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A NEW SPECIES OF *NASSARIUS* (GASTROPODA, NASSARIIDAE) FROM CANOPUS BANK, OFF NORTHEAST BRAZIL

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ABSTRACT

Nassarius levis sp. nov. is described from Canopus Bank, off Ceará, Northeast Brazil, based on shell morphology. It differs from other Brazilian species of the genus in having a more elongate shell, with a weakly developed parietal shield and a notably smooth surface. This last trait has not yet been described among the Western Atlantic *Nassarius*, but it is common to other congeners from the Eastern Atlantic, such as *Nassarius elatus* (Gould, 1845) and the Indo-Pacific, such as *Nassarius excellens* (Kuroda & Habe, 1961).

KEY-WORDS: Deep-water; Nassariinae; smooth sculpture.

INTRODUCTION

The Nassariidae are a widely distributed group of estuarine to shallow water sea snails, commonly found in tropical and temperate latitudes. They live on soft, muddy bottoms and are carnivores, with some facultative exceptions (Morton, 1960; Brown, 1982; Harasewych, 1998). Nassariids usually have small (from 4 to 75 mm), high-spined, ovate to fusiform shells, with a distinct reflected siphonal notch and a lirate outer lip (Abbott, 1974; Harasewych, 1998). The family comprises hundreds of species divided into 18 extant genera, three of which – *Buccinanops*, *Dorsanum* and *Nassarius* – are currently represented in Brazil (Bouchet *et al.*, 2005; Rios, 2009; Appeltans *et al.*, 2012).

The genus *Nassarius* is the largest among the Nassariidae, comprising more than 380 species (Appeltans *et al.*, 2012). Amid such an impressive

diversity, it is surprising to note that only eight species were recorded in Brazilian waters, including *Nassarius albus* (Say, 1826), *N. antillarum* (d'Orbigny, 1847), *N. capillaris* (Watson, 1882), *N. karinae* Usticke, 1971, *N. pernitidus* (Dall, 1889), *N. polygonatus* (Lamarck, 1822), *N. scissuratus* (Dall, 1889), and *N. vibex* (Say, 1822) (Rios, 2009; Rosenberg, 2009). Animals belonging to this genus have small (less than 25 mm) shells, with a sharp spire and a broad, thickened parietal shield (Abbott, 1974).

This paper deals with samples from surveys conducted at Canopus Bank, off Ceará, northeastern Brazil. As a result of these surveys, numerous new gastropod species have been revealed (Cunha, 2005; Costa & Simone, 2005; Simone & Abbate, 2005; Simone, 2006; Cunha, 2011). The present paper aims to describe a new species of *Nassarius* from that locality.

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MATERIALS AND METHODS

The collected material was washed through a 0.5 mm mesh, and then stored in 70% ethanol. Specimens sorted out of the mixture consisted mainly of empty shells in varying states of conservation. All the lots are housed at the Museu de Zoologia da Universidade de São Paulo (MZSP) collection.

Material examined: BRAZIL; from type locality, MZSP 100411 *Nassarius levis*, 5 shells plus 4 broken pieces; MZSP 94321 *Nassarius levis*, 6 shells; Ceará; off Fortaleza, 40-50 m depth, MZSP 73263 *Nassarius antillarum*, 1 shell, J. Coltro Jr. *leg.*, VIII/2005; Bahia; off Itaparica, MZSP 100351 *Nassarius polygonatus*, 2 shells, collected on VIII.1991; Espírito Santo; off Guarapari, 20-30 m depth, MZSP *Nassarius karinae*, 1 shell, A. Bodart *leg.*, III.1994; São Paulo; off Santos, 40-50 m depth, MZSP 73792 *Nassarius scissuratus*, 11 shells, collected on VI.2001; off São Vicente; Ilha Porchat, 2 m depth, MZSP 62451 *Nassarius vibex*, 2 shells, Luiz R.L. Simone *leg.*, II.01.1978. JAPAN; Okinawa; Seregaki, 20-25 m depth, MZSP 74624 *Nassarius excellens*, 1 shell, R. Kinjo *leg.*, III.2006; SENEGAL; off Yenekao, 12 m depth, MZSP 67079 *Nassarius elatus*, 2 shells, collected on VI.2005.

Systematics

Family Nassariidae

Genus *Nassarius* Duméril, 1805

Nassarius levis sp. nov.

(Figs. 1-9)

Types: Holotype MZSP 103678. Paratypes: MZSP 103752, 1 shell from type locality, MZSP 103753, 1 shell from type locality.

Type locality: BRAZIL. Ceará; 120 miles off Fortaleza, Canopus Bank, 02°14'25"S and 38°22'50"W, 260 m depth, dredged, J. Coltro Jr. *leg.*, VII.2005.

Diagnosis: Shell translucent, light, relatively thin walled with convex whorls; surface smooth, with barely distinguishable axial growth lines and distinct thicker inner and outer lips. Color pale tan, with irregular, often interrupted reddish-brown spiral bands. Parietal shield and rib weakly developed. Protoconch smooth, reddish brown to purplish.

Description: Shell (Figs. 1-9) small, up to 15.6 mm at 8 whorls, about twice as tall as wide; outline conic,

whorls equally inflated; color pale tan, with irregular, often interrupted reddish-brown spiral bands medially and near sutures, more evident in body whorl, translucent. Protoconch (Figs. 5-7) convex, smooth, glossy, reddish brown to purplish, with about 2 whorls; transition to teleoconch distinguishable as a depression, followed by a subtle change in color. Teleoconch (Figs. 1-4, 8, 9) of 6 convex whorls, smooth and glossy except for thin, irregular, barely visible axial growth lines; sutures well demarcated. Spire tall, *ca.* 63% of total length; spire angle *ca.* 40°. Aperture (Fig. 4) prosocline, rounded, posteriorly acuminate, *ca.* 37% of shell length; color white, with reddish-brown bands internally and on the edge of outer lip; outer lip thick, palatal wall with 10-12 internal lirae (Fig. 4); inner lip ornamented by 2 thin folds, short, with a thin callus; parietal rib very weak but present (Fig. 4); Parietal shield weakly developed; Spiral striae and anal notch absent. Siphonal canal strong, deep, narrow (*ca.* 16-18% of aperture length) and dorsally recurved (Figs. 1-4).

Habitat: Gravel bottoms among dead corals, at 260 m depths.

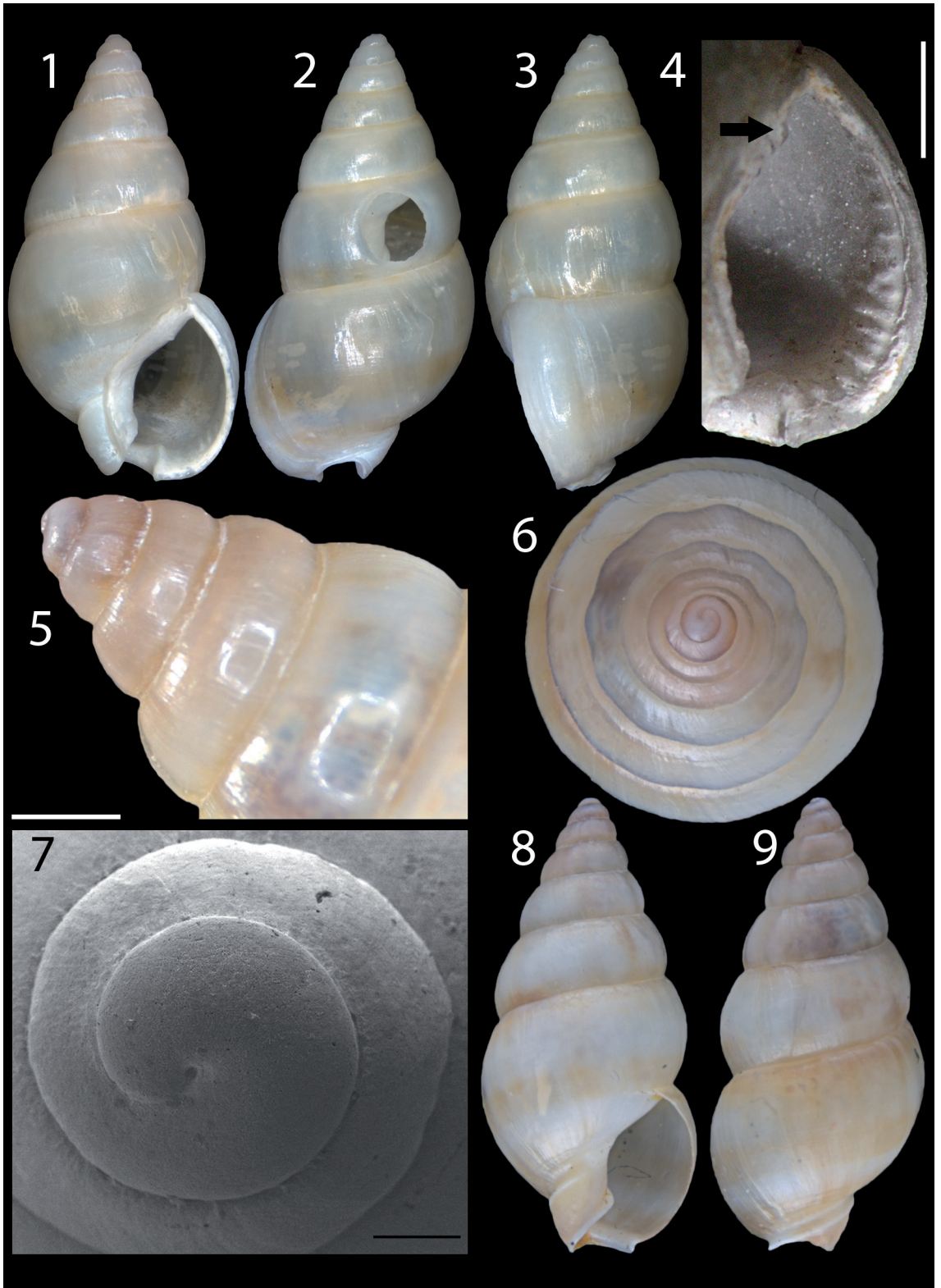
Distribution: Only known from type locality.

Etymology: The specific name is from the Latin *levis*, an adjective meaning smooth, polished, or light weighted, both meanings alluding to some of the most striking features of the species.

Measurements (length by width in mm) – Holotype: 14.2 by 6.6; Paratypes: MZSP 103752: 13.0 by 6.6; MZSP 103753: 14.4 by 7.0; Additional material: MZSP 100411, 5 shells: 13.3 by 6.2, 12.2 by 6.6, 12.7 by 7.0, 13.1 by 6.5, 15.1 by 7.6; MZSP 94321, 6 shells: 15.6 by 7.0, 13.8 by 6.5, 13.1 by 6.5, 12.1 by 7.3, 10.7 by 5.5, 12.7 by 6.5.

DISCUSSION

Nassarius levis differs from all other *Nassarius* species recorded in Brazil in having a notably smooth, glossy, translucent and light shell, since all remaining species are heavier, with a pronounced axial and/or spiral sculpture, and a more opaque surface. Besides these more evident distinctions, it differs from *N. albus* (Say, 1826), *N. antillarum* (d'Orbigny, 1847) and *N. capillaris* (Watson, 1882) in having a more elongate outline, less deep sutures, a more acute spire angle, thinner shell walls, a thinner outer lip, a higher



FIGURES 1-9: *Nassarius levis* new species. (1) Holotype, apertural view (H 14.2 mm). (2) Same, abapertural view. (3) Same, right lateral view. (4) MZSP 100411, detail of aperture (arrow indicates the parietal rib), scale: 2 mm. (5) Paratype MZSP 103752, protoconch lateral view, scale: 1 mm. (6) same, protoconch apical view. (7) MZSP 100411, protoconch SEM, scale: 240 μ m. (8) Paratype MZSP 103752, apertural view (H 13.0 mm). (9) Same, abapertural view.

number of whorls and more numerous lirae on the outer lip. It differs from *N. karinae* Usticke, 1971 in being larger, more elongate, with thinner shell walls and a higher number of whorls. It can be distinguished from *N. pernitidus* (Dall, 1889) by its smaller size, lighter color, thinner walls and more numerous whorls. It differs from *N. scissuratus* (Dall, 1889) in having thinner walls and less deep sutures. It differs from *N. polygonatus* (Lamarck, 1822) and *N. vibex* (Say, 1822) in being smaller, more elongate, palish, with a more acute spire angle and thinner walls and in presenting a much less developed parietal shield.

The smooth shell surface of *Nassarius levis* is not found among its Brazilian congeners. This is described for the first time in the Western Atlantic. Though exclusive in this region, this relatively striking feature in *Nassarius levis* is not uncommon among East Atlantic and Indo-Pacific species. Several similar looking congeners such as *Nassarius elatus* (Gould, 1845) from West Africa, and *Nassarius excellens* (Kuroda & Habe, 1961) from Japan, also exhibit such a trait. However the smooth protoconch, as well as the absence of spiral striae on the body whorl in *Nassarius levis*, can be listed as notable differences from both species.

RESUMO

Nassarius levis sp. nov. é descrita para o banco de Canopus, estado do Ceará, Brasil com base na morfologia da concha. Difere das outras espécies locais por apresentar uma concha mais alongada, com um escudo parietal pouco desenvolvido e uma superfície notavelmente lisa. Essa última característica ainda não foi descrita entre as espécies de *Nassarius* do Atlântico oeste, mas é comum a outros congêneres do Atlântico leste, como *Nassarius elatus* (Gould, 1845) e Indo-Pacífico, como *Nassarius excellens* (Kuroda & Habe, 1961).

PALAVRAS-CHAVE: Água profunda; Nassariinae; Escultura lisa.

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