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The talitrid amphipods of Tonga (Crustacea, Amphipoda, Talitridae)

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Abstract

One new genus and four species of talitrid amphipods are described from Tonga: *Platorchestia ano* **sp. nov.**; *Talorchestia spinipalma* (Dana, 1852); *Tongorchestia pangaimotu* **gen. nov., sp. nov.**; *T. towneri* **sp. nov.**

Key words: Crustacea, Amphipoda, Talitridae, *Platorchestia*, *Talorchestia*, *Tongorchestia*, taxonomy, new genus, new species

Introduction

Between 22 April and 4 May, 1840 the US Exploring Expedition ships *Vincennes* and *Peacock* were in Tonga. During this time several amphipods were collected from the Nuku'alofa area on Tongatapu. These were later described by James Dana (1852, 1853) as *Orchestia spinipalma*, *Allorchestes gracilis*, *Gammarus albidus* and *Ampithoe tongensis*. Myers (1986) reported on the second collection of amphipods made from Tonga in 1979, but none of the Dana species were present.

The only talitrid amphipod previously known from Tonga, *Talorchestia spinipalma* (Dana, 1852), was originally described from the main island of Tongatapu. Since then this species has been reported from north-eastern Australia (Serejo 2009), the Marshall Islands (J.L. Barnard 1960), New Caledonia and Papua New Guinea (Morino & Miyamoto 1988), the Philippine Islands (Schellenberg 1938), the Solomon Islands (Morino & Miyamoto 1988) and Rennell Island (Bousfield 1970). Dana's original illustrations are not detailed and his types are lost. It is unusual for a talitrid species to have such a wide distribution and all of these records need confirmation based on the description of new collections of *T. spinipalma* from Tongatapu.

In September 2009 Greg Towner (Australian Museum volunteer) collected talitrids from Tonga. These collections contained apparent specimens of *T. spinipalma* from Pangaimotu Island but without mature males. In October 2011 Jim Lowry and Gary Poore collected four species of talitrids, including *T. spinipalma*, from several islands in the Tonga archipelago. *Talorchestia spinipalma* is redescribed here. A new genus and species from 'Eua Island and is described here as *Tongorchestia towneri* **gen. nov., sp. nov.** and *Tongorchestia pangaimotu* **sp. nov.** is described from the Vava'u group. *Platorchestia ano* **sp. nov.** is also described from the Vava'u group. It belongs in *Platorchestia* (group 2) of Miyamoto & Morino (2004). The species identified as *P. platensis* (Krøyer, 1845) by Myers (1985) is assigned to *P. ano*.

Material and methods

The descriptions were generated from a DELTA database (Dallwitz 2005) to the talitrid genera and species of the world. **Bolded text** indicates diagnostic characters. Refer to Material and Methods section of Miyamoto & Morino (2004) for description of setal types on the propodus of gnathopod 1. The new character which describes the percentage distance of the palm along the posterior margin of the propodus of male gnathopod 2 is measured as the length from the corner of the palm to the base of the propodus divided by the length of the propodus measured from