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## A new fossil caridean shrimp (Crustacea: Decapoda) from the Cretaceous (Albian) of the Romualdo Formation, Araripe Basin, northeastern Brazil

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### Abstract

A new fossil caridean shrimp, *Kellnerius jamacaruensis* n. gen. n. sp., of the early Cretaceous (Albian) from the Romualdo Formation, Araripe Basin, northeastern Brazil is described and illustrated. The new species is compared to known fossil palaemonids found in Brazil. *Kellnerius jamacaruensis* n. gen. n. sp. is easily differentiated from the other palaemonids by a rostrum with 5 spines, an enlarged scaphocerite that is longer than the rostrum, and a third somite with a distinct groove in the tergite that does not extend to the pleurite.

**Key words:** Fossils concretions, Palaemonidae, Santana Group, Crato Formation

### Introduction

The Caridea is a large and well known infraorder of shrimps with approximately 3300 species. Despite this great diversity, the fossil record of this group is poorly known, with only 52 or 57 described species, depending on classifications (see De Grave *et al.* 2009; Schweitzer *et al.* 2010). The poor knowledge of caridean fossils is probably due to the frequently poor state of preservation of morphological features (Garassino & Bravi 2003). The fossil record of this group extends back to the Middle Jurassic (Glaessner 1969; Schweitzer *et al.* 2010). The Palaemonidae is a large caridean family with about 980 recent and 20 fossil species (De Grave *et al.* 2009; Schweitzer *et al.* 2010), with six of these fossils from Brazil (Martins-Neto 2005). Extant palaemonid shrimps are commonly found in tropical and temperate waters, usually in intertidal to shallow waters, within marine, brackish and freshwater environments (Holthuis 1952; 1980; Müller *et al.* 1999; Wicksten 2005).

The Araripe Basin is a region renowned world-wide for numerous important fossil finds. Within the basin, the Romualdo and Crato formations (*sensu* Neumann & Cabrera 1999) of the Santana Group are the most well-known lithostratigraphic units because of the exceptional preservation of the fossils found in their layers (Kellner 2002; Viana and Neumann 2002). The fossil biota of this region suggests a rich palaeoenvironment, with numerous known species of plants, invertebrates (especially arthropods), and vertebrates (Maisey 1991). Among arthropods, two shrimps, the palaemonid *Beurlenia araripensis* Martins-Neto and Mezzalira, 1991a and the sergestid (Dendrobranchiata) *Paleomattea deliciosa* Maisey and Carvalho, 1995 are found within the Crato and Romualdo formations, respectively.

Here, we describe a new genus and a new species of a fossil palaemonid shrimp and compare it with the known fossil palaemonids found in Brazil. Abbreviations are as follows: million years (myr); LPU, Laboratório de paleontologia da Universidade Regional do Cariri, Brasil.