A new species of *Rostellariella* Thiele, 1929 (Gastropoda, Rostellariidae) from Papua New Guinea

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ABSTRACT

A new species of *Rostellariella* is described and distinguished from all other members of the genus by its shell morphology. This new species was previously misidentified as *Rostellariella delicatula* (G. Nevill, 1881) from Papua New Guinea and is herein described as *Rostellariella aurea.*

Key words – Rostellariidae, *Rostellariella delicatula*, Papua New Guinea

INTRODUCTION

The superfamily Stromboidea comprises a clade of morphologically distinctive gastropods that include the iconic Strombidae, or 'true conchs', as well as several other extant and extinct families. One of these families is Rostellariidae Gabb, 1868. Irwin et al. (2021, 2024) treated Rimellidae Stewart, 1927 as a junior synonym of the Rostellariidae, but it was subsequently reinstated as a valid family by Dekkers (2026). The relationships among the families, genera, and available species based on COI data is illustrated in Fig. 1.

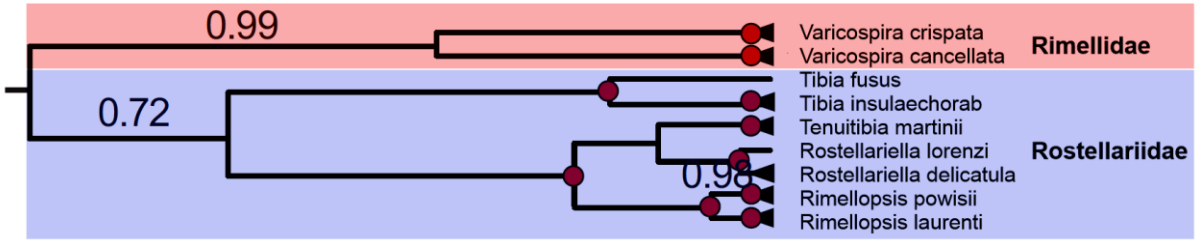

Fig 1. Bayesian analysis of COI sequences (after Irwin et al., 2024: 828, fig. 2) showing the relations of the Rimellidae and the Rostellariidae.

The molecular study of Irwin et al. (2024) included at least one representative from 87% of currently recognised stromboidean genera (MolluscaBase, 2023), comprising 93 recognised species represented by 381 newly sequenced specimens. Specimen data are provided in Irwin et al. (2024, Supplementary Material S2: 2).
One particularly interesting taxon included the dataset is *Rostellariella delicatula* (G. Nevill, 1881), a deep-water species known from the northern Indian Ocean. In the above-mentioned Supplementary Material S2, 28 sequenced specimens are listed as *R. delicatula*. During my visit to the MNHN, I examined the voucher specimens used for the cox1 sequencing, all of which originated all from Papua New Guinea. Although all were labelled as *R. delicatula*, they were immediately recognised as representing an undescribed species, which is described below. Most specimens were juveniles, although a few adults were also present.

ABBREVIATIONS

AMD	(The collection of) Aart M. Dekkers, Purmerend, the Netherlands
MNHN	Muséum national d'Histoire naturelle, Paris, France
L	shell length
W	width of the shell at its broadest point (not counting the dents)

METHODS

During a visit to the MNHN, voucher shells of Stromboidea deposited in the museum collections were examined and photographed. The specimens were compared with similar material in the author's collection and with descriptions and illustrations in the relevant literature.

TAXONOMY

Superfamily Stromboidea Rafinesque, 1815
Family Rostellariidae Gabb, 1868

Genus *Rostellariella* Thiele, 1929
Type species *Rostellaria delicatula* G. Nevill, 1881, by monotypy

***Rostellariella aurea* sp. nov.**

(Pl. 1 Figs 1a-c)
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Rostellariella delicatula G. Nevill, 1881 – Irwin et al., 2024: figs 2-3, supplementary materials [not of G. Nevill, 1881]

Description. – Shell of average sized for genus, slender, fusiform and sturdy. Protoconch paucispiral, small, broad and flattened. Spire comprising about 12 regularly expanding whorls bearing moderately raised, rather broad, former varices. Spire whorls nearly straight sided, with only shallow sutural indentations. Whorls sculptured with numerous evenly spaced punctate grooves. Punctations minute, shallow and closely spaced. Sculpture on early whorls smoother, possibly as a result of wear. Punctate grooves gradually become obsolete on the more inflated body whorl. Body whorl slightly subquadrate. Aperture narrowly ovate, occupying about half the shell length including anterior canal. Anterior canal relatively short, narrow, and curved to the right in ventral view. Posterior canal short, directed dorsally. Columella covered by a thick white callus, broadest anteriorly at the base of anterior canal. Interior of outer lip and both canals heavily calloused and pure white. Outer lip sturdy, not thickened, bearing 5 short, blunt spines. Shell uniformly golden yellow, with orange tinges adjacent to suture and at the anterior end.

Holotype. – Papua New Guinea, off Mambara Bay, latitude -7.85 longitude 148, cruise BIOPAPUA station CP3729, collected by trawl, 8 October 2010, 575–655 m depth, MNHN-IM-2013-64503, H 89.5 mm, W 29 mm (Pl. 1 Fig. 1).

Paratypes. – All from Papua New Guinea, BIOPAPUA cruise. The 27 additional specimens used for the molecular study by Irwin et al. (2024: Supplementary Material 2).

Type locality. – Papua New Guinea, off Mambara Bay, latitude -7.85, longitude 148.

Distribution. – Only known from the southeast side of Papua New Guinea, at north of Naitabe, Astrolabe Bay, Gulf of Huon, Mambara Bay, west of Kairiru Islands and southeast of New Britain. For details, see Irwin et al. (2024: Supplementary Material 2).

Etymology. – The specific epithet *aurea* is derived from the Latin adjective *aureus*, meaning "golden yellow", and refers to the characteristic golden-yellowish colour of the shell.

Comparison. – *Rostellariella delicatula* is a well-known deep-water species originally described from the Bay of Bengal, Myanmar (formerly Burma) (G. Nevill, 1881: 262) and subsequently recorded from India (off Madras, AMD), the Andaman Sea, and the Arabian Sea (Bosch et al., 1995). This distribution is geographically distant from that of the new species, occurring in a different ocean basin. *Rostellariella delicatula* is frequently encountered in the international shell trade.
Rostellariella aurea sp. nov. differs from *R. delicatula* in having a slenderer shell and spiral sculpture consisting of punctate grooves, whereas *R. delicatula* bears only spiral threads. In the typical form of *R. delicatula*, the outer lip bears 4 denticles, whereas *R. aurea* sp. nov. consistently has five. In addition, *R. delicatula* possesses white spiral bands on the outer surface of the outer lip, terminating at the lip denticles, a feature absent in the new species. Finally, *R. delicatula* is cream-colored, whereas *R. aurea* sp. nov. is characterized by a distinctive yellowish-orange shell.

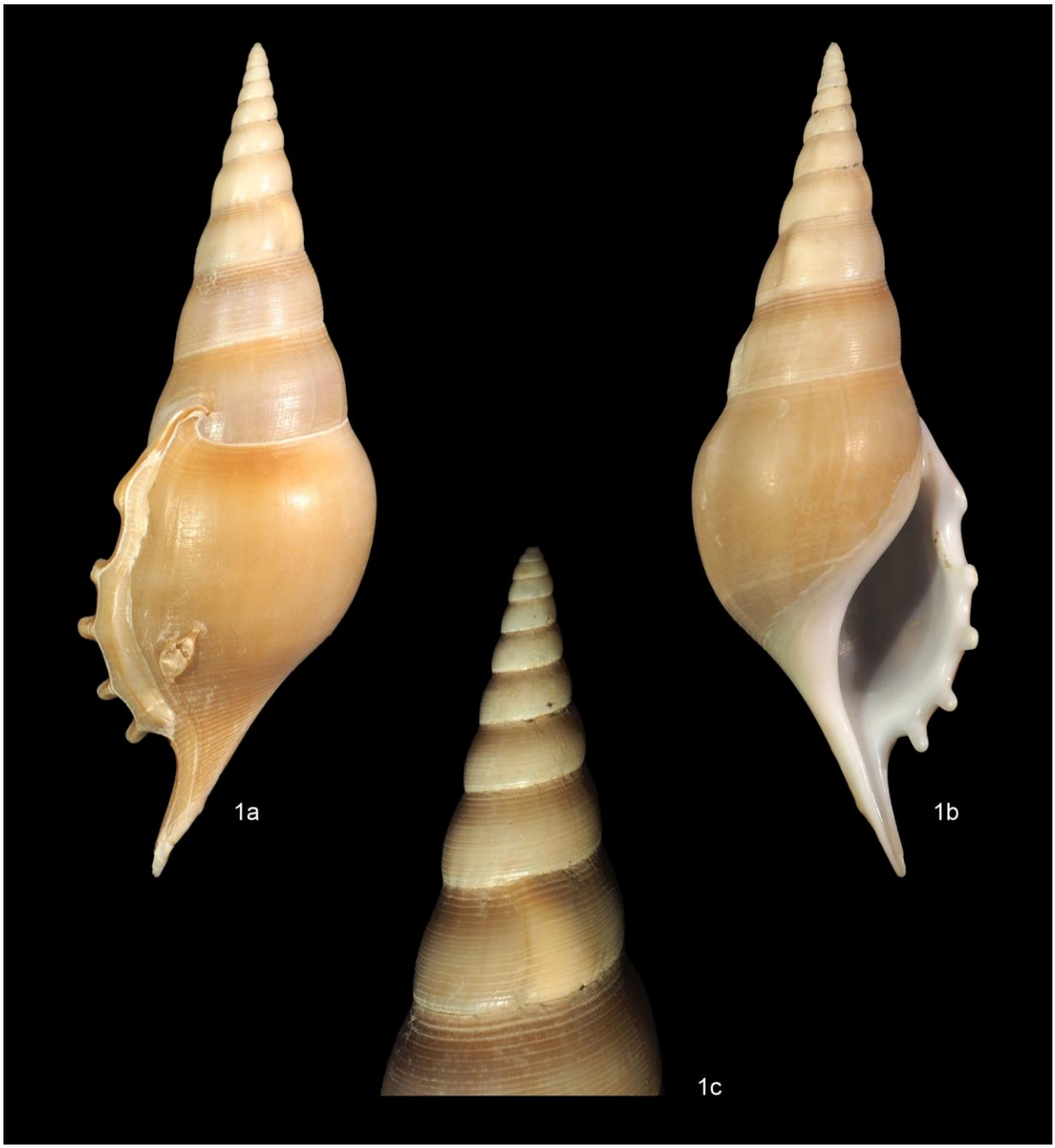

Plate 1. ***Rostellariella aurea* sp.,** Holotype MNHN-IM-2013-64503, Papua New Guinea, off Mambara Bay. L 89.5mm. Photos by the author.

Rostellariella turcki Dekkers, 2020, from south-eastern Java, Indonesia (off the southern coast of Pandagaran Bay), is even more slender and attains a larger size than the new species. It also possesses 5 denticles on the outer lip. However, *R. turcki* is characterized by the presence of narrow white spiral bands on the outer surface of the lip that extend onto the apertural spines, whereas these are absent in *R. aurea* sp. nov.

Rostellariella lorenzi Morrison, 2005, distributed from the Arafura Sea to southern Indonesia, is readily distinguished by its spiral sculpture of smooth ridges lacking punctations and by the presence of conspicuous dark brown axial color bands. Although this is the geographically

closest known congener to *R. aurea* sp. nov., it occurs on the opposite side of Papua New Guinea.
Rostellariella barbieri Morrison, 2008, described from the Philippines, is very similar to *R. lorenzi* and differs from *R. aurea* sp. nov. in the same way, namely by the presence of conspicuous brown axial color bands. The species is known only from the type series and may prove to be conspecific with *R. lorenzi*, as the reported Philippines locality is possibly erroneus.

REMARKS

Rostellaria aurea sp. nov. was identified as *Rostellaria delicatula* G. Nevill, 1881 by Gijs Kronenberg in 2019, and specimens assigned to that species were subsequently included under that name in the molecular study of Irwin et al. (2024).

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