

Adult Feeding Sites

- Adults feed on living palm trees for their sweet sap in the heart.
- Leaves are damaged as a result of adults burrowing past new emerging leaves in the crown.



Figure 5. Leaf damage showing typical V-shaped cuts caused by the feeding of adult CRB.

Adult Breeding Sites

- After feeding, adults will seek sites to breed.
- Females lay their eggs in dead standing coconut trees, and other decaying organic matter.
- Grubs will spend their whole life-cycle in organic matter.
- All life stages can be found in these breeding sites.



Figures 6-8. Examples of CRB breeding sites.

Facts to Remember

- All life stages can be found in breeding sites.
- Grubs are beneficial in breaking down organic matter for compost.
- Adult beetles are the **ONLY** ones that feed and cause damage to palm trees.
- Grubs **DO NOT** feed on live palm trees.
- Some adults lay eggs on tree tops and grubs feed in dead organic matter at the base of the fronds.
- Adults feed on the sap of palm trees and damage emerging leaves as they bore into the heart of the tree.

For More Information

Coconut Rhinoceros Beetle Program
College of Natural & Applied Sciences
Agriculture and Life Science Building Rm. 105
University of Guam
UOG Station
Mangilao, Guam 96923
Phone: (671) 735-2080
Fax: (671) 734-4600

<http://cnas-re.uog.edu/crb/>

Prepared by Ian Iriarte, Roland Quitugua, Olympia Terral, Aubrey Moore, and Mariana Sanders.
Last Updated April 25, 2017.

This publication is made possible through a grant from the USDA Forest Service.

Behavior & Biology

Coconut Rhinoceros Beetle



Scientific Name

Oryctes rhinoceros

Common Names

Asiatic Rhinoceros Beetle
Coconut Rhinoceros Beetle

Where are they from?

The Coconut Rhinoceros Beetle (CRB) is native to Southeast Asia, primarily in Indonesia and the Philippines. During the past century, they have been introduced into many Pacific Islands like Fiji, Palau, Samoa, and Tonga because of the increase in air and sea trade. It was first detected in Tumon, Guam in 2007 and Oahu, Hawaii in 2013.

How did they get here?

It is still unknown, however, it was more likely brought in by shipping container holding construction materials.

Male or female? How can I tell?

Males

- Usually larger horn.
- Little to no reddish hairs on their posterior ends.

Females

- Usually smaller horn.
- Posterior ends fully covered in reddish hairs.

Note. The amount of nutrition each beetle consumes in the grub stage of their life-cycle plays a role in the body and horn size.

Life Cycle

The beetle has four life stages: egg, larvae, pupa, and adult (Figure 3). The female rhino beetle lays about 100 eggs (in her lifetime) in decaying organic matter. Once hatched, the grubs feed on organic matter, helping to break it down into compost. After about 60 days, grubs begin to pupate and transform into an adult beetle.

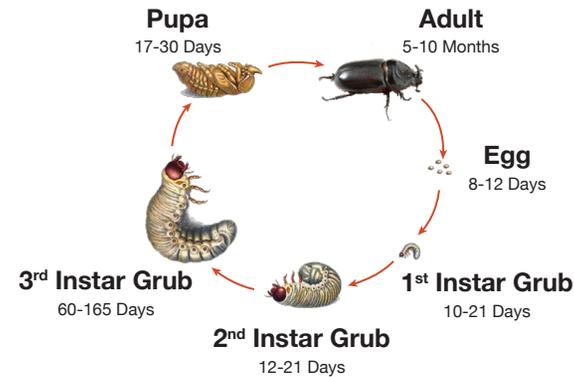


Figure 1. Coconut rhinoceros beetle life cycle.



Figure 2. Male coconut rhinoceros beetle.



Figure 3. Female coconut rhinoceros beetle.

Instar Grubs

- Live in breeding sites within green waste piles or piles of decomposing material.
- Spend all of their time eating and producing waste in order to grow and develop.
- Grow for about 2–3 months from a first-instar to a third-instar grub.
- Each instar stage is determined by the size of their head capsules rather than body size.



Figure 4. Third instar grub.

Adult Beetles

- One to two inches in length, black to reddish black in color with reddish hairs around the body, and possess a single predominant horn.
- Adults are the only ones that cause damage to coconut and other palms trees.
- Bore into trees using their horn and spiked legs to feed on the sweet sap in the heart of the palm.
- Are nocturnal and are active at sunset.
- Can fly up to 2 miles at a time.
- Only feed for two to three days at a time.
- After feeding they exit the tree and fly off to mate in green waste or organic matter piles.