

## Plant bugs

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### Introduction

The true bugs are classified into three major groups. One includes the aphids, scale insects, lerp insects, mealybugs and whiteflies. Another includes the leafhoppers, planthoppers and cicadas. The third group includes all stink bugs, assassin bugs, chinch bugs, squash bugs and other similar types of insects; of this third group, the plant-feeding pest species that are encountered most often in New South Wales are discussed in this Primefact.

Bugs suck liquid food through tube-like mouthparts. Most are plant-feeding, sucking the sap of their host plants. A large number feed on seeds and fruits. Some are predatory, catching insects and other small organisms.

The bugs discussed here are all native insects, except for green vegetable bug. They can be considered conveniently in their insect family groupings.

### Mirid bugs

Mirids (family Miridae) occur on a wide variety of plants. The adults of some species feed on the new shoots and flower buds. In some crops this stunts plant growth or reduces flower and seed production. All the mirids are very active, running and hopping with short rapid flights when disturbed. In summer, several species are often attracted to household lights.

Some mirids are predators of the eggs of other insects. One species, the apple dimpling bug, appears to prey on other insects and possibly mites in its young stages, whereas only the adult stage damages plants. Other mirids may have the same habits.

Green mirid (*Creontiades dilutus*), apple dimpling bug (*Campylomma liebkechti*), and crop mirid (*Sidnia kinbergi*) feed on the developing fruiting parts of lucerne, cotton and other crops and so may reduce crop production.

Green mirid (pictured below) is pale green to yellow, about 6 mm long and parallel-sided. It is known to destroy young flower shoots on beans and arrest growth of passion vines by killing young terminal shoots.



Figure 1. Green mirid. Colour, pale green to yellow and about 6 mm long.

Apple dimpling bug is pale green, about 2.5 mm long and ovate in outline. In some seasons it is a serious pest of apples, as it feeds in the blossom and on the fruitlets. This causes raised, scabby areas on the young fruit and serious deformation of the apple as it matures.

Crop mirid is about 3 mm long and rusty brown. The body appears truncated, with the wings folded down at the rear. As a pest it is not as important in New South Wales as green mirid and apple dimpling bug.

Citrus blossom bug, *Austropeplus* sp., sometimes reduces blossom production on citrus trees in coastal districts by killing the small flower shoots. The adult is about 5 mm long and brightly coloured: mainly green on the underside and dark coloured



above, with yellow on the thorax, and red and black wing markings.

### Stink bugs

Stink bugs or shield bugs (family Pentatomidae) are frequently found in large numbers on crops, ornamentals and weeds. All are sap-sucking and emit a pungent, evil-smelling liquid if disturbed.

Green vegetable bug (pictured below), *Nezara viridula*, can be a serious pest of a wide range of vegetables, field crops and ornamentals, and especially beans, tomatoes, soybeans and lucerne seed crops. It feeds mainly on the fruiting parts of the plants. The adult is shield-shaped, about 15 mm long and usually green; overwintering adults are brownish purple. The immature stages are brightly coloured with orange, red, black and green.



Figure 2. Green vegetable bug. Length about 15 mm long.

Bronze orange bug, *Musgraveia sulciventris*, is a common and serious pest of coastal citrus trees. In spring and summer the bugs suck sap from young shoots and the stalks of flowers and young fruits. These wilt and fall and the bugs' corrosive excretions burn the foliage. The adults are about 25 mm long and bronzy black. They are stoutly built and can fly strongly. The immature bugs are green, pink or salmon coloured. When disturbed the bugs squirt a foul-smelling fluid that can stain and burn human skin and eyes. The bronze orange bug's only host is citrus.

Spined citrus bug (pictured below), *Biprorulus bibax*, feeds on the fruits of citrus trees, especially lemons and mandarins, in coastal, north and central western New South Wales. Fruits may fall or spoil, with internal drying out and browning of affected segments. The adult is green, about 20 mm long, with a sharp black spine at each side. The immature bugs are marked with black, green and orange in the earliest stages and mainly green in the later stages. Spined citrus bug has been recorded only on citrus.



Figure 3. Spined citrus bug. Length about 20 mm.

Horehound bug, *Agonoscelis rutila*, is usually found on the weed horehound. Sometimes it swarms on foliage and blossoms of fruit trees and ornamental plants but normally causes little injury. The adult is about 12 mm long and bright orange, with black marks on the upper and lower surfaces of the body.

Green stink bug, *Plautia affinis*, is occasionally numerous on and harmful to ripening stone fruits, mulberries, grapes and vegetables such as beans and tomatoes. It is similar to green vegetable bug in shape but is smaller – about 8 mm long – and is mainly green with brown forewings.

Brown shield bug, *Dictyotus caenosus*, is sometimes found on ornamentals and vegetables and field crops such as soybean and sunflower. It appears to do little harm. The adult is about 9 mm long and evenly dull brown.

### Jewel bugs

Jewel bugs (family Scutelleridae) are closely related to stink bugs and also produce offensive odours when disturbed. The wings are hidden beneath a large convex cover, the scutellum. This is frequently gaudily coloured, giving the group its common name.

Most jewel bugs do little harm to economic plants but attract attention by their bright colours and their habit of sheltering in groups.

Cotton harlequin bug (pictured below), *Tectocoris diophthalmus*, feeds on plants of the family Malvaceae, such as hibiscus and cotton. It is a minor pest of cotton, feeding on young shoots and bolls. Adults are 15–20 mm long and strongly convex over the upper surface. Females are yellow-orange with 6–8 small patches of metallic green or blue scattered over the body. Males are metallic green and blue with red patches or extensive areas of red and are smaller than the females.



Figure 4. Cotton harlequin bug. Length about 15–20 mm long

Metallic shield bug, *Scutiphora pedicellata*, is commonly found sheltering in groups of 10–20 in leaf litter or under bark, particularly around the bases of native trees. It feeds on vegetative growth, as well as on fruits, which may shrivel and fall. It has been recorded as affecting native figs, fruit trees such as apricot, cherry, peach and pear, and grapes. It also infests garden plants, both exotic and native.

The adult is shield-shaped, about 14 mm long, and deep metallic green or blue, mottled with black on the upper surface. The front and side margins of the thorax and two spots on the upper surface of the body are bright red.

#### Stainer bugs (family Pyrrhocoridae)

Pale cotton stainer, *Dysdercus sidae*, which usually feeds on native plants and weeds, sometimes occurs on cultivated plants and fruit trees. It can be a minor pest of cotton, staining the lint and damaging the seed, and is known to damage ripening peaches. The adult is about 12 mm long and light reddish brown with the ends of the forewings dark brown. Near the centre of each forewing there is a small black spot. There is a black triangular marking ahead of the centre of the back, and black markings also occur across the front of the thorax and on the head. The underside of the body is yellow-green with red and black markings.

Harlequin bug, *Dindymus versicolor*, may attack a wide range of crop and ornamental plants, such as cotton, pome fruits, stone fruits, fig, grape, kurrajong, strawberry, vegetables, wisteria, dahlia and violet. When they are present in large numbers their feeding makes growing tips wilt or spoils fruit. Sometimes the bugs swarm on tree stumps and fences, and they may come into sheds and houses in large numbers. The adult is about 12 mm long and brightly coloured. The head and the inner margins and tips of the forewings are black and the thorax and base of the forewings are reddish

orange. The underside of the body is tinted with yellow or green and has red and black markings.

#### Chinch bugs (family Lygaeidae)

These small bugs are sometimes present in great numbers and thus may be very harmful to some crops. They are frequently seed feeders but may also feed on vegetative growth.

Rutherglen bug, *Nysius vinitor*, breeds on weeds and in some years reaches plague numbers in spring and summer. It may then migrate in swarms and cause severe damage to cultivated crops such as stone fruits, grapevines, potatoes and many other vegetables, and some field crops. The feeding spoils the fruits of stonefruit trees, leaving them pitted, with exudates of gum. Vegetables and some young trees and vines may be killed outright. The adult bug is about 5 mm long, narrow-bodied and grey-brown. The immature bugs are reddish brown.

Grey cluster bug, *Nysius clevelandensis*, is very similar to Rutherglen bug and sometimes occurs in company with it.

Coon bug (pictured below), *Oxycarenus arctatus*, and cottonseed bug, *Oxycarenus luctuosus*, which are seed and fruit feeders, live by preference on malvaceous plants, such as the weed marshmallow, and hibiscus and cotton. Occasionally they swarm on other cultivated plants, damaging their growth, and on fruit trees, especially stone fruits. They suck the juices of the ripening fruits, leaving dried discoloured patches. If younger fruits are attacked they shrivel and exude gum. These small bugs often swarm around fowl yards, on fences and around the bases of walls of houses and outbuildings. The two species look similar, about 3 mm long and black and white as adults. The nymphs are black with blood-red abdomens.



Figure 5. Coon bug. Length about 3 mm.

### Squash bugs (family Coreidae)

Crusader bug, *Mictis profana*, is common on cassia, wattles and eucalypts and also attacks citrus, grape, rose and wisteria. It feeds on the tips of young shoots, which wilt and die back. The adult is up to 25 mm long and dark brown to black with a yellow St Andrew's cross mark on its back when the wings are folded.

Fruit-spotting bug (pictured below), *Amblypelta nitida*, is known as a pest of stone fruits, macadamias, chokos and avocados in New South Wales. It feeds on the developing fruits, which may fall or be blemished severely. Blemished avocados develop large star-shaped cracks. Blemished peaches have collapsed areas with gum pockets underneath. The adult bugs are 12–15 mm long, light green and parallel-sided. Small numbers of these bugs on the tree can do a lot of damage.



Figure 6. Fruit-spotting bug. Length 12 mm to 15 mm. photo: Queensland Department of Primary Industries.

Passionvine bug (pictured below), *Leptoglossus australis*, is seen in New South Wales on the Far North Coast, mainly damaging passionfruit by piercing the developing green fruits. Occasionally it has been recorded as damaging the fruit of cucurbits and causing fruit drop from citrus. The adult is about 18 mm long and dull black or reddish



Figure 7. Passionvine bug. Length about 18 mm.

black, with a red transverse band behind the head and several red spots on the underside of the body. There is a large flattened area on the hind leg.

### Alydid bugs (family Alydidae)

Pod-sucking bug, *Riptortus serripes*, sometimes attacks beans in north coast districts. The bugs congregate on the pods and suck them dry, reducing the seeds to husks. The adult is about 18 mm long and reddish brown, with conspicuous yellow-white markings along the body and a sharp spine on each side of the thorax.

### Rhopalid bugs (family Rhopalidae)

Leptocoris bug (pictured below), *Leptocoris mitellata*, is found throughout south-eastern Australia. It develops on various native plants and readily feeds upon many cultivated plants, including passion vines, stone fruit trees, tomatoes and other vegetables and saltbush hedges. Infested stone fruits may become pitted. The adults and nymphs commonly shelter in large numbers in houses, often attracted by lights, and can be a severe nuisance. The adult is about 12 mm long, narrow-bodied and a dull red colour, with lighter and darker markings. The legs and antennae are black.



Figure 8. Leptocoris bug. Length about 12 mm.

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