



## A new species and first record of *Gabunillo* Schmalfuss & Ferrara, 1983 (Isopoda, Oniscidea, Armadillidae) from the Neotropics

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### Abstract

A new species of terrestrial isopod, *Gabunillo aridicola* **sp. nov.**, is described from Ceará and Rio Grande do Norte States, in Karstic formations in the Brazilian semi-arid (caatinga). This genus, hitherto monotypic, was known only from Gabon. This occurrence is remarkable because very few genera of Armadillidae are known from both Afrotropics and Neotropics, and because it offers evidence of a tropical Gondwana biogeographical component.

**Key words:** Malacostraca, terrestrial crustaceans, semi-arid, cave life, Karst, caatinga, Brazil

### Introduction

Terrestrial isopods (suborder Oniscidea) include 38 families, most of them occurring in the Neotropics. The family Armadillidae is composed of 80 genera and 703 species (Schotte *et al.* 2008 onwards) which form a clade, sister group to the Eubelidae (Schmidt 2008). Four genera and seven species have been recorded from Brazil (Souza-Kury 1998; Leistikow & Wägele 1999). The study of material collected in the vicinity of caves in the municipalities of Aiuaba, Ceará State and Apodi, Rio Grande do Norte State, in the caatinga biome, revealed a new species of Armadillidae of the monotypic genus *Gabunillo* Schmalfuss & Ferrara, 1983, hitherto known only from Gabon, West Africa.

*Gabunillo* makes part of a group of genera that has the pleotelson triangular (or T-shaped) as opposed to the hourglass-shaped found in the groundplan of the Armadillidae. According to Schmalfuss & Ferrara (1983), *Gabunillo* is akin to *Synarmadillo* Dollfus, 1892, a genus with 26 species distributed in western and eastern Africa (Schmidt & Leistikow 2004) and one species in Colombia (found in the zone of the coffee plantations), one in Costa Rica (Schmalfuss 2003) and one in Venezuela (Leistikow & Wägele 1999).

According to Schmalfuss & Ferrara (1983) *Gabunillo* differs from *Synarmadillo* by the cephalic structure (frontal margin interrupted medially), absence of teeth in pereonites 2 and 3, and shape of the pleotelson (although roughly triangular in both) and uropods. *Gabunillo* also does not have pleopodal lungs while *Synarmadillo* has lungs on the five pairs of pleopods (Ferrara & Schmalfuss 1976). The new species presents all the characters of the genus diagnosis, except for the uropod exopods attached dorsally and the presence of eyes, such as in *Synarmadillo*.

### Material and methods

The material examined was collected from the municipality of Aiuaba, Ceará State, on July 12th, 2002, and the municipality of Apodi, Rio Grande do Norte State, on August 28th, 2007, both from karstic environments. One male paratype specimen was dehydrated using gradual ethanol series and dried to the critical point with carbon dioxide for scanning electron microscopy (SEM). Dry specimens were mounted on metal specimen