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The shrimp family Pseudochelidae De Grave & Moosa, 2004 (Crustacea, Decapoda, Caridea) in Brazil, with the description of a new species

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Abstract

A new species of the caridean shrimp genus *Pseudocheles* Chace & Brown, 1978 is described from an offshore locality about 160 km east of the Rio Doce estuary in Espírito Santo, Brazil. *Pseudocheles falsapinca* **sp. nov.** is the fourth species in the genus, differing from its three congeners, *P. enigma* Chace & Brown, 1978, *P. chacei* Kensley, 1983 and *P. neutra* De Grave & Moosa, 2004, by the combination of the following features: antennal tooth minute or absent, fifth pleuron with acute posterior tooth, carpus of third, fourth and fifth pereiopod with robust spiniform seta, coxa of third and fourth pereiopods without acute projection mesially, rostrum with five dorsal teeth, all anterior to post-orbital margin, and third maxilliped with rounded, epipod-like structure. The new species is the deepest species of *Pseudocheles* reported so far, with both type specimens dredged at a depth range of 68–71 m. *Pseudocheles falsapinca* **sp. nov.** also represents the first record of *Pseudocheles* and the family Pseudochelidae De Grave & Moosa, 2004 for Brazil and the South-West Atlantic.

Key words: Decapoda, Caridea, Pseudochelidae, shrimp, continental shelf, Brazil

Introduction

The shrimp genus *Pseudocheles* Chace & Brown, 1978 is one of the rarest genera of the infraorder Caridea, with only a dozen or so adult specimens known worldwide. Until now, *Pseudocheles* was composed of three species: *P. enigma* Chace & Brown, 1978, type species from Australia's Great Barrier Reef; *P. chacei* Kensley, 1983 from Florida and Belize; and *P. neutra* De Grave & Moosa, 2004 from Indonesia (Chace & Brown 1978; Kensley 1983; De Grave & Moosa 2004; De Grave & Fransen 2011). Members of this genus can be easily recognised by the pseudochelate third, fourth and fifth pereiopods, ending in a pectinate dactylus and several adjacent spiniform setae, including a particularly long and stout one that resembles an immovable finger. The pseudochelate third, fourth and fifth pereiopods together with the truly chelate first and second pereiopods give a unique impression that the shrimp has claws on all its pereiopodal appendages.

Despite its rarity, the genus has been of a great interest for caridean phylogenetics. Chace & Brown (1978) recognised *Pseudocheles* as an intermediate lineage between the Bresiliidae Calman, 1896 and Disciadidae Rathbun, 1902. Therefore, the latter family was synonymised creating a more inclusive Bresiliidae, containing *Pseudocheles* and all then-known bresiliid and disciadid genera. Subsequently, Christoffersen (1986) resurrected the Disciadidae, to which he assigned *Pseudocheles*, while erecting the Alvinocarididae Christoffersen, 1986 for the formerly bresiliid genus *Alvinocaris* Williams & Chace, 1982. Additional family-level rearrangements, not affecting the position of *Pseudocheles*, were proposed by Christoffersen (1990). However, most of Christoffersen's (1986, 1990) generic and familial assignments were not followed by Chace (1992) and Holthuis (1993), who preferred to keep the concept of the Bresiliidae *sensu lato*, including *Pseudocheles*. The increasing morphological heterogeneity and suspected non-monophyly of the Bresiliidae *sensu* Chace (1992) and Holthuis (1993) finally led to the formal re-establishment of the Alvinocarididae and Disciadidae (Komai & Segonzac 2003; De Grave & Moosa 2004), and creation of the monogeneric Pseudochelidae De Grave & Moosa, 2004 for *Pseudocheles* (De

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