

Extension Fact Sheet 62: *Axiagastus* Spathe Bug



Common name: Coconut spathe bug

Scientific name: *Axiagastus cambelli*

Hosts: Coconut and betel nut.

Damage

Both adults and nymphs do the damage. They have long piercing mouthparts that they insert into young coconuts to suck the sap. This feeding causes some nuts to fall, and those that remain become long and thin, without the 'meat' and 'milk' of healthy nuts. Whether or not the bug injects a poison as it feeds is not known, but it is thought unlikely.

Biology and Life Cycle

The barrel-shaped, white eggs are laid in clusters on the flowers, the fibrous sheath at the base of the fronds and, more rarely, on the leaflets. Eggs hatch in 6-8 days, and the nymphs, which are white at first then orange with black markings, moult four times before they become adults. The time from egg to adult is about 45 days.

The adult is dark brown with yellow marks, about 15 mm long. It gives out a strong unpleasant smell when held or disturbed.

Detection and Inspection

The bug occurs in large numbers on the newly opened spadices, feeding on male and female flowers. The damage done by the bug is uncertain. There is some loss of young nuts when

populations are high, and outbreaks in Santa Cruz (Nendo Island) have occurred on coconuts that have produced dry, banana-shaped nuts. However, it has not been proven that *Axiagastus* is the cause of the condition: it is still only an association. Nutritional deficiencies have also been suggested as well as poor fertilisation of the flowers.

The smell when disturbed is also a characteristic of the bug.

Management

Natural enemies:

In Papua New Guinea, surveys have found egg, nymph and adult parasitoids (e.g., the wasp, *Trissolcus painei*, and the fly, *Pentatomophaga bicincta*), and it is likely that there are related species in Solomon Islands. *Oecophylla smaragdina* (Weaver ant, Green ant, Green tree ant) is said to reduce populations of this pest as it does for those of *Amblypelta* (see Fact Sheet no. 19). Thus, planting soursop and other fruit trees that host colonies of *Oecophylla* within coconut plantations, and then helping the ant to establish on these trees, by placing 'nests' in the canopy, may help to reduce *Axiagastus* numbers.

It is likely that the recently introduced fire ant, *Wasmannia auropunctata*, will also provide control, although this is only speculation.

Chemical control:

The use of insecticides is not recommended. The bug is usually under control naturally, and outbreaks only occur occasionally. Insecticides would only increase the time before the balance between the pest and its parasitoids was re-established. Additionally, there is the difficulty of spraying mature palms, making the application of insecticides difficult as well as uneconomical.