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A new genus and species of freshwater crab from Madagascar (Decapoda, Brachyura, Potamoidea, Potamonautidae)

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Abstract

A new genus and species of freshwater crab is described from Madagascar. The new species is morphologically closest to the three species of the genus *Foza* Reed & Cumberlidge, 2006, but can easily be distinguished by having a completely smooth carapace with an unarmed anterolateral margin and a mandible with a distinctly shortened anterior lobe. This unusual suite of characters is sufficient to warrant the recognition of a new monotypic genus to accommodate this species.

Key words: Crustacea, taxonomy, *Glabrithelphusa*, new genus and species, Madagascar

Introduction

The present work reports on the discovery of a new species of freshwater crab, *Glabrithelphusa angene* **n. gen. n. sp.** from Madagascar based on a series of specimens belonging to the Muséum national d'Histoire naturelle, Paris. These specimens proved to belong to an undescribed species of potamonautid with a unique suite of characters that warrants the recognition of a new monotypic genus to accommodate this species. The new genus *Glabrithelphusa* **n. gen.** and the new species, here named *Glabrithelphusa angene* **n. sp.**, are described, figured and compared with other species of freshwater crabs found in Madagascar. The new taxon is assigned to the Potamonautidae Bott, 1970, and is endemic to Madagascar, as are the other seven genera and 15 species of freshwater crabs found on that island (Cumberlidge *et al.* 2002; Cumberlidge & Sternberg 2002; Reed & Cumberlidge 2006; Cumberlidge *et al.* 2007; Cumberlidge & Meyer 2009; Cumberlidge 2010).

Material and methods

Specimens examined are deposited in the Museum Nationale d'Histoire Naturelle, Paris, France (MNHN). The following abbreviations are used: CW, carapace width measured across carapace at widest point; CL, carapace length measured along median line from anterior to posterior margin; CH, carapace height measured at maximum height of cephalothorax; FW, front width measured along anterior frontal margin between orbits; s, thoracic sternite; s4/s5, s5/s6, s6/s7, s7/s8, sternal sulci between adjacent thoracic sternites; e, thoracic episternite; s4/e4, s5/e5, s6/e6, s7/e7, episternal sulci between adjacent thoracic sternites and episternites; p1–p5, pereopods 1–5; G1, first gonopod; G2, second gonopod. All measurements were made with digital calipers and are given in mm. The terminology is adapted from Cumberlidge (1999) and Cumberlidge & Sternberg (2002). Line drawings (Figs. 1 and 2) were prepared by the third author (JCK) using a Leica MZ 16 stereobinocular microscope. The habitus photographs were taken with a Panasonic digital camera in suite with a Leitz MZ 95. Post processing was done in Adobe Photoshop 7.0.

small, even teeth; upper margin of dactylus smooth; lower margin of propodus slightly indented (Fig. 1F,G). Fixed finger of propodus of major (right) cheliped slender with 3 unfused molars in proximal region followed by series of small pointed teeth (Fig. 1F). First carpal tooth on inner margin of cheliped carpus large, pointed; second carpal tooth smaller, pointed, followed by series of very small teeth (Fig. 1D). Medial, lateral, margins of inferior face of cheliped merus smooth, inferior face with small pointed, distal meral tooth; superior margin, superior face of cheliped merus smooth; cheliped ischium rounded, smooth (Fig. 1D,E). Walking legs p2–p5 normal length, not elongated (p5 merus/cw = 0.32), inner margins of propodi of p2–p5 smooth (Fig. 3A,B).

Remarks. The new species is distinguished from other species of Madagascan freshwater crabs by a unique suite of characters of the mandible, carapace, and gonopods (see Remarks for genus). The specimens described here are morphologically closest to the three species of the genus *Foza* (Reed & Cumberlidge 2006; Cumberlidge & Meyer 2009). *Glabrithelphusa angene* n. sp. can be distinguished from these by its completely smooth dorsal carapace (Fig. 1A, 3A) (versus strong carinae on the posterior dorsal carapace in *F. raimundi* and *F. goudoti* (Reed & Cumberlidge 2006 Fig. 1B; Cumberlidge & Meyer 2009)), by granules on the anterolateral carapace surface in *F. ambohitra* Cumberlidge & Meyer 2009 Table 1), and by its mandible with a shortened anterior lobe, 0.25x terminal segment length (Fig. 1D,E) (versus a mandible with a large anterior lobe, 0.5x terminal segment length (Reed & Cumberlidge 2006; Cumberlidge & Meyer 2009)).

Etymology. The specific name *angene* is a combination derived from the names of the first author's parents (Angela and Gene Meyer) used as a noun in apposition and is in recognition of their contributions to her education.

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