

A NEW SPECIES OF *NASSARIA* LINK, 1807 (GASTROPODA, BUCCINIDAE) FROM EAST CHINA SEA

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Abstract A new species of the genus *Nassaria* Link, 1807 is described and illustrated from the East China Sea. *Nassaria varicosa* sp. nov., has a medium sized, broad shell with a peculiar sculpture that distinguishes it from congeners.

Key words East China Sea, Buccinidae, *Nassaria*, new species

INTRODUCTION

The genus *Nassaria* Link, 1807 comprises a group of gastropods restricted to the tropical Indo-West Pacific from shallow to moderately deep water (Okutani, 2000; Fraussen, 2006; Fraussen & Poppe, 2007; Fraussen *et al.*, 2009; Zhang, 2008). Their shells are of moderate size, ovately fusiform in shape with an acuminate spire and broad body whorl. The sculpture consists of spiral cords and axial ribs. The aperture is rounded, ending anteriorly in a recurved canal with the inner lip circumscribed and the outer lip usually grooved internally.

To date, more than 40 species of *Nassaria* have been described. Among them, about thirteen species have been reported from China (Cai & Chen, 2000; Lee, 2000; Fraussen & Stahlschmidt, 2008; Zhang, 2008).

In 1981, a scientific survey on the East China Sea was conducted by the Institute of Oceanology, Chinese Academy of Sciences (IOCAS). A new species of *Nassaria* was collected and is described herein.

MATERIALS AND METHODS

The studied specimens were sampled from the East China Sea. Specimens are deposited in the Marine Biology Museum, Chinese Academy of Sciences (MBMCAS). The following abbreviations are used in the text: MBM-Marine Biological Museum; RN-registration number; spm(s)-specimen(s).

SYSTEMATICS

Family Buccinidae Rafinesque, 1815
Genus *Nassaria* Link, 1807

Type species by subsequent designation (Eames, 1952): *Nassaria lyrata* Link, 1807, a junior synonym of *Neptunea pusilla* Röding, 1798.

Nassaria varicosa sp. nov.

Figs 1–9

Nassaria spinigera: Fraussen, 2006: 36, figs. 17–19. (not of Hayashi & Habe, 1965)

Holotype 1 spm, East China Sea, off China, 26°50'00" N 124°70'00" E, 220 m deep, soft mud bottom, coll. Fengshan Xu, 6 1981, in MBMCAS, RN: MBM120186.

Paratype 1 spm, same locality as holotype, in MBMCAS.

Type locality East China Sea, off China, 26°50'00" N 124°70'00" E, 220 m deep, on soft mud.

Measurements Holotype: 30.6 mm in length and 16.2 mm in width; paratype: 29.6 mm in length and 15.0 mm in width.

Description Shell medium sized for the genus, thick and solid. Spire high and acuminate. Body whorl broad. Protoconch paucispiral, consisting of 1.5 smooth whorls, transition to teleoconch indistinct. Teleoconch with 7.5 convex whorls. First teleoconch whorl with three or four spiral cords. Second whorl with four spiral cords, without intercalated cords except for a thin subsutural cord. From third whorl on, each whorl has



Figures 1–9 *Nassaria varicosa* sp. nov. 1–6. Holotype, 30.6 mm, East China Sea, 26°50'00" N 124°70'00"E, 220 m deep, soft mud bottom, in MBMCAS, RN: MBM120186. 1–3. Apertural, lateral and dorsal view of Shell, respectively 30.6 mm; 4. Sculpture of body whorl; 5. Aperture; 6. Operculum, 7.1 mm; 7–9. Apertural, lateral and dorsal view of shell of paratype, respectively 29.6 mm.

five primary spiral cords, forming strong knobs when crossing the axial ribs. Each of the two primary spiral cords on third whorl with one secondary spiral cord. From fourth whorl on, weak tertiary spiral cords appear between the primary and secondary spiral cords. On the penultimate whorl and upper part of body whorl, primary spiral cords have developed secondary and tertiary spiral cords. Base of body whorl with spiral cords of equal strength, occasionally with intercalated cords. The primary and secondary spiral cords are thin, rather sharp with a flattened top resulting in a moderately rectangular cross-section.

First teleoconch whorl with 11 axial ribs. Second to fifth whorl with 13 axial ribs each. Axial ribs becoming broad and widely spaced toward the penultimate and body whorl, 12 (including two varices) and 10 (including one varix) in number on penultimate and body whorl, respectively. Incremental lines very weak, forming small axial grooves on spiral cords and weak ridges between spiral interspaces, therefore giving shell surface a rough appearance.

Aperture rounded. Outer lip thickened, 20 lirae within, of which the abapical four are the largest. Labral varix present. Columella slightly curved, with one large and some irregular small parietal denticles, and with five folds on inner lip. Siphonal canal short and recurved. Operculum brownish, ovate, with anterior nucleus.

Derivation of name The name of new species is derived from Latin *varicosus*, referring to the dilated varices on penultimate and body whorl.

Comparisons *Nassaria varicosa* sp. nov. is characterised by its medium sized, broad shell with its peculiar sculpture consisting of thin, sharp spiral cords with flattened top and thick axial ribs. This species was formerly collected from Tanimbar Islands by Fraussen (2006) and identified as *Nassaria spinigera* (Hayashi & Habe, 1965). However, *Nassaria spinigera* is a distinct species, which can be readily distinguished from *Nassaria varicosa* sp. nov. by having weak or no secondary spirals, lower axial ribs and a thin outer lip rather than a thick outer lip with a labral varix.

Nassaria varicosa sp. nov. is also similar to *Nassaria problematica* (Iredale, 1936) in shape. *Nassaria problematica* has convex whorls that are

concave on the ramp below the suture, more angulated axial ribs, smoother inside of aperture and lacking the labral varix.

Nassaria acuminata (Reeve, 1844) and *Nassaria sinensis* Sowerby, 1859 resemble *Nassaria varicosa* sp. nov. in sculpture pattern in that the primary and secondary spiral cords have a flattened top resulting in a moderately rectangular cross-section, but can be distinguished from the new species by their angulated teleoconch whorls, more acuminate spire, more constricted base and longer siphonal canal.

ACKNOWLEDGMENTS

This research was supported by the National Natural Science Foundation of China (No. 41376167) and the Science and Technology Development Planning of Shandong Province (No.2012GHY11537). We would like to express our sincere thanks to Koen Fraussen (Belgium) for his enthusiastic support and information. Our thanks also to Dr Junlong Zhang (China) for correcting the English text.

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