A new *Scutarcopagia* Pilsbry, 1918 species (Bivalvia, Tellinidae) from Indonesia, with notes on other species in this genus

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ABSTRACT

A species of *Scutarcopagia* Pilsbry, 1918 from Indonesia and the Philippines is described as new species. Other species in this genus are discussed. *S. elizabethae* (Pilsbry, 1918) from Hawaii and *S. delicatula* (Selli, 1974) from the Red Sea are at present regarded as synonyms of *S. scobinata* (Linnaeus, 1758) but herein restored as valid species. The group of elongated species, which are now also recognised as part of the genus *Scutarcopagia*, have been reclassified into the genus *Tellinella* Mörch, 1853. The genus-group name *Smithsonella* Afshar, 1969, which has as type species one of those elongated species, is a synonym of *Tellinella*. *Tellina* (*Arcopagia*) *cratitia* A. A. Gould, 1861 is demonstrated to be a nomen dubium.

Key words – Tellinidae, *Scutarcopagia*, taxonomy, new species Indonesia, Philippines

INTRODUCTION

The Tellinidae is a family of bivalves that includes numerous species, all divided into various subfamilies and genera (Huber et al., 2015). One of the many genera is the genus *Scutarcopagia* Pilsbry, 1918. It is characterized by an *Arcopagia*-like shell form, but it has the outer sculpture formed by many small scales. This kind of sculpture of scales is not unique for this genus, but also several elongated tellinid species possess a similar sculpture, ranging from non, partial covered, to totally scales covered shells. Given their distinctly different and extremely elongated shells, I do not regard them as *Scutarcopagia* species in this respect, I follow the earlier authors predating Huber et al. (2015), and think they belong to *Tellinella* Mörch, 1853. The genus *Scutarcopagia* contains only a few species, *S. scobinata* (Linnaeus,

1758), *S. linguafelis* (Linnaeus, 1758), *S. elizabethae* (Pilsbry, 1918) and *S. delicatula* (Selli, 1974). The first two species were already recognized by many previous authors, the latter two are not well-known. A new species is being introduced alongside them.

Abbreviations

H	Height of the shell measured from the apex to dorsal margin
L	Length of the shell
T	Thickness of shell, both valves
HD	(collection of) Henk Dekkers, Winkel, the Netherlands
MSNUP	Museo di Storia Naturale dell'Università di Pisa, Pisa, Italy

TAXONOMY

Superfamily Tellinoidea Blainville, 1814
Family Tellinidae Blainville, 1814
Subfamily Tellininae Blainville, 1814

Scutarcopagia Pilsbry, 1918

Type species: *Tellina scobinata* Linnaeus, 1758 (type by original designation).

Synonym: *Smitharcopagia* Afshar, 1969, type species *Tellina linguafelis* Linnaeus, 1758 (type by original designation).

I agree with Huber et al. (2015: 581) that *Smitharcopagia* Afshar (1969: 48), introduced as a subgenus of *Arcopagia* T. Brown, 1827, is a synonym of *Scutarcopagia*. The type species *Tellina linguafelis* has a similar form, sculpture and hinge characteristics as *Tellina scobinata*.

The *Tellina pulcherrima* G. B. Sowerby I, 1825 (Pl. 2 figs 2a-d) species group possess a sculpture of concentric ridges, which are nearly completely expressed as scales. In this sense they are similar in sculpture to *Scutarcopagia* species. Huber et al. (2015: 581) their arguments that elongate shells of *Scutarcopagia scobinata* (Huber et al., 2015: 174, figs lower row) are close in form to some of the elongate shells of species within this *Tellina pulcherrima* group is not followed here. The shell form of *S. scobinata*, and other typical *Scutarcopagia* species, is much more rounded than the *T. pulcherrima* species group. This is probably the result of a different way of living, meaning they will have a different position when buried in the sediment. Several species which Huber et al. (2015: 581) considered to belong to *Tellinella* Mörch, 1853 (*T. dissimilis* Deshayes, 1855; *T. philippii* (Philippi, 1844); *T. regina* (Salisbury, 1934); *T. severnsi* Huber et al., 2015) do also possess scales in their sculpture, but the scales do not cover all parts of the shell. *Tellinella* sensu Huber et al., 2015 therefore already contains species with commarginal sculpture of ridges, and species with ridges partly presented as scales. The genus *Tellinella* has now been expanded to include elongated species whose entire shells are covered in scales. The *Tellina pulcherrima* species group is therefore herein regarded as belonging to the genus *Tellinella* and not as before (Huber et al., 2015: 581) to *Scutarcopagia*. Resulting in the new combinations: *Tellinella pulcherrima* (Sowerby I, 1825), *T. monika* (Huber et al., 2015), *T. nelly* (Huber et al., 2015),

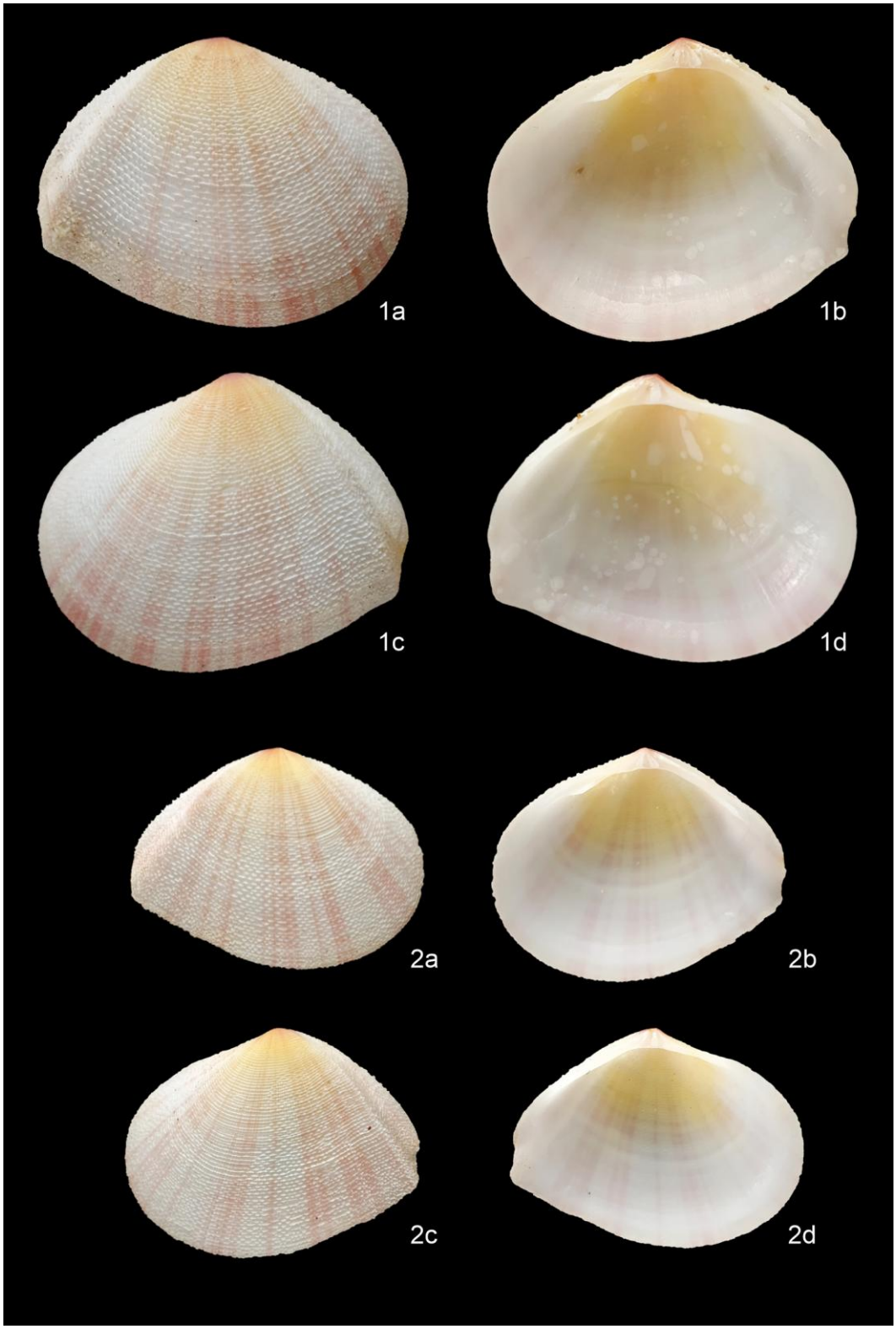
T. semiaspera (Deshayes, 1855), *T. squamulosa* (A. Adams, 1850) and *T. verrucosa* (Hanley, 1844).

Afshar (1969: 38) introduced the subgenus *Smithsonella* in the genus *Tellina* Linnaeus, 1758, with as type species *Tellina pulcherrima* G. B. Sowerby I, 1825 (Pl. 2 figs 2a-d). Since there appears to be no justification for recognising *Smithsonella* as a valid genus or subgenus, it is herein considered synonymous with *Tellinella*.

There is also discussion on the status of two described species of *Scutarcopagia*. *S. delicatula* (Selli, 1974) (Pl. 4 Figs 1-2), endemic to the Red Sea, is considered to be a synonym of *S. scobinata* (Pl. 3 Figs 1-2) by Huber et al. (2015: 581). But comparing a number of specimens from the Red Sea and from elsewhere in the Indo-Pacific revealed that the scales on Red Sea specimens are consistently much finer. Therefore, Red Sea specimens were considered a separate subspecies by Mienis (2006: 7, fig. 2) and as valid species by Rusmore-Villaume (2008: 246, 247 figs) and Blatterer (2019: 125, fig. 18a-f). I agree with the latter view that *S. delicatula* is a valid species. The figure given by Oliver (1992: pl. 30 fig. 1a-b) is a clear specimen of *S. scobinata* and therefore not originating from the Red Sea, the locality of his figured shell is not mentioned in his book. The coarse sculptured form of *S. scobinata* (Pl. 3 Fig. 1a-d) is not found in the Red Sea. However, there are some finer sculptured shells of this species found in its range (Pl. 3 Fig. 2a-b), which may indicate that *S. scobinata* is a species complex, but no molecular data is available to solve this problem.

Another species regarded as valid is *Scutarcopagia elizabethae* (Pilsbry, 1918), described as *Tellina* (*Arcopagia*) *elizabethae* Pilsbry (1918: 331, pl. 22 fig. 8) from Hawaii (Pl. 5 Figs 1-2). It was regarded as valid species by Mienis (2006: 7), but as synonym by Huber et al. (2015: 581). It is more similar to the Red Sea species *S. delicatula* in having finer scales, than to *S. scobinata* which has typical larger sized scales. Furthermore, this Hawaiian species differs from both *S. scobinata* and *S. delicatula* in being snow-white inside (Pl. 5 Figs 1b,d & 2b,d), instead of being yellowish coloured, and in the more accentuated ridge on the posterior side. Next to *S. elizabethae*, also *S. scobinata* might occur in Hawaii, as Severns (2011: 478, pl. 219 fig. 8) figures a typical specimen of the latter, although without mentioning locality details.

Mienis (2006: 7) mentions the subspecies *Scutarcopagia scobinata cratitia* (A. A. Gould, 1861)as a subspecies from southern Japan, with sculpture finer than typical *S. scobinata*. This species of 15 mm in length was described as *Tellina* (*Arcopagia*) *cratitia* A. A. Gould (1861, vol. 8: 29) from Japan, the RyuKyu Islands, 15 m depth. Gould mentions “Analogous to *T. scobinata*, but no species has been described with similar sculpture, which is much like that of *Venus marica*.”. No types of this species were recognized (Johson, 1964: 61). Looking at the Japanese tellinids described and figured by Okutani, 2017, a suitable candidate for the Gould



Pl. 1. ***Scutarcopagia radiisolis*** **sp. nov.** Fig. 1a-d. Holotype, Indonesia, Sumbawa, dived 5-10 m depth, July 2025, L 43.2 mm, MSNUP-0225-MOL. 1a-b right valve, 1c-d left valve. Fig. 2a-d. Paratype 1, Indonesia, Sumbawa, dived 5 m depth, L 34.3 mm, HD 56055. 2a-b right valve, 2c-d left valve.

species might be *Afsharius patagiatus* (Prashad, 1932) (Okutani, 2017: pl. 547 fig. 6). It is a tellinid, and sculpture looks a bit similar to the venerid *Timoclea marica* (Linnaeus, 1758).

However, since this is merely speculation and there are no type specimens, Gould's name should be regarded as a nomen dubium.

Scutarcopagia radiisolis sp. nov.

(Plate 1 Figs 1-2)

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Description. – Shell ovate, anteriorly widely rounded, posteriorly truncated. On the outside of the right valve a distinct ridge is running from the umbo towards the posteroventral margin, on the outside of the left valve this is a shallow groove. Shell clearly flexuous near the posterior margin. Lunula present, depressed, elongate, larger on left valve than right valve. Lunule in left valve is fused with the anterior lateral tooth and is when closed being partially overlapped by the lunula of the right valve. Sculpture consisting of fine radial striae, crossed by much stronger developed commarginal lamellae. On the umbo the lamellae are continuous, gradually changing into connected and unconnected fine scales, giving a very rough appearance. The pallial sinus is large, extending for 2/3 of shell length, pointing to the anterior side, partially confluent with the pallial line.
The shell is white, with the apex coloured dark red. The red colour changes rapidly into yellow, which fades towards the ventral margin to white. Narrow pinkish-red coloured rays run from the apex towards the ventral margin. Inner side umbonally yellow, with the pinkish-red coloured rays visible through the shell.

Holotype. – Indonesia, Sumbawa. Dived 5-10 m depth, July 2025, ex HD 55850, H 34.4 mm L 43.2 mm T 15.5 mm, MSNUP-0225-MOL, Pl. 1 Fig. 1a-d.

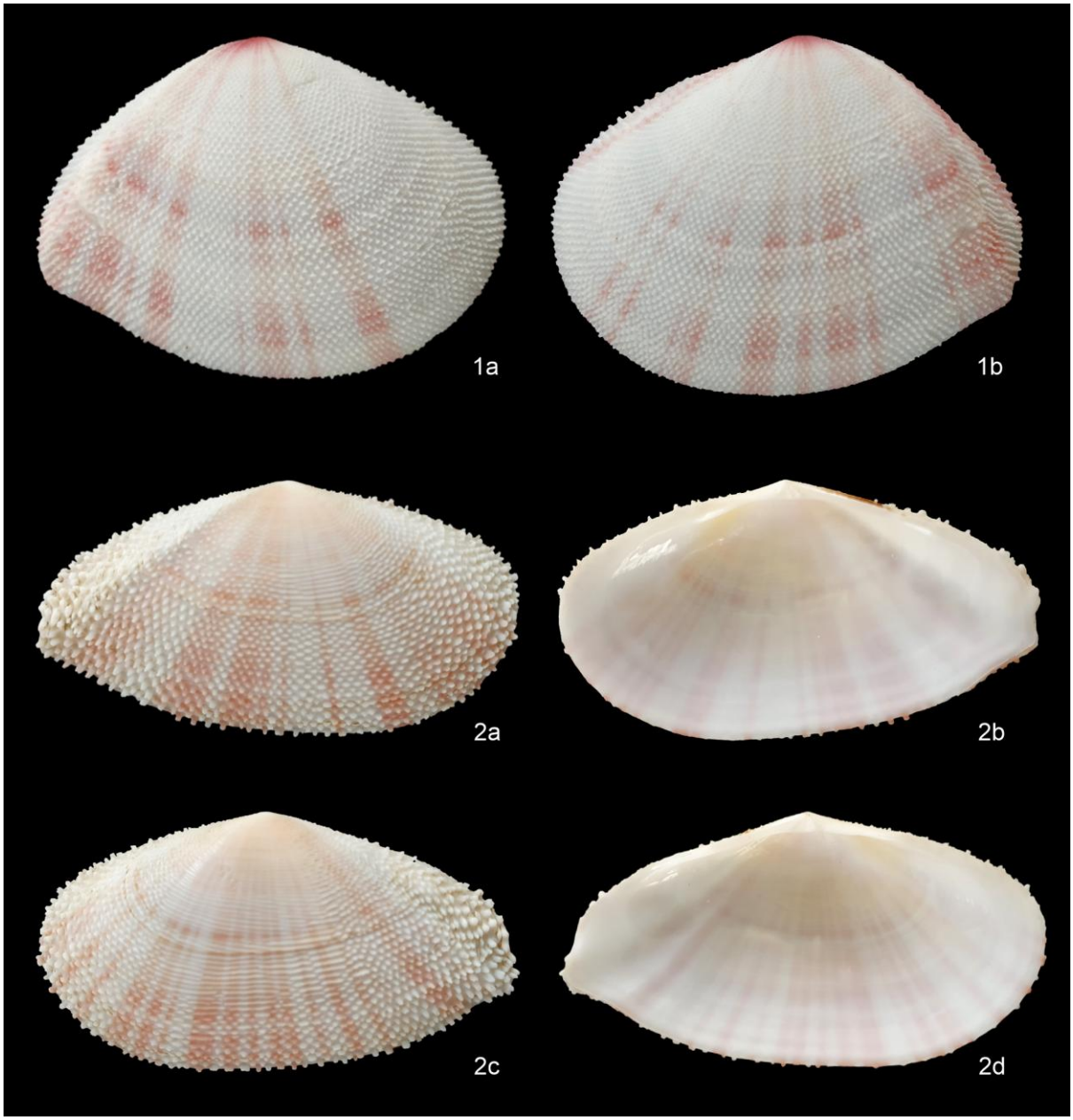
Paratypes. – Paratype 1, from type locality, dived 5 m depth, no date (obtained September 2025), H 26.8 mm L 34.3 mm T 10.7 mm, HD 56055, Pl. 1 Fig. 2a-d. Paratype 2, from type locality, dived 5-10 m depth, October 2025, L 26.6 mm, HD 56072.

Non-type material. – Philippines, N. Cebu, Daanbantayan, Maya, 0-28 m depth, April 2010, HD 55328.

Type locality. – Indonesia, Sumbawa.

Distribution. – Known from Indonesia, Sumbawa and from the Philippines, northern Cebu.

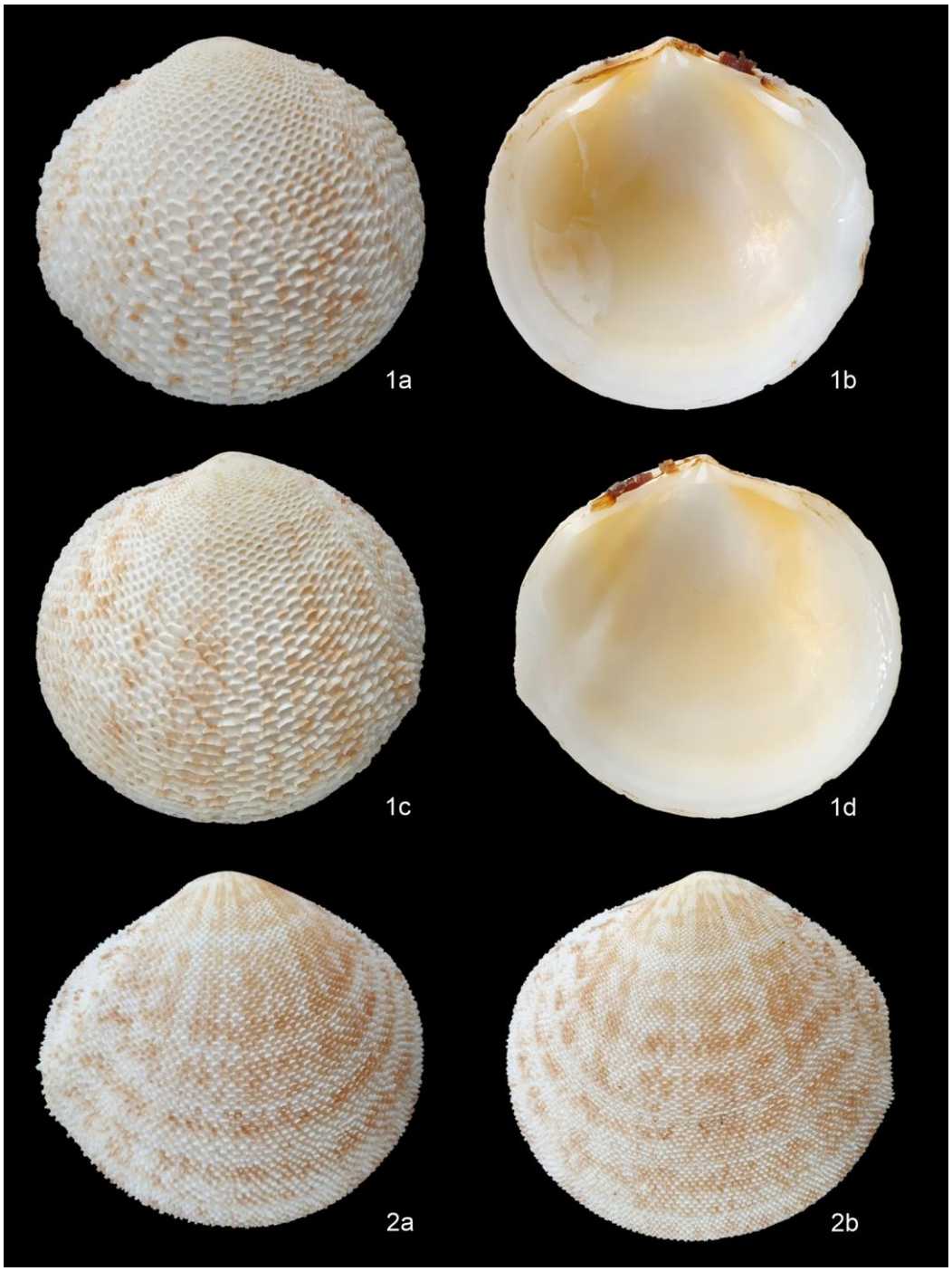
Etymology. – The red apex gradually becoming yellow combined with the red coloured rays gives the idea of sun rays, in Latin radiis solis, here combined to *radiisolis*. A noun in apposition. Noodt (1819: 130) was also inspired by the sun for choosing the name for his new species, *Tellina solaris*, but it turned out to be a synonym of *Scutarcopagia linguafelis*. Huber et al. (2015: 581).



Pl. 2. Fig. 1a-b. ***Scutarcopagia linguafelis*** (Linnaeus, 1758), Philippines, Mindoro Island, 1980-90's, L 49 mm, HD 37360. 1a right valve, 1b left valve. Fig. 2a-d. ***Tellinella pulcherrima*** (G. B. Sowerby I, 1825), Australia, Queensland, Turkey beach, dived, L 52 mm, HD 56015. 2a-b right valve, 2c-d left valve.

Comparison. – The new species *Scutarcopagia radiisolis* sp. nov. is most similar to *S. linguafelis* (Pl. 2 Fig. 1), but differs from it in having a shorter shell, a more pronounced posterior ridge and the presence of yellow colour below the umbo, absent in *S. linguafelis*. Noodt (1819: 130 nr. 367.25, pl. [3] fig.) described and figured *Tellina solaris* as a new species. This name was earlier mentioned by Röding (1798: 187), but this is a nomen nudum. Checking the description and figure in Noodt, I agree that *T. solaris* is a synonym of *S. linguafelis*, it was listed as such by Huber et al. (2015: 581).

From *S. scobinata* (Pl. 3 Figs 1-2) the new species differs in its more elongate shell, the more produced posterior ridge and the much finer scales which are straighter than the strongly curved scales in *S. scobinata*. The colour is also different between *S. radiisolis* sp. nov. and *S. scobinata*, the first one has continues pinkish-red radials in contrast to the brown interrupted radials in the latter, which is lacking the red umbo present in the new species.



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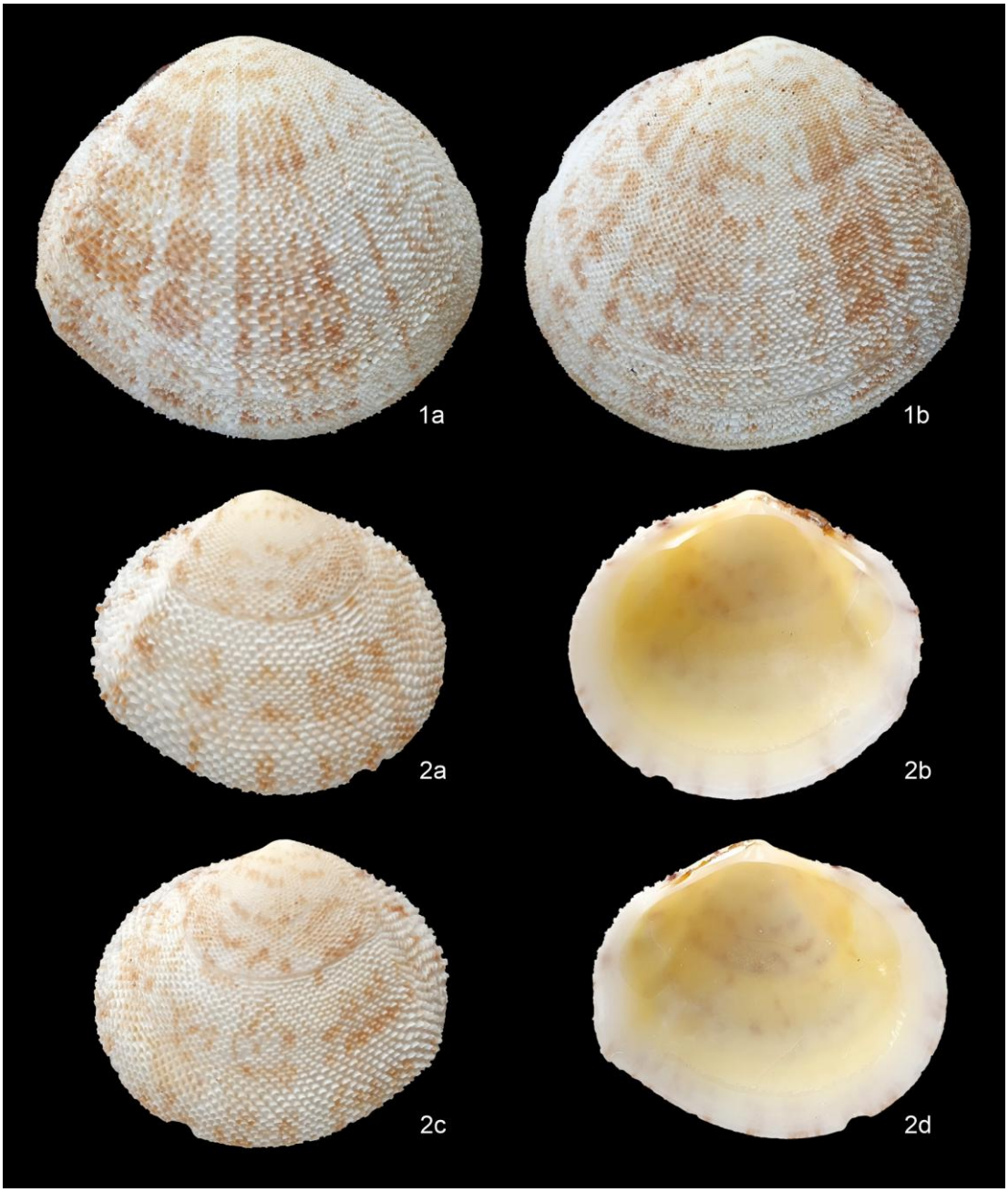
Pl. 3. *Scutarcopagia scobinata* (Linnaeus, 1758). Fig. 1a-d. Typical coarse sculptured specimen, Mauritius, St. Gilles, lagoon, L 50 mm, HD 20686. 1a-b right valve, 1c-d left

valve. Fig. 2a-b. Finer sculptured form, Philippines, Olango Island, dived in shallow water, August 2010, L 64 mm, HD 26352. 2a right valve, 2b left valve.



Pl. 4. ***Scutarcopagia delicatula*** (Selli, 1974). Egypt, Red Sea, Makadi Bay, 28 September 1999, coll. by H. Dekker, HD 3378. Fig. 1a-b. L 58 mm. 1a right valve, 1b left valve. Fig. 2a-d. Juvenile specimen, L 35 mm. 2a-b right valve, 2c-d left valve.

Pl. 5. ***Scutarcopagia elizabethae*** (Pilsbry, 1918). Fig. 1a-d. Hawaii, Oahu, dived, in sand, 20 m depth, L 47 mm, HD 36701. 1a-b right valve, 1c-d left valve. Fig. 2a-d. Hawaii, Oahu, L 47 mm, HD 20841. 2a-b right valve, 2c-d left valve.

Remarks. – The holotype and paratype 1 were said to come from Indonesia, Sumbawa, Labuan Bajo. In September 2023, Bavius Gras and I conducted a visit to this small fishing

village. It is situated on a small peninsula, for access connected with a dam to the coast. The peninsula is completely lined with fishermen's houses, surrounded by muddy sediments and on the lagoon side are mangroves. This indicates clearly that this village, which is frequently used as origin of shells from Indonesia by Indonesian shell dealers, is wrong. Making inquiries from the only shell dealer we met on this island revealed that shells actually originated from the smaller islands offshore Sumbawa, but also shells had their origine elsewhere in Indonesia. Therefor the type locality is here assumed to be Sumbawa.
The situation for Bungin Island, from which paratype 2 was said to originate, is similar, visited by us in May 2024. But around/near this island and nearby Kaung Island there are sand flats present. If shells in the shell trade originate from these flats is unknown, as we could not inspect them because of high tide. Shells discarded from meals by local people on Bungin Island consisted of *Anadara*'s (>90%), with a few venerid species and the strombids *Canarium anatellum* (Duclos, 1844) and *Laevistrombus turturella* (Röding, 1798). So, not any species which are regularly being sold by Indonesian shell dealers were among this locally collected shells.

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