



Description of a third species in the alpheid shrimp genus *Richalpheus* Anker & Jeng, 2006 (Crustacea, Decapoda)

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Abstract

A new species of the alpheid genus *Richalpheus* Anker & Jeng, 2006 is described from the Egyptian Red Sea and Moorea, French Polynesia. *Richalpheus alpheoides* **sp. nov.** differs from the two previously described species of this genus, *R. palmeri* Anker & Jeng, 2006 and *R. dahabensis* Dworschak & Anker, 2007, by the presence of a distinct proximal tooth on the dactylus fitting into a shallow fossa on the pollex of the major chela, reminiscent of the snapping mechanism in *Alpheus* Fabricius, 1798. Recently collected material of *R. palmeri* from Moorea is reported, whilst a specimen previously reported as *R. palmeri* is reassigned to *R. alpheoides* **sp. nov.** A key to the three known species of *Richalpheus* is provided.

Key words: Alpheidae, *Richalpheus*, infaunal shrimps, Indo-West Pacific, Red Sea, French Polynesia

Introduction

Richalpheus Anker & Jeng, 2006 is a small genus of infaunal alpheid shrimps known only from a few localities in the Indo-West Pacific. This genus belongs to a clade of alpheid genera characterised by the absence of orbital teeth (and in most cases also lacking a rostral projection), the unequal and asymmetrical chelipeds, folded under the body when not in use, and the uropodal diaeresis deeply incised and bearing a large, typically triangular tooth near the mesial margin of the exopod. This clade includes, besides *Richalpheus*, the genera *Leptalpheus* Williams, 1965, *Fenneralpheus* Felder & Manning, 1986, and *Amphibetaeus* Coutière, 1897 (Anker *et al.* 2006; Anker & Jeng 2006).

Until now, *Richalpheus* included only two species, *R. palmeri* Anker & Jeng, 2006 and *R. dahabensis* Anker & Dworschak, 2007. The type species, *R. palmeri*, was originally described from Panglao, the Philippines, on the basis of a single female specimen (Anker & Jeng 2006), and later reported from Moorea, French Polynesia, again based on a single female, and with some doubts (Anker 2010; see below). The second species, *R. dahabensis*, is also known from a single female type specimen collected in Dahab, Egypt, northern Red Sea (Anker & Dworschak 2007). The scarcity of *Richalpheus* specimens obviously makes taxonomic decisions quite difficult (Anker 2010).

In September 2009, a single specimen of *Richalpheus*, an intact ovigerous female, was collected about 15 km north of Safaga (Bur Safajah) on the Red Sea coast of Egypt. This specimen was initially identified as *R. cf. palmeri*, because it presented some morphological differences compared to the holotype described and illustrated in detail by Anker & Jeng (2006). Interestingly, these differences were the same as in the specimen collected in Moorea in 2008 and reported as *R. palmeri* by Anker (2010), namely the antennular peduncle with a shorter second article, and the distolateral margin of the uropodal exopod with a deeper incision.

In December 2010, another complete female specimen of *Richalpheus* was collected in the Moorea lagoon, French Polynesia. This second specimen corresponded much more closely to the original description of *R. palmeri* than did the previously reported Moorea specimen (Anker 2010). In addition, the Safaga specimen and the specimen reported by Anker (2010) were different from *R. palmeri* in the position and the shape of the tooth on the cutting edge of the major chela dactylus. In both specimens, this tooth is well defined, situated closer to the dactylar base, and shallowly excavated distally. In the holotype of *R. palmeri*