



Rhinoceros beetle pest found in Guam and Saipan



• *Adult rhinoceros beetle*



• *Rhino beetle damage on coconut tree*

On September 12, 2007, a large beetle was found near the old Fujita Hotel site near the beach at Tumon Bay in Guam. The beetle was identified by entomologist Aubrey Moore of the University of Guam as the coconut rhinoceros beetle, *Oryctes rhinoceros*. During a delimiting survey, about 50 trees were found with adult CRB feeding damage and grubs were found at three sites. All damaged trees and breeding sites were within the Tumon Bay and Faifai Beach areas, totaling about 500 hectares. A year ago, in September 2006, a single CRB adult was caught in a warehouse at the seaport on Saipan, Commonwealth of the Northern Mariana Islands. Surveys prompted by the interception did not find any CRB feeding damage. The four states of the Federated States of Micronesia, and Marshall Islands and Kiribati are still free from the beetle.

The rhinoceros beetle is a serious pest of coconut and other palms including betel nut. Coconut, also called 'the tree of life' is a very important crop in Micronesia and it is therefore vital to prevent the introduction of the beetle.

The rhinoceros beetle is very robust, shiny black and measures 3.5–5 centimetres or 1.5–2 inches long. The male bears a long horn on the head, giving it a rhinoceros-like appearance. The female has only a short horn. The larva or grubs of the beetle are light yellowish in colour, grow to a length of 10–12 cm or 4–5 inches and have a strongly built head and mouthparts.

The adult beetle lives in the crown of palm trees. The female lays eggs in decaying organic matter such as the rotten wood of coconut trunks and dead standing palms, rubbish heaps, or piles of compost and sawdust. The larvae take 4 to 5 months to reach full maturity. The young adult beetle remains at the breeding site for 3 more weeks before flying to the nearest coconut palm to feed. The adult beetle, which lives for at least 5 months, is capable of flying long distances and may infest isolated coconut trees several kilometres from the breeding site.

It is the adult beetles that cause damage. They burrow into the crowns of palms and feed on the soft unfurled palm leaves inside. When the leaves unfold, they show typical large 'V-shaped' cuts on the sides of the leaves. Sometimes, the tips of the leaves are completely cut off. Damage caused by the rhinoceros beetle weakens palm trees and can reduce nut production. Severe attacks may result in the death of the trees.

In the South Pacific where the rhinoceros beetle is well established, a virus disease and a fungus have been introduced for biological control. Ensuring good field sanitation by removing dead standing palm trees and other breeding sites is most important.

Officials from the Guam Department of Agriculture and entomologists from the University of Guam have begun work to eradicate the rhinoceros beetle. Guam is planning to control larvae (grubs) by eliminating breeding sites such as coconut stumps and rotten vegetation from the Tumon Bay area. At the same time, pheromone traps will be used to catch adult beetles.

In countries where the beetle is not present, and in Guam where an eradication program is being carried out, people should report the sighting of V-shaped cuts on palm fronds, and adult beetles, to one of the following addresses:

Guam: Plant Inspection Station, phone (1 671) 475 1426;
Dr Aubrey Moore, UOG, phone (1 671) 735 2086
Marshall Islands: Mr Henry Cabelle, R&D,
phone (692) 625 3206
Pohnpei: Mr John Wichep, R&D, phone (691) 320 5133/2646
Yap: Mr Andrew Fogolur, phone (691) 350 2116
Kosrae: Mr Palikkun Tulenna, phone (691) 370 3017

Chuuk: Mr Sabrino Roberts, phone (691) 330 3720
CNMI: Dr Joaquin (Jack) Tenorio, Northern Marianas
College phone 1-670-234-5498 ext. 1432
SPC Pohnpei Office: Konrad Englberger,
phone (691) 320 7523