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## A new species of *Boca* Lowry & Stoddart, 1997 (Amphipoda: Lysianassoidea: Aristiidae) from a mesophotic coral ecosystem off Puerto Rico, Caribbean Sea

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### Abstract

A new species of the genus *Boca* Lowry & Stoddart, 1997 is described from a mesophotic coral ecosystem off southwestern Puerto Rico, in the Caribbean Sea. The new species is easily recognized from the others in the genus mainly by the following characters: (1) maxilliped, inner plate with 2 long apical simple setae; palp, articles slender, subequal in length; (2) gnathopod 1, propodus slightly elongate, about 2.5 × longer than wide, and palm extremely acute, quite long and distinctly demarcated by a robust seta at the palmar corner; (3) gnathopod 2, carpus slightly elongate, about 3.7 × longer than wide; (4) pereopod 5, basis widely expanded posteriorly, posterior margin rounded and smooth, and posteroventral lobe weakly developed. We also present a key to world species of *Boca*. This is the fifth species of *Boca* from world's oceans and the first record of the genus from Puerto Rico.

**Key words:** taxonomy, Biodiversity, *Boca gurui* sp. nov., Mesophotic Coral Ecosystems, Western Atlantic

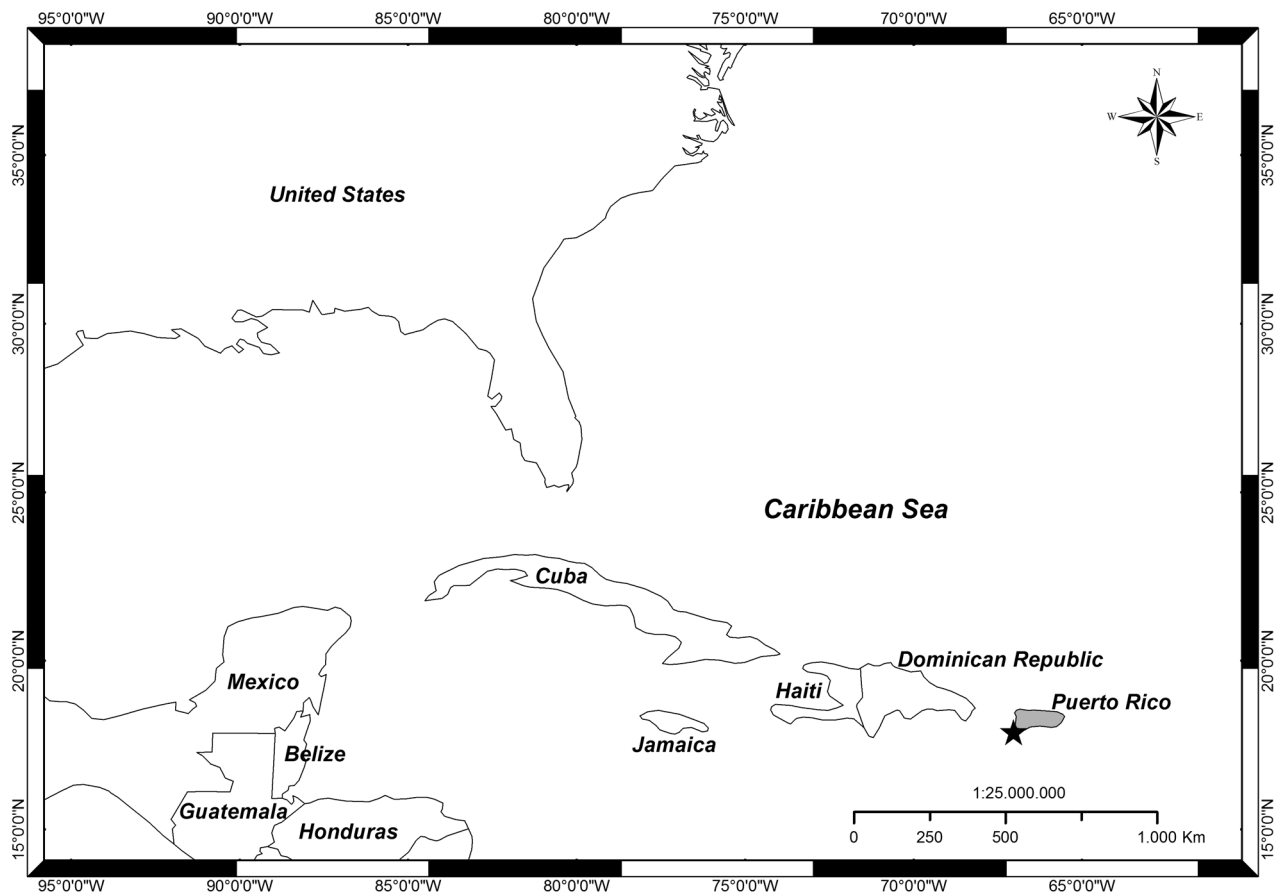
### Introduction

The Aristiidae Lowry & Stoddart, 1997 is a family of lysianassoid amphipods widely spread around the world, with more than 30 species grouped in the genera *Aristias* Boeck, 1871, *Boca* Lowry & Stoddart, 1997, *Memana* Stoddart & Lowry, 2010, *Perrierella* Chevreux & Bouvier, 1892 and *Pratinas* Stoddart & Lowry, 2010. Until now, just four species are known for the genus *Boca*: *B. campi* Lowry & Stoddart, 1997, *B. elvae* Lowry & Stoddart, 1997, *B. megachela* Lowry & Stoddart, 1997, all from the Gulf of Mexico, and *B. normae* Ortiz, Winfield & Varela, 2012, from southwestern Cuba. Mesophotic Coral Ecosystems (MCEs) are relatively deep benthic habitats found at depths between 30–40 m to 100 m in the tropics (Locker *et al.* 2010). MCEs are visually dominated by macroalgae, sponges and reef-building corals and have proven to be a trove of new records and new species of peracarid crustaceans, especially cumaceans (e.g. Petrescu *et al.* 2012, 2013). The present study is part of a US National Oceanic and Atmospheric Administration-funded research programme (DeepCres) to characterize the biodiversity of MCEs. We describe the first new species of amphipods from samples collected during DeepCres.

### Material and methods

The material was collected from Hole-in-the-Wall, one of the diving sites of the DeepCres research program, off southwestern Puerto Rico, in the Caribbean Sea. On June 8, 2010, divers equipped with Tri-Mix Rebreathers collected loose rubble, corals, sponges and algae from 90.5 m (297 ft.) depth. All substrata were placed over a 1 mm

- outer ramus article 2 ..... *Boca gurui* sp. nov. 4
- 3a. Gnathopod 1, dactylus curved; telson without apical robust setae ..... 4
- 3b. Gnathopod 1, dactylus bent at right angle proximally; telson with 1 apical robust seta on each lobe ..... *Boca elvae*
- 4a. Gnathopod 1 weakly subchelate, dactylus large; pereopods 5–7, propodus with articulated anterodistal spur ..... *Boca campi*
- 4b. Gnathopod 1 massively subchelate, dactylus very large; pereopods 5–7, propodus with non articulated anterodistal spur ..... *Boca megachela*



**FIGURE 4.** Type locality of *Boca gurui* sp. nov. Hole-in-the-Wall, 90.5 m (297 ft.), off SW Puerto Rico, Caribbean Sea (Distribution map by Danielle P. Cintra).

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