

# Cancellariidae of Hansa Bay, Papua New Guinea (Mollusca: Neogastropoda)<sup>1</sup>

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## Abstract

The Cancellariidae collected by scientists working at the "King Leopold III" Biological Station on Laing Island, Hansa Bay, Madang Province, Papua New Guinea (PNG), have been studied. This material consists of 58 shells, belonging to six species: *Scalptia crenifera* (SOWERBY, 1832), *S. crossei* (SEMPER, 1861), *S. laingensis* VERHECKEN, 1989, *S. obliquata* (LAMARCK, 1822), *S. vangoethemi* sp. nov. and *Trigonostoma antiquatum* (HINDS, 1843). The collecting area was limited both geographically and bathymetrically, so that the results obtained probably reflect only part of the cancellariid fauna of PNG.

**Keywords:** Gastropoda, Cancellariidae, Indo-Pacific, Papua New Guinea, faunal list.

## Résumé

Tout le matériel de Cancellariidae collectionnés par des chercheurs belges du Station Biologique "Roi Léopold III" à Laing Island, Hansa Bay, province de Madang, Papouasie Nouvelle Guinée (PNG), a été étudié. Le matériel consiste de 58 coquilles, appartenant à six espèces: *Scalptia crenifera* (SOWERBY, 1832), *S. crossei* (SEMPER, 1861), *S. laingensis* VERHECKEN, 1989, *S. obliquata* (LAMARCK, 1822), *S. vangoethemi* sp. nov. and *Trigonostoma antiquatum* (HINDS, 1843). La collection a été obtenue dans une région limitée au point de vue géographique et bathymétrique; par conséquent, les résultats obtenus ici ne représentent probablement qu'une partie de la faune des Cancellariidae de PNG.

**Mots-clefs:** Gastropoda, Cancellariidae, Indo-Pacifique, Papouasie Nouvelle Guinée, liste faunistique.

## Abbreviations used

AV	author's collection
AMS	Australian Museum, Sydney, Australia
KBIN	Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium
MHNG	Muséum d'Histoire naturelle, Genève, Switzerland
MNHN	Muséum national d'Histoire naturelle, Paris, France
NHM	The Natural History Museum, London, Great Britain
NMNH	National Museum of Natural History, Smithsonian Institution, Washington DC, USA
PNG	Papua New Guinea

## Introduction

The marine gastropod family Cancellariidae has a worldwide distribution, but is particularly well represented in tropical and subtropical regions, where the highest number of cancellariid species occur along the axis Japan - Australia. Cancellariidae live from subtidal to abyssal depths, although there are only few shallow water species. The cancellariids living in the seas adjacent to Papua New Guinea (PNG) have been listed by previous authors: Philippines: 16 species (SPRINGSTEEN & LEOBRERA, 1986; PETIT & HARASEWYCH, 1986; BEU & MAXWELL, 1987); Indonesia: 25 species (VERHECKEN, 1986a; BEU & MAXWELL, 1987), and Australia: 48 species (GARRARD, 1975; VERHECKEN, 1991; BEU & MAXWELL, 1987).

The Cancellariidae from PNG are poorly known, also because it is not easy to correlate old citations of "New Guinea" to the modern state of PNG. The former Dutch New Guinea (now Irian Jaya) may have been referred to under that name, as well as nearby islands, e.g. New Britain or New Ireland. Moreover, in museum collections locality data of some shells labeled "New Guinea" most probably have been copied from reference works, e.g. TRYON (1885), for this was a rather common practice about a century ago.

A search in literature and museum collections yielded only five cancellariid species for PNG:

*Merica sinensis* (REEVE, 1856), Port Moresby, AV.  
*Plesiotriton mirabilis* BEU & MAXWELL, 1987, holotype (C140741 AMS), Rabaul, New Britain.  
*Sydaphera undulata* (SOWERBY, 1849a). NMNH 845169, Port Moresby; CERNOHORSKY, 1972: pl. 50 fig. 4.  
*Trigonostoma antiquatum* (HINDS, 1843). HINDS, 1843: 49; shells in MNHG and MNHN.  
*Tritonoharpa pseudangasi* BEU & MAXWELL, 1987, 2 paratypes (NHM 1969344), New Ireland.

## Material studied

The material studied consists of all cancellariids collected by scientists of the KBIN working at the "Koning Leopold III" Biological Station at Laing Island, Hansa Bay, Madang Province, PNG, over the period 1976 to 1994. It amounts to a total of 58 shells representing six species.

(1) Contribution n° 307: Leopold III Biological Station of Laing Island.

**Taxonomic review**

In cases where the locality of the type-material is unknown, the first locality given by later authors for other material of that species is indicated; this should not be interpreted as the type-locality.

Genus *Scalptia* JOUSSEAUME, 1887

JOUSSEAUME, 1887: 192, 213. COSSMANN, 1899: 15. WENZ, 1943: 1358. MARKS, 1949: 458. PETIT, 1980: 211.

TYPE-SPECIES, by original designation: *Cancellaria obliquata* LAMARCK, 1822.

DISTRIBUTION: Indo-Pacific, roughly west of 180° E.

REMARK: The genus *Scalptia* comprises a large number of often closely related species. Consequently, the literature abounds in incorrect identifications within this group, so that unfigured citations often are unreliable.

*Scalptia crenifera* (SOWERBY, 1832)  
(Fig. 3)

*Cancellaria crenifera* SOWERBY, 1832: 5, fig. 29. SOWERBY, 1849b: 453, figs. 84-86. REEVE, 1856: species 24 (textpages unnumbered), pl. 6 figs. 24a-b.

*Scalptia crenifera* - HABE, 1961: 436, pl. 23 fig. 7. KURODA, HABE & OYAMA, 1971: 203, pl. 54 fig. 4.

TYPE-MATERIAL: Three syntypes in NHM, reg. n° 1968423, up to 25.3 × 17.0 mm.

TYPE-LOCALITY: Ceylon (SOWERBY, 1832). KURODA, HABE & OYAMA (1971: 203, probably copying the locality given by REEVE (1856: species 24), erroneously give Manila as type-locality.

DISTRIBUTION: along the line Japan-Australia (VERHECKEN, 1986a: 49); Madras, India (AV); Gulf of Oman (MELVILL & STANDEN, 1901).

PNG MATERIAL: 11 shells, Hansa Bay, off Sisimangum Village, 6 m, TURSCH & PIERRET, 1975-79, I.G. N° 26,132. 1 shell, Hansa Bay, Duangit, 45 m, TURSCH & PIERRET, 1975-79, I.G. N° 26,132. 2 shells, Hansa Bay, Duangit N., dredged 45 m, TURSCH, 1978, I.G. N° 25,955. Dimensions up to 18.7 × 13.1 mm.

REMARKS: This is one of the commoner Indo-Pacific Cancellariidae. I cannot agree with GARRARD (1975: 30) who, referring to TRYON (1885: 80), considers this species together with others as "probably only varieties of *C. scalarina* LAMARCK". For a discussion on the latter name, cfr. VERHECKEN (1986b: 146).

*Scalptia crossei* (SEMPER, 1861)  
(Fig. 2)

*Cancellaria serrata* REEVE, 1856: species 63, pl. 14 figs. 63a-b.

*Cancellaria crossei* SEMPER, 1861: 257. (nom. nov. for *C. serrata* REEVE, non BRONN, 1831).

*Cancellaria (Trigonostoma) crenifera* SOWERBY var. *serrata* - MELVILL & STANDEN, 1901: 451.

*Scalptia crossei* - PETIT, 1980: 212, fig. 2. ABBOTT & DANCE, 1982: 229 unnumbered fig.; VERHECKEN, 1986a: 49, figs. 19-20.

*Trigonostoma scalarina* - GARRARD, 1975, fig. 3(14) (non *C. scalarina* LAMARCK).

TYPE-MATERIAL: two syntypes of *C. serrata* REEVE: NHM 1968407, 17.3 × 11.7 mm and 17.1 × 12.0 mm.

TYPE-LOCALITY: Unknown to REEVE (1856) for *C. serrata*. MELVILL & STANDEN (1901) first indicate a locality: Gulf of Oman.

DISTRIBUTION: "North-eastern South Africa to the Philippines" (PETIT, 1980: 213); Northern and Eastern Australia (GARRARD, 1975, under the name *T. scalarina*).

PNG MATERIAL: 4 shells, Hansa Bay, TURSCH & PIERRET, 1975-79, I.G. N° 26,132. Dimensions up to 19.1 × 13.0 mm.

REMARKS: This species is very variable in shell form; this has led to a great confusion in identifications. The name *S. crossei* is here interpreted as explained earlier (VERHECKEN, 1986a: 50). The shells of this species differ from those of *S. crenifera* in being more slender, having a narrower umbilicus and the columella less curved abaxially.

*Scalptia laingensis* VERHECKEN, 1989  
(Fig. 7)

*Scalptia laingensis* VERHECKEN, 1989: 97, figs. 1, 2, 5.

TYPE-MATERIAL: Holotype: KBIN, Mollusc Type n° 446, I.G. N° 26132, TURSCH & PIERRET, 1975-79, 10.1 × 6.5 mm.

2 Paratypes: KBIN, I.G. N° 26132, same locality data.

TYPE-LOCALITY: Duangit, Hansa Bay, 45 m.

DISTRIBUTION: apart from the type material, a few more shells are now known: one specimen from 15-30 m, off Hoskins, W. New Britain (R. E. PETIT, *in litt.* 9-iii-1990); and NMNH has specimens tentatively identified as this species, with reliable locality data (U.S. Bureau of Fisheries Stations) from the Philippines (Luzon; Corregidor, Palawan), 50-77 m, and from off Sandakan Island, Borneo, 70 m.

PNG MATERIAL: the type-material only; dimensions up to 10.2 × 6.5 mm.

REMARKS: NMNH has 2 shells from Jolo Island, Philippines (Cat. N° 239530), one of which has been tentatively identified als *S. laingensis* (the other one is a *S. bicolor* (HINDS, 1843)). A note accompanying the shells states: "from pearl oysters. BARTSCH", but the nature of the cancellariid's relation to the oyster is not stated. This knowledge might possibly give a clue to the feeding habit of this species. Also other cancellariids have been found in close association with living molluscs (cfr. VERHECKEN, 1986b: 139). Extremely little is known as to the feeding habits of Cancellariidae. In the literature, their food is supposed to be "soft-bodied microorganisms" (OLSSON, 1970: 21), or the animals are thought to be "herbivorous" (SPRINGSTEEN & LEOBRERA, 1986: 76), or "probably carnivorous" (RICHARDS, 1989: 71). For one species, parasitizing of a fish by sucking of blood has been demonstrated (O'SULLIVAN, McCONNAUGHEY & HUBER, 1987).

*Scalptia obliquata* (LAMARCK, 1822)

(Fig. 1)

*Cancellaria obliquata* LAMARCK, 1822: 115. SOWERBY, 1832: 4, fig. 26. KIENER, 1841: 21, pl. 6 fig. 2.

*Cancellaria (Trigonostoma) obliquata* - SCHEPMAN, 1911: 264.

*Trigonostoma obliquata* - CHENU, 1859: 276, fig. 1830. CERNOHORSKY, 1972: 181, pl. 50 figs. 6-6a. GARRARD, 1975: 26, fig. 3(17).

*Scalptia obliquata* - PETIT, 1980: 211, fig. 1. ABBOTT & DANCE, 1982: 228 last figure (last-but-one figure is erroneously named). VERHECKEN, 1986a: 45, fig. 17.

TYPE-MATERIAL: Holotype: MHNG 1097/91, 18.4 × 14.2 mm.

TYPE-LOCALITY: Unknown to LAMARCK. The first locality citation is by SOWERBY (1832: 4): Haynam (= ? Hainan Island, China). GARRARD (1975: 27), without citing a source, gives New Caledonia as type-locality.

DISTRIBUTION: in the area Japan to Australia, but apparently very rare off the Australian continent; New Caledonia; East coast of Africa (VERHECKEN, 1986a: 45); Tahiti (?) (COUTURIER, 1907: 177, based on a shell in an ethnological collection). Apparently absent along the northern coasts of the Indian Ocean.

PNG MATERIAL: 27 shells, Hansa Bay, Duangit, 45 m, TURSCH & PIERRET, 1975-79, I.G. N° 26132. 3 shells, Laing Biological Station, TURSCH & PIERRET, 1976-77, I.G. N° 25930. 1 shell, Hansa Bay, off Sakula River mouth, 10 m, muddy sand, PIERRET, 27-vii-1980, I.G. N° 26.253. Dimensions up to 15.3 × 11.5 mm.

REMARKS: This species is one of the most commonly found Cancellariidae in its areas in the Indo-Pacific. Its distribution, as far as actually documented, is discontinuous: along the axis Japan-Australia, and eastern Africa. This is not a unique feature in Cancellariidae: e.g. *Cancellaria patricia* THIELE, 1925 (cfr. VERHECKEN, 1991), and *Plesiotriton vivus* BEU & MAXWELL, 1987. The small size of the PNG shells is remarkable: a mean height of 12.2 mm (standard deviation 1.3 mm), with a maximum of 15 mm. Indonesian shells of this species reach a height of up to 18.5 mm (VERHECKEN, 1986a: 45); Philippine shells up to 20 mm (SPRINGSTEEN & LEOBRERA, 1986: 78); for Australia (mostly New Caledonia) the average size is 18 mm, with a maximum of 20 mm (GARRARD, 1975: 27). A shell from Moçambique (AV) is 21.5 mm high. The reason for the small size of the PNG material (with a statistically valid sample size) is not known. Almost all shells have the lip thickened into a varix; this shows that these shells are not juveniles.

*Scalptia vangoethemi* sp. nov.

(Figs. 4 - 6)

TYPE-MATERIAL: Holotype: 15.6 × 10.2 mm, Talikod Island, Samal, Davao Province, Philippines, 55 m. (ex colln. AV; don. A. DELSAERDT), KBIN Mollusc type n° 472 (Fig. 4).

Paratype 1: 13.7 × 8.7 mm, Laing Island, Besarpap Reef, 40-45 m, coralline sand, leg. J. PIERRET, 8.xii.1973, I.G. n° 26730 (Fig. 6). Paratype 2: 9.1 × 6.1 mm, N. Duangit, dredged 45 m, leg. B. TURSCH, 1978, I.G. n° 25955. Paratype 3: 8.8 × 6.1 mm, S. E. Duangit, 50 m, fine slightly muddy sand, hand-dredge, leg. J. PIERRET, 4.viii.1979, I.G. n° 26086 (Fig. 5).

TYPE-LOCALITY: Talikod Island, Samal, Davao Province, Philippines, 55 m.

DISTRIBUTION: only known from the type-locality and from Laing Island, Besarpap Reef and Duangit, PNG.

PNG MATERIAL: Paratypes 1 - 3.

ETYMOLOGY: This name honours Dr. J. VAN GOETHEM, Head of the Department of Invertebrates and of the Malacology Section of the KBIN.

DESCRIPTION: Shell thin, pale beige; the spire is tinged in a very pale purplish pink. On the body-whorl there are two slightly darker bands, mainly on the axial ribs. Shell dimensions up to 15.6 × 10.2 mm.

Protoconch pale beige, naticiform with impressed suture, not deviated from teleoconch shell axis, multispiral with 1 7/8 - 2 whorls; maximum diameter 1.1 - 1.3 mm, visible height 0.9 - 1.0 mm. Protoconch surface smooth and shiny. Transition to teleoconch neatly marked but not very conspicuous.

Teleoconch with up to 4 slightly rounded whorls, with a flat sutural shelf almost perpendicular to shell axis. Axial sculpture consists of well-defined ribs with a rounded cross-section, width varying from 0.1 to 0.5 mm from first to fourth whorl; numbers of ribs on the first to fourth whorl are respectively 11-15, 12-14, 13-16 and 16. Ribs start at the anterior suture in an almost orthocline direction, but at about half height of the whorl the direction becomes clearly prosocline. From the second teleoconch whorl on, the axial ribs above the shoulder of the whorls form a rounded coronation, bent slightly in opisthocline direction and thus deviating from the general line of the ribs. This coronation continues, in the same width and height, on the sutural shelf to about half the shelf width at most. Then it narrows down into a low ridge with triangular cross-section, crossing the shelf obliquely until the suture. At first sight, this confers to the sutural area a canaliculate look, although the shelf is quite flat. Between the axial ribs, axial microscopic thin lamellae can be seen, also continuing in the otherwise unsculptured areas between the ridges on the sutural shelf.

Spiral sculpture consists of well-marked rounded bands of 0.1 mm width; there are 4-6, 5-6 and 5-6 bands on respectively the first to third whorl. From the second whorl on, narrower second-order spirals may occur between them, and on the third whorl third-order spirals are visible. The spirals remain in strength while crossing over the axial ribs. This results in a rather rough shell sculpture.

Aperture white, elongated semicircular, truncated adapically. The holotype has 2 rather strong and one small teeth close to each other inside the truncated part of the outer lip. Columella straight, with three oblique folds of about the same strength; only in the smallest shell the abapical fold is weaker. A few granulations may be present on the columellar area near the folds. Umbilicus open and deep but not wide; partly covered by the thin columellar callus. Outer lip thin; 16 or 19 lirae inside the larger shells.

REMARKS: The paratypes, from PNG, are juveniles with the outer lip not fully developed; paratype 1 has the outer lip partly broken away. Therefore, the apparently adult shell from the Philippine locality has been chosen as holotype.

The present species resembles most *Scalptia articularoides* VERHECKEN, 1995 (= *Cancellaria articularis* sensu SOWERBY (II), 1949b, non *Cancellaria articularis* SOWERBY (I), 1832), but differs from it in having a rather

rough surface (in contrast to the much smoother and shiny surface of *S. articularoides*), and in having the shoulder coronations much more developed, forming solid rounded rectangular structures (in *S. articularoides* these are thin scales reflected away from the aperture). Another difference is the direction of the columella and the strength of its folds: in the larger shells of *S. vangoethemi* the three folds have about the same strength, with the abapical one slightly stronger; in *S. articularoides* the folds decrease in strength from the adapical to the abapical fold. This visually confers to the columella a slight abaxial twist in *S. vangoethemi*, but a slight adaxial direction in *S. articularoides*.

Slender juvenile shells of the usually globose *Scalptia obliquata* (LAMARCK, 1822) (cfr. fig. 1), occurring in the same area, resemble *S. vangoethemi*, but can be distinguished by their less defined axial ribs, the smooth shiny surface between them (spiral lines almost missing there), and the short brown spiral lines on the axial ribs. In size, the new species somewhat resembles *Scalptia amasia* (IREDALE, 1930) from south-eastern Australia, but the latter shells generally have a dark brown color, are more globose and, importantly, have a paucispiral protoconch.

*Scalptia vangoethemi* differs from *S. textilis* (KIENER, 1841), which occurs in the Pacific in about the same area, in lacking the dark brown shell color, having a larger protoconch, a less acuminate spira and a more elaborate spiral sculpture. *Scalptia scalata* (SOWERBY, 1832) from Mauritius differs from *S. vangoethemi* in its wider concave sutural ramp, and its paucispiral protoconch, versus the multispiral protoconch of *S. vangoethemi*. *S. contabulata* (SOWERBY, 1832), closely related to *S. scalata* but widely distributed in the Indo-Pacific, also has a paucispiral protoconch and has a broad flat sutural ramp without the varices on the shoulder.

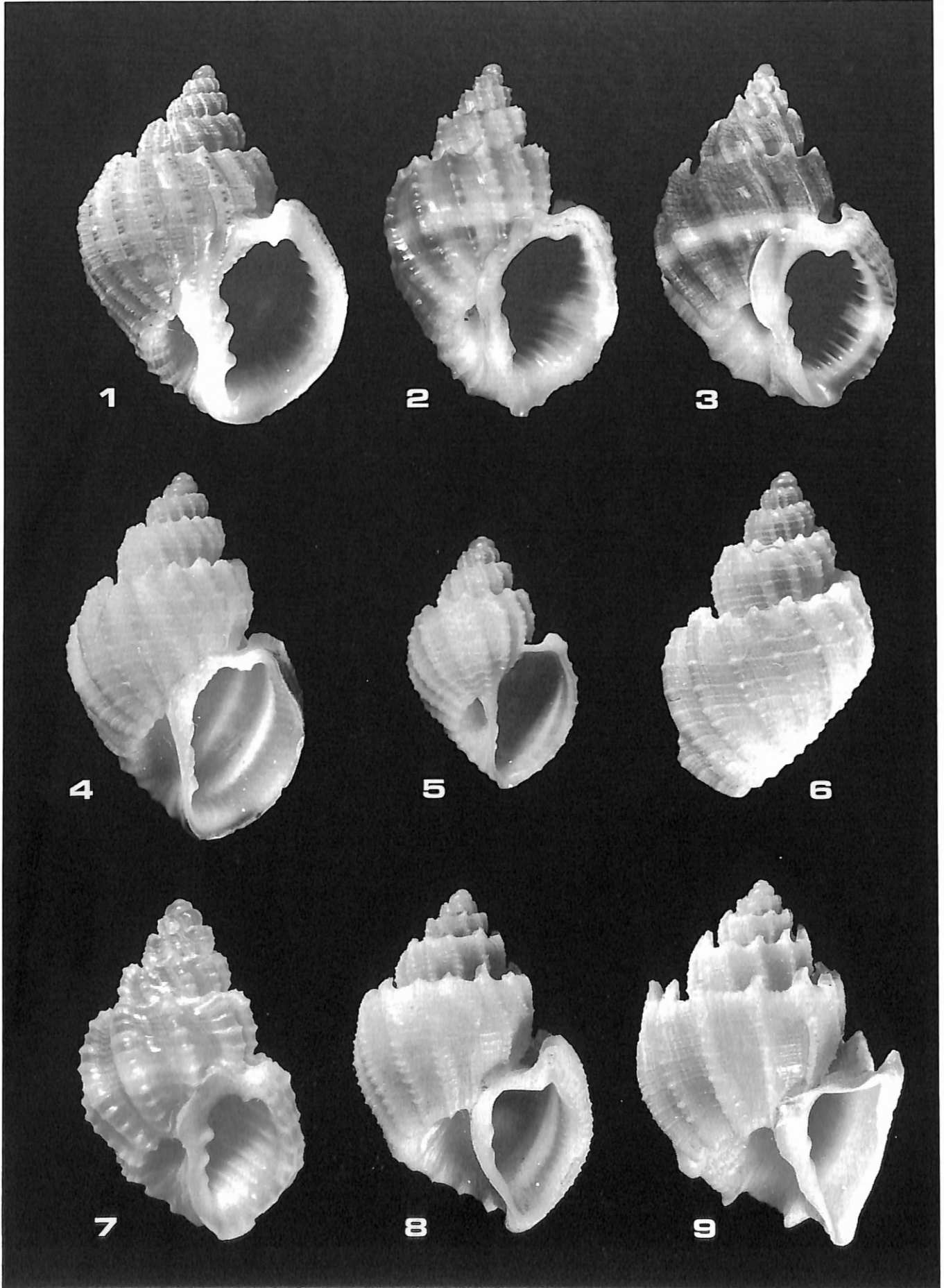
#### Genus *Trigonostoma* BLAINVILLE, 1827

BLAINVILLE, 1827: 652. COSSMANN, 1899: 24. KOROBKOV, 1955: 325. WENZ, 1943: 1358. *Trigona* PERRY, 1811 (non JURINE, 1807).

TYPE-SPECIES, by monotypy: *Delphinula trigonostoma* LAMARCK, 1822 (= *Buccinum scalare* GMELIN, 1791; = *Trigona pellucida* PERRY, 1811).

DISTRIBUTION: Indo-Pacific and Central West-America.

Fig. 1. – *Scalptia obliquata* (LAMARCK), 15.3 × 13.7 mm, Duangit. Fig. 2. – *Scalptia crossei* (SEMPER), 19.1 × 13.0 mm, Hansa Bay. Fig. 3. – *Scalptia crenifera* (SOWERBY), 18.7 × 13.1 mm, off Sisimangum Village, Hansa Bay. Figs. 4-6. – *Scalptia vangoethemi* sp. nov. Fig. 4. – holotype (KBIN Mollusc type n° 472), 15.6 × 10.2 mm, Talikod Island, Philippines. Fig. 5. – paratype 3, 8.8 × 6.1 mm (juvenile), Duangit. Fig. 6. – paratype 1 (outer lip broken), 13.7 × 8.7 mm, Besarap Reef, Laing Island. Fig. 7. – *Scalptia laingensis* VERHECKEN, holotype (KBIN Mollusc type n° 446), 10.1 × 6.5 mm, Duangit. Figs. 8-9. – *Trigonostoma antiquatum* (HINDS), Duangit. Fig. 8. – shell with thickened outer lip, 13.9 × 9.8 mm. Fig. 9. – shell lacking thickened outer lip, 14.7 × 10.8 mm.



*Trigonostoma antiquatum* (HINDS, 1843)  
(Figs. 8 - 9)

*Cancellaria antiquata* HINDS, 1843: 49; 1844: 43, pl. 12 figs. 17-18. SOWERBY, 1849b: 458, pl. 93 fig. 27. REEVE, 1856: species 74 (textpages unnumbered), pl. 16 figs. 74a-b. LOEBBECKE, 1886: 57, pl. 16 figs. 9-10.

*Trigonostoma antiquatum* - PETIT & HARASEWYCH, 1987: 79.

TYPE-MATERIAL: Lectotype (VERHECKEN, 1986a: 60): NHM 1968416/1, 15.0 × 11.4 mm; two paralectotypes NHM 1968416/2-3; all from the Isle of Corregidor, Philippines (CUMING colln.).

TYPE-LOCALITY: Isle of Corregidor, Philippines (ICZN 74 a iii).

GARRARD (1975: 21) gives as type-locality "New Guinea, 40 metres", which is the locality given by HINDS (1843: 49) for the shells collected by the "Sulphur" expedition; but this is overruled by the lectotype designation.

DISTRIBUTION: Northern Indian Ocean to Papua New-Guinea and Solomon Islands (cfr. Remarks); Philippines.

PNG MATERIAL: 4 shells, dimensions up to 14.7 × 10.8 mm, Hansa Bay, Duangit, 45 m. B. TURSCH & J. PIERRET, 1975-79. IG. N° 26,132.

DESCRIPTION of PNG shells: Shell conispiral, with angulated coronated whorls and a deep canaliculate sutural area. Colour white.

Protoconch white, multispiral, naticiform with impressed sutures, slightly oblique to teleoconch shell axis; 2 1/2 - 2 7/8 whorls with a sculpture of only microscopic growth-lines; only on last 1/8 whorl some softly indicated spiral lines. Maximum diameter 1.2-1.3 mm, visible height 0.8-1.1 mm. Transition into teleoconch fairly well marked by a thickened growth line, and by the weak start of the teleoconch spiral sculpture

Teleoconch with up to 4 1/2 whorls; sutural area broadly deeply canaliculate; shoulder formed by a narrow rounded hollow band raised above the sutural plane and bearing prominent pointed hollow coronations open in the direction of the aperture and pointing slightly adaxially. The sculpture of the sutural plane consist of microscopic growth-lines and, on the younger whorls, up to 12 smooth spiral lines. Axial sculpture consists of ribs, of which there are 8-10, 9-11, 9-12, and 11-12 on first to fourth teleoconch whorl respectively. Adapically, the ribs end in the shoulder coronations, and abapically in small rounded triangles on the umbilical ridge, formed by the siphonal fasciole.

Spiral sculpture of softly indicated bands and lines; the bands become stronger when crossing the axial ribs, where elevated ridges of 0.1 mm width are formed. The bands occur in alternating strength: stronger primary bands and weaker secondaries, but sometimes the difference is not very clear. Between these bands, the flat zones have up

to 5 - 6 microscopic spiral lines. The number of bands on the body-whorl varies from 27 to 41.

Aperture rounded trigonal. Posterior canal well indicated, bordered by a small tooth on the parietal side; siphonal canal weak. Columella curved abaxially; two weak folds (posterior one the strongest) placed at half height; sometimes there is an indication of a very weak third fold near the siphonal canal. The outer lip, white when fully developed, is slightly expanded abapically; bordered by a thickened axial rib consisting of multiple (up to some 20) lamellae. This varix runs along the outer lip, surpasses the abapical point of the siphonal canal and then disappears behind the inner lip on the first mm inside the umbilicus.

When fully developed, the outer lip has 13-14 short lirations inside. Deeper inside, the aperture has a pale orange colour; the broad border of the aperture may be dark brown on its anterior parts.

Umbilicus wide, open up to the protoconch, bordered by the well-marked siphonal fasciole on which the anterior parts of the axial ribs form a sawteeth-like sculpture.

REMARKS: This species was originally described from New Guinea ("Sulphur"-expedition) and the Philippines (CUMING material). The whereabouts of the "Sulphur" shells is unknown (PETIT & HARASEWYCH, 1987: 79), only the CUMING material is now in NHM. A lectotype has been selected from the latter shells (VERHECKEN, 1986a: 60). This implies that the locality of the lectotype (NHM 1968416.1) is the type-locality of *T. antiquatum*. According to PETIT & HARASEWYCH (1987), "the Philippine locality given for the CUMING specimens is suspect, as additional specimens have not been found even though the Corregidor Island area has been well collected. The possibility of incorrect locality data cannot be ignored, especially as other CUMING material stated to be from the Philippines,..., has been shown to be from localities far removed from the Philippines." Unfortunately, the stated locality cannot be verified now for the CUMING specimens of *T. antiquatum*. PETIT & HARASEWYCH (1987) did not find *T. antiquatum* among shells of *Trigonostoma* s. s. from the Philippines. Possibly, the Philippine type-locality may need to be corrected when much more data become available.

Shells cited from Japan and the Philippines under the name *T. antiquatum* belong to the species *Trigonostoma thysthlon* PETIT & HARASEWYCH, 1987. GARRARD (1975: 20) gives no proof that *T. antiquatum* occurs in Australia, since his figure (1975: pl. 3 fig. 16) represents a shell of *T. scalare* (GMELIN), and his statement later (GARRARD, 1983: 6) that "the name *T. antiquata* (HINDS) appears to be a synonym" of '*T. trigonostoma* LINNAEUS, 1758' " (sic) (= *T. scalare* (GMELIN, 1791) cannot be accepted. The single citation of *T. antiquatum* from Indonesia, a juvenile shell from Madura Strait, published (VERHECKEN, 1986a: 70) before the description of *T. thysthlon*, has now been re-examined. It conforms fig. 9 given by PETIT & HARASEWYCH (1987): it is indeed a *T. antiquatum*, thus confirming the occurrence of this species in Indonesia.

Four more shells of this species are known from Guadalcanal, the Solomon Islands, relatively close to PNG. All were taken since 1987 by divers: at 50 m (AV, 16.2 × 10.9 mm); near Honiara, 30-45 m (colln. A. DELSAERDT, Aarschot, Belgium, 13.4 × 10.1 mm); at 20-25 m on silty sand off Ranadi (EVERSON, 1994: 8, 13.3 × 10.0 mm); at 30 m in mud and silt with debris from nearby river, Kakambona (colln. R. E. PETIT, North Myrtle Beach, USA; 16.8 × 12.0 mm). The presence of these eight shells in the area PNG - Solomon Islands clearly warrants the extension of the distribution area as given above; shells from that area reach a height of 16.2 mm.

This species is quite rare in museum collections, and most shells labeled under this name belong to the related *T. thysthlon*.

### Discussion

Ten cancellariid species are now known from PNG: the six species from the collection studied, and five other species cited in the Introduction. This number of species may seem rather low as compared to the cancellariid faunas known from adjacent areas. However, sampling in PNG was restricted both geographically (mainly to Hansa Bay) and bathymetrically (down to about 65 m). Consequently, the results obtained here most probably represent only part of the cancellariid fauna of PNG.

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