



Coconut Rhinoceros Beetle

By: Dr. Aubrey Moore, University of Guam

The coconut rhinoceros beetle, or "rhino beetle" for short, is native to Asia and the Philippines. It arrived on Guam only recently: the first one was found near the beach at Tumon Bay during September 2007. The rhino beetle is a very large and powerful scarab beetle. It is the world's most serious insect pest of coconut palms. Adults fly up into the crowns of palm trees just after dark. Here, they bore into the center of the tree where they feed on the sweet sap. In addition to leaving a large bore hole [Fig. 2], the beetles damage developing leaves. When these leaves open they show distinctive v-shaped cuts [Fig. 3]. Palms are killed when a beetle bores through the growing tip. Trees damaged in this way die within about a year because they cannot replace old fronds which fall off. Immature beetles, called grubs [Fig. 4], do no damage. They feed mainly on dead, decaying coconut material. Food for the grubs is very abundant on Guam in the form of dead coconut palms killed by typhoons.

Rhino beetles have been found only near the northwest coast of Guam in a strip extending from Agana in the south to Urunao in the north. An eradication project has been launched with the goal of exterminating all rhino beetles on Guam before they kill a lot of palm trees and spreads to other parts of

the island. The project uses three tactics:

1. Quarantine. A quarantine regulation has been imposed which makes it illegal to remove green waste and other organic material outside of the which may contain beetles from the infestation area.

2. Trapping. The eradication project has built and deployed more than 1700 bucket traps [Fig. 5].

These traps use a commercially available rhino beetle lure which attracts both male and female beetles. Mass trapping within the infestation zone, especially in the Tumon Bay hotel area, is intended to intercept all adult beetles before they do damage. Elsewhere, traps are hung at one mile intervals along major roads to detect any spread of the beetle population.

3. Sanitation. When breeding sites are found, indicated by grubs and/or adult beetles in rotting vegetation, this infested material and potential food sources for the grubs must be totally removed. Currently, this material is treated with an insecticide to kill all beetle life stages, and then it is buried.

If the eradication program fails, entomologists predict that about half of Guam's palm trees will be killed by the rhino beetle. Please help by reporting all sightings of the rhino beetle to the Guam Plant Inspection Station at 475-1427.



Fig.1 / 写真1



Fig.2 / 写真2



Fig.3 / 写真3



Fig.5 / 写真5

Dr. Aubrey Moore is an Extension Entomologist at UOG. He is an expert in insect identification and pest control.



グアム島内のいたるところで、ワナがかけられている。

かぶと虫を撲滅せよ！
ライノ・ビートル殲滅作戦



現在グアム全島がライノソラス・ビートルの害に脅かされている。ココナッツ・ライノソラス・ビートル(通称ライノ・ビートル)とはカブト虫とコガネメシの仲間、体長約63mmと大きく、体は黄金色をしている。

世界でも代表的な「椰子の木」の天敵(害虫)で、2007年9月に始めてタモン湾にて発見され(写真1)今ではグアム中の椰子の木が絶滅の危機に瀕しているのだ。この成虫は蜜を吸う為に椰子の木の上部に大きな穴を開ける(写真2)。その開けられた穴が生長点(植物の細胞分裂をする部分)まで達してしまうと、葉の生え変わりができなくなり、約1年程度で木全体が枯れてしまう、という。まさに椰子の木にとって天敵なのである。

タモンの街やビーチを歩いていると、椰子の木にバケツ

が掛かっているのを見かけないだろうか？

全てのライノ・ビートルを駆除するプロジェクトとして、1700以上の箇所にバケツのワナ(写真5)を椰子の木に仕掛けた。

このワナは、ライノ・ビートルが誘惑されるフェロモンをしかけたものだ。もし、このプロジェクトが成功しない場合、グアムにある椰子の木の半分が枯れることになるだろう、と昆虫学者は予測している。

もしも、ライノ・ビートルを目撃した場合は、グアム植物管理(電話番号475-1427)に連絡していただきたい。

[Fig. 2] Bore hole made by an adult rhino beetle. / Image courtesy of Ernie Nelson, Greenscapes Inc. [Fig. 3] V-shaped cuts in palm fronds damaged by adult rhino beetles. / Image courtesy of Ben Quichocho, U.S. Department of Agriculture. [Fig. 4] Rhino beetle grubs do no damage. They feed in decaying vegetation. / Image courtesy of Aubrey Moore, University of Guam.

[Fig. 5] A rhino beetle pheromone trap. / Image courtesy of Aubrey Moore, University of Guam.

写真1: グアムで最初に発見されたライノ・ビートル

写真2: 椰子の木に開けられた穴

写真5: ライノ・ビートルのフェロモンによるワナ



Fig.4 / 写真4

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グアム散策

MAP

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