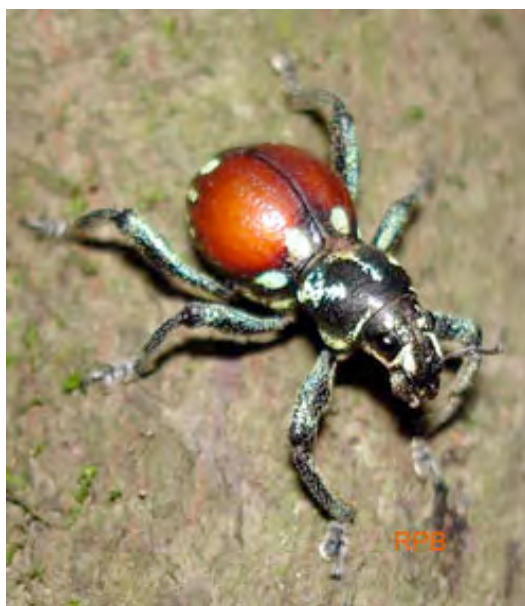


## Extension Fact Sheet 61: *Pantorhytes* Weevils



**Common name:** Cocoa weevil borer

**Scientific name:** *Pantorhytes* species.

*P. biplagiatus* is a serious pest of cocoa in Solomon Islands.

**Hosts:** Cocoa and several commercial forest trees, e.g., *Eucalyptus* and *Terminalia*.

### Damage

The larvae do the damage. They bore into the sapwood of trunks and branches, making tunnels 1-3 cm deep (photo, right). Often the tunnels are made at or near the jorquette, the junction of branches and trunk. Damage at the jorquette has the potential to do considerable harm. The overall effect of the damage is to weaken the trees, causing tip dieback, death of branches due to ring barking, and even death of the tree if splits occur at the jorquette. Consequently, pod yields may be reduced considerably.

The wounds made by larvae may allow entry of the bark canker fungus, *Phytophthora palmivora* (see Fact Sheet no. 6), and also termites.

### Biology and Life Cycle

The white, oval eggs, about 2 mm long, are laid singly in crevices in the trunk and main branches, particularly near the jorquette. They hatch after 2-3 weeks. The larvae bore into the wood, feeding for 3-9 months through nine instars, and then pupate beneath the bark for about 2 weeks.

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The adults are black and red (photo, above left), wingless weevils about 1.5 cm long. They feed for 4-6 weeks before mating; afterwards, the female lays about two eggs a day throughout a life of 1-2 years. Adults feed on the bark of young cocoa shoots, flowers and, occasionally, pods, but the damage is not sufficient to affect pod production.

## Detection and Inspection

Look for holes in the trunk and branches, particularly at the jorquette; look for the jelly-like substance that exudes from the holes where the larvae feed. Look for the adult beetles, that have a red abdomen with white spots, and are relatively slow moving, sufficient to be handpicked.

## Management

### Natural enemies:

Biocontrol of *Pantorhytes* is possible using the crazy ant, *Anoplolepis gracilipes*, or *Oecophylla smaragdina*. The ants make colonies in soursop trees, so these should be planted between cocoa trees to encourage the ants to colonise them. The Little fire ant, *Wasmannia auropunctata*, too, may be antagonistic to *Pantorytes*.



The yellow-brown crazy ant has remarkably long legs and antennae (photo, above). Its total length is about 4 mm. It kills its prey by spraying formic acid. *Wasmannia* is smaller.

### Cultural control:

- Hand pick *Pantorhytes* adults (they do not have wings) during the middle of the day when they come down from the canopy to find cooler places;
- In severely infested plantations, find the larvae by looking for frass pushed out of the entrance of the larval tunnel and/or the jelly-like substance. Remove the frass with a stiff brush and apply a solution of Dichlorvos, white oil, Ridomil and water with a small 2 cm brush onto the bark around the entrance hole. (Ridomil is added to control *Phytophthora*). Repeat every 2 weeks;
- For smallholders, find the tunnels made by the larvae, and kill them with a piece of wire;
- If possible, plant cocoa beneath coconuts as *Pantorhytes* numbers are less than under forest trees, *Leucaena* or *Gliricidia*; possibly, the lower numbers are associated with higher ant populations under coconuts.

### Chemical control:

The use of insecticides – other than as ‘paints’ to kill larvae - are not recommended. The difficulty of bringing the chemical into contact with the larvae inside their tunnels, and the low populations of beetles makes their use uneconomical.