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Short communication

First occurrence of the crab *Calappa nitida* Holthuis, 1958 (Brachyura, Calappidae, Calappinae) on the coast of the state of Piauí, Brazil

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Resumo

Primeira ocorrência do caranguejo *Calappa nitida* Holthuis, 1958 (Brachyura, Calappidae, Calappinae) na costa do Estado do Piauí, Brasil. O presente estudo reporta o registro de uma fêmea do calapídeo *Calappa nitida* encontrada em uma estação de bombeamento de água de uma fazenda de camarão, no manguezal situado em Cajueiro da Praia (PI), local que compõe a Área de Preservação Ambiental do Delta do rio Parnaíba. Com distribuição nas Regiões Norte e Nordeste, esse é o primeiro registro no Estado do Piauí, preenchendo, assim, uma das lacunas existentes nessa zona de distribuição.

Unitermos: biodiversidade, biogeografia, Decapoda, distribuição, manguezal

Abstract

The present study reports a female of *Calappa nitida* found at a water-pump station on a shrimp farm, in a mangrove located in Cajueiro da Praia, state of Piauí, within the Parnaíba River Delta Environmental Preservation Area. Although *C. nitida* occurs in northern and northeastern Brazil, this first record from Piauí fills one of the gaps in its known range.

Key words: biodiversity, biogeography, Decapoda, distribution, mangrove

Introduction

It is necessary to know the distribution of a species when we want to preserve it. New records often fill gaps in a species' known range and help us to understand the history of its population dispersal.

According to Melo (1996), the ornamented box crab *Calappa nitida* Holthuis, 1958, is found on coral and sand-mud bottoms at depths down to 70 meters. This species is common on shrimp flats in northern Brazil. It occurs in the western Atlantic (Antilles, Venezuela, Suriname, Guyana, and in Brazil in the states of Amapá and Pará). Young and Serejo (2005) caught the species at Abrolhos, suggesting that its distribution off the Brazilian coast extends from Amapá to Bahia.

The female of *C. nitida* (Figure 1) reported herein was collected in December 2005, at a water-pump station (02°55'29.1"S and 41°26'33.0"W) on a shrimp farm of

Litopenaeus vannamei (Boone, 1931) in a mangrove located in Cajueiro da Praia, Piauí, within the Parnaíba River Delta Environmental Preservation Area. The specimen was found in the canal that supplies seawater to the culture ponds at a depth, which was less than 1 meter. Water is pumped from the estuary into the canal, and there are no impediments to the survival of living crabs at that location. The female measured 97.20mm in carapace width, including its lateral spines, and 64.40mm in carapace length. The specimen is deposited at the Aquatic Resources Laboratory in Embrapa Meio-Norte, Parnaíba, Piauí.

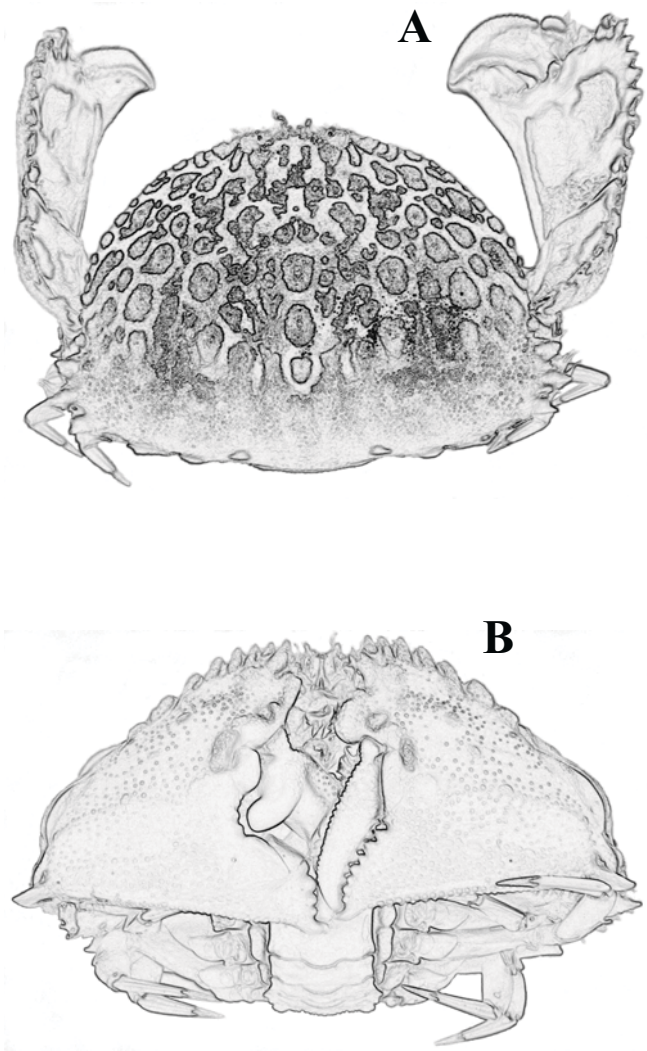

FIGURE 1: Callapa nitida. Female collected in the Cajueiro da Praia mangrove. A - Dorsal view; B - Ventral view.

Besides the new occurrence in inner-estuarine waters of the Piauí coast, *C. nitida* has been recently captured at depths between 236 and 1246 meters, in one of the trawls off the northern Brazilian coast (Azano Filho et al., 2005).

The occurrence of *C. nitida* at that depth in the northern region suggests that the species may have a very broad distribution. Based on the reports from Amapá, Pará, and Bahia, and now from Piauí, it is possible to infer that the species occurs in the northern and northeastern regions from Amapá to Bahia, as mentioned by Young and Serejo (2005). This first record of *C. nitida* in Piauí fills one of the existing gaps in this distribution. The find illustrates the relative lack of knowledge of the fauna of Brachyura in the Parnaíba River Delta Environmental Preservation Area. New expeditions will undoubtedly find new species not yet reported from this area.

The area of mangrove forest and adjacent areas are a highly important component of this environmental preservation area. In this context, it is essential to make people aware of the need to conserve these habitats, where at present the local shrimp farms are largely responsible for effluents discharged into the mangroves. The highly diverse fauna and flora of the mangroves is more and more affected.

In Ceará alone, recent surveys have extended the known distributions of nine decapod species: *Apiomithrax violaceus* (A. Milne-Edwards, 1868) and *Hypoconcha arcuata* Stimpson, 1858, by Bezerra et al. (2005); *Fredius denticulatus* (H. Milne-Edwards, 1853) and *F. reflexifrons* (Ortmann, 1897) by Magalhães et al. (2005); *Nanoplax xanthiformis* (A. Milne-Edwards, 1880), *Synalpheus hemphilli* Coutière, 1909, *S. minus* (Say, 1818), *S. sanctithomae* Coutière, 1909, and *Petrolisthes rosariensis* Werding, 1978, by Bezerra and Coelho (2006). This relatively high number of new records demonstrates that the lack of studies of the faunal composition renders present knowledge of the biodiversity of brachiurans of the Brazilian coast very far from reality. In order to preserve this fauna, it is necessary to know its component species.

According to Góes et al. (1998), enlargement of the geographic distribution of marine invertebrates may

be a result of larval dispersion, through the action of currents, winds, and tides, as well as other non-biological factors such as the lack of faunal surveys. Studies aiming to improve knowledge of the occurrence of these brachyuran crabs may clarify the areas of occupation of the species.

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