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New species of *Nuuanu* (Amphipoda: Nuuanuidae) from Norfolk Island, Torres Strait and the Cocos (Keeling) Islands

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Abstract

Three new species of *Nuuanu*, *N. quintalana* **sp. nov.**, *N. stuckeyorum* **sp. nov.** and *N. titaseyi* **sp. nov.** are described from Norfolk Island, Tasman Sea; Cocos (Keeling) Islands, Indian Ocean and the Torres Strait, Australia, respectively. There are currently 17 described species of *Nuuanu* with the genus distributed world-wide.

Key words: Crustacea, Amphipoda, *Nuuanu*, Oceania, Indian Ocean, taxonomy, new species

Introduction

Species of the genus *Nuuanu* J.L. Barnard, 1970 are small benthic interstitial melitoids. Previously, there were 14 known species with the genus recorded world-wide. This paper describes three new species of *Nuuanu*, *N. quintalana* **sp. nov.** from Norfolk Island, Tasman Sea; *N. stuckeyorum* **sp. nov.** from Cocos (Keeling) Islands, Indian Ocean and *N. titaseyi* **sp. nov.** from the Torres Strait, Australia based on recently collected material. Additional distribution records are provided for *Nuuanu merringanee* (J.L. Barnard, 1974) extending the species range from southern Australia into north Western Australia.

Eight of the 17 described species of *Nuuanu* are known from Oceania, which includes Australia (*N. merringanee*; *N. mokari* J.L. Barnard, 1974; *N. numbadi* J.L. Barnard, 1974; *N. titaseyi* **sp. nov.**); Malaysia (*N. hanamurai* Tomikawa *et al.*, 2007); Thailand (*N. kata* Lowry & Watson, 2002) and the South Pacific (*N. utwe* (Myers, 1995); *N. quintalana* **sp. nov.**) Two species are known from the Indian Ocean, *N. rectimana* Appadoo & Myers, 2005 and *N. stuckeyorum* **sp. nov.** The remaining seven species are from more geographically separated locations, occurring in: South Africa (*N. castellana* (Griffiths, 1977)); the Mediterranean (*N. garciai* (Marti & Villora-Morena, 1995) and *N. beatricis* Jaume & Box, 2006); Cuba (*N. muelleri* Ortiz, 1976); the Caribbean Sea (*N. curvata* Vonk, 1989); Brazil (*N. peroa* Senna & Serejo, 2012) and Hawaii (*N. amikai* J.L. Barnard, 1970).

The generic placement of species in *Nuuanu* and closely related genus *Gammarella* Bate, 1857 were most recently reassessed by Lowry & Watson 2002, following on from Karaman & Barnard 1979; J.L. Barnard 1970 and 1974. The new species described here support the current generic division of the *Nuuanu* and *Gammarella* proposed by Lowry & Watson (2002) based on the consistent combination of characters of: the small body size; poorly developed eyes with separated ommatidia and urosomite 1 without carina.

Material and methods

Material studied was collected as part of the Circum-Australian Amphipod Project funded by the Department of Environment, Water, Heritage and the Arts. All material is deposited with the Australian Museum, Sydney (AM). Specimens were dissected in 80% ethanol. Permanent slides were made using Aquatex™ mounting agent. Specimens were prepared for electron microscopy as follows: preserving solution was sequentially advanced in 5% increments from 80% to 100% ethanol; critical point dried; mounted individually on pins; gold sputter coated and