

Bean bug (349)

Common Name

Bean bug

Scientific Name

Melanacanthus margineguttatus; the brown bean bug (or small brown bean bug), *Melanacanthus scutellaris*, is similar. It also attacks pulses. (Note, there is little information on *Melanacanthus margineguttatus* in the literature, mostly reports are on *Melanacanthus scutellaris* - a species native to Australia.)

Distribution

Asia (China), Oceania. It is recorded from Australia, Federated States of Micronesia, Fiji¹, Guam, Northern Mariana Islands, and Samoa.

Hosts

Beans and other legumes - cowpea, mung bean, navy bean, soybean, pigeon pea. *Vigna* species are favoured hosts. The bean bug is likely to attack legume weeds (e.g. phasey bean and rattle pod); they are also hosts of the small brown bean bug, *Melanacanthus scutellaris*.

Symptoms & Life Cycle

Adults and nymphs suck the pods causing pitting and shrivelling of the seeds. They also damage flowers and buds.

Eggs laid in singly, scattered, and produce nymphs with dull-black heads and ant-like features, except they do not have the narrow waist of ants. The abdomen is pointed, cream, with brown and pink spots. Adults are 10-12 mm long, dull brown, narrow and almost parallel-sided, with a cream stripe along the side (Photo 1). They have prominent eyes. The third section of the hind legs (the longest part) is slightly swollen and has short spines on the inside. The small brown bean bug is similar (Photos 2-4).

Impact

A minor pest of food and pasture legumes.

Detection & inspection

The bean bug may be confused with *Riptortus*, the large brown bean bug, or pod-sucking bug (**see Fact Sheet no. 18**). *Melanacanthus* species have a short spine on each 'shoulder', less so than on *Riptortus*, and the hind legs are thinner. Look for the ant-like nymphs; those of *Melanacanthus* species have elongated (not round) abdomens, and six dark spots on the top. Further, the adults of *Melanacanthus* are slender, and shorter (10-12 mm long) than *Riptortus*. Identification to species requires expert examination.



Photo 1. Adult bean bug, *Melanacanthus margineguttatus*, showing the large eyes, spines on the leg, and cream stripe down the sides.



Photo 2. Adult small brown bean bug, *Melanacanthus scutellaris*, showing cream stripe alongside the body.



Photo 3. Adult small brown bean bug, *Melanacanthus scutellaris*, female. The stripe along the body is less obvious.



Photo 4. Adult small brown bean bug, *Melanacanthus scutellaris*, male.

Management

Control measures are not normally required for the bean bug, but should they be required follow the recommendations for *Riptortus* (see **Fact Sheet no. 18**).

NATURAL ENEMIES

There are no reports of predators or parasitoids attacking *Melanacanthus* in Pacific island countries. However, the reduviids (assassin bugs), mantids (preying mantids), spiders and wasps that are known to attack *Leptoglossus* (see **Fact Sheet no. 165**) probably attack *Melanacanthus* eggs, and prey on nymphs.

CULTURAL CONTROL

Before planting:

- Do not plant crops of beans next to those that are already infested with the bug.

During growth:

- Handpick the insects where crop area is small. Do this in the early morning, as at other times of the day the insects are more likely to take flight.

After harvest

- Collect and burn as much of the crop as possible after harvest.

CHEMICAL CONTROL

If infestations reach levels where chemical control is necessary, use sprays of derris, pyrethrum or chilli. If a commercial product is needed, use synthetic pyrethroids or malathion. In Australia, there is no product specifically registered for *Melanacanthus*, but products used against the green vegetable bug are likely to be effective (see **Fact Sheet no. 98**). Mostly, they are synthetic pyrethroids or organophosphate pesticides. But note, these pesticides will also kill the natural enemies.

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval. Recommendations will vary with the crop and system of cultivation. Expert advice on the most appropriate pesticides to use should always be sought from local agricultural authorities.

AUTHOR Grahame Jackson

¹Information from Swaine G (1971) *Agricultural Zoology in Fiji*. Her Majesty's Stationery Office, London; and DAF (2020) Brown bean bug, Business Queensland, Queensland Government, (<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/crop-growing/pests-field-crops/brown-bean-bug>); and from McCaffrey S (2011) (*Melanacanthus nr. scutellaris*): PaDIL - <http://www.padil.gov.au>. Photo 1. Coreoidea species file online. *Melanacanthus marginiguttatus* Distant. The Leverhulme Trust, (<http://coreoidea.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1186292>). Photos 2&3 The Beatsheet. Insect Pest Management for Australia's Northern Region, (<http://thebeatsheet.com.au/resources/insect-identification/podsucking-bugs/bbsm/>). Photo 3 *Melanacanthus scutellaris* (14528939742).jpg Wikimedia Common, ([https://commons.wikimedia.org/wiki/File:Melanacanthus_scutellaris_\(14528939742\).jpg](https://commons.wikimedia.org/wiki/File:Melanacanthus_scutellaris_(14528939742).jpg)).

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