



## New findings of rare or little-known alpheid shrimp genera (Crustacea, Decapoda) in Moorea, French Polynesia

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### Abstract

Six rare or little-known genera from the shrimp family Alpheidae are reported from French Polynesia, five of them for the first time. Distribution ranges are significantly extended for the recently described *Acanthanas pusillus* Anker, Poddoubtchenko & Jeng, 2006 and *Richalpheus palmeri* Anker & Jeng, 2006, previously known only from two and one type specimens, respectively, from the Philippines. The original description of *A. pusillus*, based on two females, is completed with the description and illustration of the male cheliped and pleopod; accordingly, the diagnosis of *Acanthanas* is slightly emended. The genus *Leptalpheus* Williams, 1965 was not known from French Polynesia before, but is represented there by two species: *L. denticulatus* Anker & Marin, 2009, previously known from Vietnam, the Philippines and Fiji; and *L. pacificus* Banner & Banner, 1974, previously considered as a Hawaiian endemic. The genus *Prionalpheus* Banner & Banner, 1960 is represented in French Polynesia by two species: *P. triarticulatus* Banner & Banner, 1960, reported for the first time, and *P. brachytomeus* Banner & Banner, 1971, reported with some doubts (*P. cf. brachytomeus*) for the first time since the original description. *Rugathanas borradailei* (Coutière, 1903), a widespread but rather uncommon and easily overlooked species, is also reported for the first time from French Polynesia. Colour patterns are illustrated for all species, this being for the first time for *R. palmeri*, *L. pacificus*, *P. triarticulatus* and *P. cf. brachytomeus*.

**Key words:** Caridea, Alpheidae, shrimp, Pacific Ocean, French Polynesia

### Introduction

The alpheid shrimp fauna of French Polynesia is not well known, despite several older contributions by Coutière (1896, 1905c), Nobili (1907), and more recent ones by Banner & Banner (1967) and Odinetz (1983), the latter study being an unpublished thesis dealing with ecology of coral-associated decapods (see Poupin 1998 for more complete reference list). This is hardly surprising considering French Polynesia's vast oceanic surface (almost 4000 km<sup>2</sup>), the geological heterogeneity of its five largest archipelagos (Society Is, Marquesas Is, Tuamotu Is, Austral Is, Gambier Is), and the resulting diversity of marine habitats. However, even the relatively well-known Society Islands, which include Tahiti, Moorea and Bora-Bora remain largely under-sampled. Another factor responsible for the poor taxonomic knowledge of many Polynesian alpheids is that a numerous species were originally described from the Indian Ocean, e.g., the Red Sea (Heller 1861, 1862) and central Indian Ocean (Coutière 1905b), from the area known as the “coral triangle”, which includes Indonesia, Malaysia and the Philippines (De Man 1911; Chace 1988); or from Australia (e.g., Banner & Banner 1973, 1982). The true identity of specimens from the South-West Pacific under those names remains in question, as they may not necessarily belong to the same species as the specimens from the type locality.

During an extensive survey of the shallow-water (0–30 m) marina invertebrate fauna of Moorea in October–November 2008 and October–December 2009 (Biocode Moorea), the author collected a number of interesting alpheid shrimps in waters no deeper than 2 m. Many specimens were collected by snorkelling in the lagoon, under large rocks and rubble. Others were extracted from large pieces of coral rubble, either directly on the beach or in the laboratory. The use of a bait suction pump (“yabby pump”) yielded several