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# *Speleonectes kakuki*, a new species of Remipedia (Crustacea) from anchialine and sub-seafloor caves on Andros and Cat Island, Bahamas

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## Abstract

A new species of the crustacean class Remipedia is described, illustrated and compared to closely related taxa. *Speleonectes kakuki* n. sp. inhabits at least four widely separated anchialine cave systems on the Great Bahama Bank. A total of ten specimens were collected from caves on Andros and Cat Island. *Speleonectes kakuki* can be distinguished from other species of remipedes by the presence of heteromorphic sternal bars and comparatively robust and pilose prehensile cephalic limbs. It is the first remipede to be collected from an offshore cave, whereas as all previously known remipede habitats are inland sites. The presence of remipedes in sub-seafloor caves is highly significant in that it suggests the anchialine habitat is much more extensive than previously thought and may extend for hundreds of kilometers beneath the shallow waters of limestone banks to link widely separated inland caves.

**Key words**: Remipedia, Speleonectidae, sub-seefloor cave, anchialine caves, Bahamas

## Introduction

The identification and recognition of a new species of *Speleonectes* is based on several specimens from Cat Island, Bahamas, collected in 2004. When we compared these specimens with older collection material, we found samples from 1985 and 2001 that comprised as yet unidentified remipedes belonging to the new species. The older samples were collected from three caves on Andros.

Its occurrence in several cave systems on two islands on the Great Bahama Bank makes *Speleonectes kakuki* n. sp. one of the most widely dispersed species in the family Speleonectidae Yager, 1981. At present, the remipede order Nectiopoda Schram, 1986 is composed of three families, eight genera and 20 species (Table 1). While the majority of species is known only from single localities, a number of godzilliid and speleonectid taxa have been reported from both Grand Bahama and Abaco Island, two islands on the Little Bahama Bank. These include *Pleomothra apletocheles* Yager, 1989, *Godzilliognomus frondosus* Yager, 1989, *Cryptocorynetes haptodiscus* Yager, 1987a, *S. benjamini* Yager, 1987a, and *S. lucayensis* Yager, 1981 (one specimen from Abaco Island collected by TMI in 2006). *Lasionectes entrichoma* Yager & Schram, 1986 is known from North Caicos and Providenciales, both on the Caicos Bank. On the Yucatan Peninsula, *S. tulumensis* Yager, 1987b occurs in a number of caves that are probably part of a hydrologically interconnected system of anchialine tunnels.

The Bahamas archipelago consists of two major shallow-water banks, each containing multiple islands. The Great Bahama Bank is a large, shallow-water carbonate platform that includes the islands of New Providence, Bimini, Andros, Cat, Eleuthera, Great Exuma and Long Island. The Great Bahama Bank is separated from the Little Bahama Bank (containing the islands of Grand Bahama and Abaco) by the Northeast

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