

## Oryctes Illiger 1798

### Taxonomy

Sub family: Dynastinae / Tribe: Oryctini / Genus: *Oryctes*

### Distinguishing Features

Large, elongated, cylindrical beetles with prominent sexual dimorphism. Body length 25-60mm. Body colouration shiny reddish brown to dark brown or black. Clypeus with apex deeply emarginated. Antennae with 10 segments, and a 3 segmented club that is similar in both sexes. Labrum hidden under clypeus and highly setose. Mentum apex rounded, with dense marginal setae. Frons of males with a long horn, females with a tubercle (rarely a horn). Pronotum of males with a large concavity, females with smaller concavity, and both usually with a raised median ridge or knob to the rear of the cavity, with varying numbers of denticles present. Pronotum with an apical membrane margin. Propygidium with a single banded stridulatory area. Foretarsi in both sexes simple, not thickened. Hind tarsal claws simple.

*O. rhinoceros* specific features:

Body length 30-57mm. Body colour black to dark reddish brown. Frons of male with medium sized blunt horn. Frons of female with a tubercle or small horn. Pronotal knob with two low denticles medially. Pronotal concavity extending beyond half of pronotal length. Sides of pronotum with areola apposita (rugose areas) similar to rugosity within pronotal concavity. Elytra with dense punctations along midlines of elytral suture, becoming fainter towards lateral margins. Females with long erect reddish hairs on pygidium. Apex of hind tibia with two teeth.

### Related and Similar Species

The genus is a member of the tribe Oryctini which all share distinct sexual dimorphism, and apex of metatibia crenulate or with teeth like projections.

There are around 43 species within the genus *Oryctes*. A key to species and some subspecies is provided by Endrödi (1985).

An updated key to the Australian Dynastinae tribes and genera is provided by Weir *et.al.* (2019)

*Oryctes* can be separated from other Genera through the shape of their frontal horn, and pronotum. They can be rapidly separated from *Scapanes australis* by having a stridulatory area on the propygidium, and by the absence of two large, forwardly projecting horns on the pronotum present on *Scapanes australis* males.

### Biological Data

Numerous species of *Oryctes* are significant pests of palms. *O. rhinoceros* is seen as the most damaging pest of coconut palms throughout Asia and the Pacific. Adult beetles, especially young adults, cause damage by burrowing into the crown of palms and chewing on developing fronds to feed on the sap. Adult beetles then bore outwards, leaving large exit holes in the base of the main fronds. Damaged leaves grow with large "V-shaped" sections missing. While larvae are usually soil dwellers feeding on composting material, but in Guam larvae have been recorded completing their entire lifecycle within the crowns of coconut palms.

An extensive datasheet for *O. rhinoceros* is available at:

<http://download.ceris.purdue.edu/file/2489>

### Distribution

Most species in the genus are found in the Afrotropical region. A number of species are spread across tropical and subtropical Asia and Oceania, ranging from Pakistan to Japan, and into numerous Pacific and Indian Ocean Islands. *O. rhinoceros* is particularly invasive, and poses a significant risk to coconut growing areas. A detailed distribution list can be found in Bedford (2015).

*O. rhinoceros* has previously been reported from Thursday Island, QLD, Bathurst Island, NT, and historically from the Cocus-Keeling Islands.

*O. centaurus* has been recorded from Cape York, QLD.

### Useful Links



*Oryctes rhinoceros* female dorsal view

Photographer:

Pia Scanlon



*Oryctes rhinoceros* female lateral view

Photographer:

Pia Scanlon



*Oryctes rhinoceros* female ventral view

Photographer:

Pia Scanlon



*Oryctes rhinoceros* female head front

Photographer:

Pia Scanlon



*Oryctes rhinoceros* male dorsal view

Photographer:

Pia Scanlon



*Oryctes rhinoceros* lateral

Photographer:

Pia Scanlon



*Oryctes rhinoceros* male ventral view

Photographer:

Pia Scanlon

CABI *O. rhinoceros* datasheet: <https://www.cabi.org/isc/datasheet/37974>  
Dynastid Beetle Pests - *O. elegans* and *O. agamemnon* (pdf): <https://bio.mq.edu.au/wp-content/uploads/2016/02/Dynastid-Beetle-pests-Bedford-et-al-Chapter-5-2015.pdf>  
PaDIL image set: <http://www.padil.gov.au/pests-and-diseases/pest/main/135642>  
*Oryctes* Hawaiian Scarab fact sheet: <http://idtools.org/id/beetles/scarab/factsheet.php?name=15233>  
USDA *Oryctes* screening aid (pdf): <https://idtools.org/screeningaid/2019/Oryctes%20spp.pdf>

## References

Bedford, G. 2015. *Oryctes rhinoceros* (coconut rhinoceros beetle). Invasive Species Compendium. Wallingford, UK, CABI International. Available from <http://www.cabi.org/isc/datasheet/37974> (Accessed 11-9-2019).

Bedford, O., Ali Al-Deeb, M., Khalaf, M.Z., Moohammadpour, K., Soltani, R. 2015 Chapter 5: Dynastinae Beetle Pests. in *Sustainable Pest Management in Date Palm: Current Status and Emerging Challenges*. W. Wakil et al. (eds.) Springer International Publishing Switzerland. 73-108

Endrödi, S. 1985 *The Dynastinae of the World*. W. Junk. London. 800pp.

Weir T.A., Lawrence J. F., Lemann, C., Gunter N.L. 2019. 33. Scarabaeidae: Dynastinae Macleay, 1919. In: *Australian Beetles*. Volume 2. Archostemata, Myxophaga, Adepaga, Polyphaga (part) (eds A Ślipiński & JF Lawrence) pp. 516–530. CSIRO, Clayton, Australia.

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*Oryctes rhinoceros* male head front

Photographer:

Pia Scanlon



*Oryctes rhinoceros* Male pygidium

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*Oryctes rhinoceros* male clypeus

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*Oryctes rhinoceros* mentum

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