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Two new subterranean species of *Hyalella* Smith, 1874 (Crustacea: Amphipoda: Hyalellidae) from Brazil

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Abstract

Two new species of *Hyalella* from Brazil are described. *Hyalella veredae* **sp. n.** shows the following characters: eyes reduced or absent in some specimens; antenna 1 and antenna 2 of similar size, and a curved seta on the inner ramus of male uropod 1. *Hyalella formosa* **sp. n.** is characterized by the absence of eyes, antenna 1 longer than antenna 2 and a curved seta on the inner ramus of male uropod 1. The species were found on caves located in two private properties, both under the impact of agricultural activities, which demonstrates a potential threat to these subterranean environments.

Key words: Neotropics, underground habitats, cave, amphipods, *Hyalella*, new species, taxonomy

Resumo

Duas novas espécies de *Hyalella* são descritas para o Brasil. *Hyalella veredae* **sp. n.** possui os olhos reduzidos ou ausentes em alguns espécimes; antena 1 e antena 2 com tamanhos semelhantes e uma seta curva no ramo interno do urópodo 1. *Hyalella formosa* **sp. n.** apresenta uma completa perda dos olhos; antena 1 mais longa que a antena 2 e uma seta curva no ramo interno do urópodo 1. Ambas as espécies foram encontradas em cavernas localizadas dentro de propriedades particulares e seus respectivos entornos encontram-se impactados pela ação de atividades agrícolas, demonstrando uma potencial ameaça sobre os ambientes.

Introduction

Although underground environments are usually considered "isolated" from external habitats, they can be easily influenced by external conditions, which can threaten this environment and consequently, the local fauna, through disturbance from the surface (Culver & Pipan, 2009). The vulnerability of these ecosystems highlights the importance of the knowledge on biological diversity, especially considering that most of the troglobitic species show a high degree of endemism (Sket, 1999). Furthermore, the occurrence of troglobitic species can safeguard underground environments through public policies for environmental conservation.

The amphipods belonging to the genus *Hyalella* Smith, 1874 occur in freshwater environments of the Americas (Grosso & Peralta, 1999), and include five hypogean species. Most of the subterranean species occur in Brazil: *H. caeca* Pereira, 1989 and *H. spelaea* Bueno & Cardoso, 2011 in São Paulo state (south-east) and *H. imbya* Rodrigues & Bueno, 2012 in Rio Grande do Sul state (south) (Pereira, 1989; Cardoso *et al*., 2011; Rodrigues *et al.,* 2012). The other two species, *H. anophthalma* Ruffo, 1957 and *H. muerta* Baldinger, Threloff & Shepard, 2000,

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permanent preservation of the caves in which they occur, ensuring the continuity of these so endangered and unique species.

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