

HETEROPTERAN BUGS

Sub-order Heteroptera

Bugs in which the forewings, when fully developed, are horny at the base and membranous at the tip.

▲ **Pine Flat-bug** *Aradus cinnamomeus* Aradidae. Very flat, with head narrowing strongly behind eyes. Antennae 4-segmented. Forewings very narrow and lacking membrane: even smaller in female. Feeds on pine sap. Most members of the family are fully winged and feed on fungi under loose bark.

▲ ***Aneurus laevis*** Aneuridae. One of the bark bugs. Very flat: forewings almost entirely membranous. Antennae 4-segmented. Feeds on fungi under bark.

typical shield bug showing beak

The following bugs are known as shield bugs, from their general shape. All have 5-segmented antennae. They are also known as stink bugs because many species emit pungent fluids when alarmed. Many hibernate as adults and are seen mainly in autumn and spring. The group contains both herbivorous and carnivorous species. Their colours often fade after death.

▲ **Hawthorn Shield Bug** *Acanthosoma haemorrhoidale* Acanthosomatidae. Tarsi 2-segmented, as in whole family. Feeds on leaves and fruit of hawthorn and other trees.

▲ **Parent Bug** *Elasmucha grisea*. Named for female's habit of standing guard over eggs and young nymphs, probably protecting them from attack by parasites. Mainly grey or yellow, usually tinged with purplish red. Mainly on birch.

▲ **Pied Shield Bug** *Sehirus bicolor* Cydnidae. Tarsi 3-segmented and tibiae very spiny, as in whole family. On dead nettles and other labiates. ▲ *S. dubius* is metallic green or violet, sometimes black. It lives on various labiates.

Cydnus aterrimus. Legs very spiny, with flattened front tibiae. Pronotum with a marked transverse depression. Feeds on various plants in sandy places, including coastal dunes. S & C.

▲ **Negro Bug** *Thyreocoris scarabaeoides*. Large rounded scutellum covers most of abdomen. In leaf litter and dry turf, especially on sandy and chalky soils.

△s ***Odontoscelis dorsalis*** Scutelleridae. As in all members of the family, tarsi are 3-segmented and scutellum covers whole abdomen. Forewings (covered by scutellum) largely membranous. Very hairy. Light bands may be reduced. Mainly on coastal dunes, feeding on stork's-bill. S & C.

▲ ***Eurygaster testudinaria***. Damp grassy places, feeding mainly on rushes and sedges. 2nd antennal segment hardly longer than 3rd. ▲ **European Tortoise Bug** *E. maura* varies from yellowish to black, with or without brown stripes. Scutellum parallel-sided and 2nd antennal segment much longer than 3rd. Polyphagous. Often damages cereal grains.

Family Pentatomidae. The largest shield bug family, with a total of about 3000 species. Scutellum usually triangular and reaching at least to middle of abdomen. Tarsi 3-segmented. Nymphs usually rounded, often brightly coloured. Abundant on continent, but relatively few in B owing to short, cool summers.

▲ ***Eysarcoris fabricii***. Greenish bronze, golden, or brownish violet: always heavily punctured. On hedge woundwort and other labiates.

△s ***Eurydema dominulus***. Orange or red. A common pest of brassicas on the continent. △s **Brassica Bug** *E. oleracea* Metallic green, blue, or violet, often with red, yellow, or cream spots. Mainly on crucifers and often a pest of cultivated brassicas.

▲ ***Zicrona caerulea***. Dark green, blue, or violet. A carnivorous species, sucking juices from eggs and young larvae of various beetles, butterflies, and moths – including such pests as the Colorado Beetle and cabbage white butterflies.

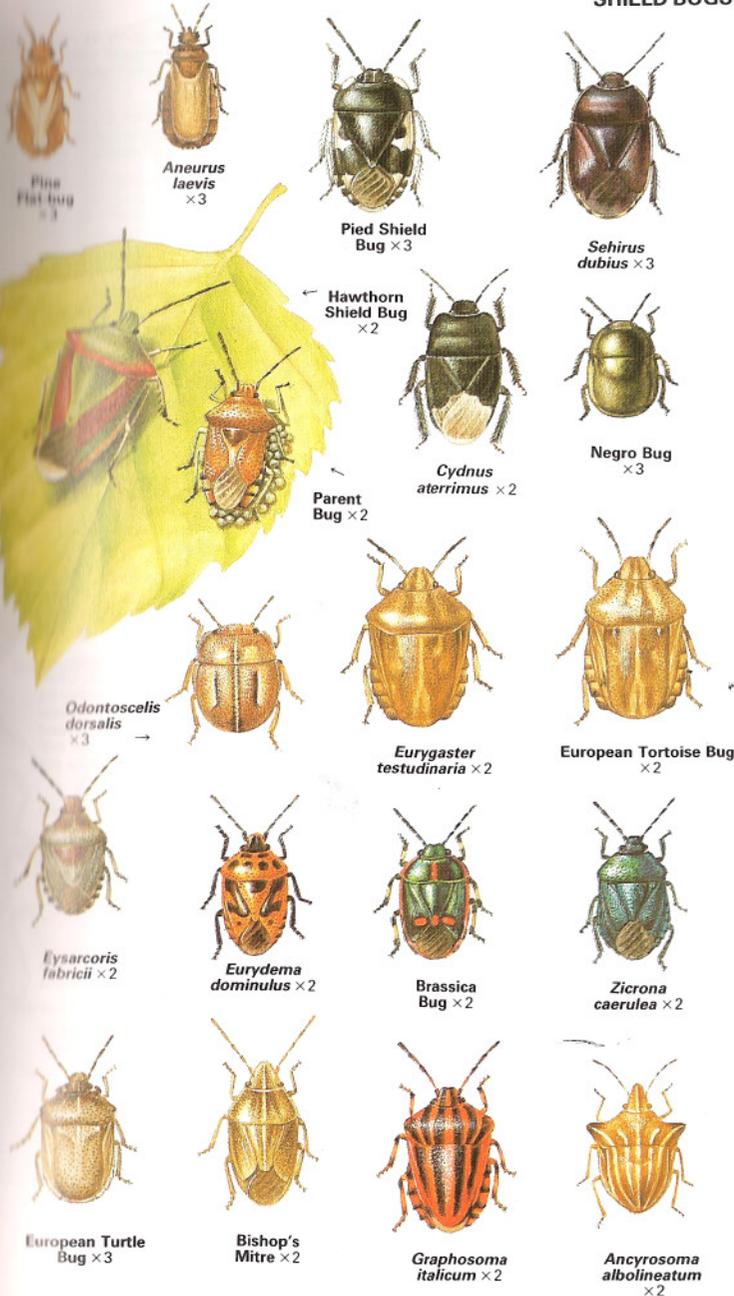
▲ **European Turtle Bug** *Podops inuncta*. Resembles Scutelleridae in its large scutellum covering most of abdomen, but readily distinguished by two small anvil-shaped projections at front of pronotum. Grassy places.

▲ **Bishop's Mitre** *Aelia acuminata*. Rough grassland and cereal fields, occasionally attacking ripening grain. *A. glebana* is similar but larger. S & C (southern).

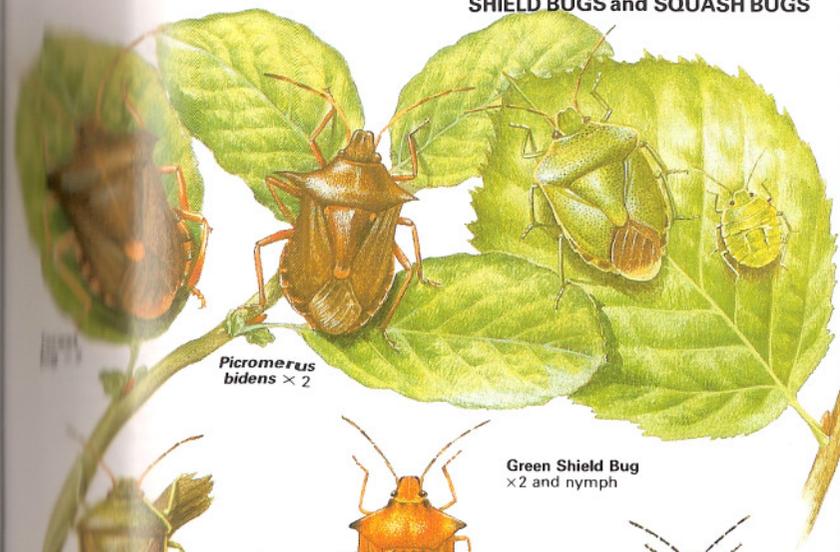
Graphosoma italicum. Abundant on umbellifers 5-10. Bold colour warns of foul taste. Legs often much blacker than shown here. S & C. *G. semipunctatum* has pronotal stripes broken into dots and tibiae almost entirely red. S.

Ancyrosoma albolineatum. Ground colour yellowish to violet brown. Shape unmistakable. On various plants in dry habitats. S.

SHIELD BUGS



SHIELD BUGS and SQUASH BUGS



Picromerus bidens x 2

- ▲ **Forest Bug** *Pentatoma rufipes*. Distinguished from most shield bugs by its rather square 'shoulders' and almost rectangular pronotum. 6-10 on a wide range of trees and shrubs, sometimes attacking other insects as well as feeding on sap. Often common in orchards, especially on cherries. Nymphs are yellow with dark spots.
- ▲ **Picromerus bidens**. Pronotum slopes sharply back from head and then expands to form a sharp 'thorn' on each side. Common on bushes and other vegetation, especially in damp habitats. 7-10. Predatory on larvae of butterflies, moths, and beetles.
- ▲ **Green Shield Bug** *Palomena prasina*. Sides of pronotum slightly concave. Abundant on trees and shrubs, and in rank herbage in autumn. Becomes bronze coloured in late autumn before going into hibernation, but bright green again when it re-emerges 4-5. There are several similar species. *P. viridissima* has slightly convex sides to the pronotum.



Nezara viridula nymph x 1.5

Nezara viridula. Slightly narrower than *Palomena*, with paler membrane at wing-tip and 3-5 pale spots on front edge of scutellum. Head and front of pronotum may be pale brown. The nymph (left) is brightly coloured. Abundant on a wide range of herbaceous plants, often causing damage to peas and potatoes. S & C.

▲ **Gorse Shield Bug** *Piezodorus lituratus*. The red colour is present only in young adults 7-10: after hibernation the insects are yellowish green, often with a bronze tinge. Always heavily punctured. Mainly on gorse, but sometimes on broom and other leguminous plants, often in very large numbers. S & C.

Carpocoris fuscispinus. Ground colour ranges from yellow to reddish brown. Pronotal angles slightly raised and extending as dark points well beyond the wing margins. Double-brooded in south, where only mid-summer insects have the sharp pronotal angles: the autumn-spring brood have smaller and blunter angles. Polyphagous, but especially common on composites and umbellifers.

▲ **Sloe Bug** *Dolycoris baccarum*. Very hairy when seen under a lens: often tinged purple or red. On a wide range of herbaceous plants as well as blackthorn and other rosaceous shrubs, usually feeding on flowers and fruit. Very common on dunes.

▲ **Coreus marginatus** Coreidae. Two tiny horns on head between antennae. Latter are 4-segmented in this and all remaining families of land-living heteropterans. Often much darker brown than shown here. On docks and related plants, feeding mainly on the seeds, but also feeds on blackberries and other fruits in the autumn. Like most members of the family, it hibernates as an adult and is most often seen in autumn and spring. There are many rather similar species. Most members of the family are dull brown and they are commonly known as squash bugs because several species are pests of squashes in North America: nearly all are fruit-feeders.

Philomorpha laciniata. On silvery paronychia in dry, sunny places. Eggs are usually laid on other bugs of the same species and thus carried to fresh food plants. S & C.

△s **Syromastes rhombeus**. Abdomen diamond-shaped and extending sideways well beyond the wings. In dry habitats, usually on sandy soils, including heaths, grassland, and open woods. On sandworts and related plants. Mainly coastal in B.

▲ **Coriomeris denticulatus**. A rather spiky bug found on trefoils and other leguminous plants. Generally only on light, well-drained soils.

△s **Chorosoma schillingi** Rhopalidae. Straw-coloured to green. Forewings sometimes even shorter than shown. In long grass, mainly on coastal dunes: rarely on inland dunes and heaths. 7-9.

▲ **Rhopalus subrufus**. Resembles some coreids but head is broader (almost as wide as pronotum) and pronotum not expanded sideways. Woodland clearings and other lush, flowery places, on St John's-wort and many other plants. Flies readily.

▲ **Myrmus miriformis**. Males green or brown: females always green. Usually brachypterous. Forewings always with prominent pink veins. 6-10 in all kinds of grassland from dry heaths to water meadows. Feeds mainly on ripening grass seeds.

△s **Corizus hyoscyami**. Superficially like some of the ground bugs (p. 76) but distinguished by its hairiness and numerous veins in the apical membrane (ground bugs never have more than 5). Sandy areas, feeding on a wide range of plants. Mainly on coastal dunes in B.

Coptosoma scutellata Plataspidae. 2 tarsal segments. Scutellum covers almost whole of abdomen. Hind edge of scutellum strongly indented in male, weakly so in female. On legumes in damp grassland in summer. S & southern C.



74 Coptosoma scutellata x 3



Horse Shield Bug x 2



Carpocoris fuscispinus x 2



Sloe Bug x 2



Coreus marginatus x 2



Philomorpha laciniata x 2



Syromastes rhombeus x 2



Coriomeris denticulatus x 2



Chorosoma schillingi x 2



Rhopalus subrufus x 2



Myrmus miriformis x 2



Corizus hyoscyami x 2



Fire Bug × 2

▲ *Alydus calcaratus* Alydidae. 4th antennal segment much longer than 3rd and distinctly curved. Fast-flying in sunshine, with red abdomen exposed in flight. Heathland and other dry habitats, associated with a variety of plants and also partly carnivorous: sometimes feeds at carrion. Nymphs are ant-like and often found in ants' nests.

Camptopus lateralis. Like *Alydus* but pronotum much squarer. 4th antennal segments only slightly curved. Larger than *Alydus* and with yellowish brown underside marked with brown (underside bronzy black in *Alydus*). Dry habitats in S & C.

△s **Fire Bug** *Pyrrhocoris apterus* Pyrrhocoridae. Generally brachypterous; rarely macropterous. On many kinds of vegetation: often swarms on ground to feed on fallen seeds, especially in early spring after hibernation. Also attacks other insects. S & C.

GROUND BUGS Lygaeidae. A large family of essentially sombre-coloured bugs, although some display bright warning colours. Membrane of forewing, when present, has no more than 5 veins (see p. 70). Antennae basically 4-segmented, although some individuals may have only 3 segments. Many species resemble mirid bugs (p. 80) but the forewings are much tougher and lack the distinct cuneus of the mirids. Ground bugs also have ocelli, which are lacking in mirids. Mainly seed-eating, although some are partly predatory, and mostly ground-living – often in sandy areas. Most species hibernate as adults.

△s *Aphanus rolandri*. Pale spot varies from yellow to red. In dry places with plenty of stones or leaf litter: occasionally under loose bark. Mostly nocturnal, feeding on fallen seeds. Mainly coastal counties in B.

▲ *Megalonotus chiragra*. Antennae often all black. Forewing membrane may extend beyond abdomen. In moss and leaf litter in sandy places, feeding on various plants. Mainly coastal in B.

▲ *Scoloposthetus decoratus*. One of several rather similar species. Abundant on heathland, often swarming over heather shoots. Active all winter, feeding on shoots and seeds and partly on other insects.

▲ **European Chinch-bug** *Ischnodemus sabuleti*. Long and short-winged forms equally common. Swarms on reeds and other tall grasses, including cereals, in damp and dry habitats. Adults and young hibernate in masses in leaf sheaths. Abdomen of nymph is largely red.

Lygaeus saxatilis. Underside of abdomen red with a black band at base of each segment. Common on a wide range of plants in sunny habitats. S & C. *L. equestris* is similar but forewing membrane is marked with white. Underside of abdomen has 2 black spots on each side of each segment.

▲ **Spruce Cone Bug** *Gastrodes abietum*. Very flat. Usually high up in Norway spruces, hiding in old cones by day and feeding on needles and young seeds at night. Overwinters in cones or bark crevices. ▲ **Pine Cone Bug** *G. grossipes* is readily distinguished by its rich chestnut colour. It lives mainly on pines but is less confined to the cones than *abietum* and commonly found on the lower branches.

Trapezonotus ullrichi. Largest of several species with bicoloured pronotum and black scutellum. Among grasses in dry habitats, mainly on coast. S & C (southern). ▲ *T. arenarius*, with 2nd and 3rd antennal segments black instead of brown, is common in dry grassland everywhere.

▲ *Rhyparochromus pini*. An active runner on dry heathland. Found mainly around the bases of heathers and other plants, but higher up in the vegetation in warm weather. Feeds mainly on seeds.

▲ *Nysius thymi*. Pronotum without a keel. On dry sandy or gravelly areas, especially waste land, with short turf or scattered vegetation. 6-11 (occasionally living through winter). On numerous plants, especially composites such as Canadian fleabane, but also partly carnivorous.

Geocoris grylloides. Short forewings distinguish it from some related species. Mainly on coastal sand dunes. N & C.

Phymata monstrosa Phymatidae. A predatory bug with enlarged raptorial front legs. Abdomen angular and toothed. Yellowish brown to black. S. *P. crassipes* is similar but a little larger and without teeth on sides of abdomen. Usually reddish brown. S & C (southern).



Phymata monstrosa × 3

GROUND BUGS



Alydus calcaratus × 2



Camptopus lateralis × 2



Aphanus rolandri × 2



Megalonotus chiragra × 4



Scoloposthetus decoratus × 4



long-winged European Chinch-bug × 4



Lygaeus saxatilis × 2



L. equestris × 2



Spruce Cone Bug × 3



Pine Cone Bug × 3



Trapezonotus ullrichi × 3



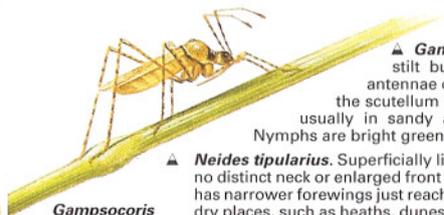
Rhyparochromus pini × 3



Nysius thymi × 4



Geocoris grylloides × 3



Gampsocoris punctipes ×3

▲ *Gampsocoris punctipes* Berytidae. One of the stilt bugs, named for the very long legs and antennae of most members of the family. A spine on the scutellum distinguishes this species. On retharrow, usually in sandy areas: often plentiful on coastal dunes. Nymphs are bright green in this family. S & C.

▲ *Neides tipularius*. Superficially like *Empicoris* and other assassins, but with no distinct neck or enlarged front legs. Rostrum straight. Short-winged form has narrower forewings just reaching tip of abdomen. In dense vegetation in dry places, such as heaths, dunes, and weedy arable fields. Feeds on a wide range of plants and 'freezes' when disturbed.

▲ *Berytinus minor*. Commonly short-winged. In dry grassy places, feeding on grasses and various leguminous plants. Absent from far south.

▲ *Cymus melanocephalus*. Resembles ground bugs (p. 76), but distinguished by scutellum being much shorter than commisure and by inflated edges of forewings. In rank vegetation in damp places. Feeds on various rushes. Several related species have a pale keel on scutellum. S & C.

ASSASSIN BUGS Reduviidae. Predatory bugs with distinct neck and stout, curved, 3-segmented rostrum hardly longer than the head (left). Some have enlarged, raptorial front legs. All European species feed on other insects, but some of the larger ones can pierce human skin. Some tropical species feed on vertebrate blood.



R. iracundus showing beak or rostrum

▲ **Fly Bug** *Reduvius personatus*. Chocolate brown to black. Among rocks and in tree holes, but most common in and around buildings. Nocturnal and often attracted to light. Feeds on a wide range of insects, including bed bugs. Stridulates by rubbing tip of rostrum in a ridged groove on underside of thorax. 5-9.

▲ **Heath Assassin Bug** *Coranus subapterus*. Sometimes fully winged, especially in north. 6-10 on heaths and sand dunes, usually on bare patches of ground. Stridulates loudly if touched, like previous species.

Rhinocoris iracundus. Variable red and black pattern: pronotum may be all-black. 1st segment of rostrum red (black in *R. erythropus*). On flowers. 5-9. S & C (southern).

Pirates hybridus. Anterior part of pronotum much longer than posterior part. Waves antennae as it walks over the ground. 4-10. S & C.

▲ *Empicoris vagabundus*. Readily distinguished from stilt bugs by raptorial front legs and strongly curved rostrum. Lives mainly in trees and looks like a gnat at rest. Feeds on aphids and other small insects. Pale sides of abdomen separate it from several similar species.

Ploiaria domestica. Always wingless. Nocturnal, usually in and around buildings. Feeds on mosquitoes and other small flies. S.

DAMSEL BUGS Nabidae. Predatory bugs resembling assassins but with a longer, 4-segmented rostrum. 2nd antennal segment longer than first and antennae never clearly elbowed. Larger species will pierce human skin if handled.

Prostemma guttula. Usually short-winged. At the bases of various plants in dry, sandy places. S & C. Common in Channel Islands.

▲ *Kalmanius flavomarginatus*. Upper surface and sides of abdomen with golden hair. Forewings occasionally reach beyond tip of abdomen. 6-10 in rough, damp grassland.

▲ **Common Damsel Bug** *Nabis rugosus*. Pale to dark brown: one of several very similar species. Forewings long or short. Grassy places everywhere.

▲ **Marsh Damsel Bug** *Dolichonabis limbatus*. Very rarely with longer wings. 7-11 in damp, grassy places, feeding on a wide range of insects.

▲ **Tree Damsel Bug** *Himacerus apterus*. Forewings occasionally reach tip of abdomen. One of very few tree-dwelling damsel bugs. 6-10. S & C.

▲ **Ant Damsel Bug** *Aptus mirmicoides* lives on the ground and has much shorter antennae. Its nymphs are extremely ant-like.

▲ *Loricula elegantula* Microphysidae. A very tiny bug with fully winged male and short-winged or virtually wingless female. 6-9 among lichens on trees and old walls. Males uncommon: rarely seen after July. Feeds on mites, springtails, etc.

Loricula elegantula ×6

STILT BUGS and ASSASSINS



Gampsocoris punctipes ×3



Neides tipularius ×2



Berytinus minor ×2



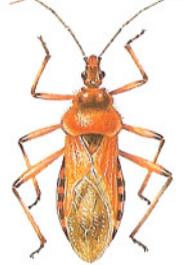
Cymus melanocephalus ×4



Fly Bug ×2



Heath Assassin Bug ×2



Rhinocoris iracundus ×2



Pirates hybridus ×2



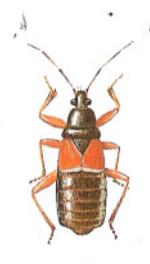
Empicoris vagabundus ×2



Ploiaria domestica ×2



Prostemma guttula ×2



Kalmanius flavomarginatus ×2



Common Damsel Bug ×2



Marsh Damsel Bug ×2



Tree Damsel Bug ×2

Common Flower Bug feeding on aphid



▲ *Piesma maculatum* Piesmidae. Superficially like lacebugs, with strongly punctured forewings and pronotum, but latter does not cover scutellum. Pronotum has 2 keels at front. On sea purslane, orache, goosefoot, and other chenopods on coastal salt marshes and waste ground. Occasionally on beet. ▲ *P. quadratum* has 3 keels on pronotum and may be green or brown. Male stridulates by rubbing wings on abdomen. Most of European coastline: inland in parts of C, where it carries virus disease of sugar beet. Both species are known as beet bugs.

- ▲ *Tingis cardui* Tingidae. One of the lacebugs, named for the densely punctured and reticulate pronotum and forewings. Pronotum extends back to cover scutellum. Clothed with powdery wax. On spear thistle, where nymphs live in dense clusters on underside of flowerheads. There are many similar species.
- ▲ **Bedbug** *Cimex lectularius* Cimicidae. Orange to deep brown and completely wingless. In and around houses, hiding in crevices by day and emerging to suck blood from man and other animals at night. Common in zoos.
- ▲ *Oeciacus hirundinis*. Smaller and hairier than bedbug. Feeds on house martins and swallows (occasionally on other birds) and over-winters in and around their nests. May enter houses when birds leave in autumn.
- ▲ **Common Flower Bug** *Anthocoris nemorum* Anthocoridae. Forewings shiny throughout – distinguishing this from several similar species. Abundant everywhere on a wide range of trees, shrubs, and herbaceous plants – on leaves as well as flowers. A useful predator of aphids and spider mites, it will pierce human skin and suck blood if handled. This and other members of the family are distinguished from mirids by the clear embolium in the anterior part of the forewing (see p. 70).
- ▲ *Orius niger*. One of several similar, very small species. Colour varies, but can be identified by black hind tibiae. Male has swollen antennae. On a wide range of plants, especially gorse, heather, and mugwort.
- ▲ **Hot-bed Bug** *Xylocoris galactinus*. Antennae distinctly hairy (lens!). Named for its liking for compost heaps and similar places. Also in stables, birds' nests, etc, feeding on other insects and also sucking birds' blood.

MIRID or CAPSID BUGS Miridae. The largest family in the Heteroptera, with some 6,000 known species. Body and forewings are relatively soft. Forewings, when present, have a well-developed cuneus (see p. 70), which distinguishes this family from most other bugs. The embolium is not distinct and the membrane generally contains one or two distinct cells at the base. Most species are herbivorous, feeding largely on developing fruits and seeds. Most pass the winter as eggs.

- △s *Deraeocoris olivaceus*. 6-8 on hawthorn, feeding on young fruits as well as on various small insects. S & C. ▲ *D. ruber* is smaller and shinier: generally brick coloured but ranging from yellow to black: cuneus always red. Tibiae not ringed. On a wide range of plants. 6-9. S & C.
- ▲ *Systellonotus triguttatus*. 5-9, mainly on heathland, feeding on shoots and fruits of many plants and also on aphids. Often associated with ants, which nymphs and females resemble closely, although not in movements.
- ▲ *Phylus melanocephalus*. Yellow or brick coloured and distinguished from related species by black head. On oak and hazel, feeding partly on the plants and partly on aphids and other small insects. 5-8.



Fern Bug
(short-winged) × 5

- ▲ *Psallus varians*. Reddish, yellow, or greyish brown. 5-9 on various deciduous trees, especially oaks. Partly predatory. There are many similar, closely related species.
- ▲ *Amblytulus nasutus*. One of many rather similar mirids. Green at first, often becoming brown with age. 5-8 in dry, grassy places. S & C.
- ▲ *Dicyphus errans*. 5-10 in rough herbage, including stinging nettles. Partly predatory. Most members of the genus are entirely herbivorous, with just one food-plant.
- ▲ *Macrotylus paykulli*. Tibiae clothed with minute black spines. 6-9 on restharrow in dry grassland and waysides. Usually gregarious.
- ▲ **Fern Bug** *Bryocoris pteridis*. Forewing membrane commonly absent, the shortened wings leaving tip of abdomen exposed: in this form the forewings get wider towards the tip, giving a pear-shaped outline. 6-9, on bracken and other ferns in damp woods. N & C.

LACEBUGS to MIRIDS

