

# A new species of *Nassarius* (Gastropoda, Nassariidae) from Vietnam

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A new species of *Nassarius* is described from Vietnam. This species has a characteristic brown, dotted, colour pattern. It has been wrongly identified with the uniformly brown *Nassarius olivaceus* (Bruguière, 1789) in the past.

Key words: Gastropoda, Nassariidae, *Nassarius*, new species, Vietnam.

## INTRODUCTION

The genus *Nassarius* Duméril, 1805, is limited to the Indo-West Pacific (Galindo et al., 2016) and is very rich in the number of species compared to other neogastropod genera. Different species occur from the intertidal zone to several hundreds of meters in depth.

Cernohorsky (1984) reviewed all the names available at that time for the Indo-West Pacific species, but his concept of species boundaries was conservative. Nowadays much more material is available for study, including many newly discovered species. The result is that species boundaries are more narrowly defined and consequently this has meant removing some names from synonymy back to full species status. A relatively large species with a colour pattern of axially aligned brown speckles on a yellowish background is described below. This new species originates from Vietnam and seems to have a limited

distribution range.

Abbreviations: AMD, collection A.M. Dekkers, Blokker, The Netherlands; HD, collection H. Dekker, Winkel, The Netherlands; HK, collection H.H. Kool, Dieren, The Netherlands; LvG, collection L.J. van Gemert, Zeist, The Netherlands; RMNH, Naturalis Biodiversity Center, Leiden, The Netherlands.

## SYSTEMATIC PART

Family Nassariidae Iredale, 1916 (1835)

Subfamily Nassariinae Iredale, 1916 (1835)

*Nassarius* Duméril, 1805

Type species by subsequent monotypy (Froriep, 1806): *Buccinum arcularia* Linnaeus, 1758.

Cernohorsky (1984) recognized within the genus *Nassarius* a number of subgenera. Recent research making use of molecular phylogenetic analysis revealed that the traditional subgenera within *Nassarius* are not supported (Galindo et al., 2016). The distribution was found to be an important factor in the recovered clades. The monophyletic genus *Nassarius* was found to be restricted to the Indo-Pacific. The small elongated species of the also Indo-Pacific *Nassarius pauperus* (Gould, 1850) group (Kool & Dekker, 2006, 2007) were found to belong to a different clade, and were placed in the genus *Reticunassa* Iredale, 1936.



**Figs 1–4.** *Nassarius thachorum* spec. nov., Vietnam. 1–3, Holotype, RMNH.5003995, Hoi An, length 32.8 mm; 4, Paratype, HK 152.02, off Nha Trang, length 29.2 mm.

#### *Nassarius thachorum* spec. nov. (Figs 1–4)

*Nassarius olivaceus* (maybe colour variety) – Thach, 2007: pl. 27 fig. 473 [non Bruguière, 1789].

Description of holotype. – Shell elongate-ovate. Protoconch missing. Teleoconch about 7 evenly convex to almost straight-sided whorls. The first 4 axially ribbed and with 3–6 over-riding weak spirals, the posterior one stronger. Subsequent whorls smooth, glossy, with microscopic spiral threads and weak irregular growth lines. Last whorl with 6 strong basal cords. Suture a bit canalculated. Aperture wide, ovate, outer lip thickened. Edge of outer lip has spinous denticles from siphonal notch to halfway up aperture. The inside of the outer lip with 10 short lirate denticles, a little longer towards the siphonal notch. Columellar callus well bordered, laminate anteriorly, parietal denticle distinct. Siphonal area relatively short, with 4 cords.

Upper teleoconch whorls uniform chocolate brown. Background creamish yellow, with brown speckles aligning into irregular blotches and axial streaks, even zigzags. Decoration diminishing towards outer lip. Base and outer lip lacking brown markings. Interior of aperture brown, inner margin of outer lip and columellar callus whitish. Operculum unknown. The protoconch is eroded in the holotype, as in all other studied specimens.

Variability of species. – The brown pattern is variable: the axial streaking and the extent of the zigzag pattern differs among specimens, often with an ob-

scure white or yellow peripheral spiral band. In several specimens the spinous denticles on the edge of outer lip continue as much weaker denticles towards the adapical channel. The length of adult shells ranges from 26.7 to 34.5 mm.

Type locality. – Vietnam, Quang Nam province, Hoi An.

Type material. – Holotype, length 32.8 mm, width 16.2 mm (RMNH.5003995, Figs 1–3). Paratypes: type locality, 05.2002 (LvG, 10 sp.; AMD 1 sp.); type locality, 05.2002 (HD 11039, 1 sp.); Vietnam, Hoi An, Cua Beach (HK 152.01, 1 sp.); Vietnam, off Nha Trang, 10 m (HK 152.02, 1 sp., Fig. 4); Vietnam, off Nha Trang (HK 152.03, 1 sp.).

Habitat. – The species is found in shallow water, from the intertidal zone to 10 m depth, it lives on a muddy sand bottom in brackish water near river mouths (Thach, 2015, personal communication). A recently rediscovered species from Vietnam is the brackish water nassariid *Nassodonta dorri* (Wattebled, 1886) (Kantor & Kilburn, 2001). At the type locality both species were found together by the third author, probably discarded after a meal, indicating they occur in a similar habitat.

Distribution. – Vietnam, Central Vietnam from Quang Nam province to Khanh Hoa province.

Etymology. – Named after Dr Nguyễn Ngọc Thach and his wife Mrs Nguyễn Thị Huệ from Nha Trang, Vietnam. Dr Thach is well known for his many contributions in the scientific literature and in books to increase knowledge about the shells of Vietnam.

Comparison with similar species. – The new species is similar to the smooth form of *Nassarius olivaceus* (Bruguière, 1789), but differs in colour, which is yellowish in *N. thachorum* spec. nov. and dark brown to greyish, often with an obscure peripheral white spiral, in *N. olivaceus*. The characteristic marmorated pattern is always absent in *N. olivaceus*. Adult specimens of *N. thachorum* spec. nov. are smaller (27-35 mm vs 40-50 mm). *Nassarius olivaceus* also occurs in Vietnam (Thach, 2012: pl. 68 fig. 797-right).

Two similar species in appearance are *Nassarius* living from the Arabian Peninsula to Pakistan, viz. *Nassarius marmoreus* (A. Adams, 1852) and *N. tadjalli* Moolenbeek, 2007. *Nassarius thachorum* spec. nov. differs from *N. marmoreus* (Bosch et al., 1995: fig. 561; Moolenbeek, 2007: figs 4-5) in having a more straight-sided shell, larger size, presence of a ridge consisting of small denticles on the columella, more and deeper spiral grooves on the anterior part of the shell and in the colour pattern. *Nassarius marmoreus* has a dark brown shell with small white dots. *Nassarius thachorum* spec. nov. differs from *N. tadjalli* (Moolenbeek, 2007: figs 1-3) in possessing a much weaker to absent subsutural groove, the presence of a ridge consisting of small denticles on the columella, and in colour, the shell of *N. tadjalli* is much lighter brown. In both *N. marmoreus* and *N. tadjalli* the interior of the outer lip is stained with two or three brown bands, which are absent, or only very weakly present, in *N. thachorum* spec. nov.

Another species, occurring in Vietnam, somewhat comparable with the new species is *Nassarius javanus* (Schepman, 1891). The new species is has smooth whorls whereas the first three teleoconch whorls of *N. javanus* are axially and spirally ribbed. The latter has a considerable thinner shell and a more bulbous last whorl; it lacks the typical brown axial markings of *N. thachorum* spec. nov.

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