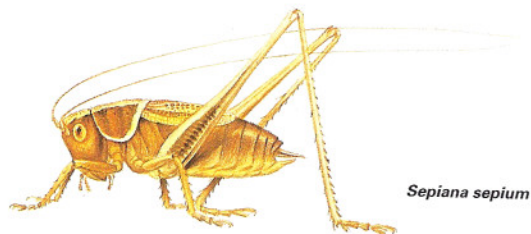
Sepiana sepium differs from the above in being short-winged and in lacking side keels on the pronotum. Pinkish brown, sometimes reddish, with very long hind feet. Ovipositor 11-15mm. Song a prolonged strident hiss, mainly at night: shorter bursts by day. Rough vegetation, especially in damp places. 7-9. S.

△ **Bog Bush-cricket** *Metriopectera brachyptera*. Forewings normally short in both sexes, hindwings vestigial. A short central keel on posterior half of pronotum. Pale band normally only on hind margin of pronotal flaps. Green may be missing from upper parts, but always green underneath. Ovipositor 8-10mm: moderately curved. Song a prolonged series of short, shrill chirps - 2-6 per sec and resembling the rapid ticking of a clock. Mainly diurnal. Peat bogs and damp heaths. 7-11. N & C. One of several similar species.

△ **Roesel's Bush-cricket** *M. roeselii*. Pale yellow or green stripe all round pronotal flaps. Head and body brown or green, but the short forewings are always brown. Ovipositor 5-6mm: strongly curved. Song long bursts of high-pitched sound, like a high-speed drill. Active day and night. Lush vegetation in moist areas, including coastal marshes. 6-11.

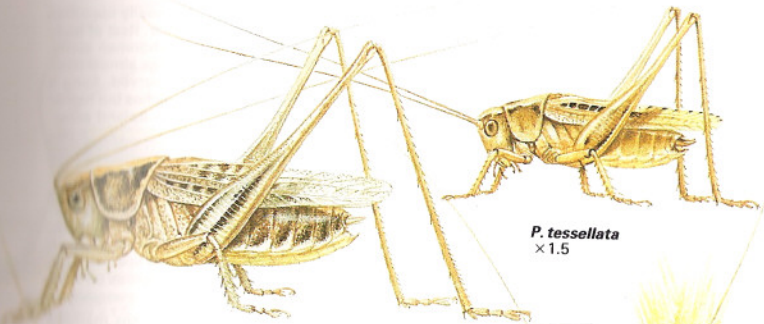
Zeuneriana abbreviata differs from the above in its slightly longer forewings (c. 10mm) and in the much shorter male cerci, which are very stout at the base and largely covered by the last abdominal segment. Ovipositor 6-7mm. Moist mountain slopes with lush grass. 6-9. SW (mainly Pyrenees).

△ **Dark Bush-cricket** *Pholidoptera griseoaptera*. No central keel on pronotum. Light brown, through chestnut, to almost black: but top of head and pronotum always brown and underside of body always greenish yellow. Female usually paler than male. Forewings vestigial in female. Song a single, very short high-pitched chirp repeated irregularly. Will sing in daytime, especially in afternoon, and likes sunbathing, but becomes most active in evening and sings well into the night. 7-11. Rough vegetation of hedgerows, woodland clearings, and roadsides. Also in garden shrubberies. Absent from heathland and other open habitats. Several similar species in southern Europe, especially SE.



Sepiana sepium

BUSH-CRICKETS



Grey Bush-cricket ×1.5

P. tessellata ×1.5

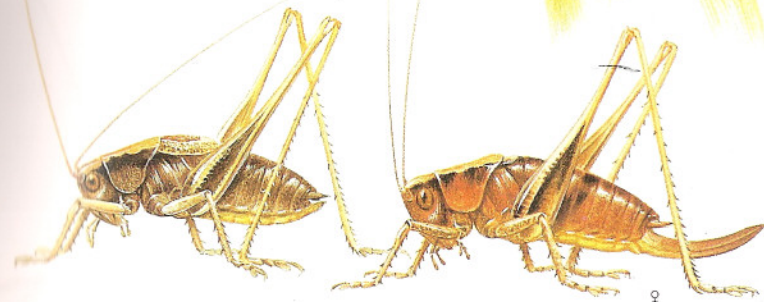


Bog Bush-cricket ×1.5

Roesel's Bush-cricket ×1.5



Zeuneriana abbreviata ×1.5



Dark Bush-cricket ×1.5

Eupholidoptera chabrieri. One of the most beautiful bush-crickets, easily identified by bright green top of pronotum, which is strongly rounded at the rear. Rest of body generally green or yellowish green above and often orange below; abdomen sometimes largely brown. Face lime-green with black spots. Female forewings almost completely hidden under pronotum. Ovipositor 18-24mm: very slightly curved. Song a series of shrill, staccato chirps, about 2 per sec., rather like striking matches but higher pitched: mainly after dusk. On bushes and low vegetation, mostly in upland areas. 7-10. S & C (southern).

Anonconotus alpinus. Upper surface generally dark brown or black, often heavily mottled with olive green: sometimes chestnut-coloured. Cream or pale grey below. Female forewings only 1mm long and carried at sides. Front tibia with 3 spines on outer edge. Ovipositor 11-16mm: slightly curved. Song short bursts of rather soft warbling sound, like a sewing machine: produced only in sunshine. Insect enjoys sunbathing. Often infested with red mites. Stony ground and low-growing vegetation in mountains, usually above 600m. 7-10. S & C. ***A. apenninigenus***, a rare species from the mountains of S. France and Italy, is similar but has only one or two spines on front tibia.

Rhacocleis germanica. Basically brown with darker markings: sometimes marbled with grey or yellow. Pronotum elongate and lightly rounded behind, with a pale stripe in mid-line: stripe often extends along abdomen. Female forewings are minute flaps. Ovipositor 14-19mm: very slightly curved. Long flaps under hind tarsi. Dry habitats, especially woodland margins and olive groves. Mainly crepuscular. 7-10. S & C (southern). Several similar species in SE.

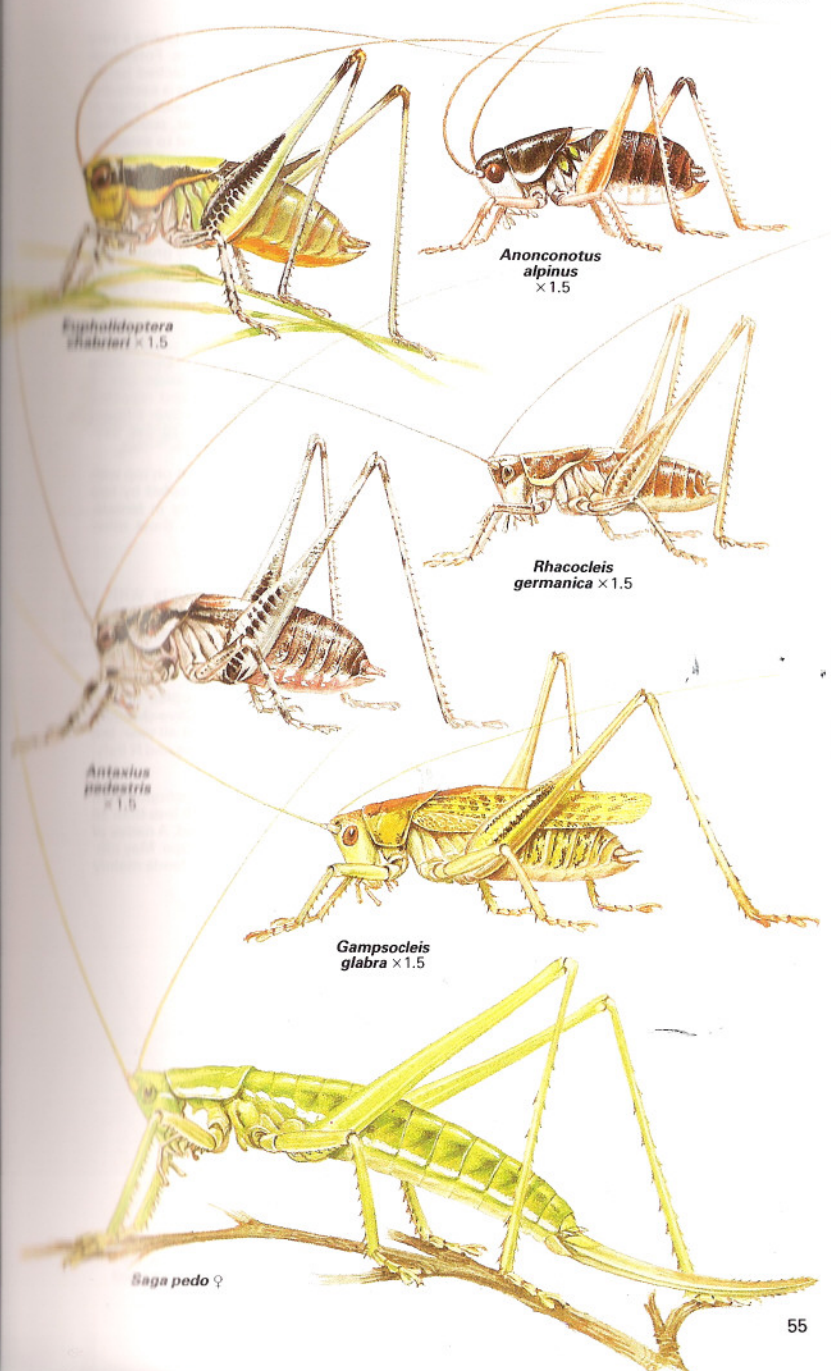
Antaxius pedestris. Grey or light brown above, generally with darker markings: sometimes entirely greyish, relieved only by pale border of pronotum and dark spot above it. Often pinkish below. Male forewings black at base and pale at apex: female forewings hardly visible beyond pronotum. Ovipositor 13-19mm: almost straight. Song a low-pitched scratching sound, ratchet-like with fluctuating volume: in bursts of 1-2 secs. Active largely by day. Shrubby habitats, mainly in uplands. Usually falls to ground when disturbed. 8-9. S & C (southern). Several similar species.

Gampsocleis glabra. Mainly light green as a rule, but sometimes brown: top of pronotum always brownish. Fully winged in both sexes. Forewings heavily spotted with brown. Ovipositor 15-23mm, curving gently downwards towards tip. Song a rather weak, but continuous warble lasting for as much as a minute: produced mainly by day. Lush vegetation in moist habitats. 7-9. S & C.

Yersinella raymondi. Like a small *Rhacocleis*, but no large flaps under tarsi. Shiny, with a smoothly rounded pronotum. Sometimes chestnut but more often light brown with dense speckling. A dark stripe along each side of the body. Forewings minute in both sexes. Ovipositor 10mm; quite strongly curved. Rough areas and shrubby habitats, especially near water. Attracted to lights at night. 7-9. S & C (southern).

Saga pedo. One of Europe's largest insects. Occasionally grey with a pale yellow stripe on the side, but stripe may be absent from both green and grey forms. Wings completely absent. Male unknown, female reproducing by laying parthenogenetic eggs. Grassy and shrubby habitats, especially on limestone: lives on ground or vegetation and feeds almost entirely on other bush-crickets and grasshoppers, which are held down by the spiky front legs. Quite rare. 7-9. S (rarely far from Mediterranean coasts). Several similar species, with males as well as females, occur in SE. The males have flap-like forewings, just enough for stridulation.

BUSH-CRICKETS



Eupholidoptera chabrieri × 1.5

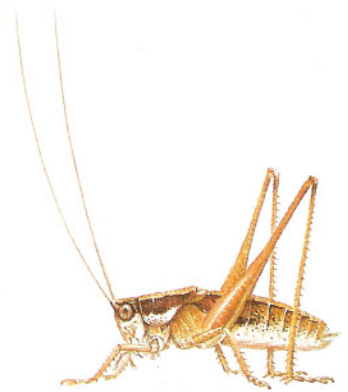
Anonconotus alpinus × 1.5

Rhacocleis germanica × 1.5

Antaxius pedestris × 1.5

Gampsocleis glabra × 1.5

Saga pedo ♀



Yersinella raymondi × 1.5

BUSH-CRICKETS

Ephippiger provincialis. Pronotum strongly raised in posterior half, producing a very distinctive saddle-shape: top of pronotum joining side in a smooth curve. Forewings very short and with stridulatory apparatus in both sexes. Antennae attached below eyes. These features are shared by all *Ephippiger* species, but *provincialis* is easily distinguished by its size. Ovipositor about 30mm; gently curved. 6-9. On a wide range of shrubs, including vines. Populations fluctuate markedly from year to year, sometimes becoming very high and causing severe damage in vineyards. Confined to southern France.

Ephippiger ephippiger. One of several very similar species. Green or brown, often with a clearly banded abdomen. Ovipositor up to 25mm; gently curved. Known as 'le tizi' in France for its characteristic song – a short, high-pitched rasping, double chirp, sounding like *tizi* and repeated irregularly, sometimes in quick succession. Female also chirps, as in all *Ephippiger* species, but less readily than male. Rough ground and scrubby habitats, often damaging vines when abundant. 7-11. S & C.

E. cruciger resembles *E. ephippiger* but is generally a little larger and usually has a dark cross on top of the pronotum, which is shinier and less wrinkled than that of *ephippiger*. The species appears to be confined to southern France.

Uromenus rugosicollis. Resembles *Ephippiger* but pronotum has side keels in rear half, forming a distinct angle between top and sides. Ovipositor 10-12mm; quite strongly curved towards tip. Occasionally greyish green. Song rather like a slowed-down *tizi* song (see above), each chirp lasting about 2/3 sec and repeated about 20 times a minute: not unlike winding a watch or running a comb over a finger nail. Female chirp is shorter, more like typical *tizi* song. Scrubby places. 7-10. SW. Several similar species, mainly in Iberia.

Pycnogaster inermis. Greenish or reddish brown. Pronotum virtually flat on top with a shallow V-shaped notch at the rear: side keels run all along it, interrupted by two transverse grooves. Forewings almost covered by pronotum, especially in female. Antennae attached near base of eyes (attached between the eyes in most other bush-crickets). Ovipositor 30-35mm. Scrubby places. 5-8. Spain.

CAVE CRICKETS Rhabdophoridae Completely wingless insects with very long antennae: legs, palps, and cerci are also unusually long and slender. Tarsi 4-segmented. Ovipositor blade-like, as in bush-crickets. Most species inhabit caves and scavenge on dead animal matter. They are also called wingless camel-crickets. About 30 species live in Europe, mostly in SE.

Dolichopoda azami. One of several very similar species. Plain or mottled brown. Ovipositor about 14mm, almost straight and lightly toothed near tip. Cave-dwelling but often seen on vegetation outside in summer. Strictly nocturnal. Adult all year, but most common in late autumn, when mating occurs. Confined to SE France and N Italy, often high in hills.

▲ **Greenhouse Camel-cricket *Tachycines asynamoros***. Very similar to *Dolichopoda* but with much spinier hind tibia (50-80 closely-packed spines, compared with less than 30 in *Dolichopoda*). Usually mottled. Ovipositor 11-12mm; very gently curved. A native of eastern Asia, but now established in heated greenhouses throughout Europe. May nibble plants, but probably compensates by eating insect pests, although it feeds mainly on dead animal matter. Strictly nocturnal.

Ephippiger provincialis

E. ephippiger

Uromenus rugosicollis

Pycnogaster inermis

Dolichopoda azami

Greenhouse Camel-cricket

Ephippiger eggs are laid in the ground. Raising herself up on her long legs, the female drives her ovipositor into the soil for its full length.

TRUE CRICKETS Gryllidae Orthoptera with long, slender antennae, globular head, 3-segmented tarsi, and long cerci. More flattened than bush-crickets, with forewings, when present, fitted over body like a lid. Hindwings, when present, rolled up and protruding beyond abdomen like tails. Ovipositor straight and needle-like. Front tibia usually with an ear on inner and outer faces, although inner one often very small.

▲ **House Cricket** *Acheta domestica*. Fully winged. Song a bird-like warble: 2-3 chirps per sec and continued for long periods. Mainly nocturnal. Native of SW Asia and N Africa, but well established in houses, bakeries, etc in Europe. Often on rubbish dumps and sometimes in gardens in summer.

△s **Field Cricket** *Gryllus campestris*. Pale yellow at base of forewing often obscure, especially in female. Her forewings less shiny and with denser venation. Hindwings vestigial in both sexes. Hind femur orange below. Song like that of House Cricket, but usually 3-4 chirps per sec: very musical. Lives in burrow and male sings at entrance. Active day and night. Grassland. 4-9. Absent from far north. *G. bimaculatus* of S Europe is very similar, but has a narrower head and is fully winged, with hindwings projecting behind body.

Eugryllodes pipiens. Front tibia has ear only on outside. Female forewings hardly longer than pronotum: obliquely truncated. Song a shrill, musical chirp, like a cheeping chick, with occasional trills. Dry, stony places, including old walls and buildings. Mainly nocturnal. 7-10. SW.

Gryllomorpha dalmatina. Wingless. A pale cross on pronotum. No 'ears'. Damp, rocky places, often in and around buildings. Mostly nocturnal. Mainly 9-12. S.

Melanogryllus desertus. Forewings may reach end of abdomen. Hindwings short or fully developed. All legs entirely black. Song short, shrill chirps: 30-40 per minute. Among stones and turf, often on cultivated land. 5-8. S & C.

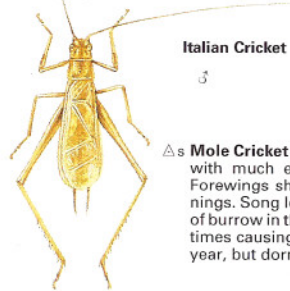
Modicogryllus frontalis. Wings vary from very short to fully developed. Front tibia has ear on outer face only. Pale band between eyes. Hind tibia with short spines. Sunny woodland edges and scrub: also vineyards. 5-8. S & C.

△s **Wood Cricket** *Nemobius sylvestris*. Front tibia has ear on outer face only. Forewings shorter in female, not or only just meeting in centre. No hindwings. Hind tibia with long spines (distinctly longer than width of tibia). Song a soft prolonged warble with brief pauses every second or two. On ground in woodland and scrub. Active day and night. 6-11. S & C.

Pteronemobius heydeni. Like Wood Cricket but smaller. Forewings cover at least half of abdomen. Hindwings rudimentary or fully developed. Song shrill, but soft, in bursts of about 3 secs: repeated every 2-3 secs. Damp grassland. 5-8. S & C.

Arachnocephalus vestitus. Wingless: clothed with fine scales. No ears. Male drums by tapping end of abdomen on leaves. On shrubs in dry places. 7-10. S.

Italian Cricket *Oecanthus pellucens*. Very delicate. Female forewings much narrower than male. Song a soft warbling *griii-griii-griii*, produced mainly at night and continued for long periods. On trees, shrubs, and tall herbage. Sometimes called Tree Cricket. 7-10. S & C.



Italian Cricket

♂

△s **Mole Cricket** *Gryllotalpa gryllotalpa* Gryllotalpidae. A burrowing insect with much enlarged front legs. Body furry. No visible ovipositor. Forewings short, but hindwings fully developed. Flies on warm evenings. Song long periods of quiet churring, usually produced at mouth of burrow in the evening. Moist meadows, especially near rivers, sometimes causing damage to the roots of vines and other crops. Adult all year, but dormant in winter. Absent from far north.

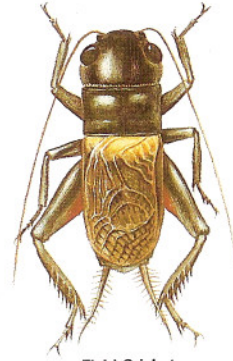


Mole Cricket

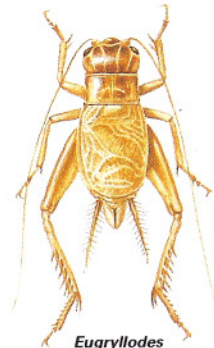
TRUE CRICKETS



House Cricket × 1.25



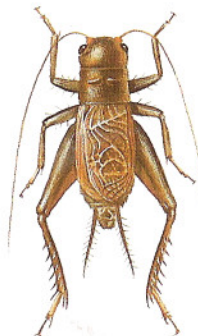
Field Cricket × 1.25



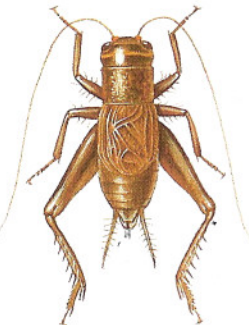
Eugryllodes pipiens × 1.25



Gryllomorpha dalmatina × 1.25



Melanogryllus desertus × 1.25



Modicogryllus frontalis × 1.25



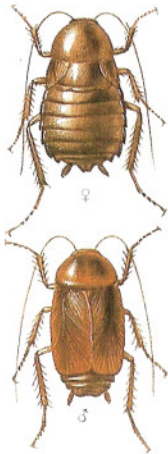
Wood Cricket × 2



Pteronemobius heydeni × 3



Arachnocephalus vestitus × 3



Common Cockroach

COCKROACHES Order Dictyoptera: Sub-order Blattodea

Rather flat insects with long antennae and long, spiky legs. Mostly fast-running, ground-living scavengers, feeding largely on dead plant matter. Broad pronotum almost completely covers head. Central area of pronotum is called the disc. Forewings (tegmina) leathery: often shorter in female than in male, but sexes otherwise alike. Hindwings membranous, but often absent. Eggs laid in horny cases (oothecae), which female may carry protruding from her rear end. Nymphs very like adults without wings. There are about 3500 known species, mostly in the warmer parts of the world. Several tropical species have become cosmopolitan pests in houses and other buildings. Native European species are all rather small.

- ▲ **Common Cockroach** *Blattella germanica* Blattellidae. Commonly called the black beetle. Wings vestigial in female: both sexes flightless. Introduced from Africa or Asia. Usually found indoors in Europe – in houses, bakeries, etc. Sometimes on rubbish dumps in summer, and may survive there in winter in warmer regions.
- ▲ **American Cockroach** *Periplaneta americana*. Introduced from Africa, despite its name. Rarely out of doors in Europe, and usually near ports. Inhabits bakeries, warehouses, greenhouses, sewers, etc., but rare in dwelling houses. Common on ships. Flies well in warm conditions.
- ▲ **Australian Cockroach** *P. australasiae* is also probably African. Slightly smaller than *americana*, with distinct yellow margin to pronotum. Habits and distribution like *americana*.

▲ **German Cockroach** *Blattella germanica* Blattellidae. Introduced from N. Africa. Mostly in bakeries and other buildings in Europe, but also on rubbish dumps in summer. Pronotal stripes vary. Both sexes can fly, but reluctant to do so.

▲ **Brown-banded Cockroach** *Supella longipalpa*. An African species only recently established in European houses. Ground colour yellowish to deep brown. Female darker and with shorter wings, leaving part of broad abdomen exposed. Male can fly.

Loboptera decipiens. Wings form minute flaps on sides of thorax. Pale margin of pronotum may extend round abdomen. Under stones and debris: often by sea. 4-8. S.

△ **Tawny Cockroach** *Ectobius pallidus* Ectobiidae. Fully winged in both sexes and flies in warm weather. Like other *Ectobius* species, it inhabits woods, heaths, and rough grassland: mostly in turf and leaf litter but sometimes in the trees. 4-10. S & C.

E. sylvestris. Pronotal disc entirely black, sharply angled behind. Female forewings cover only about half of black abdomen. Male can fly. 5-9. *E. vittiventris* Body and forewings unspotted. Pronotal disc rounded. Fully winged in both sexes. 7-10. SE & C.

△ **Dusky Cockroach** *E. lapponicus*. Like *sylvestris* but unspotted and pronotal disc rounded. Male often very pale. Female shorter, broader, and browner, with forewings not usually reaching tip of abdomen. Male flies. 4-10.

△ **Lesser Cockroach** *E. panzeri*. Always under 9mm long. Pale to dark brown, sometimes greyish: heavily speckled. Male forewings narrow and pointed: female short and truncated. Mainly coastal areas and sandy ground. 6-10. S & C.

Phyllodromica subaptera. Forewings minute, not wider than pale margin of pronotum. Male cerci black: female cerci yellowish brown. Under leaves and stones: rare. 5-9. S.

P. maculata. Female forewings roundly truncated, but more or less meeting in centre. In debris. 5-9. C. The forewings in *Phyllodromica* spp are stiffer than in *Ectobius* and less distinctly veined.

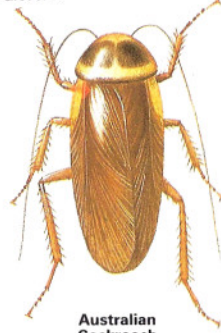
P. marginata has unmistakable pattern. In leaves and debris. 4-7. SE.

All males unless otherwise indicated

COCKROACHES



American Cockroach



Australian Cockroach



German Cockroach x2



Brown-banded Cockroach x2



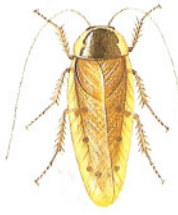
Loboptera decipiens x2



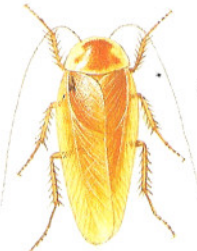
Tawny Cockroach x2



Dusky Cockroach x2



Ectobius sylvestris x2



E. vittiventris x2



♂ Lesser Cockroach x2 ♀



Phyllodromica subaptera x2



P. maculata x2



P. marginata x2



German Cockroach x2 with ootheca