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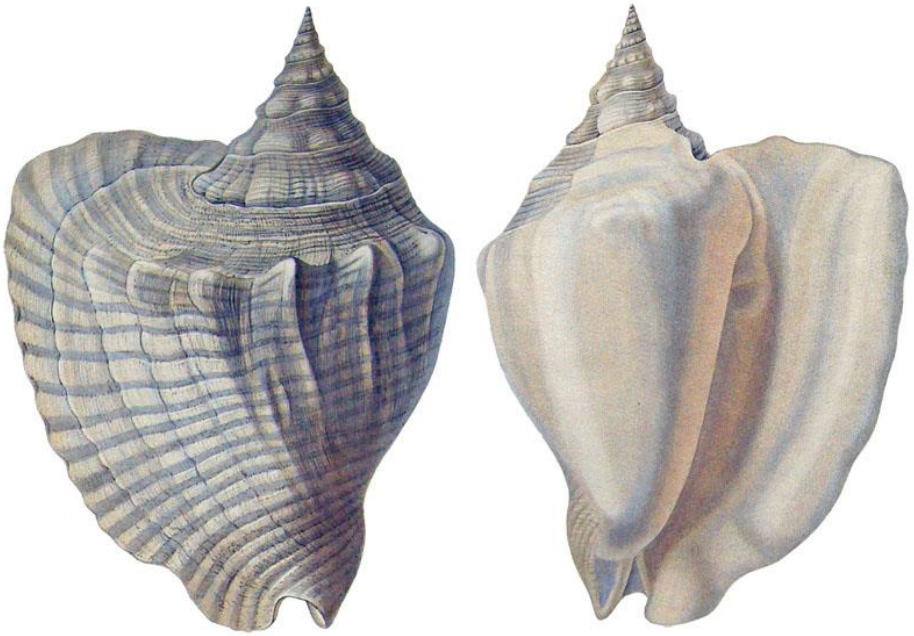

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Content: see back cover

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Front cover: *Strombus inermis* Swainson, 1822 in Duclos, 1844: pl. 25 figs 3-4.

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Eopterodonta nomen novum, a replacement name for *Pterodonta* d'Orbigny, 1843 (Mollusca) non Reichenbach, 1817 (Insecta)

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ABSTRACT

***Eopterodonta* nomen novum is introduced as a replacement name for the genus *Pterodonta* d'Orbigny, 1843 (Gastropoda, Campaniloidea, Tylostomatidae), being preoccupied by *Pterodonta* Reichenbach, 1817 (Insecta, Lepidoptera, Noctuidae). Additionally, in accordance with Art. 70.2 of the ICZN (1999), the type species fixation by Stoliczka (1868) for *Pterodonta* d'Orbigny, 1843 is here accepted and that of Cossmann's (1904) posterior fixation is invalid.**

Key words – Gastropoda, Tylostomatidae, Cretaceous, primary homonymy, replacement name, nomenclature.

INTRODUCTION

The genus *Pterodonta* (Gastropoda, Stromboidea, Tylostomatidae) was established by d'Orbigny (1843: 315) in his *Paléontologie française* for species of Cretaceous gastropods belonging to the Stromboidea. D'Orbigny introduces the genus *Pterodonta* as follows (translated): «Animal unknown. Shell oval, oblong, swollen. Conical spiral, elongated, regular at all ages, formed of simple, united, convex whols; the last provided with a dilated, entire labrum, sometimes bordered outwards, without sinuses or notches, sometimes extended posteriorly. Aperture oval, slightly narrowed, provided anteriorly with a short, oblique, canal, or a simple notch. We always notice, inside the labrum, on the internal edge of the varix, a tooth or, to put it better, an oblong, longitudinal projection. Inside the aperture this projection is replaced by a depression. These varices are sometimes repeated at various ages of the shell. Relations and differences. The Pterodonts appear to belong to the Strombidae group by their wing, while being distinguished from it by their smooth shell, without tubercles, by the lack of

a sinus in front, and by the presence of their internal tooth on the varix. So far all species are restricted to the *craie chloritée* of the Cretaceous, and in this zone only to the lowest parts».

Seven species are introduced for this genus by d'Orbigny, *Pterodonta elongata* (Fig. 1), *P. ovata, P. inflata* (Fig. 3), *P. intermedia, P. pupoides, P. scalaris* and *P. guerangeri*, without type species designation (d'Orbigny, 1843: 315-320).
Stoliczka (1867: 35), at first, considers the genera *Tylostoma* Sharpe, 1849 and *Varigera* d'Orbigny, 1850, as subjective synonyms of *Pterodonta* d'Orbigny, 1843. Later on in the same work (1868: 292) he considers *Tylostoma* as distinct genus: «Since the publication of my opinions as to the presumed identity of *Pterodonta* and *Tylostoma* (vide pp. 35-41), I have had an opportunity of examining nearly all the principal collections of Europe, and found that the genus *Tylostoma,* as instituted by Sharpe, must be retained. My present definition and classification of the genus is based upon two well preserved specimens of *Tyl.* (*Pter.*) *naticoides, D'Orb.,* from Uchoux [Uchaux]. These two specimens exist in D'Orbigny's collection (Turonian stage), in the palaeontological Museum of the Jardin des Plantes at Paris». Stoliczka maintains however the synonymy with *Varigera* and restricted *Pterodonta* to species with an internal prelabral projection, thickened labrum and oblique canal. *Pterodonta* is in fact characterized by a short internal prelabral protrusion and *Tylostoma* by a varix running from the base to the suture, located opposite the margin of the aperture (Kollmann, 2005).

Methods – A study revealed that genus *Pterodonta* d'Orbigny, 1843 is preoccupied by *Pterodonta* Reichenbach, 1817 (Insecta, Lepidoptera, Noctuidae). A replacement name is provided herein. Also, during a bibliographic search it was discovered that a species fixation for the genus *Pterodonta* d'Orbigny, 1843 remained unknown.

TAXONOMIC PART

Subclass Caenogastropoda L. R. Cox, 1960
Order [unassigned] Caenogastropoda L. R. Cox, 1960
Superfamily Campaniloidea Douvillé, 1904
Tylostomatidae Stoliczka, 1868

Tylostomatidae Stoliczka, 1868 used to be placed in Stromboidea, Rafinesque, 1815 (Kollmann, 2005; Bouchet & Rocroi, 2005). However, Bouchet et al. (2017: 375, note 118) placed Tylostomatidae in the superfamily Campaniloidea, which is followed here**.**

Eopterodonta **nomen novum**

Replacement name for the genus *Pterodonta* d'Orbigny, 1843

Type species. – *Eopterodonta elongata* d'Orbigny, 1843, Fig.1, from the Cenomanian (Upper Cretaceous) of Charente-Maritime.

Etymology. – From the Greek Εώς: Eos, primordial deity, goddess of dawn, combined with *Pterodonta*.
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Fig. 1. ***Eopterodonta elongata*** (d'Orbigny, 1843) from the Cenomanian (Upper Cretaceous) of Rochefort (Charente-Maritime), paralectotype MNHN.F.A52056 (coll. d'Orbigny). Height: 55 mm.

Remarks. – The name *Pterodonta* d'Orbigny, 1843 is nomenclaturally invalid. This name is preoccupied by *Pterodonta* Reichenbach, 1817 (Insecta, Lepidoptera, Noctuidae). Noctuidae is a family of Lepidoptera (butterflies) which are mostly nocturnal and most diverse, with approximately 12.000 described species. *Pterodonta* d'Orbigny, 1843 has no known available or potentially valid synonyms. Following Squires & Saul (2004), I consider the genus *Varigera* d'Orbigny, 1850 as a synonym of *Tylostoma* Sharpe, 1849 and not of *Pterodonta*. For these reasons, and in accordance with article 60.3 ICZN (1999), the taxon introduced by d'Orbigny must be replaced by a new substitution name. We propose the name ***Eopterodonta*** nomen novum, whose type species is *Pterodonta elongata* d'Orbigny, 1843, Fig. 1, from the Cenomanian (Upper Cretaceous) of Charente-Maritime.

Actually, Kollmann (2005) supposed that the type species designation of the genus *Pterodonta* was subsequently fixed by Cossmann (1904: 116) by designating the taxon *Pterodonta inflata* d'Orbigny, 1843. Roman & Mazeran (1920: 58) pointed out that Cossmann figures under this name a specimen from the Cenomanian of Sarthe [MNHN.F.R64174 (coll. Péron)] which is clearly distinct from the lectotype of *P. inflata* from the Turonian d'Uchaux (Vaucluse). This specimen is subsequently referred to as *P. sarthacensis* by Kollmann (2005: 138, pl. 14 fig. 19), Fig. 2. In accordance with Art. 70.3 of the ICZN (1999) concerning the type species of a poorly identified genus, we could choose,

and therefore fix as the type species, either the nominal species initially designated by the author (thus: *Pterodonta inflata* d'Orbigny, 1843), or the species actually concerned (here: *Pterodonta sarthacensis* Kollmann, 2005). Note that the lectotype designation made by Kollmann (2005: 137) [MHNA 2.000.061 (coll. Requien) ; copy MNHN.F.A24955] for *P. inflata* is invalid. Roman & Mazeran (1920: 57, fig. 19) already designated a lectotype for this species before the year 2000 (ICZN, 1999: Art. 74.5). However, the fact that this specimen is lost, as indicated by Kollmann, does not invalidate this designation.

Fig. 2. ***Eopterodonta sarthacensis*** (Kollmann, 2005) from the Cenomanian (Upper Cretaceous) of Coulaines (Sarthe), MNHN.F.R64174 (coll. Péron). Height: 53 mm.

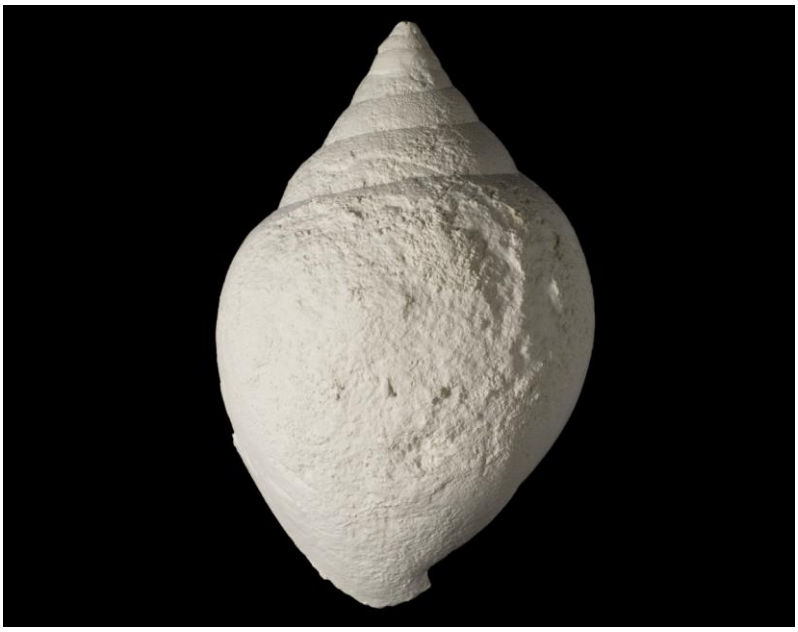

Fig. 3. ***Eopterodonta inflata*** (d'Orbigny, 1843) from the Turonian (Upper Cretaceous) of Uchaux (Vaucluse), paralectotype MHNA 2.000.061/copie MNHN.F.A24955 (coll. Requien). Height: 113 mm.

During a bibliographic search it was discovered that a species fixation for the genus *Pterodonta* d'Orbigny, 1843 remained unknown. Indeed, Stoliczka (1868: 294) in his *Cretaceous fauna of Southern India* wrote: «The name *Pterodonta* has to be retained for species, **of which the *Pter. elongata*, d'Orb. is the type**, having a distinctly dilated outer lip, provided with an internal tooth and a more or less produced, or recurved, anterior canal. The species agree in form with some *Strombi*, like *St. lamarckii*, but they usually appear to have a smooth shell. *Pterodonta ovata* would also be a species of this genus. How far the other species noted by D'Orbigny in his 'Prodrome' are true Pterodontæ, I have, as already stated, not been able to ascertain on account of the very defective state of the original specimens».
In accordance with Art. 70.2 of the ICZN (1999) this unnoticed earlier fixation is accepted here and that of Cossmann's later fixation (with a recognized identification error), is invalidated. This discovery does not lead to any instability or confusion for the genus *Pterodonta* d'Orbigny, 1843.

Additional remarks. – The name *Pterodonta* Austaut, 1905 (Insecta, Sphingidae), a younger primary homonym of *Pterodonta* Reichenbach, 1817, is also invalid. The taxon *Sphingonaepiopsis* Wallengren, 1858, an older subjective synonym, can be used as a replacement name. *Neopterodonta* Eitschberger, 1999, introduced as a replacement name for *Pterodonta* Austaut, 1905, is a junior synonym of *Sphingonaepiopsis* and is therefore superfluous.

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A new *Dominus* Dekkers & S. J. Maxwell, 2020 from Indonesia (Gastropoda, Strombidae)

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ABSTRACT

This paper introduces a new species of *Dominus* from Indonesia, *Dominus vinki* nov. sp., and is compared with the recently described *Dolomena likuii* Zhu, 2023 and other species in the genus. *Dominus vinki* nov. sp. differs from other members of the *Dominus* complex in morphological form and range. *Dominus* was erroneously subjugated under *Dolomena* by Raven (2021), after it was distinguished from that genus by Dekkers and S. J. Maxwell (2020).

Key words – Strombidae, Dominus, Dolomena, Indonesia, taxonomy, new species

INTRODUCTION

In his paper Zhu (2023) introduces a new species of *Dolomena* Wenz, 1940 from the Western Pacific (Riau Archipelago, South China Sea and surroundings) as *Dolomena likuii*, overlooking that a new genus name (*Dominus* Dekkers & S. J. Maxwell, 2020) is available since 2020 which is seen as alternative representation on MolluscaBase. An additional remark

is posted at the end of the article. The characters of *Dominus* are clearly different from *Dolomena* Wenz, 1940 and the alternative placement is MolluscaBase is not supported herein. *Dolomena likuii* Zhu, 2023 is therefore recombined to *Dominus likuii* (Zhu, 2023) (new combination).

In the last year(s) new shell sellers have offered shells from Indonesia on different websites. New and exciting species are offered with intense coloration and the shells are often freshly collected, mostly by diving. One of these species is new to science, is remarkably stable in form, and falls into the *Dominus* complex. Multiple specimens of the new species were offered by several Indonesian sellers fishermen dived in relatively shallow water, and SMC bought a large sample (n =108) from his contacts in Indonesia. The species therefore must be rather common in the area where they were collected. The collection data always show the region around Sumbawa Island (Pulau Sumbawa, part of West-Nusa Tenggara). Sumbawa is one of the Lesser Sunda Islands, belonging to Indonesia. It is located in the southeastern part of the Indonesian Archipelago, between Lombok in the west and Flores in the east. The surface of the island is approximately 15,600 km². Sumbawa is part of the volcanic chain that winds across Nusa Tenggara. The island is much drier and less populated than other islands in the Indonesian archipelago. The Indonesia archipelago consists of many islands with multiple habitats. This region comprises a complexity of landforms that create bays and other sea stretches that are not significantly impacted by the currents of the Indonesian Throughflow (ITF). The ITF is an ocean current with importance for global climate, as is the low-latitude movement of warm water from the north Pacific (Philippines) to the Indian Ocean (Vranes et al., 2002). The ITF flows partly north–south through the Makassar Strait and then to the Java Sea-Banda Sea (Vranes et al., 2002). A part of the current exits directly through the very narrow Lombok Strait into the Indian Ocean and the remainder of the flow goes to the Flores Sea and further to northwest Australia (Vranes et al., 2002). Pulau Sumbawa, or West-Nusa Tenggara, is relatively untouched by the ITF which presents opportunities for the discovery of endemics species of sea life, and is known for its high concentrations of endemics forming the Nusa Tenggaran Infraprovince (Petuch & Berschauer, 2020).

The *Dominus labiosus* (Wood, 1828) complex was studied intensively in 2011-2012 (Dekkers & Liverani, 2011; Wiersma & Monsecour, 2012, 2012a), and with the recent addition of Zhu (2023) three strongly related species were added to the complex: *Dominus abbotti* (Dekkers & Liverani, 2011), *D. wienekei* (Wiersma & Monsecour, 2012, 2012a), and *D. likuii* (Zhu, 2023). The distribution of *D. labiosus* is restricted to the western Indian Ocean, *D. wienekei* is found in Papua New Guinea, far Northern Australia, the Solomon Islands, and Fiji. The distribution of *D. abbotti* was proposed to include not only Thailand, but also the Philippines, Borneo, and other parts of the East Indies, but is herein restricted to the Andaman Sea as the eastern representants fall within the current understanding of *D. likuii* by Zhu (2023).

Herein a new species from Indonesia, Sumbawa Island, is reported based on morphological differences with a restricted range. The shells have not been illustrated and reported upon with a different identification in earlier literature.

METHODS

The shells are compared with existing species in *Dominus* and with one outside that genus but herein replaced, from existing literature and shells of the involved species contained in private collections.

CONCLUSIONS

The recently offered specimens of *Dominus* from the Southern Indonesian Archipelago are an undescribed species. A description is provided herein. *Dominus* is a distinct genus, and should not be considered a subgenus of *Dolomena*.

ABBREVIATIONS

AMD – (the collection of) Aart. M. Dekkers, Purmerend, The Netherlands
HD – (the collection of) Henk Dekker, Winkel, the Netherlands
H – the height or length of a shell
MNHN – Muséum national d'Histoire naturelle, Paris, France
NCB – Naturalis Biodiversity Center, Leiden, the Netherlands
SMC – (the collection of) Stephen J. Maxwell, Cairns, Queensland, Australia
W – the width of a shell measured at the broadest point of the body whorl

TAXONOMIC PART

Superfamily Stromboidea Rafinesque, 1815
Family Strombidae Rafinesque, 1815
Genus *Dominus* Dekkers & S. J. Maxwell, 2020

Type species *Strombus labiosus* Wood, 1828; by original designation

Description. **–** The spire with a distinct shoulder and knobs mostly axially aligned. The body whorl has medium knobs dorsally on the shoulder, and weak spiral ribs. The expanded outer lip has a strongly thickened end. The posterior outer lip is horizontal or pointing slightly upwards to the posterior. The aperture is lirate within. The columellar callous is mostly smooth or weakly lirate. The anterior canal is rather short (Dekkers & S. J. Maxwell, 2020).

Remarks – This genus is recorded in MolluscaBase as subgenus to *Dolomena* Wenz, 1940, following the proposal of Raven (2021), but that taxonomic re-arrangement is rejected herein.

***Dominus vinki* nov. sp.**

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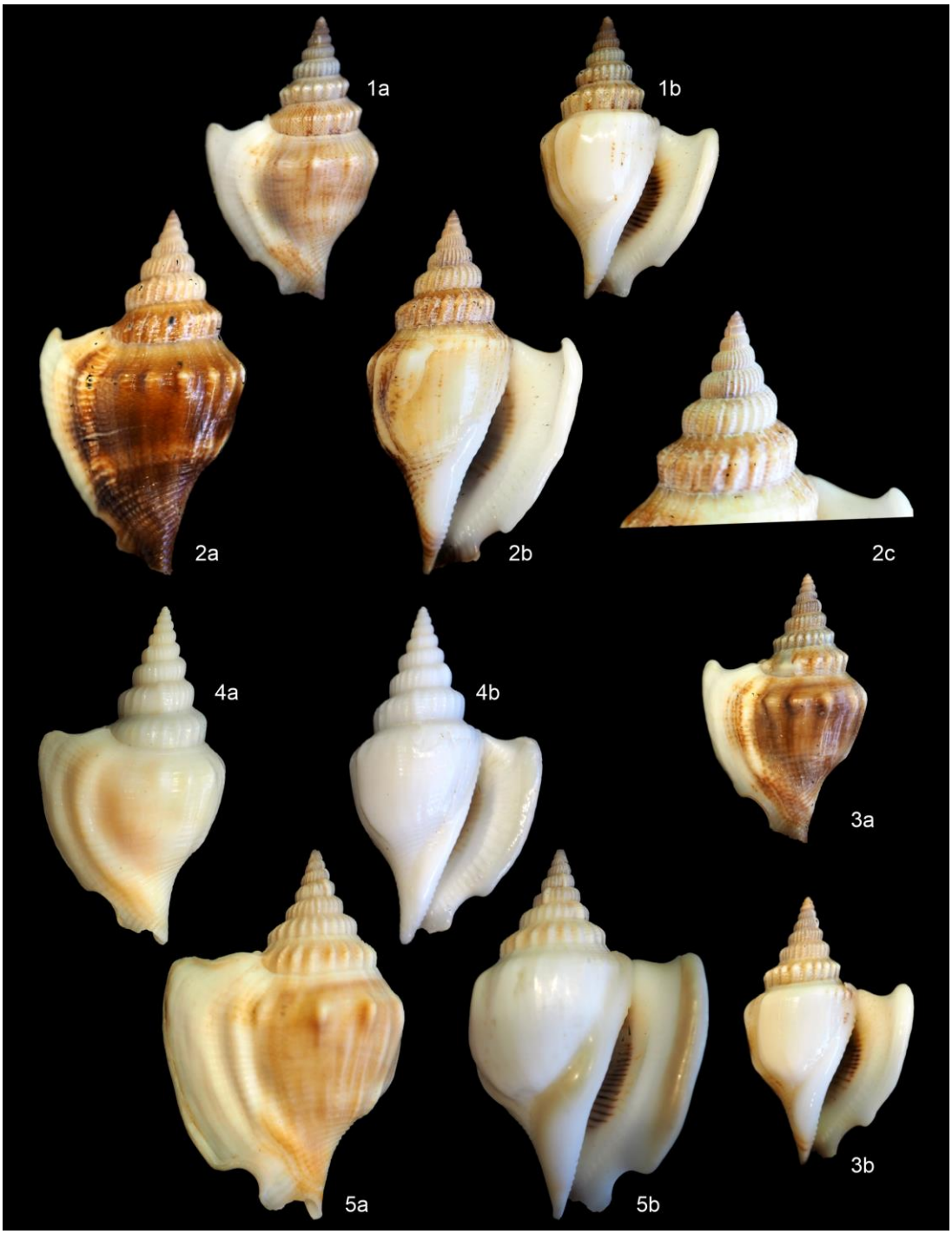

Dominus vinki* nov. sp.**, all from the type locality Indonesia, Sumbawa Island: 1a+b holotype, NCB no. RMNH.MOL.150122, H 29.3 mm; 2a+b paratype 4, STR4419, H 37.9 mm; 2c enlarged apex of previous; 3a+b paratype 2, MNHN-IM-2012-25397, H 27.8 mm; ***Dominus likuii (C. L. Zhu, 2023), 4a+b, East coast of Singapore, in sand and mud around shipwreck of tugboat "Luzardi" at 30-35 meters of depth, H 35.2 mm; ***Dominus abbotti*** (Dekkers & Liverani, 2011) 5a+b, paratype 11, STR0721, SW Thailand, Kantang, trawled at 45-50 meters of depth.

Description. – The shell is of average size for the genus (up to 37.9 mm in height in the type specimens). The shell is biconical in outline with a flaring lip, body whorl tapering in appearance. Shell is light, caused by the relatively thin shell. Protoconch consists of about 3 smooth brown whorls. Teleoconch consists of 8-9 strongly-shouldered whorls. Spire whorls tall, with a sharp outline (spire angle 35-51°). The spire whorls have a strong angle at the shoulder, rendering a deep suture and a slender spire. Distinct axial ribbing is dominant on every whorl of teleoconch except the ventral side of the last one, with only knobs on the shoulder remaining. Strong regular spiral sculpture on the body whorl and the spire whorls, but often the spiral ribbing gets obsolete. Spire looks finely cancellate caused by the crossing of axials and spiral ribbing of the same strength. About 23-28 ribs on the body whorl. 8-9 small, rounded or axially stretched knobs on the shoulder of the last whorl. Shell is often brown to dark brown, spire too, and often there is a lighter coloured band of ca. 1-2 mm on the lower half of the body whorl. Lip flaring, sloping down from onset towards the moderately thin end, forming a semi-triangular outline, with a white band of 3-4 mm at the outside towards the rim. Lip internally with numerous deep lirae, along the entire length, clear white. The lip is only a bit thickened and often glazed at the ultimate end. Columella with moderately thickened callus at the anterior end, tiny lirae developing on both adapical and abapical part of columella while absent or indistinct in center of callus. Stromboid notch deep. Animal unknown. Operculum not preserved.

Holotype. – NCB no. RMNH.MOL.150122 H 29.3 mm, W 18.0 mm. Dived at ca. 2 m depth.

Paratypes. – Paratype 1. NCB no. RMNH.MOL.150232; Paratype 2. MNHN-IM-2012-25397; Paratypes 3-10 AMD; Paratypes 11-20 SMC; Paratypes 21-25 HD. All from the type locality (Table 1).

Further studied material. – the other 98 shells of the lot bought by SMC from the type locality.

Type locality. – Indonesia, Sumbawa Island.

Distribution. – Known only from Indonesia, Sumbawa. It is not (yet) known from other locations in Indonesia, but once described it might be expected to turn up from the neighboring islands.

Etymology. – Named in honor of Rob Vink, Vlaardingen, the Netherlands. Rob is a nature lover of especially birds and the molluscan family Neritidae. Rob and AMD were once member of the board of the Netherlands Malacological Society (NMV). Rob is very connected to Indonesia, he has a partner living in Ambon and is a scholar of Rumphius' work (e.g. D'Amboinsche Rariteitkamer, 1705).

Comparison. – *Dominus vinki* nov. sp. is more similar in morphology to *D. abbotti* (Dekkers & Liverani, 2011) and *D. likuii* (C. L. Zhu, 2023), than to *D. labiosus* (W. Wood, 1828) and *D. wienekei* (Wiersma & D. Monsecour, 2012). *D. vinki* is geographically isolated from *D. labiosus*, which lives in the western part of the Indian Ocean and always reaches a much

larger size (ca. 40-65 mm) than the new species. *Dominus wienekei* has a flared upper aperture which forms a triangulate extension towards the apex, a character unique for the genus.

Tabel 1. The type material of *Dominus vinki* nov. sp,

Type no.	Repository	Height mm	Width mm	H/W ratio	Spire Angle in °
Holotype	NCB RMNH.MOL.150122	29,3	18,0	1,63	46,7
Paratype 1	NCB RMNH.MOL.150232	31,1	18,9	1,65	50,0
Paratype 2	MNHN-IM-2012-25397	27,8	17,1	1,63	52,5
Paratype 3	AMD STR4418	36,5	20,6	1,77	46,6
Paratype 4	AMD STR4419	37,9	22,3	1,70	51,6
Paratype 5	AMD STR4420	35,0	19,6	1,78	50,0
Paratype 6	AMD STR4421	27,0	16,0	1,69	50,1
Paratype 7	AMD	29,2	17,0	1,72	44,2
Paratype 8	AMD	24,5	15,8	1,55	49,3
Paratype 9	AMD	26,5	16,3	1,62	46,7
Paratype 10	AMD	28,7	16,0	1,79	42,4
Paratype 11	SMC 65.a.001a	23,5	14,0	1,68	35,6
Paratype 12	SMC 65.a.001b	31,5	19,0	1,66	39,6
Paratype 13	SMC 65.a.001c	24,2	16,0	1,51	39,4
Paratype 14	SMC 65.a.001d	27,0	15,5	1,74	35,6
Paratype 15	SMC 65.a.001e	27,0	17,3	1,56	37,8
Paratype 16	SMC 65.a.001f	29,8	18,2	1,64	41,2
Paratype 17	SMC 65.a.001g	26,3	15,0	1,75	37,2
Paratype 18	SMC 65.a.001h	26,3	16,1	1,63	43,4
Paratype 19	SMC 65.a.001i	26,0	16,0	1,63	49,2
Paratype 20	SMC 65.a.001j	23,4	13,8	1,70	44,8
Paratype 21	HD 48946, subadult	37,7	19,0	not reliable	43,0
Paratype 22	HD 50358a	29,2	17,3	1,69	44,0
Paratype 23	HD 50358b	27,4	16,4	1,67	45,0
Paratype 24	HD 50375a	27,6	16,6	1,66	46,0
Paratype 25	HD 50375b	26,0	16,5	1,58	45,0
	Mean value n=26	**28,7**	**17,1**		
	Mean value n=25			**1,67**	
	Mean value n=26				44,5

Dominus abbotti is of similar size (ca. 30-45 mm) to the new species. However, *D. abbotti* is herein confined to the northeastern part of the Indian Ocean, the Andaman Sea and its surroundings (Thailand). *Dominus abbotti* is a solid shell, with a rather squarish body whorl with a strong outer lip turning up posteriorly, bearing 3-5 large, rounded knobs on the body whorl, and looks like a miniature *D. labiosa*, hence the late description of this species. The new species *D. vinki* does not have the rounded knobs of *D. abbotti* on the body whorl, but instead has thin axially elongated ridges on the shoulder, and has a more elongated shell than other members of the genus *Dominus*. But the most important difference between *D. abbotti*

(and *D. luikii*) and *D. vinki* is the more slender spire of the latter and the form of the spire whorls in the new species: in the first two species the whorls run down straight to the suture and in *D. vinki* the whorl makes a sharp angle towards the suture.

The recently described *Dominus likuii* is said to occur in Indonesia, the Nansha Islands (Zhu, 2023: 228), although the author mentions only the holotype and four paratypes from the same offshore location (Indonesia, Sumatra, Riau islands) and does not mention or illustrate specimens from elsewhere. The author had 9 specimens available, but only 5 of them are actually mentioned as types. *D. likuii* is of a similar small size (ca. 25-40 mm) as the new species, but differs in having a higher and sharper spire compared to the new species and *D. abbotti*. Furthermore, the new species has axially fine streaks lacking the big knobs of *D. abbotti*. The new species *D. vinki* has a pure white outer lip whereas the color of the outer lip in *D. likuii* is the same as the shell, a bit dirty white. The new species has a less thickened edge of lip when compared to *D. likuii* (and *D. abbotti*). Overall, the form of the shell of the new species is slenderer. In the new species, a white band is seen mid-body whorl. In the two other species, a vague white band is sometimes visible.

Some key characters of the species are shown in the table below (Table 2). In Zhu (2023) is a similar table including also *D. labiosa* and *D. wienekei*. These two species are not included in the table below as these two species are unlikely to be mistaken for the new species described herein.

Tabel 2. Characters of shells of *Dominus vinki*, *D. likuii* and *D. abbotti*.

Shell character	***D. vinki***	***D. likuii***	***D. abbotti***
Size	ca. 23-37 mm	ca. 25-40 mm	ca. 30-45 mm
Teleoconch	8 whorls, moderately shouldered, pre-ultimate and previous whorl sharp edged at shoulder	8-9 whorls, moderately shouldered	8 whorls fide Zhu (2023), shouldered (original description 10 whorls)
Sculpture of teleoconch	Fine spiral cords and axial aligned knobs on the shoulder	mostly strong axial cords	mostly strong axial cords
Spiral angle	35-51°	42-55°	50-63°
Color of apex	purple brown, 3 smooth whorls	white	brown and white
Body whorl	tapered squarish	squarish-rounded	Squarish to squarish-

			rounded
Sculpture of body whorl	shining almost smooth mid body whorl with spiral threads almost obsolete. Spiral treads coarser towards the anterior end of the shell.	spiral ribbing on dorsum and more or less fine axial ribbing	smooth except for thee almost obsolete axial folds; only a few spiral lines near the anterior canal; solid knobs on the shoulder
Shoulder of spire whorls	sharp angle towards the suture	straight towards the suture	straight towards the suture
Color of body whorl excluding lip	brownish often with small white band	basic shell color (dirty white to brownish)	basic shell color (dirty white, cream to brownish)
Shape of lip	straight sloping down, and turning upwards posteriorly	half rounded sloping down, and turning upwards posteriorly	rather straight, and turning upwards posteriorly
Edge of lip	slim thickened	moderately thickened	thickened
Stromboid notch	deep, narrow, well-defined	deep, narrow, well-defined	deep, well-defined
Colour of outer lip	pure white	basic shell color (dirty white)	white
Colour of inner lip	white	basic shell color (dirty white)	with brown blotch at strombid canal
Columella	many tiny lirae, obsolete in the middle	no lirae in center	no lirae in center

Remarks. – The type locality is based on information provided by the fishermen situated on the island of Sumbawa. Of all our types, the more precise origin is listed as Labuan Bajo, a fishing village from where fishermen start to travel by boat to dive for their catch. Henk Dekker & Bavius Gras visited this small fishing village in NW Sumbawa during a collecting trip in September 2023. It was concluded that nearly all shells offered by Indonesian shell dealers from this location do not originate from this village, but most likely they originate from around the group of offshore islands west of this village. But some shells are also brought to this village from neighboring islands like Lombok or Flores. It was concluded that the dark colors of the shells may be caused by the mineral content of the sand the species is

living on. The island has volcanoes and the sand is often dark to black colored from the weathered volcanic rocks.

The genus is a complex of rather similar species. Our concern is mainly the Philippine specimens. We do not know if there are indeed three species or just one more or a mixture of extreme forms of the same species. That was the reason for the first author to include the morphs now described as *D. likuii* in the 2011 paper as *D. abbotti*. The comparisons given above are preliminary for the current understanding of the different species in the genus. We aim to do a more detailed study of the Philippine and other south-eastern Asian specimens of *Dominus* in the future.

ACKNOWLEDGEMENTS

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Strombus bonellii Brongniart, 1823 is the correct name for a well-known Miocene species described from Italy, and a new synonym of *Stromboconus suessi* (Bayan, 1870) (Gastropoda, Strombidae)

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ABSTRACT

The name *Strombus bonellii* Brongniart, 1823 was antedated by *Mitra nodosa* Borson, 1820 (Harzhauser & Kronenberg, 2013). Both specific epithets have been frequently used in older literature for the same extinct species, of which the current combination is *Persististrombus nodosus* (Borson, 1820). In contrast, I advocate that *Mitra nodosa* Borson, 1820 is a junior synonym of *Stromboconus suessi* (Bayan, 1870). The synonymy with *Strombus bonellii* is rejected, and it is treated as valid species, now *Persististrombus bonellii* (Brongniart, 1823). It is advocated the correct name is *S. bonellii*, not *S. Bonelli.*

Keywords: Strombidae, Eocene, Miocene, Italy, taxonomy, *Persististrombus*

INTRODUCTION

The identity of *Mitra nodosa* Borson , 1820 remained problematic, although Harzhauser & Kronenberg (2013) stated it is a *Persististrombus* species; it is the older available name for *Strombus bonellii* Brongniart, 1823 according to these authors. Maxwell et al. (2020: 17) in their discussion of *Persististrombus* listed both *Mitra nodosa* Borson, 1820 (Lower Miocene, Italy) and *Strombus bonellii* Brongniart, 1823 (Lower Miocene, Italy) as separate species. While studying the Strombidae with the aid of old literature and the website dedicated to the study of the Stromboidea (www.stromboidea.de), the illustration (Figs 1-2) below of *Stromboconus suessi* (Bayan, 1870) and the drawing of the species *Mitra nodosa* Borson, 1820 (Fig. 3) attracted my attention, both available on the same website. The juveniles of

Stromboconus suessi are strikingly the same as *Mitra nodosa* Borson, 1820, as published by Borson (1820). This resulted in a conclusion about its identity, different from that either of Maxwell et al. (2020) or Harzhauser & Kronenberg (2013).

Bayan (1870, pl. 7 fig. 1,1a) shows only an adult example of the species described by him. The remarkable protruding spire (the juvenile stage) is well visible. De Gregorio (1896, pl. 2 fig. 2-5) clearly shows both the adult and the juvenile stage of *Stromboconus suessi*. There are not so many strombid species in the Eocene of Italy, and the description fits perfectly.

This article clarifies the taxonomic status of *Mitra nodosa* Borson, 1820 and *Strombus bonelii* Brongniart, 1823.

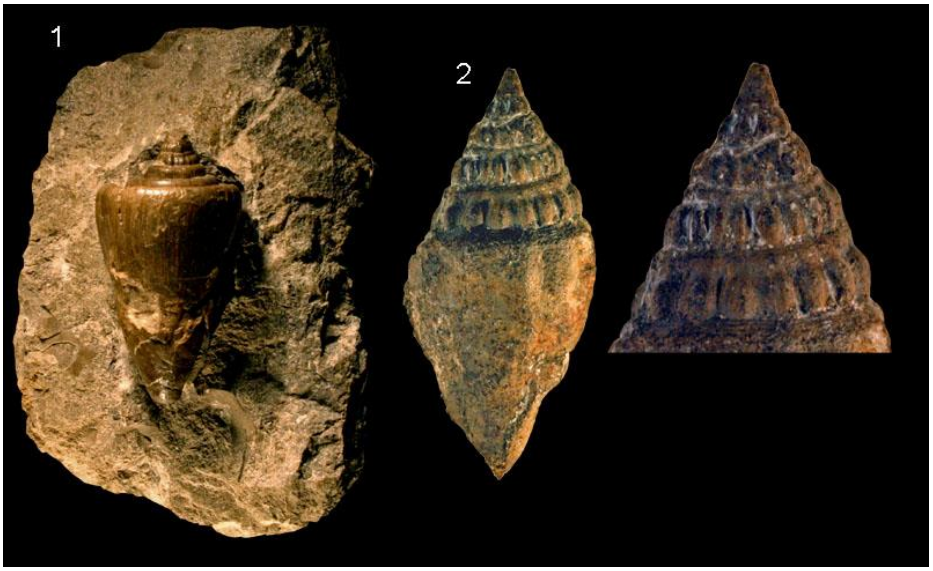
TAXONOMIC PART

Superfamily Stromboidea Rafinesque, 1815
Family Strombidae Rafinesque, 1815
Genus *Stromboconus* De Gregorio, 1896

Type species: *Strombus* (*Stromboconus*) *suessi* Bayan, 1870, by original designation = *Stromboconus nodosus* (Borson, 1820)

***Stromboconus nodosus* (Borson, 1820)**

Mitra nodosa Borson 1820: 208, pl. 1 fig. 9
Strombus suessi Bayan, 1870: 33, pl. 2 figs 2-5 (**new synonym**)
Strombus (*Stromboconus*) *suessi* (Bayan, 1870) — De Gregorio 1896: pl. 2 fig. 3



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Figs 1-2. *Stromboconus suessi* (Bayan, 1870); upper Lutetian, middle Eocene; Roncà, Verona Province, Veneto Region, Italy; Coll. Virgilio Liverani. **1.** H = 46 mm. **2.** H = 31 mm with enlargement of the same. **Fig. 3.** *Mitra nodosa* Borson, 1820. From Borson, 1820: pl. 1 fig. 9.

Fig. 4. *Stromboconus nodosus* (Borson, 1820) = "*Strombus* (*Stromboconus*) *suessi*, Bayan tipo". - Drawing fig. 3 (rotated 180°) from De Gregorio (1896: pl. 2 fig 3).

Strombus suessi was described by Bayan (1870: 480): “Ce strombe se distingue de toutes les espèces qui me sont connues par son mode d'accroissement particulier. Les six premiers tours sont de forme allongée et ornés postérieurement d'un bourrelet longeant la suture et d'où partent des plis ondulés qui disparaissent sous les tours suivants. Plus tard, la coquille devient lisse et s'accroit de manière que ses tours s'étagent presque sur un même plan en présentant une forte rampe. — Échancrure postérieure et sinus antérieur bien marquées. — Coquille fort épaisse.” Translated, this reads: “This conch is distinguished from all the species that are known to me by its particular mode of growth. The first six whorls are elongated in shape and decorated posteriorly with a bead running along the suture and from which leave wavy folds which disappear under the following whorls. Later, the shell becomes smooth and increases so that its whorls are staged almost on the same plane by presenting a strong ramp. — Posterior indentation and anterior sinus well marked. — Shell very thick.”

The shape of the shell thus changes dramatically from a sharply pointed apex in the juvenile shell to a horizontal flat posterior end in adult shells with the pointed apex protruding outward.

This species was described from the Eocene, probably uppermost Lutetian-basal Bartonian of Roncà, Verona Province, Veneto Region, Italy.

The description of *Mitra nodosa* by Borson (1820: 208) reads: “*Testa fusiformis; spira elongata; anfractibus nodosis, minoribus apice papillosis*.” Translated this reads: “Shell fusiform; whorls elongate; spire nodose, the apex papillose in the smaller ones. The description is understandable in combination with the drawing. One can believe that the drawing is poor, but the drawing is in fact a precise representation of *Stromboconus suessi*.

Remarks. — From the descriptions and figures above, it is clear that *Mitra nodosa* and *Strombus suessi* are the same species. Where did it go wrong? Sacco (1893:4) was the first

author that synonymized *Mitra nodosa* with *Strombus bonelli* and described a range of subspecies based on juveniles that might represent other species than *Mitra nodosa*. Furthermore, the species described by Brongniart is from the Aquitanian Miocene, not from the Lutetian Eocene as *Mitra nodosa*. This also indicates *Mitra nodosa* cannot be the same species as *Strombus bonelli*.

Pavia (1976) could not find the specimen during his revision in the Borson collection, and, therefore, he considered *M. nodosa* a nomen oblitum. Ermanno Quaggiotto (pers. comm., July 2022) also has not found it in the collection in the paleontological museum of Turin University where the Borson collection resides. Harzhauser & Kronenberg (2013) doubted that *M. nodosa* could be given the nomen oblitum (forgotten name) status, as the name was used too often. Therefore, they considered it the earliest available name for the species also known as *Strombus bonelli* Brongniart, 1823, which is now demonstrated to be incorrect.

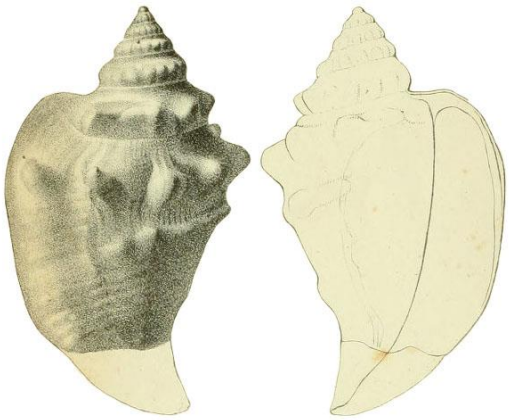
Conclusion. — *Mitra nodosa* Borson, 1820 is clearly not a *Mitra* but a juvenile *Strombus*, and *Strombus suessi* is a junior synonym.

TAXONOMIC PART

Genus *Persististrombus* Kronenberg & Lee, 2007

Type species: *Strombus granulatus* Swainson, 1821,by original designation

***Persististrombus bonelli* (Brongniart, 1823)**



Lectotype of *Strombus bonelli* Brongniart, 1823, pl. VI, fig. 6 a, b

Str. bonelli Brongniart 1823: 74, pl. 6 figs 6a-b
S. bonelli — Basterot 1825: 69
Str. bonelli Al. Br. — Grateloup 1847: pl. 32 fig. 12
Str. lentiginosus Lin. — Grateloup 1847: pl. 32 fig. 16 (non *Strombus lentiginosus* Linnaeus, 1758)
Strombus nodosus (Bors) — Sacco 1893: 4
Strombus bonelli Brongniart, 1823 — Boussac 1910; 161, 161a
Strombus (*Canarium*) *bonellii* Brongniart — Cossmann & Peyrot 1923: 326, pl. 8 figs 1–4, 10
Strombus bonellii Brongniart, 1825 (sic!) — Lozouet & Maestrati 1986: 12, figs J–K
Persististrombus nodosus (Borson, 1820) — Harzhauser & Kronenberg, 2013: 788

Original description. — "Labro incrassato; spirâ tuberculis crassis coronatâ , in dorso duplici serie; caudâ ….

"Il se trouve dans la montagne de Turin, et l'individu que je décris a le test de la coquille épaissi et changé en calcaire spathique ; ce qui a dû arrondir les tubercules et effacer les stries. (Dédié à M. Bonelli de Turin.)"

Translation: "Lip thickened; spire with a coronation of thick tubercles, in a double series on the dorsum; tail …."

"It is found in the mountain of Turin, and the individual which I describe has the test of the shell thickened and changed to spathic chalk, which must have rounded off the tubercles and erased the fine ribbing " (Dedicated to Mr. Bonelli from Turin).

Type. — Lectotype designation pl. VI, fig. 6 a, b by Boussac (1910).

Type locality. — Italy, Turin, Colline de la Supergua.
Series. — Miocene.
Stage. — Aquitanian.

Remarks. — Brongniart described the specimen he had in front of him and did not mention other examples. On the website of the Muséum national d'Histoire naturelle (MNHN), three paralectotypes are shown from the Brongniart collection (MNHN / Paleontology (F) / R64078). The figure from Brongniart (Brongniart, 1823, pl. VI, fig. 6 a, b) was selected the holotype by Boussac (1910, no 161-161a). Pacaud (MNHN / Paleontology) had noted on the website page that "Désignation abusive d'un holotype" (translated: Improper designation of a holotype). According the zoological rules (ICZN Art. 74.5. Lectotype designations before 2000) the holotype selection must be regarded as a lectotype designation.

Sacco (1893: 4) emended the spelling of *Strombus bonelli* to *bonellii* in his synonym list of *Strombus nodosus*. This is an unjustified emendation, an incorrect subsequent spelling according to the Code (ICZN 1999, Art. 33.4).

Although the examples from the Aquitanian of south-western France are generally considered the same species as the Italian one discussed here (Harzhauser & Kronenberg, 2013), the material from both areas need further study.

ACKNOWLEDGEMENTS

I thank Ermanno Quaggiotto (Italy) for his attempt to find the type of *Mitra nodosa* and for discussions about the identity of the species involved. Jean-Michel pacaud (MNHN Paleontology) for providing literature and explanation. I thank Virgilio Liverani (Italy) for allowing to use his photographs of *Stromboconus suessi* from his collection. I thank Virgilio and Ulrich Wieneke (Germany) for the online information available at www.stromboidea.de.

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Two new synonyms in Strombidae introduced as (sub)species in 2020 (Gastropoda, Strombidae)

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ABSTRACT

It is argued that the recently introduced stromboid taxa *Dolomena columba lorenzi* Cossignani, 2020 and *Lambis montorum* Cossignani & Lorenz, 2020 are junior synonyms of respectively *Dolomena columba* (Lamarck, 1822) and *Lambis scorpius scorpius* (Linnaeus, 1758).

Key words – Strombidae, *Dolomena*, *Lambis*, *Strombus*

INTRODUCTION

In the Italian journal Malacologia Mostra Mondiale issued by the Museo Malacologico Piceno at Cupra Marittima, issue 32 (109), 2020, two papers have been published with newly proposed taxa in the Strombidae. The newly introduced taxa are *Dolomena columba lorenzi* Cossignani, 2020 and *Lambis montorum* Cossignani & Lorenz, 2020. The involved authors are not known as specialist on Strombidae and have not published before on taxa in this family to my knowledge. When the names were published, without having seen the publications, some of the authors in Strombidae raised eyebrows (personal communication with some of them). Especially a new *Lambis* species from the Philippines was rather unusual and therefore suspect. A taxonomic inflation could be expected.

Methods – After the thorough reading of the two papers and comparison with private collection material of the author, conclusions on the status of the newly described taxa could be drawn.

Conclusions

The conclusion on the status of *Dolomena columba lorenzi* Cossignani, 2020 is that of the four noted differences by the author, not one can be used for discrimination between the nominal species and the supposed new subspecies, and therefore the supposed new subspecies is synonymized with the nominal species herein, *D. columba* (Lamarck, 1822).

The conclusion about *Lambis montorum* Cossignani & Lorenz, 2020 is that the only differences that remain with *L. scorpius scorpius* (Linnaeus, 1758) are corresponding to the colour of the shells. The supposed new species *L. montorum* is a kind of albino colour form of *L. scorpius scorpius*, and herein synonymized with the latter.

ABBREVIATIONS

AMD – the collection of Aart. M. Dekkers, Purmerend, The Netherlands

TAXONOMIC PART

Superfamily Stromboidea Rafinesque, 1815
Family Strombidae Rafinesque, 1815
Genus *Dolomena* Wenz, 1840

Type species *Strombus pulchellus* Reeve, 1851, type by original designation

Dolomena columba (Lamarck, 1822)

New synonym: *Dolomena columba lorenzi* Cossignani, 2020

Original description of *Dolomena columba lorenzi* Cossignani, 2020 - "The shell is of medium size for the genus (44 to 55 mm in length). The aperture widens gradually with the flange of the labrum, away from the shell's axis. The spire is tall and consists of 6 post nuclear whorls characterized by about twenty longitudinal, convex, well-raised, and regular cords whose off-white color corresponds to the color of the entire shell. The suture is wide and convex. The protoconch is made up of two and a half whorls, it is dome-shaped, and slightly flattened. The labrum is thick, starting from the body whorl at an angle of 150° and a small plateau in the oblique area, it is linear in the central part and, due to the stromboid notch, forms a rounded tooth. The siphonal channel is in line with the axis of the shell and the front protrudes from the rear. A dense striation (almost 40 discernible dark brown lines) characterizes the internal part of the aperture and reaches almost to the edge of the lip, gradually becoming paler. Along the internal columellar side of the aperture, the striation is present only in the adapical half, and the coloring is present in the innermost part, fading towards the parietal callus. On the dorsal part of the body whorl there are some tubercles in the area close to the upper suture (about ten) and a considerable number of spiral lines that correspond to the internal striae. The soft parts are unknown".

Dolomena columba lorenzi was described from Cargados Carajos, also known as St. Brandon, in the Indian Ocean, 450 km northeast of Mauritius. The new subspecies was conchologicaly compared with *Dolomena columba* (Lamarck, 1822) with considering its remote origin.

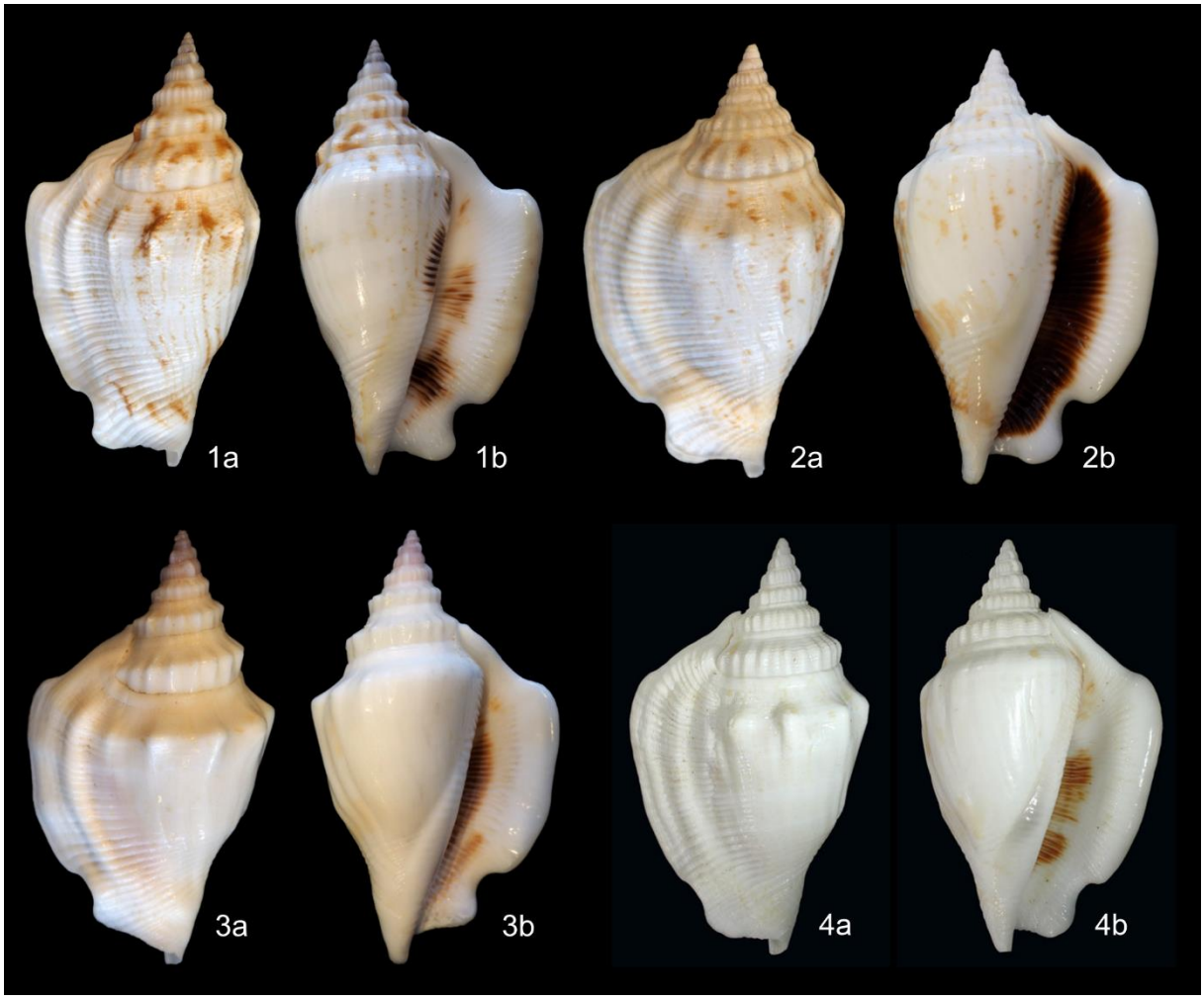

Plate 1, Figs 1-4. *Dolomena columba* (Lamarck, 1822). **1.** Mozambique, Nacala Bay, dived, 5-10 m, March 2002, AMD STR0640, 55.1 mm. **2.** Mozambique, Nacala Bay, feeding on algae, 2-3 m, 2002, AMD STR0096, 48.6 mm. **3.** Seychelles, Mahe, off Victoria, by local divers, July 1983, AMD STR0641, 43.2 mm. **4.** Cargados Carajos (St. Brandon), paratype 2 of *Dolomena columba lorenzi*, coll. Tiziano Cossignani, 55.05 mm.

In the discussion this newly described subspecies is "distinguished from *Dolomena columba columba* (Lamarck, 1822) by its larger size, by its pale, nearly all-white color and by differences in the striae inside the aperture. In addition, the early teleoconch whorls are less raised, giving the spire a more stunted appearance". Here these supposed differences are discussed in detail.

The size range given for the type material of the supposed new subspecies is 42.8 – 55.05 mm based on 31 examined specimens. The size range of 14 examples of *D. columba* in the

collection AMD varies between 37.0 for the smallest to 55.1 (AMD STR0640) for the largest shell. The largest – from Mozambique – is even larger than the size indication of the supposed subspecies. This proves the size as discriminating factor is useless and is rejected herein.

The nearly all white colour of all examined specimens can be explained by the circumstances the shells were collected. All shells were collected dead (empty shells) on the beach in a tropical environment. It is well-known that shells including Strombidae are vulnerable to colour loss when exposed to sunlight for a period of time and the finding of them beached on a chain of sandy islands (Cossignani 2020: 20) does not tell anything on how long they have been exposed to the intense light of the sun fading the original colour of the shells. Here, given the circumstances, colour cannot be part of discrimination from *Dolomena columba*, colour alone cannot be used in Strombidae as a discrimination factor. The specimen on Plate 1 Fig. 3 from the Seychelles has almost the same whitish shell as the supposed new subspecies. That this shell and *D. columba lorenzi* belong to two different subspecies is rejected herein.

The supposed differences in the striae inside the aperture are not explained. The species is quite variable in the apertural colouring. The holotype of *Dolomena columba lorenzi* has a broad brown apertural band and paratype 2 only minor brown colouring inside the aperture. Just as in the nominate species. A *D. columba* specimen with a broad brown apertural band in the authors collection is depicted on Pl 1 Fig. 2 (AMD STR0096, 48.6 mm from Nacala Bay, Mozambique) and one with minor colouring from the same location (Pl. 1 Fig. 1. AMD STR0640, 55.1 mm). This argument of the author (Cossignani) to discriminate *D. columba lorenzi* is thus without value.

The early teleoconch whorls are said to be less raised, giving the spire a more stunted appearance. No measurement qualification is given although 31 examples of the proposed subspecies are examined. No indication is given of the number of specimens of *Dolomena columba* that have been examined by the author either. The value of this supposed difference is not properly demonstrated. The photo of the protoconch (Cossignani 2020: 22) shows only a worn apex without protoconch, which is not surprising given the fact that the collected shells were all beach collected. Therefore, this argument cannot be used.

The conclusion is that of the four noted differences, not one can be used for discrimination between the nominal species and the supposed new subspecies, and therefore the supposed new subspecies is synonymized with the nominal species herein. The rather remote location (St. Brandon) does not justify a new subspecies *an sich*, as the nominal *D. columba* is widely spread in eastern Africa. *Dolomena columba* is a variable species as can be seen on the accompanying Plate 1, but the species remains readily identifiable from other species in the genus.

Dolomena was limited to three extant species in Dekkers & Maxwell (2020) paper based on an examination of the relationships between *Dolomena*, *Doxander*, *Mirabilistrombus*, *Neodilatilabrum* and *Labiostrombus* using character state analysis and maximum parsimony: *D. columba* (Lamarck, 1822), *D. hickeyi* (Willan, 2000) and the type species *D. pulchella* (Reeve, 1851).

Genus *Lambis* Röding, 1798

Type species *Strombus lambis* Linnaeus, 1758, type by absolute tautonymy

Note: in the publication by Cossignani & Lorenz (2020: 17) the type species mentioned is *Cytharopsis cancellata* A. Adams, 1865. A lapsus - *Cytharopsis cancellata* is a species belonging to the family Mangeliidae.

Lambis scorpius scorpius (Linnaeus, 1758)

New synonym: *Lambis montorum* Cossignani & Lorenz, 2020

Original description of *Lambis montorum* Cossignani & Lorenz, 2020 – " Shell of medium-large size for the genus, elongated, with seven concave teleoconch whorls that are keeled at the suture. Outer lip with seven digits that develop on the same level as the aperture, the five lateral ones are arched in an adapical direction, the first and second are almost vertical. The seventh (anterior) digit is on the opposite side of the first (posterior) digit, which shows a developed callus flange, which is not connected to the shell's body. The seventh digit forms the open siphonal canal and is twisted and curved to the right. All digits have three rows of tubercles, less evident in the sixth and seventh. The stromboid notch is produced. The upper border of the spiral suture consists of nodules, the lower is just wavy. The labral area below the digits is calloused and of white color. The body whorl shows three spiral cords of coarse and rounded nodules that correspond to the three lower digits (fourth, fifth and sixth). On the upper cord, in the dorsal position, the last three nodulations are slightly more developed than the previous ones, appearing as distinct humps. Between the rows of nodules and on the siphonal canal there are continuous spiral cords, more or less regular, which extend onto the labrum, forming a crenulated border. The well-developed columellar callus forms a rounded hump in the anterior half. The internal surface of the opening is markedly ribbed on both sides. These ribs start internally from two parallel vertical ridges, the columellar one runs throughout the entire distance between the anterior and posterior sinus, and the labial one is limited to the median area of the aperture. White background color irregularly covered with flammulate spots varies between fawn and light brown. The tubercles on the whorls of the spire are generally white or slightly colored, the depressions between them are darker, enhancing the articulated spiral design. White inner lining on a violet background is found on both sides of the aperture, which is white, to pale cream. The inner edge of the labrum is pale orange in the areas between the digitations. The ends of the digits are white. The operculum is comma-shaped, claviform, and horny, and of approximately one-sixth of the length of the entire shell including the digits".

Lambis montorum Cossignani & Lorenz, 2020 was described from the Philippines, northern Bohol. It was compared and distinguished from *L. scorpius scorpius* (Linnaeus, 1758), from *L. scorpius indomaris* Abbott, 1961 and from *L. cristinae* Bozzetti, 1999 (in WoRMS: hybrid of *L. scorpius indomaris* x *L. lambis*). The material studied was made available by the second author, Felix Lorenz. The supposed new species is named after Rhonda and Dr. Michael A. Mont, Molluscan Science Foundation, Inc., Maryland, USA. Mr. Mont was acknowledged for proofreading of Cossignani's 2020 article, also discussed in this paper, and here honored with

naming a shell after him and Rhonda Mont. The newly proposed subspecies *Dolomena columba lorenzi* Cossignani, 2020 (see herein) is conspicuously named after Felix Lorenz, hardly a coincidence.

The comparison given by the authors is reproduced herein and commented upon.

Comparison 1. "Compared to the new species, *Lambis scorpius scorpius* has much longer and narrower digitations, with the central ones much more twisted. The ribbing of the aperture is more colorful and stronger developed on the columellar side. Furthermore, the flange of the first digit is attached to the shell's body and not at the base of the digit itself. Also, the coloration of the body whorl is more marked and includes the entire digits".

Comment: The comparison with *Lambis scorpius scorpius* is most important as that species is confined to the western Pacific Ocean and collected by the millions for food in the Philippines, the locus typus of the supposed new species. It is said that "*L. scorpius scorpius* has much longer and narrower digitations, with the central ones much more twisted". Paratype 1 (Cossignani & Lorenz, 2020: 16) has virtually the same digitations as the *L. scorpius scorpius* the authors show on page 17. With the large variability in the digitation's length and form in *Lambis* species this supposed differences is of no value. Further the authors state that: "The ribbing of the aperture is more colorful and stronger developed on the columellar side (of *L. scorpius scorpius*)". Indeed, there is a difference observed here. Plate 2 Fig. 1 shows the holotype of *L. montorum* which has no ribbing on the columellar side just as Fig. 3 which is a not fully adult shell lacking the columellar ribbing and with the beginning of ribbing inside the labrum. The shell Plate 2 Fig. 2 is intermediate between Fig. 1 and Fig. 4 with a well-developed apertural ribbing. Only fully adult examples of *L. scorpius* have the fully developed apertural ribbing. With the still short digitations the shell Plate 2 Fig. 1 looks like the example has become fully adult while not fully grown. It is not a substantial difference and differences in colour of the aperture and apertural aspects are frequently observed in *L. scorpius scorpius* (pers. observations).

Comparison 2. "*Lambis scorpius indomaris* has more similarities with *L. scorpius scorpius* than with the new species (e.g. *L. montorum*): the flange at the base of the first digit is almost absent. The last (anterior) digit is twisted to the right. The ribbing of the aperture is completely different from the new species, and the spiral grooves are more numerous between the four rows of tuberculose cords that give rise to the median digitations".

Comment: The comparison with *L. scorpius indomaris* is interesting as that subspecies lives in the Indian Ocean and not in the Philippines where the supposed new species was found. It is said that " the flange at the base of the first digit is almost absent" but the photos indicate the contrary: large flanges at the base of the first digit as we know from *L. scorpius scorpius*.

Further is stated that " the seventh digit is strongly twisted to the right" which is no difference to *L. scorpius indomaris* and in *L. scorpius scorpius* both twisted to the right and straight or almost straight 7th digits (the anterior canal) occur frequently and can be excluded from the differences for discriminating the new supposed species. The ribbing and colour are supposed

to be different to this subspecies, which is off course part of the difference between the nominate subspecies and the Indian Ocean subspecies.

Plate 2, Figs 1-4. *Lambis scorpius scorpius* (Linnaeus, 1758). **1.** Philippines, northern Bohol, dived at 40-50 meter, holotype of *Lambis montorum* Cossignani & Lorenz, 2020, 113.7 mm. **2.** Philippines, Coron Island, AMD STR1071, 129 mm. **3.** Philippines, Bohol, 2007, AMD STR1555, 98.5 mm. **4.** Philippines, Mactan Island, Punta Engaño, 2006, AMD STR1552, 162 mm.

Comparison 3. "The differences between the new species and *L. cristinae* are substantial; in the latter the digitations have no tubercles, the seventh digit is strongly twisted to the right, the coloring of the ventral part is more marked, and a flange at the base of the first digit is absent".

Comment: *Lambis cristinae* Bozzetti, 1999 is unaccepted in MolluscBase and seen as a hybrid between *L. scorpius indomaris* x *L. lambis*, which is followed here and reflects the general opinion shared by specialists in Strombidae (not published). Thus the differences between the

supposed new species and *L. cristinae* are noted “substantial” is therefore not a surprise and of little value for the comparison as it is not a valid species.

Comparison 4. "flange of the first digit is attached to the shell's body and not at the base of the digit itself".

Comment: Again, the only photo of *Lambis scorpius scorpius* on page 17 of the article shows the same and no difference can be observed. The 4 examples on Pl. 2 Figs 1-4 show the flange to the shells’ body (and the base of the spine) in all 4 examples. A wrong observation by the authors and therefore useless for discrimination.

Comparison 5. The last difference observed by the authors: "the coloration of the body whorl is more marked (of *Lambis scorpius scorpius* compared to the supposed new species) and includes the entire digits". The holotype of *L. montorum* is herein seen as a semi-albino example, just as the semi-juvenile example of Pl. 2 Fig. 3.

Conclusion. What can be concluded is the differences that remain are corresponding to colour of the shells. The supposed new species is nothing but an albinistic form of *Lambis scorpius scorpius*, and herewith recorded as junior synonym of the latter.

PHOTO CREDIT

All photos made by the author with exception of paratype 2 of *Dolomena columba lorenzi* and the holotype of *Lambis montorum* which are taken from the original publications.

ACKNOWLEDGEMENTS

Henk Dekker, Winkel, the Netherlands is thanked for help with literature, exchanging ideas, and mounting the plates.

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A new *Ministrombus* (Gastropoda, Strombidae) from Australia, Queensland and surroundings

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ABSTRACT

A new species of the genus *Ministrombus* Bandel, 2007 is described from Australia (Queensland) and New Caledonia (Lifou) and compared with other species in this genus.

Key words – Strombidae, *Strombus*, *Ministrombus*, SW Pacific, Australia, New Caledonia, taxonomy, new species

INTRODUCTION

Strombidae is a diverse group of marine gastropods that has received new attention due to the numerous new taxa described in recent years. Maxwell (2022) explored the variability of the genus *Ministrombus* Bandel, 2007 with the description of 3 new species: *M. aurantius* S. J. Maxwell, 2022, *M. caledonicus* S. J. Maxwell, 2022 and *M. oceanicus* S. J. Maxwell, 2022. However, an undescribed species from his home country Australia was not recognized and is described herein.

Ministrombus contains a group of small to medium sized strombids that are restricted to the Central Indo- West Pacific region, from China in the north to Australia in the south.

METHODS

The shells of the new species are compared with *Ministrombus* species as represented in existing literature and shells of the involved species contained in private collections.

ABBREVIATIONS

AMD – the collection of Aart M. Dekkers, Purmerend, The Netherlands
H – Height or length of the shell
HD – the collection of Henk Dekker, Winkel, the Netherlands.
MNHN – Muséum national d'Histoire naturelle, Paris, France
QM – the collection of Queensland Museum & Science Centre, Brisbane, Queensland, Australia
WF – the Collection of Wolfgang Fischer, Austria

TAXONOMIC PART

Superfamily Stromboidea Rafinesque, 1815
Family Strombidae Rafinesque, 1815
Genus *Ministrombus* Bandel, 2007

Type species *Strombus minimus* Linnaeus, 1771 (type by original designation)

Remarks. – Once considered a member of *Dolomena* Wenz, 1940, but S*trombus minimus* Linnaeus, 1771 was placed in his monotypic subgenus *Ministrombus* by Bandel (2007). Dekkers (2010) placed *Strombus variabilis* Swainson, 1820 in this genus.

Ministrombus rhinoceros nov. sp.

Pl. 1 figs 1-6

http://zoobank.org/264BE91A-BDAD-41A1-B924-4D1CDB9825F0

Description. Shell medium sized for the genus, 31-46 mm in length, moderately shiny, light weight for the size, protoconch unknown (all have chipped apex), smooth body whorl with a relatively big dorsal knob on the shoulder, centrally or more at the right side of the shoulder, and 2 smaller ones earlier on the whorl up to the heavy rib at the left ventral side (if turned around); weakly shouldered early whorls. Pre ultimate whorl almost smooth with very shallow sutures: axial ribs are hardly visible on the shoulder. Early whorls have a few small varices. Only weak growth lines visible and a few incised lines (5-6) near the anterior end. Light cream ground color with 5 orange to light brown bands of zig-zag lines. Columella without dark brown fleck, smooth and hardly demarcated, thickened in the anterior part. Rim of the labrum thickened with posterior ‘hook’ caused by the callus; strombid notch broad but very shallow. Strombid flap very minor. Operculum and soft parts unknown.

Holotype. – In clean coral sand, dived from reef slope at 14 meter, July 1968, leg. Tony St. John, H 40 mm, QM MO 86021 (Pl. 1 Fig. 1).

Paratypes. – Paratype 1, New Caledonia, Loyalty Islands, Lifou, Chépénéhé, H 33.9 mm, AMD no. STR4187 (Pl. 1 Fig. 2); Paratype 2, Australia, Queensland, Hayman Island, H 35.9, leg. K. Uetz, 1974, WF no. MW303 (Pl. 1 Fig. 4); Paratypes 3-6, location unknown, H 31.9-34.6 mm, AMD STR0081, from shell shop of Zeemuseum, bought 2002 (paratype 3, H 31.9 mm, STR0081b, (Pl. 1 Fig. 3);Paratype 6 MNHN-IM-2012-25396); Paratypes 7-8, Australia, South Australia, Point Widbey, 1979, collected by person who travelled 7 years through Australia, bought from Zeemuseum, ex coll. J. Blommers, HD 49265, paratype 7 H 40.8 mm (Pl. 1 fig. 5), paratype 8 H 46.5 mm (Pl. 1 fig. 6).

Type locality. – Australia, Queensland, Gloucester Island.

Distribution. – No literature records. Known from Australia, Queensland, and New Caledonia, Loyalty Islands.

Habitat. – The holotype was collected on clean coral sand at a reef slope at 14 m depth, paratype 1 was collected from weed beds with algae.

Comparison. – The new species is different from all members in the genus for the big, centrally or more to the right, placed knob on the dorsal shoulder of the last whorl. This "horn" is the largest of all other genus members. The new species differs from the also Australian *Ministrombus athenius* (Duclos, 1844) and other species by the far less shallower suture and less pronounced axial ribs on the spire whorls. The new species is somewhat reminiscent in appearance to the smooth *Doxander queenslandicus* Maxwell, 2022 from Queensland, but is relatively wider and much smaller and stockier. On Plate 2 other species in the genus are represented with the exception of *M. minimus*, which is well-known, and quite different in shell shape and size to allow easy identification.

Remarks. – The holotype and paratype 8 have developed a subsutural spiral ridge, but the other paratypes have not. All available shells have the apex chipped; perhaps the embryonic whorls are vulnerable for damages, and likely all shells were dead collected. This new species is probably scarce, or otherwise overlooked, as the specimens known are not the nice glossy shells as in other members of the genus *Ministrombus*.

With the few records known to the author, it is not useful to draw a map showing the range of the new species. Paratype 1 is from the New Caledonia, Loyalty Islands. The new species might have a wider range in the SW Pacific. The holotype is selected, although its apex is badly chipped, for reasons of having a reliable locality, which is supported by the of origin of paratype 2 which is also located in Queensland (in collection Wolfgang Fischer). Both the holotype and the paratype 1 were purchased by the author from Tony. St. John, a former Australian shell collector with detailed labels. Both shells were collected in 1968 and were with hesitation (question mark on the label) called *Strombus variabilis*. Paratypes 3 to 6 were bought by the author from the now closed shell museum at Scheveningen, the Netherlands, in 2002, without location details. They belong to the first batch of shells acquired in the personal collection of the author when he started collecting shortly before the year 2000.

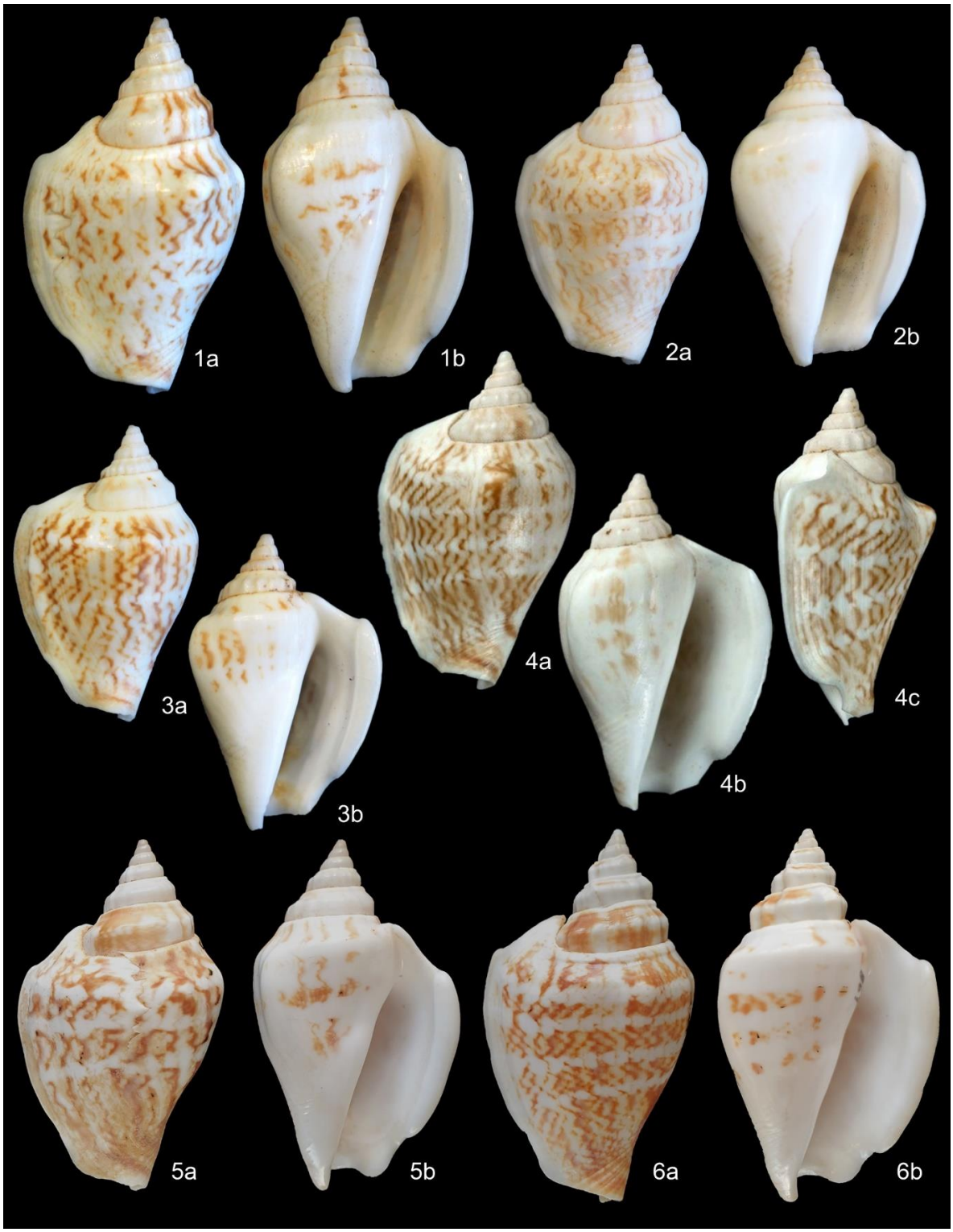

Plate 1. ***Ministrombus rhinoceros*** **nov. sp**. Fig. 1a-b. Holotype, QM MO 86021, Australia, Queensland, Gloucester Island, H 40 mm.; Fig. 2a-b. Paratype 1, AMD STR4187, Loyalty Islands, Lifou, Chépénéhé, H 33.9 mm.; Fig 3a-b. Paratype 3, AMD STR0081, no location, H 31.9 mm.; Fig. 4a-b. Paratype 2, WF no. MW303, Australia, Queensland, Hayman Island, H 35.9 mm.; Fig. 5a-b. Paratype 7, HD 49265, Australia, South Australia, Point Widbey, H 40.8 mm. Fig. 6a-b. Paratype 8, Australia, South Australia, Point Widbey, H 46.5 mm.

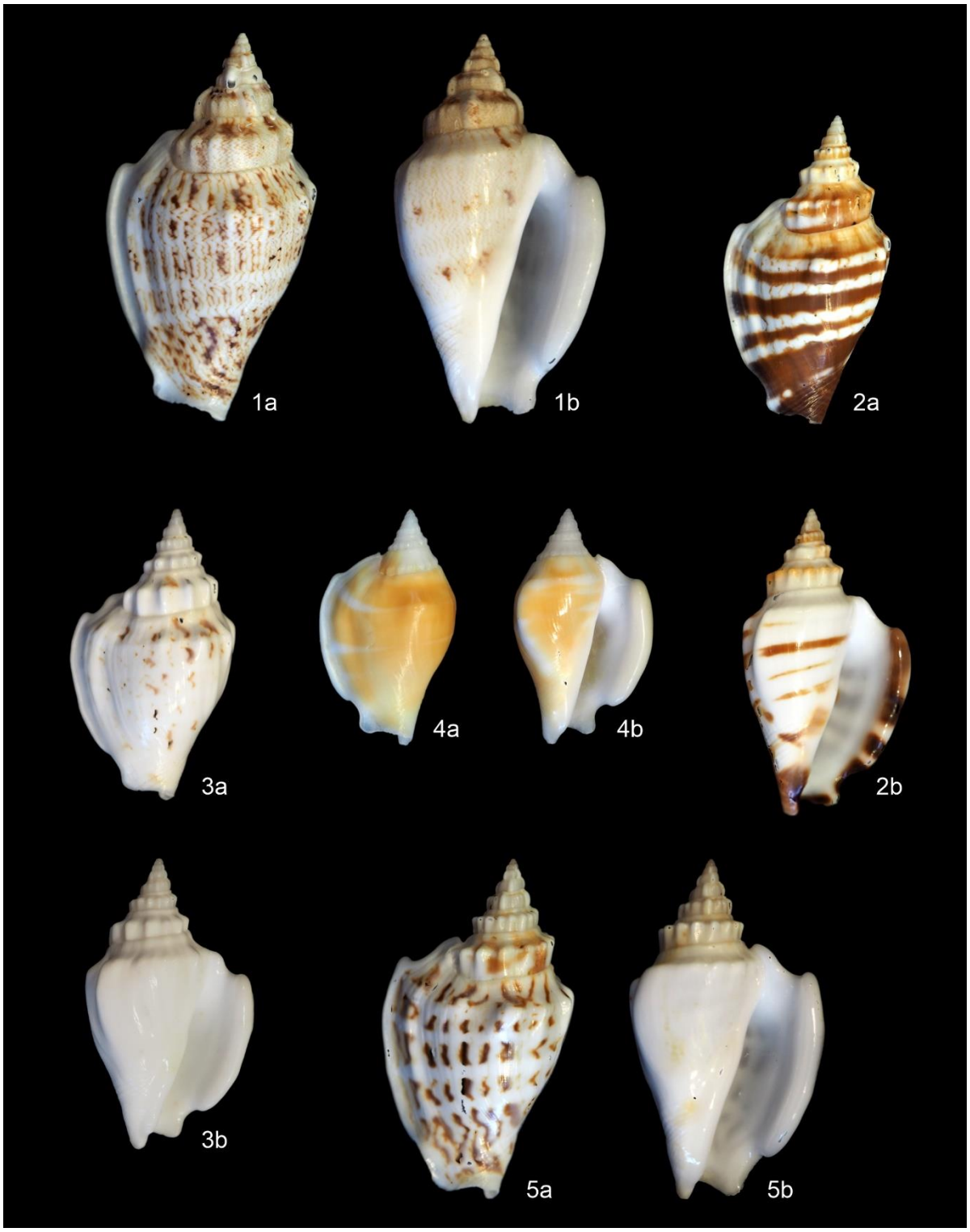

Plate 2. Comparable other species of *Ministrombus*. Fig. 1a-b. ***M. variabilis*** (Swainson, 1820), Thailand, Gulf of Thailand, Ban Talokapo, leg. B. Gras, H 46.5 mm, AMD STR3613A. Fig. 2a-b. ***M. caledonicus*** S.J. Maxwell, 2022, New Caledonia, Noumea, H 36.9 mm, AMD STR2602. Fig. 3a-b. ***M oceanicus*** S.J. Maxwell, 2022. Marshall Islands, Jaluit Atoll, H 34.8 mm, AMD STR4096. Fig. 4a-b. ***M. aurantius*** S.J. Maxwell, 2022, Indonesia, Floris, from old collection, H 28.1 mm, AMD STR4347. Fig. 5a-b. ***M. athenius*** (Duclos, 1844), Australia, Queensland, Swain Reefs, H 40.7 mm, AMD STR2400.

The shell shop at Scheveningen was at that time the most important source of sea shells in the Netherlands. The paratypes in the collection of Henk Dekker came from the same well supplied shell shop, but it should be remarked that the locality added (in South Australia) is clearly wrong.

ACKNOWLEDGEMENTS

I thank Wolfgang Fischer (Austria, Vienna) for showing his example of the new species on Facebook (internet) and supplying the photos of his specimen (paratype 2). I thank Henk Dekker, Winkel, the Netherlands for mounting the plates and photos of his examples of the new species. I thank the anonymous reviewers of a first draft of the manuscript for their useful comments. Philippe Bouchet is thanked for the help in contacting the Queensland Museum for depositing the holotype in an Australian museum.

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The rediscovery of *Strombus taeniatus* Quoy & Gaimard, 1834 in Indonesia (Gastropoda, Strombidae)

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ABSTRACT

A population of *Strombus taeniatus* Quoy & Gaimard, 1834 is rediscovered from Indonesia . This species was reinstated as a valid species after a long period of hiding in synonymy of *Laevistrombus canarium* (Linnaeus, 1758) (Maxwell et al., 2019). Recently offered shells on an auction website match with the description and drawing in Quoy & Gaimard, 1834 and the holotype in the Muséum national d'Histoire naturelle, Paris.

Key words – Strombidae, *Laevistrombus*, Indonesia, taxonomy

INTRODUCTION

Maxwell et al. (2019) consider *Strombus taeniatus* Quoy & Gaimard, 1834 as valid after hiding in synonymy for many years (Abbott, 1960). These authors regarded the species as valid, partly based on the detailed description of a living animal with different colors than we know from other species in the genus. However, besides the lectotype lodged in the Muséum national d'Histoire naturelle, Paris (MNHN-IM-2000-32460), the authors did not study other specimens of this species. The type locality is Ambon after Quoy & Gaimard, 1834: "Cette nouvelle espèce provient des Molusques. Nous la trouvâmes dans un achat d'autres

coquillages faits à Amboine". This indicates that Ambon is likely not a very exact description of the type location. Ambon is a small island located in the eastern part of the Indonesian islands chain, just southeast of the bigger island Seram. Both are centrally in the group of islands know as the Moluccas (or Maluku Islands). A Dutch friend and shell collector Rob Vink often (several times per year) travels to Ambon as his girlfriend lives there, and he never found any shell of this species (pers. comm.). Ambon was the administrative center for the Moluccas during the Dutch occupation of Indonesia. The Moluccas are a group of islands lying in a wide circle around Ambon: north-west is the big island of Celebes, in the north there is North Celebes and in the south are some smaller island(groups) of which Pulau Yamdena is the biggest. The shells treated in this paper were said to have come from Saumlaki, South Moluccas. Saumlaki is a coastal town at the south side of Pulau Yamdena, facing Australia (on the meeting point of the Timor Sea and Arafura Sea). The new site seems a very logical one and more exact than Ambon as listed by Quoy & Gaimard (1834).

METHODS

The newly acquired shells are compared with the lectotype and original description of *Strombus taeniatus* Quoy & Gaimard, 1834 and other existing species in *Laevistrombus*. The acquired shells are now stored in my private Strombidae collection.

CONCLUSIONS

The conclusion is reached that *Strombus taeniatus* Quoy & Gaimard, 1834 is found again in the southeastern part of Indonesia and is easy identifiable within the genus *Laevistrombus*.

Abbreviations

AMD – the collection of Aart M. Dekkers, Purmerend, the Netherlands
MNHN – Muséum national d'Histoire naturelle, Paris, France

TAXONOMIC PART

Superfamily Stromboidea Rafinesque, 1815
Family Strombidae Rafinesque, 1815
Genus *Laevistrombus* Abbott, 1960
Subgenus *Laevistrombus* (*Gonggongus*) Dekkers, Rymer & S. J. Maxwell, 2021

Type species *Lambis turturella* Röding, 1798, by original designation

Description. **–** Shell of medium to larger size without zig-zag patterns; white to light brown colour. Spire often with old varices (Dekkers & S. J. Maxwell, 2021).

Ther new species fits in this diagnosis.

Laevistrombus (*Gonggongus*) *taeniatus* (Quoy & Gaimard, 1834)

Strombus taeniatus Quoy & Gaimard, 1834, MNHN-IM-2000-32460

Strombus taeniatus Quoy & Gaimard, 1834: 75, pl. 51, figs. 14, 15 (1833)
Laevistrombus taeniatus (Quoy & Gaimard, 1834) – Maxwell et al. 2019: 499-501
Laevistrombus (*Gongongus*) *taeniatus* (Quoy & Gaimard, 1834) – Dekkers et al. 2021: 11

Description. – Shell solid, slender fusiform, medium sized, reaching 50 mm in height. Distinct to all other members in the genus is the brown spiral line on all spire whorls, and the lead grey 3 spiral bands (1 small, 2 broad) on the dorsum of the body whorl. In some specimens those violet-greyish spiral bands are lacking. Fresh examples also have brownish axial colour streaks running over the entire body whorl.

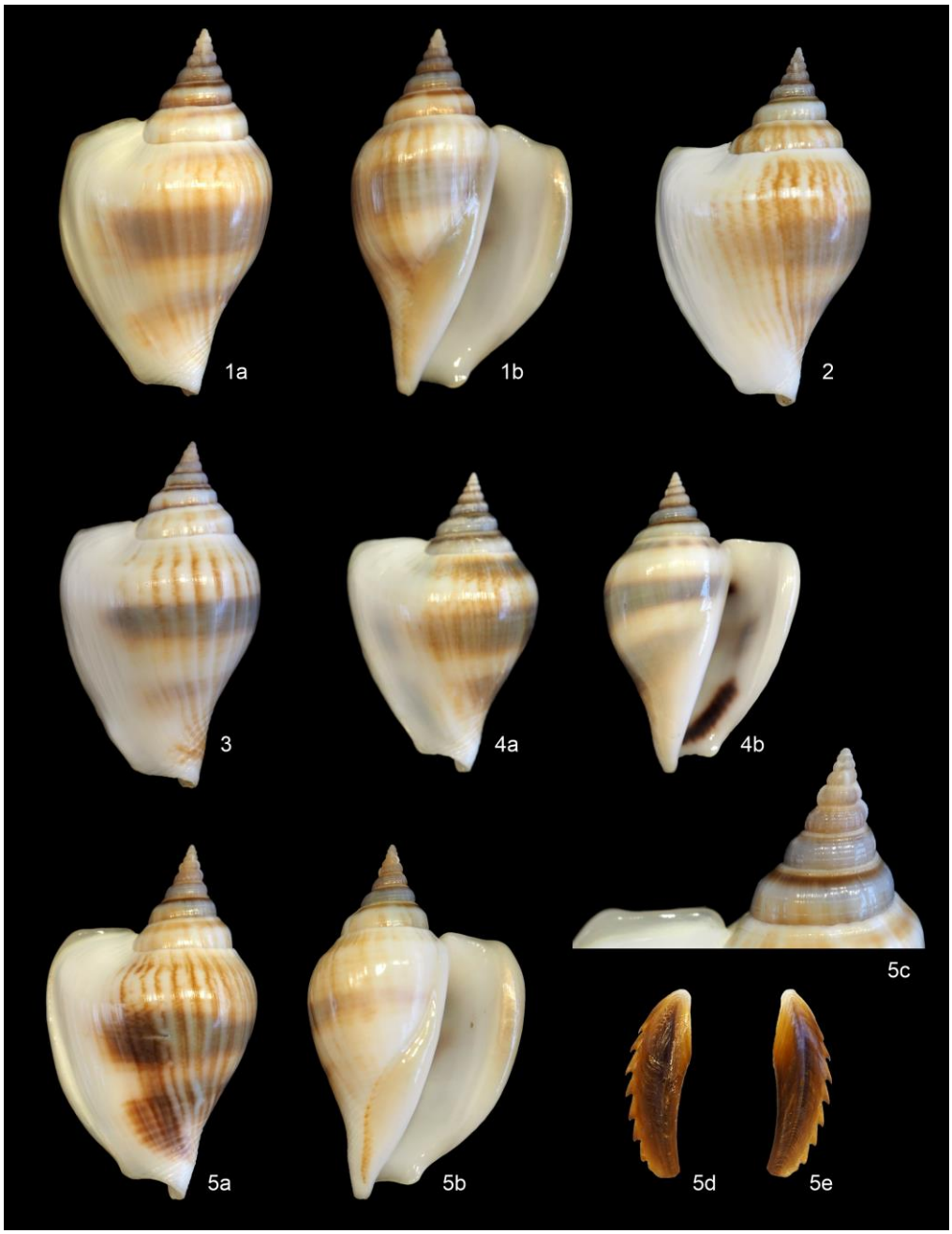
Original description of *Strombus taeniatus*. – "*Strombus*, testa obovata, laeve, basi striata, tribus vittis violaceo-fuscis cincta; spira brevi, mucronata; labro crasso, dilatato, antice marginato" [*Strombus*, shell ovate, smooth, with striate base, surrounded by three violet bands, spire short, mucronate, lip callused, dilated, anteriorly margined (Quoy & Gaimard, 1834, p. 75; translation Maxwell et al., 2019).

Holotype. – MNHN-IM-2000-32460.

Type locality. – Indonesia, Moluccas, Ambon.

Distribution. – It is a historical species, now known from additionally freshly collected specimens. Its range is not yet fully known, but this species might be discovered also in the neighboring islands, now the identity of this species has been established. There was one example of the species reported (http://www.stromboidea.de/?n=People.RomanFankhauser)

shortly after the Maxwell et al. 2019 publication. That is a 55.2 mm shell from Sulawesi (no further details), coll. Roman Fankhauser, Switzerland. In AMD several shells are present from Indonesia, Buton Island, an island southeast of Sulawesi, recently (2023) acquired. They do not differ from the sample shown here.



Laevistrombus* (*Gonggongus*) *taeniatus Quoy & Gaimard, 1834, all Indonesia, Yamdena Island, Saumlaki. 1a+b STR4451, H 50.25 mm; 2a+b STR4448, H49.14 mm; 3 STR 4446, H 47.36 mm; 4a+b STR4443, H 41.14 mm; 5a-c STR4447, H 48.6 mm; 5d+e operculum of 5a+b length 13 mm.

Tabel 1. Measurement of the sample in coll. AMD from Indonesia, Moluccas, Yamdena, Saumlaki.

collection no. AMD	Height in mm	Width in mm	H/W ratio
STR4443	41,14	27,00	1,52
STR4444	42,95	26,09	1,65
STR4445	46,47	30,03	1,55
STR4446	47,36	29,13	1,63
STR4447	48,60	29,24	1,66
STR4448	49,19	30,37	1,62
STR4449	49,49	31,17	1,59
STR4450	49,71	31,22	1,59
STR4451	50,25	29,98	1,68
STR4452	50,43	30,15	1,67
STR4453	50,52	31,25	1,62
STR4454	51,34	33,32	1,54
STR4455	52,17	32,40	1,61
Avarage (n=13)	**48,4**	**30,1**	**1,6**

Strombus canarium var. *taeniatus* in Duclos, 1844: pl. 7 fig. 6.

Comparison. – *Laevistrombus taeniatum* has to be compared with the other members in the genus. This species is small to average for the genus, not attaining a larger length than 52 mm in the sample studied here, see Tabel 1. It is the only species in the (sub-)genus that has a violet-grey band on the spire whorls which is visible on the body whorl as a thin first band. This feature is not highlighted in the original description but it is the hallmark of the species. The original description seems to be based on a faded and dead collected example, hence the missing top whorls. Apparently the colour bands fade to violet. The small first band well

visible on the spire whorls is less visible on the body whorl in the type as well on the freshly caught examples shown herein. The two other spiral bands are always smaller than in the type specimen. The axial brown streaks on the body whorl in the lot here shown is another feature not seen in other members of the (sub)genus and is lacking too in the type. Some fresh shells also lack these brown axial streaks. These streaks are also seen on the illustration in Duclos, 1844, *Strombus canarium* var. *taeniatus*, which shell has also the smaller spiral bands as in the studied sample.

Remarks. – The Height/Width ratio is on average 1.6 (Tabel 1). The shell with the lowest H/W ratio is the smallest shell, other conclusions cannot be drawn from this ratio.

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An overlooked name for the species known as *Sinetectula farinosa* (A. Gould, 1850) (Gastropoda, Pisaniidae)

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ABSTRACT

Recently, the new genus *Sinetectula* Fraussen & Vermeij, 2021 was introduced for some species of *Engina*-like shells, as they showed clear differences with typical *Engina* species. For one of the included species an overlooked name was found, changing the name from *Sinetectula farinosa* (Gould, 1850) to *Sinetectula carduus* (Reeve, 1844).

Key words – Pisaniidae, taxonomy, *Sinetectula*

INTRODUCTION

One of the problems one is facing when trying to figure out the correct name for a species, is the long history for over 250 years since the nomenclature started with the well-known work of Linnaeus in 1758. Especially the older literature is full of vague indications, inadequate descriptions and poor figures, if any. The result of this long period with descriptions is the presence of many less-well-known names in literature. But due to the availability on the internet of many articles and books in digital form makes it relative easy to check old publications. MolluscaBase is a prime source for information about names of species and for links to (older) publications. Checking a name in an publication by Cernohorsky (1980), I noticed a type specimen figured of a familiar species to me, but not in present use for the species in question. This initiated me to write this short note on the species involved.

TAXONOMY

Family Pisaniidae J.E. Gray, 1857
Genus *Sinetectula* Fraussen & Vermeij, 2021
Type species *Triton egregius* Reeve, 1844, by original designation

***Sinetectula carduus* (Reeve, 1844)**

Synonymy:
Triton carduus Reeve, 1844a: pl. 19 fig. 95
Triton elegans W. Thompson, 1845: 317, pl. 19 fig. 1 [junior homonym of *Triton* (*Pusio*) *elegans* J.E. Gray, 1833]
Buccinum (*Pollia*) *farinosum* A. Gould, 1850: 152
Hindsia angicostata Pease, 1860: 142

This species was known as *Engina farinosa* (Gould, 1850) in the literature, e.g. Robin, 2008 (189 fig. 10). The discovery of an older name for this species again changes the name, now to *Sinetectula carduus* (Reeve, 1844). The holotype of *Triton carduus* is figured by Cernohorsky (1980: 139, fig 8) and clearly shows the same species as which was known as *Engina farinosa* before.
Sowerby III (1859: 87, pl. 220 fig 14) regarded this species as a *Nassaria* Link, 1807 species (genus now in Nassariidae), but still used by e.g. Abbott & Dance (1983: 167, fig. lower left, as *Nassaria pusilla* (Röding, 1798), a misapplied name). E.A. Smith (1894: 163) stated it was certainly not a *Nassaria* species, but thought the species may be placed in *Colubraria* Schumacher, 1817 (Colubrariidae). Cernohorsky (1980: 140) regarded it as an *Engina* s.l. species, together with *Engina egregia* (Reeve, 1844) and *Engina farinose* (three sp.). As the species differed substantially from other species of the genus *Engina*, it was finally transferred to the newly erected genus *Sinetectula* by Fraussen & Vermeij (2021). Cernohorsky's paper was overlooked by Fraussen & Vermeij in their 2021 publication (K. Fraussen, pers. comm. 2023).

Fig. 1. *Sinetectula carduus* (Reeve, 1844). Mozambique, Nampula Prov., Nacala Bay, 3-5 m depth, length 18.7 mm, coll. H. Dekker nr. 39090.

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Content this issue: