

# Pacific Pests, Pathogens and Weeds - Online edition

## Guava bud moth (381)

### Common Name

Guava bud moth. Swaine (1971)<sup>1</sup> refers to the moth as a 'webworm'.

### Scientific Name

*Strepicrates ejectana*. It was previously known as *Strepicrates holotephra*s. However, there is some doubt whether these two species are the same based on male genitalia, which are used by taxonomists to differentiate between species of *Strepicrates*. A revision of the genus is needed. The moth was first described from Fiji. It is a moth of the Tortricidae.

### Distribution

It is reported from Australia, New Zealand, the Philippines, and from the following Pacific islands: Fiji, French Polynesia, Northern Mariana Islands, and Samoa.

### Hosts

The larvae feed on *Thryptomene calycina* (a small shrub with white flowers native to Australia), guava, cherry guava, Malay (rose) apple, *pitanga* or Suriname cherry, and *Metrosideros collina* (a native to French Polynesia and Cook Islands). Many of these plants are in the Myrtaceae family. In Fiji, it is recorded on *Eucalyptus* and also on tea, under the name *Strepicrates holotephra*s.

### Symptoms & Life Cycle

The caterpillars or larvae of the moth do the damage. Eggs are laid on young guava shoots (evidence from other species attacking guava, e.g., *Strepicrates smithiana*). The larvae live in the rolled and webbed terminal leaves and their chewing causes yellowing of the leaves and eventually death of the shoot (Photos 1-3). When mature, the larva are 12 mm long, yellowish below and grey above. The head is yellowish-brown, the gut shows in places through the skin, and a U-shaped mark is present on the top of the last segment of the abdomen. The larvae also damage the young fruit by eating surface layers.

The pupae are about 8 mm long and develop in the webbed leaves.

The adult moth is 6 mm long with a wingspan is about 20 mm. The forewings are greyish brown with darker irregularly-shaped markings, and white speckling; the fringed hindwings are pale brown, with darker veins and borders (Photos 4&5).

### Impact

There have been no investigations into the damage caused by this moth on cultivated guava in the Pacific, but on wild trees in Fiji, Swaine (1971) states: "At times, this is sufficiently numerous on guava to check its growth". It is very likely that similar damage occurs in plantations of cultivated varieties.

### Detection & inspection

Look for rolled leaves, and the webs that hold them together. Unroll the leaves of the terminal shoots, and look for the larva or pupa, frass, webbing and extensive damage (and death) of the shoot.



Photo 1. Larva of the guava bud moth, *Strepicrates ejectana*, with orange head and dark grey upper body in unfurled leaf, exposed to show leaf damage.



Photo 2. Extensive damage to apex of shoot by the larva of the guava bud moth, *Strepicrates ejectana*.



Photo 3. Extensive damage to shoot tip by the larva of the guava bud moth, *Strepicrates ejectana*. The cocoon of the pupa is shown clearly.



Photo 4. Adult guava bud moth, *Strepicrates ejectana*.

## Management

### NATURAL ENEMIES

None have been reported from Fiji, but it is likely that minute species of wasp parasitise the eggs or larvae of the guava bud moth.

### CULTURAL CONTROL

Before planting:

- Inspect plants in the nursery and if rolled leaves are seen, kill the larvae inside by squeezing between finger and thumb, or if too numerous treat with a pesticide (see below).

During growth:

- In the field, routinely inspect the bushes, especially when the plants are young, and kill the larvae in rolled leaves or spray if infestations are large.
- Plant large blocks of flowering plants within and around guava plantations to attract parasitoids and to provide them with a source of nectar.

### CHEMICAL CONTROL

- Use PDPs (botanicals) to safeguard natural enemies (chillies, neem, derris, pyrethrum), or microbial, commercial products, such as, spinosad, Bt (*Bacillus thuringiensis* subspecies *kurstaki*) sprays against caterpillars when young.
- In Florida, a number of insecticides have been registered for use on guava against a related species, *Strepicrates smithiana*. Those recommended against lepidoptera (i.e., moth larvae) are: Bt (*Bacillus thuringiensis*), spinosad, pyrethrins (from pyrethrum or *Chrysanthemum* flowers), and malathion.
- In Australia, spinetoram (Success), carbaryl and the systemic dimethoate are registered for guava. Spot-spraying damaged shoots should be sufficient. Avoid 'blanket' spraying entire trees. To avoid killing natural enemies, if possible, avoid using malathion, carbaryl or dimethoate.

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*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 pesticide to use should always be sought from local agricultural authorities.*



Photo 5. Adult guava bud moth,  
*Strepicrates ejectana*.

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<sup>1</sup>Swaine G (1971) *Agricultural Zoology in Fiji*. Her Majesty's Stationery Office, London. Information on the taxonomy of the moth from Todd Gilligan (see also Gilligan TM, Baixeras J, Brown JW (2018) T@RTS: Online World Catalogue of the Tortricidae (Ver. 4.0). (<http://www.tortricid.net/catalogue.asp>); and from Carillo D et al. (2017) Guava pests and beneficial insects. UF IFAS Extension, Florida. (<https://edis.ifas.ufl.edu/ig072>).

Produced with support from the Australian Centre for International Agricultural Research under project HORT/2016/185: Responding to emerging pest and disease threats to horticulture in the Pacific Islands, implemented by the University of Queensland and the Pacific Community.

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