



## Two new turrid species (Gastropoda: Pseudomelatomidae) from the Palawan region, the Philippines

PETER STAHLSCHMIDT<sup>1</sup> & KOEN FRAUSSEN<sup>2</sup>

<sup>1</sup>Institute for Environmental Sciences, University of Koblenz-Landau, Fortstr. 7, 76829 Landau, Germany.

E-mail: [stahlschmidt@uni-landau.de](mailto:stahlschmidt@uni-landau.de)

<sup>2</sup>Lewensestraat 25, B-3200 Aarschot, Belgium. E-mail: [koen.fraussen@skynet.be](mailto:koen.fraussen@skynet.be)

Species richness of tropical marine molluscs is considerably underestimated (Bouchet *et al.* 2002). Indeed, the molluscan faunas of some regions, such as Palawan in the western Pacific, have received little attention and some hyper-diverse groups, such as the turrids (a parapyhletic group of Conoidea, formerly known as Turridae), are barely documented. For example, apart from original descriptions of two turrid taxa that have their type locations in Palawan (*Comitas aequatorialis palawanica* Powell, 1969 and *Mangilia quadrasi* Boettger, 1895 = *Gingcithara notabilis* (E. A. Smith, 1888)), there are no published records of turrids from this region. We have been fortunate to have access to recent collections of turrids from different parts of Palawan. Examination of these materials has revealed existence of several undescribed and potentially endemic species. In the present paper two new Pseudomelatomidae species are described.

### Abbreviations

a/l ratio of total length and aperture length (measured along main shell axis)

b/l ratio of total length and breadth

### Abbreviations of museums and depositories

ANSP	Academy of Natural Sciences, Philadelphia, USA
KF	Koen Fraussen collection, Aarschot, Belgium
LMD	Löbbecke Museum Düsseldorf, Germany
MNHN	Muséum national d'Histoire naturelle, Paris, France
NMSA	Natal Museum, Pietermaritzburg, South Africa
PS	Peter Stahlschmidt collection, Rohrbach, Germany
SMF	Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany

### Systematics

#### Family Pseudomelatomidae Morrison, 1965

#### Genus *Crassispira* Swainson, 1840

**Type species:** (s.d.) *Pleurotoma bottae* Kiener, 1840 [synonym of *Pleurotoma incrassata* Sowerby, 1834]

#### *Crassispira bruehli* n. sp.

Figures 1–5

**Type material.** Holotype: MNHN IM-2000-23314 (11.4 mm). Paratype 1: MNHN IM-2000-23315 (11.2 mm). Paratypes 2–3: SMF-336431/2 (9.8 mm, 9.8 mm). Paratypes 4–5: ANSP-454324 (10.3 mm, 10.7 mm). Paratypes 6–11: PS-020259 (9.3 mm, 10.1 mm, 10.6 mm, 11.1 mm, 11.5 mm, 11.5 mm). Paratype 12: KF (10.8 mm). Paratype 13: Conchology Inc. (10.2 mm). All from type locality.

**Type locality.** Philippines, Palawan, Balabac Island, 15–65 m.

**Distribution.** Only known from the Palawan region. So far reported from Balabac Island (dredged at 15–65 m; type

Sculptured by weak axial ribs, intervals about 2–3 times broader than axial ribs; 8–10 on first teleoconch whorl, 11–12 on penultimate whorl (including varices), the last varix situated about on-third whorl back from lip. Spiral cords on spire whorls moderately wide and gently rounded, with equally wide interstices; a total of 3–5 on first teleoconch whorl to 8–11 on penultimate whorl. Spiral cords on last whorl becoming narrower towards rostrum while interstices becoming gradually wider.

Colour whitish-cream with a light to dark brown spiral band situated above the suture at the abapical part of each teleoconch whorl. Last whorl with two bands, one at the first adapical third and the second one ending at the abapical part of the siphonal canal. Interior of aperture white tinged.

Protoconch narrowly domed, of 2–2.5 whorls, first whorl depressed, second one weakly convex; suture shallow; white tinged, smooth except for very weak growth lines near termination.

No soft parts or operculum available for study.

**Remarks.** With its remarkable coloration, *Inquisitor armillatus* n. sp. remotely resembles the South African *Inquisitor arctatus* Kilburn, 1988 (Figs. 11–13) but the former species attains a much smaller size (around 15 mm compared to around 50 mm), has a shorter siphonal canal, a less pronounced parietal nodule, and fainter spiral cords.

**Etymology.** The specific name is derived from the Latin expression *armillatus* meaning “wearing a bracelet” which refers to the dark brown colored spiral band.

## Acknowledgments

We are greatly indebted to Rafael Picardal for procuring the study material, Yuri Kantor for preparing the radula of *Crassispira bruehli*, Richard Kilburn for discussion and help, Igor Muratov for providing the type photo of *Inquisitor arctatus*, and Guido Poppe for procuring additional material. Alexander “Sasha” Fedosov, Thomas Duda and one anonymous reviewer provided useful, constructive comments and linguistic corrections.

## References

- Boettger, O. (1895) Die marinen Mollusken der Philippinen (IV) nach den Sammlungen des Herrn José Florencio Quadra in Manila. IV. Die Pleurotomiden. *Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft*, 27, 1–20.
- Bouchet, P., Lozouet, P., Maestrati, P. & Heros, V. (2002) Assessing the magnitude of species richness in tropical marine environments: high numbers of molluscs at a New Caledonia site. *Biological Journal of the Linnean Society*, 75, 421–436.  
<http://dx.doi.org/10.1046/j.1095-8312.2002.00052.x>
- Hedley, C. (1918) A checklist of the marine fauna of New South Wales. Part 1. Mollusca. *Journal and Proceedings of the Royal Society of New South Wales*, 51, Supplement 1, M1–M120.
- Hertlein, L.G. & Strong, A.M. (1951) Eastern Pacific expeditions of the New York Zoological Society. XLIII. Mollusks from the west coast of Mexico and Central America. Part X. *Zoologica*, 36, 67–120.
- Kantor, Y.I. & Taylor, J.D. (2000) Formation of marginal radular teeth in Conoidea (Neogastropoda) and the evolution of the hypodermic envenomation mechanism. *Journal of Zoology*, 252, 251–262.  
<http://dx.doi.org/10.1111/j.1469-7998.2000.tb00620.x>
- Kiener, L.C. (1840) Genre Pleurotome. (*Pleurotoma*, Lam.) *Spécies Général et Iconographie des Coquilles Vivantes Comprenant la Collection du Muséum d’Histoire Naturelle de Paris, Collection Lamarck, celle du Prince Masséna et les Découverts Récente des Voyageurs. Vol. 5.* Rousseau, Paris, 84 pp., 27 pls.
- Kilburn, R.N. (1988) Turridae (Mollusca: Gastropoda) of southern Africa and Mozambique. Part 4. Subfamilies Drillinae, Crassispirinae and Strictispirinae. *Annals of the Natal Museum*, 29, 167–320.
- Morrison, J.P.E. (1965) *On the families of Turridae*. The Thirty-First Annual Meeting of the American Malacological Union, New York, 2 pp.
- Powell, A.W.B. (1969) The family Turridae in the Indo-Pacific. Part 2. The subfamily Turriculinae. *Indo-Pacific Mollusca*, 2, 207–416.
- Smith, E.A. (1888) Diagnoses of new species of Pleurotomidae in the British Museum. *Annals and Magazine of Natural History*, Series 6, 2, 300–317.
- Sowerby, G.B.I. (1834) Characters of new species of Mollusca and Conchifera. *Proceedings of the Zoological Society of London*, 1833, 134–139.
- Stahlschmidt, P. & Bozzetti, L. (2007) Description of a new turriiform gastropod (Gastropoda: Turridae) from Aliguay Island (Philippines). *Malacologia (Mostra Mondiale)*, 56, 10–12.
- Swainson, W. (1840) *A Treatise on Malacology, or Shells and Shell-Fish. The Cabinet Cyclopaedia Conducted by Rev. Dionysius Lardner, LL. D.F.R.S.L. & E.M.R.I.A.F.R.A.S.F.L.S. Hon. F.C.P.S. &c. Assisted by Eminent Literary and Scientific Men. Natural History.* Longman, Orme, Brown, Green, & Longmans and John Taylor, London, viii + 419 pp.
- Watson, R.B. (1881) Mollusca of H.M.S. *Challenger* Expedition. Parts VIII–X. *Journal of the Linnean Society (London)*, 15, 388–475.