



The discovery of male *Potiicoara brasiliensis* (Crustacea, Spelaeogriphacea) with notes on biology and distribution

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Abstract

The male of *Potiicoara brasiliensis* is reported for the first time with evidence of sexual dimorphism. Male diagnostic characters are described and compared with the other three species of Spelaeogriphidae. Males present differential morphology on both distal podomere articles of the antennula and antenna, an elongate and curved bare endopod on pleopod 2, a pair of short round penes on the sternum near the base of pereopod 7, and telson with dorsum almost smooth and apex straight. Material is sampled for the first time from karstic areas north of the species type-locality, Gruta Ricardo Franco near Corumbá City, and Gruta do Curupira in the Araras Mountains. These new findings expand the distribution of the species over seven hundred kilometers. Comparisons between exemplars of both sexes are presented. A hypothesis on the distributional pattern of *P. brasiliensis* is introduced based on the geological history of Central-West Brazil.

Key words: Spelaeogriphacea, *Potiicoara brasiliensis*, sexual dimorphism, karstic caves, subterranean waters

Introduction

Spelaeogriphacea is a small relict group of Peracarida crustaceans containing four living species confined to subterranean waters of South Africa, South America and Australia, and two supposed fossil species, the marine *Aca-diocaris novascotica* (Copeland, 1957) from Canada and the lacustrine *Liaoningogriphus quadripartitus* Shen et al, 1998, from China (Poore & Humphreys 2003). The single South American species, *Potiicoara brasiliensis* Pires, 1987 is described from central-west Brazil, and has until now only been known from females specimens.

Early in the past decade N. Moracchioli studied the cavernicolous fauna of eight caves from the karstic areas of Central Brazil (Moracchioli 2002). Among the specimens of *Potiicoara brasiliensis*, brought to me for study, I identified three males for the first time discovered and herein described. The exemplars were captured while swimming near the surface or above bottom sediments and rocks within the caves, manually by a diver with the aid of a wide mouth plastic tube (Moracchioli 2002).

In addition to the species type-locality in Gruta do Lago Azul in Bonito, Mato Grosso do Sul State; the new specimens were found in other submersed caves localities. These include Gruta do Mimoso and Buraco das Abelhas, in the vicinity of Bonito; and Gruta Ricardo Franco, situated in Forte Coimbra near Corumbá City. This last cave is found on the Paraguay River, nearly 200 km northwest of Bonito. Other examples were obtained from Gruta do Curupira, situated on the Serra das Araras, more than 700 km north of the specie's type-locality.

Material from the following study is deposited in the collections of Museu de Zoologia (MZSP) and in Instituto Oceanográfico (IOUSP), University of São Paulo, Brazil.

Taxonomy

Order Spelaeogriphacea Gordon, 1957

Family Spelaeogriphidae Gordon, 1957