Papuana Arrow, 1911

Taxonomy

Sub family: Dynastinae / Tribe: Pentodontini / Genus: Papuana

Distinguishing Features

Medium to large broadly cylindrical beetles, body length 15-30mm. Body colouration shiny black, rarely reddish brown. Pronotum of males usually with a short horn, centrally located, or closer to the posterior margin. Fovea often present, with pronotal horn located distally. Rarely completely convex with no horn or fovea. Frons of males with either 1 or 2 horns. Clypeus with a truncated apex and dentate anterior angles. Mandibles visible dorsally, with 2-3 teeth on the outer edge. Antennae with 10 segments, and a 3- segmented club that is short and not sexually dimorphic. Elytra with distinct punctate rows, rarely lacking and smooth. Stridulatory area of propygidium present and variably developed. Foretibia tri- or quadridentate. Hind tibia with a truncated apex. Tarsal claws simple.

Related and Similar Species

There are around 19 species known within the genus Papuana.

Only 1 species, *P. woodlarkiana*, is known from Australia. Its males can be distinguished from other species through the following features: Reddish black to black, 22-28mm in length. Pronotal horn and cavity present and strong tubercles present anterolateral to the pronotal cavity. Frons with a horn. Elytra with strongly furrowed punctate rows. Base of pygidium often slightly transversely wrinkled and punctate. Stridulatory area weakly divided medially. Foretibia quadridentate and strongly thickened.

Papuana is a member of the tribe Pentodontini which share the following characteristics:

Sexual dimorphism usually not well pronounced. Mentum not broad, and not covering basal joint of palpi. Legs shorter and stouter than those of Cyclocephalini. Anterior tibia of males not longer than females. Apex of metatibia truncated, straight, with bristles present. Elytra more or less convex, usually with double rows. Propygidium with or without stridulatory area.

An updated key to the Australian genera of Pentodontini is provided by Weir et.al. (2019). A key to the known species and subspecies is provided by Endrödi (1985).

Biological Data

Papuana, or Taro beetle, are pests of various tropical crops including taro, oil and coconut palms, banana, cocoa and sugar cane. The damage is done by the adult beetles, burrowing into the growing points of the host plants, particularly the underground corms of taro. Larvae live in the surrounding soil feeding on decaying organic matter, and do not cause damage to plants. Adult beetles are attracted to lights at night.

Distribution

Papuana are primarily Pupua New Guinean in origin. Species are present throughout the surrounding region, including the Philippines, Moluccas, Solomon Islands, Vanuatu, Kiribati and Fiji. The Australian distribution of *P. woodlarkiana* is limited to Northern Queensland.

Useful Links

Hawaiian Scarab ID fact sheet: <u>http://idtools.org/id/beetles/scarab/factsheet.php?name=15232</u> PaDIL image sets: <u>http://www.padil.gov.au/pests-and-diseases/search?</u> <u>queryText1=papuana&queryType1=all</u>

PestNet -Pacific Pests and Pathogens fact sheet: http://www.pestnet.org/fact sheets/taro papuana beetle 030.htm

References

Carne, P.B. 1957, A Systematic Revision of the Australian Dynastinae: (Coleoptera: Scarabaeidae). CSIRO, Melbourne. 284pp. Endrödi, S. 1985 The Dynstinae 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, Adephaga, Polyphaga (part) (eds A Ślipiński & JF Lawrence) pp. 516–530. CSIRO, Clayton, Australia.



<u>Papuana sp. dorsal view</u> <u>Photographer:</u> <u>Pia Scanlon</u>



<u>Papuana sp. lateral view</u> <u>Photographer:</u> <u>Pia Scanlon</u>



Papuana sp. ventral view Photographer: Pia Scanlon



<u>Papuana sp. pygidium</u> <u>Photographer:</u> Pia Scanlon



<u>Papuana sp. head front</u> <u>Photographer:</u> <u>Pia Scanlon</u>



<u>Papuana</u> sp. clypeus <u>Photographer:</u> <u>Pia Scanlon</u>

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