FIRST RECORD OF *Carapus bermudenis* (JONES, 1874) (ACTINOPTERYGII: CARAPIDAE) IN THE COAST OF BAHIA STATE, NORTHEASTERN BRAZIL (WESTERN ATLANTIC OCEAN)

PRIMEIRA OCORRÊNCIA DE *Carapus bermudensis* (JONES, 1874) (ACTINOPTERYGII: OPHIDIIFORMES: CARAPIDAE) NO ESTADO DA BAHIA (LITORAL NORDESTE DO BRASIL, OCEANO ATLÂNTICO OCIDENTAL)

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ABSTRACT

The first occurrence of *Carapus bermudensis* (Jones, 1874) (Actinopterygii: Ophidiiformes: Carapidae) in the littoral of Bahia state (Northeastern of Brazil, Western Atlantic Ocean) is presented. This record is based in one specimen measuring 139,0 mm of total length collected still alived in Berlinque's beach (south of Itaparica Island, about of 13°05'18"S - 38°45'12"W) during low tide. Coloration coincide with diagnosis available to specimens of similar size and small diferences were observed in body proportions which are attributed to intra-especific variation of *C. bermudensis* along the area of geographic distribution.
KEY-WORDS: occurrence, Teleostei, Carapidae, *Carapus bermudensis*, Bahia.

INTRODUCTION

The family Carapidae (Ophidiiformes), whose specimens are known as pearlfishes, comprises 7 genera and 31 species of highly specialized benthic fishes which occur on shallow to moderately deep marine shelves and slopes, with greatest diversity in shallow tropical waters of the Indo-West Pacific. A few species have free-living adults but most are commensals in the body cavity of shallow water invertebrates such as bivalves, asteroids and holothurians. Specialized biology of some sea cucumber commensals includes male-female pairing within a host, parasitism of the host's gonads and respiratory tree, and cannibalism. These remarkable associations, as well as a unique early life history, account for the notoriety of the group (MARKLE; OLNEY, 1990; NIELSEN et al., 1999).

MATERIALS AND METHODS

The single specimen examined was found alive on the sand, during the low tide at Berlinque Beach (sand substrate, acessible by "Condomínio Rua C"), south of Itaparica Island (Vera Cruz municipality, about 13°05'18"S - 38°45'12"W), Bahia State, northeastern coast of Brazil (Western Atlantic Ocean).

The specimen was kept in ice during field work, preserved in 10% formalin and stored in 70% alcohol in the fish collection of Lab. Ichthyology (Dep. Biological Sciences) of State University of Feira de Santana (Bahia State, Brazil), recorded under number LIUEFS 5711, identified by Markle e Olney (1990) and Cervigón (1991) and measured with a caliper following the definitions of Markle e Olney (1990).

RESULTS

Material examined:

LIUEFS 5711 (1: 139.0 mm in total length, 95.6 mm in standard length).

Diagnosis: body elongated, tapering towards the posterior end; canine teeth absent in both maxillae and arranged in a continuous row, without a space near the anterior end of the maxillae; gill rakers present; right pectoral fin with a rounded margin and left pectoral fin with a sharp margin; anus located on a vertical that passes slightly after the base of the pectoral fins; pelvic fins absent; origin of the anal fin below the base of the pectoral fins; origin of the dorsal fin posterior to the origin of the anal fin.

Coloration (in 70% alcohol): overall body color light; dark pigmentation on the snout between its tip and the eyes; dark pigmentation also present between the eye and the margin of the upper jaw, the lower jaw and the anterior and lateral margins of the upper jaw, more intense in the lower maxilla; dark pigments around the eyes in the lateral and lower margins; dark pigments irregularly arranged between the eye and the opercle margin; some dark pigmentation, less evident, in the mental region; dorsally, dark pigments as more conspicuous spots extend from head to until about the middle of the body, becoming more spaced and less evident posteriorly; posterior third of the tail (approximately) with dark pigmentation that fuse towards its end.

Morphometric characters: head length: 18.1 mm, snout length: 3.9 mm, eye horizontal diameter: 3.5 mm, length of upper maxila: 8.7 mm, length of lower maxila: 8.2 mm, pre-dorsal length: 30.8 mm, pre-anal length: 16.6 mm, pectoral fin length: 8.7 mm, head width: 6.6 mm, head depth: 8.7 mm, body depth: 8.7 mm, interorbital distance: 3.0 mm, distance from snout to pectoral fin base: 18.5 mm.

Body proportions: head length/standard length: 18.9%, body depth/standard length: 9.1%, eye horizontal diameter/standard length: 3.7%, length of upper maxila/standard length: 9.1%, snout length/ standard length: 4.1%, head contained 7.7 times in total length, body depth contained 16 times in total length.

DISCUSSION

Carapus bermudensis is the only species in the genus *Carapus* Rafinesque, 1810 known to the Western coast of the Atlantic Ocean, being cited from Bermudas and Florida (USA) to the West Indies and Brazil and reaching at least 197.0 mm in total length (RANDALL, 1983; MARKLE; OLNEY, 1990; CERVIGÓN, 1991).

Carapus chavesi and *C. recifensis*, described by Ancona-Lopez (1956) from Piedade Beach, Recife (State of Pernambuco, northeastern coast of Brazil) and regarded as the first record of the genus in the South American coast, are considered synonyms of *C. bermudensis* by Markle and Olney (1990).

In addition to *C. bermudensis*, the family Carapidae is represented along the Brazilian coast only by *Snyderidia canina* Gilbert, 1905, *Echiodon dawsoni* Williams and Shipp, 1982, and *E. cryomargarites* Markle, Williams and Olney, 1983 (MARKLE; OLNEY, 1990).

Nielsen *et al.* (1999) included 4 species in the genus *Carapus* but Parmentier *et al.* (2000) have transferred to *Carapus* the species previously named *Encheliophis boraborensis* (KAUP,1856), *E. homei* (Richardson, 1844) and *E. dubius* (Putnam, 1874), none of which have been recorded to Brazil (MARKLE; OLNEY, 1990).

Cervigón (1991) recorded the presence of *C. bermudensis* in Venezuela on the basis of 2 specimens measuring 80.0 and 117.0 mm in total length and presented a short description for the coloration coincides which that observed in the specimen LIUEFS 5711, and also with that presented by Markle and Olney (1990) for specimens up to 17.0 mm in head length.

Minor differences were observed in body proportions among our specimen LIUEFS 5711, the 12 specimens examined by Markle and Olney (1990), and the 2 specimens of Cervigón (1991) and that are due, in the case of the material examined by Markle e Olney (1990), to the larger number of specimens analysed and the scarce information available on the intraspecific variation of *C. bermudensis* and, in the case of the material from Venezuela of Cervigón (1991), to the larger size of the specimen examined in the present study. Based on Randall (1983), variation (to a higher value) was observed only in the relation head length/pelvic fin length.

This record is the first to *C. bermudensis* in the littoral of Bahia state, increasing the knowledge about the ichthyofauna of northeastern Brazil and more information about this species in the Brazilian coast was insufficient due to the habits and small size.

RESUMO

É apresentada a primeira ocorrência de *Carapus bermudensis* (Jones, 1874) (Actinopterygii: Ophidiiformes: Carapidae) no estado da Bahia (litoral nordeste do Brasil, Oceano Atlântico Ocidental). Este registro está baseado em um indivíduo com 139,0 mm de comprimento total coletado ainda vivo na Praia de Berlinque (sul da Ilha de Itaparica, cerca de 13°05'18"S - 38°45'12"W), durante a maré baixa. O colorido do espécime coincide com as descrições disponíveis para exemplares de tamanho similar e as pequenas diferenças observadas em proporções corporais são atribuídas a variações intra-específicas ao longo da área de distribuição geográfica de *C. bermudensis*.
PALAVRAS-CHAVE: ocorrência, Teleostei, Carapidae, *Carapus bermudensis*, Bahia.

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