

Pacific Pests, Pathogens, Weeds & Pesticides - Online edition

Crotalaria pod borer (394)

Common Name

Crotalaria pod borer, rattle-pod borer, black spotted moth.



Photo 1. Larvae of Crotalaria pod borer, *Agrina astrea*, and black patches of damage on leaves.

Scientific Name

Argina astrea. Previously known as *Argina cibraria*. It is a moth of the Erebidae, a family commonly known as 'tiger moths'.

Distribution

South and Southeast Asia, Africa, Oceania. It is recorded from Australia, Cook Islands, Fiji, French Polynesia, Guam, New Caledonia, Palau, Papua New Guinea, and Solomon Islands.



Photo 2. Damage to leaves and leaf stalks by the Crotalaria leaf borer, *Agrina astrea*.

Hosts

Crotalaria (rattle-box), *Beaumontia*, *Ficus petersii* (peter's fig), *Ficus thonningii*, *Eugenia cordata* (lathberry), *Ochna serrulata* (mickey mouse bush), *Ochna atropurpurea*, *Melilotus indica*, *Mimusops obovata* (coastal red milkwood).

Description & Life Cycle

The caterpillars or larvae damage *Crotalaria* by eating the leaves and scraping the surface of the leaf stalks (Photo 1). In many countries *Crotalaria* is introduced and has become a weed. It is thought to poison livestock. In Australia, in the Kimberley region, the alkaloids cause liver damage in horses, resulting in blindness, referred to as 'walkabout disease'.

The eggs are laid on the upper midrib of leaves in rows of 3-15. Young larvae eat leaves, older ones bore into the pods and eat the seeds. When fully grown the head of the larva is reddish-brown, and the body black with white rings (Photo 2). The spiracles (breathing holes) are in orange patches. Pupation occurs under leaf litter. Adult moths are orange, with roundish black spots on the forewings ringed with white. Hindwings are a deeper orange, and have a variable number of larger black spots (without white rings around them) of various shapes and sizes (Photos 3&4). Moths are about 17 mm long with a wingspan up to 40 mm.

The moths contain pyrrolizidine alkaloids, which they obtain from eating *Crotalaria*. The colour patterns of adults may advertise their poisonous nature.



Photo 3. Adult Crotalaria pod borer, *Agrina astrea*, showing black dots surrounded by white rings against the orange background of the forewings.

Impact

The larvae are sometimes found in large numbers on *Crotalaria* and according to Swaine (1971)¹ are "important in checking its spread". In Australia, it does not appear to be effective in controlling *Crotalaria*.



Photo 4. Deeper orange of hindwings with larger spots without white rings, compared to those of forewings.

Detection & inspection

Look for the distinctive black and white banded larvae, and the equally noticeable adult moth with black spots on the fore and hind wings on an orange background.

Management of Biocontrol Agents

PEST RISK ASSESSMENT

The fact that the Crotalaria pod borer, *Argina astrea*, is not specific to *Crotalaria*, may mean it will have undesirable effects on non-target species. Safety tests will be needed before decisions can be made on its introduction.

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¹Information from Swaine G (1971) *Agricultural Zoology in Fiji*. Her Majesty's Stationery Office. London; and The moths of Borneo. (<https://www.mothsofborneo.com/part-6/contents.php>). Photo 3 John Hill (2009) Photo of *Argina astrea* moth with closed wings. ([https://commons.wikimedia.org/wiki/File:Argina_astrea_\(Crotalaria_pod_borer,_Tiger_moth\).jpg](https://commons.wikimedia.org/wiki/File:Argina_astrea_(Crotalaria_pod_borer,_Tiger_moth).jpg)). Photo 4 Diorit (2011) Unbekannter Schmetterling aus dem Hochland von Madagaskar. (https://commons.wikimedia.org/wiki/File:Madagaskar_Schmetterling01052011.JPG).

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