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NOTES ON GEOGRAPHIC DISTRIBUTION

Axianassa australis Rodrigues and Shimizu, 1992 (Crustacea: Decapoda: Gebiidea: Axianassidae): First record from Sergipe, NE Brazil

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ABSTRACT: The western Atlantic mud-shrimp *Axianassa australis* Rodrigues and Shimizu, 1992 (Crustacea: Decapoda: Gebiidea: Axianassidae), known from Florida, Gulf of Mexico and Brazil, is firstly recorded from the state of the Sergipe, NE Brazil, filling a gap in the species distribution along Brazilian coast.

Mud-shrimps genus *Axianassa* Schmitt, 1924 are mainly characterized by their carapace with well-defined linea thalassinica and cervical groove, short rostrum anteriorly rounded, weakly to moderately developed, reaching well beyond cornea of eyes, body poorly calcified and abdomen with thin walls (Kensley and Heard 1990; Melo *et al.* 2006; Anker 2010; Liu and Liu 2010). Presently, eight species are known from tropical and subtropical waters of western Atlantic (*A. intermedia* Schmitt, 1924; *A. arenaria* Kensley and Heard, 1990; *A. jamaicensis* Kensley and Heard, 1990 and *A. australis* Rodrigues and Shimizu, 1992), eastern Pacific (*A. mineri* Boone, 1931 and *A. canalis* Kensley and Heard, 1990), Indo-West Pacific (*A. ngochoae* Anker, 2010) and west Pacific (*A. sinica* Liu and Liu, 2010) (Kensley and Heard 1990; Anker 2010; Liu and Liu 2010).

The type locality of *A. australis* (Figure 1) is "Fazenda Maricultura" ("Maricultura da Bahia"), located in Valença, central coast of the state of Bahia, Brazil (Rodrigues and Shimizu 1992). The species has been recorded from Florida, Gulf of Mexico, and Brazil (states of Pernambuco, Bahia, São Paulo and Paraná) (Rodrigues and Shimizu 1992; Melo 1999; Felder 2001; Melo *et al.* 2006; Coelho *et al.* 2007). Specimens of *A. australis* typically burrow complex galleries among coastal mangroves and adjacent mud flats, and are apparently adapted to strongly hypoxic and reduced (sulfidic) environments (Dworschak and Rodrigues 1997; Felder 2001).

On July 2010, one individual of *A. australis* [male with 3.5 mm in carapace length (CL)] was caught with a PVC corer (10 cm of diameter and inserted 20 cm depth into

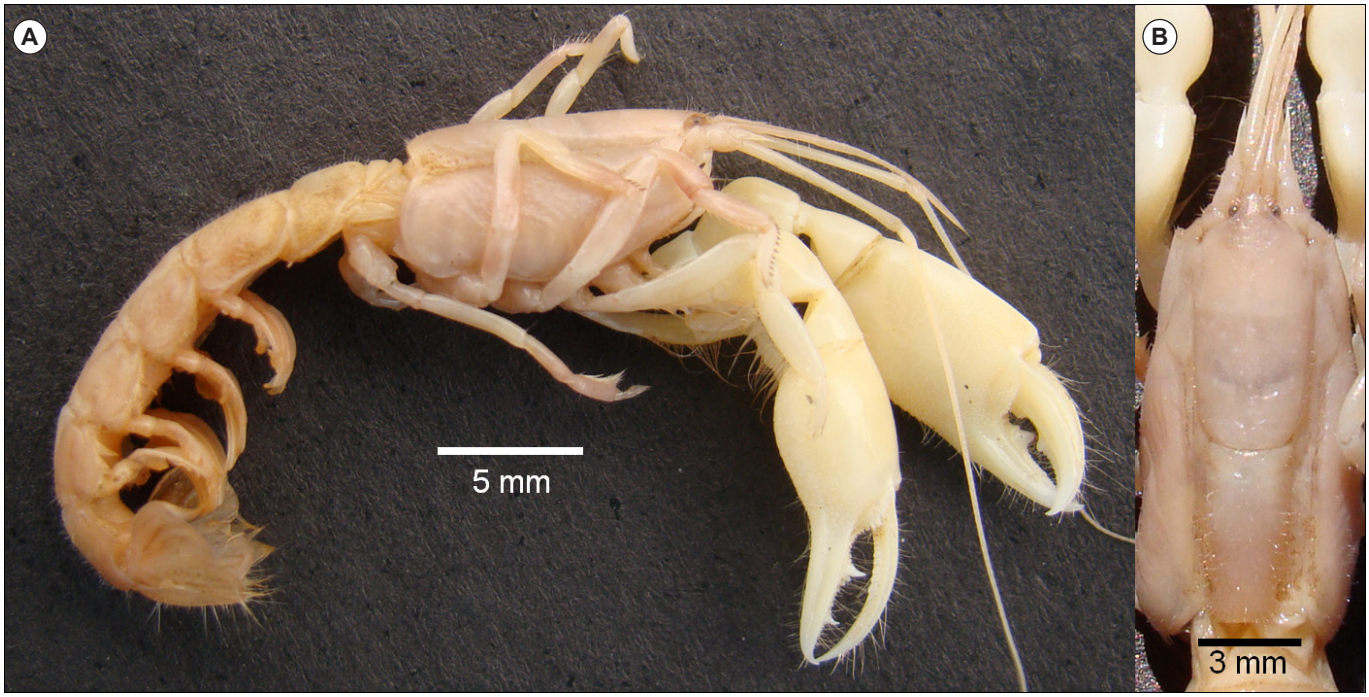

FIGURE 1. *Axianassa australis* Rodrigues and Shimizu, 1992: male collected in the estuary of Real River, state of Sergipe, Brazil (NEP-CRUST 0004). (a) Lateral view of whole specimen; (b) dorsal view of carapace.

sediment) during a benthic survey carried out nearby an oyster farm situated at the estuary of São Francisco River, northern state of Sergipe, NE Brazil (10°32'01"S; 36°29'36"W) (Figure 2). In this place, the water salinity ranged from 23 to 34 and sediment was composed mainly by poorly sorted fine sand with 1.25% of fine fractions (i.e., silt + clay) and 7.58% of organic matter content. One year later, other 10 individuals, 4 males ranging from 5.2 to 10.3 mm CL and 6 females (four of which ovigerous) ranging from 6.7 to 14.0 mm CL, were caught using a "yabby-pump" (Hailstone and Stephenson 1961) on a sandy-muddy tidal flat located at the estuary of Real River, southern Sergipe (11°28'40"S; 37°23'55"W) (Figure 2). Our material agrees with the original description by Rodrigues and Shimizu (1992).

The present record of *A. australis* represents the first from the state of Sergipe, filling a gap in the species distribution along the Brazilian coast between the states of Pernambuco and Bahia. Voucher specimens were fixed in formaldehyde 5% and deposited in the carcinological collection of the Universidade Estadual de Santa Cruz (UESC 1529), in Ilhéus, Bahia, Brazil, and in the carcinological collection of the Núcleo de Engenharia de Pesca (NEP-CRUST 0002; 0004-0012), Universidade Federal de Sergipe, São Cristóvão, Sergipe, Brazil. Samples were collected with the permits of the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) and Sistema de Autorização e Informação em Biodiversidade (SISBIO), license number 32380-1.

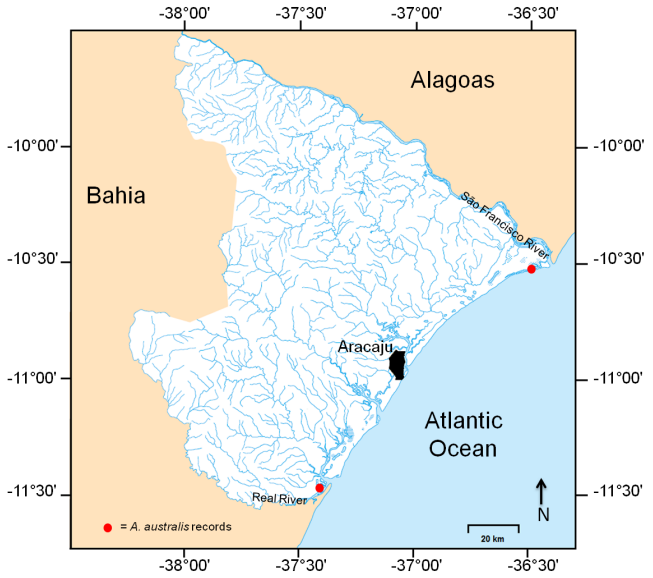

Figure 2. Hydrological basins of the state of Sergipe, Brazil, indicating the sites where the mud-shrimp *Axianassa australis* Rodrigues and Shimizu, 1992 was collected (red circles).

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