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Description of a new distinctive species of *Parabetaeus* Coutière, 1897 (Decapoda: Caridea: Alpheidae) from the Indo-West Pacific

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Abstract

Parabetaeus acanthus sp. nov. is described based on two specimens from Thuwal, Saudi Arabia, and Madang, Papua New Guinea. The new species is unique within the genus in possessing an anteriorly directed, spine-like tooth on the mid-dorsal line of the carapace, posterior to base of the eyes, and in the stylocerite not reaching the mid-length of the first article of the antennular peduncle. The chelipeds of *P. acanthus* sp. nov. are variable in size and proportions, as well as in the armature on the finger cutting edges. This cheliped polymorphism appears to be typical to all species of the genus.

Key words: Alpheidae, *Parabetaeus*, new species, alpheid shrimp, cheliped polymorphism, Indo-West Pacific, Red Sea, Papua New Guinea

Introduction

The alpheid shrimp genus *Parabetaeus* Coutière, 1897 was last revised by Nomura & Anker (2001), who synonymised *Neopalpheopsis* Banner, 1953 with *Parabetaeus* and recognised three species in the latter genus: *Parabetaeus culliereti* Coutière, 1897 (type species), *Parabetaeus euryone* (De Man, 1910) (junior synonym: *Neopalpheopsis hiatti* Banner, 1953), and *Parabetaeus hummelincki* (Schmitt, 1936). The first two species occur in the Indo-West Pacific, with *P. euryone* extending to the eastern Pacific (Coutière 1897; Banner 1953; Wicksten 1983, 1993; Nomura & Anker 2001; Wicksten & Hendrickx 2003; Anker 2007); the third species is amphi-Atlantic (Schmitt 1936; Manning & Chace 1990; Anker 2007, 2011).

Parabetaeus is most easily recognised by the shape of the posterior margin of the telson, which is produced in a triangular median end-piece, ending in a more or less sharp point. This unique feature may be completed by the major cheliped merus armed with two strong teeth distally (one distoventral and one distolateral), the presence of spiniform setae on the merus and ischium of the third to fifth pereopods, and the sixth abdominal somite possessing a well-developed articulated plate. Although the frontal margin of the carapace is highly variable in *P. culliereti* (Nomura & Anker 2001), the most common configuration found in this species, i.e. with the well-developed, sharp orbital teeth and without a rostrum, is also unique among alpheid shrimps.

Recent sampling of coral reef shrimps on the Saudi Arabian coast of the Red Sea and in western Papua New Guinea, mostly by scuba diving, enabled the author to collect and to photograph several specimens of *Parabetaeus*. Most specimens from Papua New Guinea were identified as *P. culliereti*, based on morphological criteria used by Nomura & Anker (2001) to separate *P. culliereti* from *P. euryone*. Three specimens, two from Saudi Arabia and one from Papua New Guinea, were recognised as belonging to an undescribed species of *Parabetaeus*, with a novel character for the genus. This species is described as new in the present study.

Type material of the new species is deposited in the collections of the Florida Museum of Natural History, University of Florida, Gainesville, FL, USA (FLMNH UF); additional non-type material is deposited in the collections of the Muséum National d'Histoire Naturelle, Paris, France (MNHN). Carapace length (cl, in mm) was measured along the mid-dorsal line, from the central anterior margin (orbital teeth not included) to the posterior margin of the carapace. The abbreviation “fcn” is used for field collection number and/or photographic voucher of the specimen.