

## A New Species of *Natica* (Naticidae: Gastropoda: Mollusca) from the Philippines

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**Abstract** *Natica cabrerai* sp. nov. is described from the bottoms (ca. 85 to 144 m depth) off Balicasag and Pamilacan islands, Panglao, Bohol of the Philippines. This new species resembles *Natica vitellus* (Linnaeus, 1758) but is easily separated from the latter species in the color of protoconch and the shape of basal lip.

### Introduction

Balicasag is a small island located about 8 km southwest of Panglao Island, Bohol in the Philippines. The island is well known among malacologists and shell collectors since local fishermen have collected a large number of rarely recorded molluscs from quite deep waters with tangle nets. The fishing grounds of the fishermen in this island lie in relatively small areas off the south of Balicasag Island and off the west of Pamilacan Island (about 30 km east of Balicasag Island) in the Bohol Sea, and also from deep bottoms between the two islands. The fishermen operate two kinds of tangle net for fishing: one is called “lomon-lomon”, a cluster of disused nets operated once a month, and the other is called “pukot”, a usual tangle net operated daily. The mollusks collected by them are said to come from the depths of 150 m to 400 m, but the depths are usually referred to the lengths of rope for the tangle nets. We sounded their fishing grounds by a fish sounder, ranging from ca. 80 m to ca. 200 m.

We here describe a new species of the genus *Natica* collected quite recently by several fishermen of this island from the bottoms off the south of Balicasag Island and the west of Pamilacan Island. Although the detailed depth records of the specimens are unknown, our soundings of the fishing sites suggest instead that the molluscs came from 85 m to 144 m.

See Marincovich (1977, text-fig. 10) for terminology in the shell description. Institutional abbreviations are as follows: NSMT: Malacology Section, Department of Zoology, National Science Museum, Tokyo; NHCO: National Museum Conchological Collection in the National Museum, Manila, Philippines.

### Taxonomy

Family Naticidae Forbes, 1838

Genus *Natica* Scopoli, 1777

Type species. — *Natica vitellus* Linnaeus, 1758, by subsequent designation (Anton, 1838).

*Natica cabrerai* sp. nov.

(Fig. 1A–E)

#### Description.

**Color:** Shell with a broad dark-brown (chocolate-colored) band above whorl periphery, a narrow white band below suture, and with a white base. A slightly light-colored brown band commonly occurs subjacent to main dark-brown band. Dark-brown band becoming discolored near aperture. Protoconch consistently translucent and white. Shell interior white, often stained with purplish color in deeper part. Anterior lobe of parietal callus and funicle dark-brown, and umbilical callus translucent and white, rarely with one or two brown streaks in channel of umbilicus. Periostracum very thin, brownish-yellow, mostly eroded.

**Size:** Average specimen, height 44 mm, diameter 45 mm; largest specimen, height 48.6 mm, diameter 49.0 mm.

**Shell form:** Shell spherical, thick and solid, as long as wide. Spire small, pointed, occupying slight greater than 1/5 of total shell height. Protoconch consisting of 2½ to 2¼ whorls and 1.35 to 1.49 mm in diameter (measurements based on 7 specimens), suggesting planktotrophic larval development (e.g. Nishimosono, 1996). Teleoconch of up to 4 inflated whorls. Last whorl well inflated, weakly concave near suture. Suture weakly impressed. Shell surface covered with microscopic wavy spiral striations, and growth lines becoming rugose and rib-like near suture. Umbilicus rather small, extending nearly to apex, with steep umbilical wall, covered partly by small anterior lobe of parietal callus and vestigial umbilical callus, and umbilical border subangular. Parietal callus thin, lightly filling posterior apertural angle. Funicle weakly elevated, broad and extending to apex. Channel in umbilicus variable in prominence, none to two in number, sometimes grooved. Aperture semilunar in shape, with sharp edge in outer lip. Anterior inner lip gradually thickened anteriorly; columellar lip reflected and raised into a low projection in its anterior end.

**Operculum:** Calcareous, white, with two deep grooves along outer margin and many fine short grooves along whole inner margin. Nucleus situated below, and coated with slightly grayish and thick callus.

**Type series.** Holotype, NSMT-Mo 71550, height 40.0 mm, diameter 39.6 mm; 18 paratypes, NSMT-Mo 71551–71553, 71558, 71559; 5 paratypes, NH-CO 39600. Off the west of Pamilacan Island (09°28'54.3"N, 123°54'55.2"E–09°29'07.8"N, 123°54'48.9"E), depth 93.3 m–118 m.

**Distribution.** Known from the bottoms around Balicasag and Pamilacan islands, Panglao, Bohol, Philippines. The depths of the collection sites range from 85 m to 144 m.

**Observation.** The shell form is slightly variable in the new species. Some specimens have a shell outline slightly higher than wide (the largest height/width ratio is 1.07) and these forms have adpressed whorls and a higher spire (e.g., Figs. 1B, C, E), while the shell outline is slightly wider than high (the smallest height/width ratio of 0.95) in others (e.g., Fig. 1D). The shell color and its pattern of this new species are quite uniform. The anterior lobe of the parietal callus and the funicle are consistently dark brown in color. The main broad band in the shell surface is also

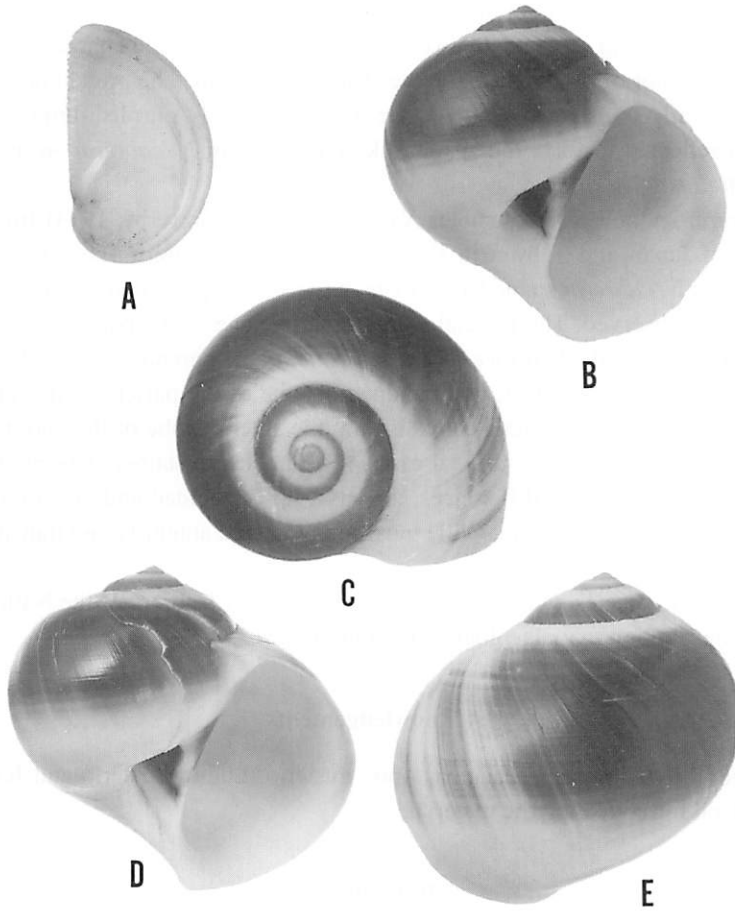


Fig. 1. *Natica cabrerai* sp. nov. A–C, E. Operculum, and apertural, apical and adapertural views of the holotype, NSMT Mo71550, from off the west of Pamilacan Island, depth 93.3 m–118 m; height 40.0 mm, diameter 39.6 mm. D. Apertural view of a paratype, NSMT Mo71551, from the same locality; height 38.2 mm, diameter 40.3 mm. A,  $\times 1.2$ ; B–E,  $\times 1.1$ .

consistently dark brown. The most conspicuous variation in this species is the presence or absence of the brown streaks (none in Fig. 1B and one in Fig. 1D) and the number (none to 2) and prominence of the channels in the umbilicus. The protoconch is consistently translucent and white in color. The operculum of this new species, preserved in 10 specimens, bears consistently two spiral grooves along the outer margin. The basal lip characteristically projects anteriorly and is weakly reflected to form a spatula-like structure, which is particularly obvious in the smaller specimens.

**Comparison.** *Natica cabrerai* sp. nov. most resembles *Natica vitellus* (Linnaeus, 1758) that is widely recorded in the Indo-west Pacific from the Arabian Gulf in the west (Bosch et al., 1995) and from Fiji in the east (Cernohorsky, 1971). Nomenclatorial problems and synonymies of this species were fully discussed by Cernohorsky (1971) and Kabat (1990).

*Natica vitellus* has a similar broad dark-brown (sometimes light-brown) band as in *N. cabrerai* sp. nov. Unlike *N. cabrerai* sp. nov., *N. vitellus* bears a distinct white (or yellow) band within the broad brown band, and the absence of this white band seemingly is the most distinct character to separate *N. cabrerai* sp. nov. from *N. vitellus*. However, Cernohorsky (1971, fig 3) recorded an

example of a form from Fiji without the white band within the broad brown band. Therefore, this is not a reliable character to separate the two species. The most reliable characters to separate the two species are the color of protoconch and the shape of basal lip. The protoconch of *N. cabrerai* sp. nov. is consistently translucent white, while it is consistently purplish-brown in *N. vitellus*. The basal lip is reflected to form the spatula-like projection in *N. cabrerai* sp. nov., while it is rounded in *N. vitellus*.

*Natica cabrerai* sp. nov. also resembles *Natica bibalteata* (Sowerby, 1914) from the shallow waters of western Japan and Taiwan in shell form and color pattern. The shell height of the largest specimen of *N. cabrerai* sp. nov. is more than twice as large as that of the largest specimen of *N. bibalteata* we observed. The parietal callus, anterior lobe of the parietal callus and funicle are quite different between the two species. In *N. bibalteata* the parietal callus is thick, the anterior lobe of the parietal callus is distinct, and the anterior lobe of the parietal callus and funicle are white in color. In contrast, the parietal callus is thin, the anterior lobe of the parietal callus is indistinct, and the anterior lobe of the parietal callus and funicle are stained dark brown in *N. cabrerai* sp. nov. In addition to these differences, the basal lip is rounded and the color of the protoconch is light-brown in *N. bibalteata*, while those are projected anteriorly and translucent white in *N. cabrerai* sp. nov.

**Etymology.** The species name is dedicated to Mr. Jimmy Cabrera of the National Museum, Manila for his contribution to malacology in the Philippines.

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