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***Elephantis*, a new genus for *Caridina natalensis* Bouvier, 1925 from eastern rivers of Madagascar**

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Abstract

Elephantis, new genus, is established for *Caridina natalensis* Bouvier, 1925 hitherto known only from South Africa with one male specimen. Recently, three surveys by electric fishing (2004, 2008 and 2010) of some eastern rivers from Madagascar have permitted to discover numerous specimens of this species. *Caridina natalensis* is different from all other known species of *Caridina* by its remarkably broad endopod of the male first pleopod, a long clubbed appendix masculina on the male second pleopod reaching beyond distal end of endopod and strong third pereopods. Therefore a new genus name is proposed for this species. In addition to detailed description of diagnostic morphological characters, molecular sequences obtained from mitochondrial 16S gene are provided for six specimens of this species. These DNA sequences are integrated to the 16S molecular phylogeny of atyid freshwater shrimps recently published by von Rintelen *et al.* (2012). *Elephantis natalensis* comb. nov. sequences formed a divergent group supported in maximum likelihood analysis. The availability of DNA samples could be used as reference and integrated in further phylogenetic studies on atyid freshwater shrimps.

Key words: Crustacea, Atyidae, freshwater shrimp, *Elephantis*, *Caridina natalensis*, new genus, Madagascar

Introduction

The Malagazy atyid species were successively studied by Coutière (1899), Bouvier (1904, 1905, 1925), Lenz (1910), Nobili (1912), Roux (1929, 1934), Holthuis (1965), Gurney (1984), Short & Doumenq (2003), Cai & Boyko (2005), Richard & Clark (2010) and Richard *et al.* (2012). Five genera occur in Malagazy freshwaters: *Atyoida* (1 species), *Caridina* (21 species), *Monsamnis* (1 species), *Parisia* (4 species) and *Typhlopatsa* (1 species). During three surveys on Malagazy freshwater inventory 100 specimens of *C. natalensis* were collected in several rivers in eastern and northeastern rivers of Madagascar.

The morphological analysis of these specimens revealed that *C. natalensis* is distinct from all other members of *Caridina* in shape and spinulation of the male sexual appendages and thus its systematic position should be revised. One problem in atyid systematics is that many taxonomic characters are variable, especially when considering widely distributed taxa (e.g. Smith & Williams, 1980; von Rintelen & Cai, 2009; Jugovic *et al.*, 2010). In *Caridina*, the combination of morphology and molecules has already proved to be a powerful tool in taxonomy and species delimitation. Therefore, in addition to detailed description of diagnostic morphological characters, molecular sequences obtained at mitochondrial 16S gene are provided for six specimens of *C. natalensis*. These DNA sequences are integrated to the 16S molecular phylogeny of atyid freshwater shrimps recently published by von Rintelen *et al.* (2012).