



Speleonectes emersoni, a new species of Remipedia (Crustacea) from the Dominican Republic

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Abstract

A new species of Remipedia (Crustacea), *Speleonectes emersoni*, is described from two anchialine caves in the Dominican Republic. It represents the first record of remipedes for the island of Hispaniola. *Speleonectes emersoni* is a comparatively small-sized remipede. It can be distinguished from other species in the genus *Speleonectes* by a combination of features that include: 1) a relatively large antennal exopod, 2) frontal filaments with subapically inserted medial processes extending over the tip of the main filament, 3) an arc-shaped horseshoe-type claw with 7–10 small denticles, and 4) an anal segment that is longer than wide with caudal rami nearly as long as the anal segment.

Key words: Crustacea, Remipedia, Speleonectidae, anchialine caves, Dominican Republic, biogeography

Introduction

To date, the crustacean class Remipedia Yager, 1981 includes three families: Speleonectidae Yager, 1981, composed of thirteen species in four genera (*Cryptocorynetes* Yager, 1987, *Kaloketos* Koenemann *et al.*, 2004, *Lasionectes* Yager & Schram, 1986, *Speleonectes* Yager, 1981), Godzilliidae Schram, Yager & Emerson, 1986, with three species in three genera (*Godzillioognomus* Yager, 1989, *Godzillius* Schram, Yager, Emerson, 1986, *Pleomothra* Yager, 1989), and Micropacteridae Koenemann *et al.* (2007a), with the monotypic genus *Micropacter*.

Herein we describe a new species, *Speleonectes emersoni*, that was collected from two caves in the south of the Dominican Republic near Santo Domingo in May 2005. This southern extension to the range of Caribbean remipedes indicates that the group is more widespread than previously known.

Definitions of morphological terms

In remipede systematics, the terms 'seta' and 'spine' have been used traditionally to distinguish between slender and more robust setal structures. However, Wollermann *et al.* (2007) followed Watling's (1989) distinction between a spine and a seta when describing a new remipede species. Watling defined a spine as a non-articulated cuticular extension that has no socket, regardless of its size or shape. A seta, on the other hand, is "an articulated cuticular extension of virtually any shape or size". Examination of numerous SEM photos of various species suggest that all remipedes are equipped with a relatively large diversity of multi-functional setae, while spines *sensu* Watling are only present as cuticular outgrowths in some species, for example, the pointed