

Gloria Maris	42 (4-5)	66-75	Antwerpen, november 2003
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Two new Terebridae species from the Indo West-Pacific

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Keywords: TEREBRIDAE, Indo-Pacific, *Terebra dedonderi* sp. nov., *Terebra poppei* sp. nov.

Abstract: *Terebra dedonderi* sp. nov. and *Terebra poppei* sp. nov. from the Indo West-Pacific are hereby described .

Introduction: Around the same time, specimens originating from 3 different localities were brought to my attention as being unidentifiable at the time. Guido T. Poppe offered me a selection of specimens from the Philippines. Amongst the lot was one species that puzzled me and required further investigation. A few months later, Fernand and Rika De Donder showed me a few unidentifiable specimens from deeper water around Aliguay, Philippines. After a first selection, two unidentified species were retained, one being the same species as Guido Poppe brought back and one closely related but clearly different. I retrieved similar specimens from Papua New Guinea in my personal collection and from the collection of the KBIN, Brussels.

While studying the juveniles, it appeared that both species were extreme forms of one another, closely related to *Terebra polygrata* Deshayes, 1859, *Terebra fuscotaeniata* Thiele, 1925 and *Terebra textilis* Hinds, 1844, but after careful investigation of adult specimens, both species could be clearly distinguished from one another and from their close relatives. Both species are hereby proposed as new to science.

Abbreviations:

AMS	<u>A</u> ustralian <u>M</u> useum, <u>S</u> ydney, Australia
ANSP	<u>A</u> cademy of <u>N</u> atural <u>S</u> ciences, <u>P</u> hiladelphia, PA, USA
BA	Private collection of <u>B</u> runo <u>A</u> nseeuw, Belgium
FRD	Private collection of <u>F</u> ernand and <u>R</u> ika <u>D</u> e Donder, Belgium
GTP	Private collection <u>G</u> uido <u>T</u> . <u>P</u> oppe, Belgium
JC	Private collection of <u>J</u> avier <u>C</u> onde, Spain
KBIN	<u>K</u> oninklijk <u>B</u> elgisch <u>I</u> nstituut voor <u>N</u> atuurwetenschappen, Brussels, Belgium
MNHN	<u>M</u> uséum <u>n</u> ational d' <u>H</u> istoire <u>n</u> aturelle, Paris, France
NHM	<u>N</u> atural <u>H</u> istory <u>M</u> useum, London, UK
NHM LAC	<u>N</u> atural <u>H</u> istory <u>M</u> useum of <u>L</u> os <u>A</u> ngeles <u>C</u> ounty, USA
NMNH	<u>N</u> ational <u>M</u> useum of <u>N</u> atural <u>H</u> istory, Washington, DC, USA
NSMT	<u>N</u> ational <u>S</u> cience <u>M</u> useum, <u>T</u> okyo, Japan.
PLC	Private collection of <u>P</u> ete <u>L</u> . <u>C</u> resswell, New Zealand.
WAM	<u>W</u> estern <u>A</u> ustralian <u>M</u> useum, Perth, WA, Australia
YT	Private Collection <u>Y</u> ves <u>T</u> erryn, Belgium
ZSM	<u>Z</u> oologische <u>S</u> taatsammlung <u>M</u> ünchen, Munich, Germany

Class GASTROPODA Cuvier, 1797
Family TEREBRIDAE Mörch, 1852
Genus *Terebra* Bruguière, 1789

***Terebra dedonderi* sp. nov.**
 (figs a-e)

Type material:

Holotype: KBIN. IG n° 30019. 23.2 x 4.8 mm. Dredged at 36-50 m. Hansa Bay, Madang Province, Papua New Guinea.

Paratypes: **Paratypes 1-28:** Dredged at 36-50 m. Hansa Bay, Papua New Guinea.

Paratype 1 & 2: MNHN. 21.5-25.0 x 4.2 mm. **Paratype 3 & 4:** KBIN. IG n° 30019. 13.7- 15.5 x 3.0-3.5 mm. **Paratype 5 & 6:** FRD. 16.0-23.0 x 3.5-4.8 mm. **Paratype 7 & 8:** GTP. 17.5-18.2 x 4.0 mm. **Paratype 9-17:** YT. 13.0-25.4 x 2.8-5.0 . **Paratype 18:** NHM. Reg.No. 20030527. 15.0 x 3.8 mm. **Paratype 19:** NHMLAC. 16.8 x 4.0 mm. **Paratype 20:** ANSP. 15.5 x 3.5 mm. **Paratype 21:** NSMT. 17.6 x 4.0 mm. **Paratype 22:** AMS C.205268. 15.7 x 4.0 mm. **Paratype 23:** NMNH. 18.2 x 4.0 mm. **Paratype 24:** WAM. 17.8 x 4.0 mm. **Paratype 25:** PLC. 16.4 x 3.9 mm. **Paratype 26:** ZSM. 19.0 x 4.0 mm. **Paratype 27:** JC. 15.2 x 3.8 mm. **Paratype 28:** BA. 15.4 x 3.6 mm. **Paratype 29-34:** Dredged off Digos at 200-400 m. Davao del Sur, Davao,

Philippines. **Paratype 29-33:** FRD. 18.6-21.5 x 4.4-4.7 mm. **Paratype 34 :** YT. 21.0 x 4.6 mm.

Other material studied:

FRD: 1 spm. Trawled at 100-200 m. Magellan Bay, Cebu, Mactan Island. Philippines.

FRD: 1spm. Trawled at 240 m. Aliguay Island, N Dipolog, Philippines.

FRD: 13 spms. Dredged off Digos at 200-400 m. Davao del Sur, Davao, Philippines.

KBIN: I.G. n° 26.132. 2 spms. Trawled at 36 m. Hansa Bay, Papua New Guinea. 1978.

KBIN: I.G. n° 26132. 1 spm. Dredged at 250 ft. Legoarant Island, Papua New Guinea. 1978.

KBIN: I.G. n° 26132. 3 spms. Trawled at 36 m. Hansa Bay, Papua New Guinea. 1979.

KBIN: I.G. n° 26132, 1 spm. Trawled at 70-100 ft. Nubia, Papua New Guinea. 1979.

KBIN: I.G. n° 26132, 2 spms. 36-50 m. Hansa Bay. Papua New Guinea.

KBIN: I.G. n° 26132, 3 spms. Trawled at 50 m. Hansa Bay, Papua New Guinea.

YT: 9 spms. Dredged at 36-50 m. Hansa Bay. Papua New Guinea.

Type Locality: Dredged at 36-50 m. Hansa Bay, Papua New Guinea.

Description: Shell light, small and slender, up to 25 mm in length. Colour white with a light brown spiral band covering the subsutural band and a fourth of the whorls. Most specimens have a secondary spiralling band at midwhorl.

Protoconch consists of 4-5 whorls, translucent, colour white.

Outline of whorls convex, measure of which increases with number of whorls. Difference between subsutural band and body whorl hardly discernable. Subsutural groove not deep and hardly present on the axial ribs.

Axial sculpture consists of ribs, 17-20 in number, measured on the penultimate whorl of holotype and paratype 2.

Spiral sculpture of the subsutural band consists of 7-8, fine, evenly wide, closely set riblets. Spiral sculpture of the body whorl consists of 8-10, heavier, irregularly in width, wider spaced, ribs. The ribs on the body whorl have on average twice or thrice the width of those on the subsutural band.

Aperture elongate, outer lip thin with rib pattern showing through, columella curved, surface of collumellar fasciole irregular.

Habitat: All the specimens were retrieved from a muddy bottom. Bathymetrical range of about 30-240 m.

Distribution: Only known from the north of Papua New Guinea and the south of the

Philippines as described in the type series and other studied material.

Derivatio nominis: *Terebra dedonderi* sp. nov. is here named in honour of Fernand De Donder, a conchologist with an eye for detail and a love for bringing the less known shells to the attention of collectors.

Terebra poppei sp. nov.
(figs f-j)

Type material:

Holotype: MNHN. 24.8 x 4 mm. Trawled at 240 m. Aliguay, Philippines.

Paratypes: **Paratype 1:** KBIN. IG n° 30020. 25.0 x 4.0 mm. Trawled at 240 m. Aliguay, Philippines. **Paratype 2 & 3:** GTP. 24.3-25.2 x 4.2-4.5 mm. Trawled 130 m. Davao Bay, Philippines. **Paratype 4:** YT. 27.8 x 4.1 mm. Trawled at 130 m. Davao Bay, Philippines. **Paratypes 5-26:** Dredged at 40 m. Hansa Bay, Papua New Guinea. **Paratype 5 & 6:** KBIN. IG n° 30020. 24.5-27.2 x 4.8-4.2 mm. **Paratype 7-11:** YT. 15.0-28.7 x 3.0-4.4 mm. **Paratype 12:** FRD. 24.4 x 4.0 mm. **Paratype 13-15:** MNHN. 14.5-16.5 x 3.0-3.2 mm. **Paratype 16:** NHM. Reg.No. 20030528. 14.7 x 3.0 mm. **Paratype 17:** NHMLAC. 15.1 x 3.0 mm. **Paratype 18:** ANSP. 13.8 x 2.8 mm. **Paratype 19:** NSMT. 14.2 x 3.1 mm. **Paratype 20:** AMS C.205269. 14.4 x 3.3 mm. **Paratype 21:** NMNH. 26.5 x 4.3 mm. **Paratype 22:** WAM. 19.1 x 3.6 mm. **Paratype 23:** PLC. 22.8 x 4.0 mm. **Paratype 24:** ZSM. 17.0 x 3.1 mm. **Paratype 25:** JC. 23.1 x 3.9 mm. **Paratype 26:** BA. 15.7 x 3.1 mm. **Paratype 27-31:** Dredged off Digos at 200-400 m. Davao del Sur, Davao, Philippines. **Paratype 27-30:** FRD : 17.3-24.7 x 3.3-4.2 mm. **Paratype 31 :** YT. 21.7 x 3.1 mm.

Other material studied:

FRD: 1 spm. Trawled at 100-200 m. Magellan Bay, Cebu, Mactan Island. Philippines.

FRD: 3 spms. Dredged off Digos at 200-400 m. Davao del Sur, Davao, Philippines.

KBIN: I.G. n° 26132, 18 spms. Dredged at 35 m. Hansa Bay, Papua New Guinea.

Type Locality: 240 m deep. Aliguay, Philippines.

Description: Shell light, small and slender, up to about 28 mm in length. Colour white to light yellowish brown with a darker, brown spiral band covering a sixth of the total width of a body whorl. Occasionally, a secondary brown spiral band is found

in specimens that have a yellowish base colour. Protoconch consists of 2-3 whorls, conical, translucent, colour white to yellowish white.

Outline of whorls slightly convex, measure of which is constant with number of whorls.

Axial sculpture consists of ribs, 14-16 in number, measured on the penultimate whorl of holotype and paratype 1-2.

Spiral sculpture of the body whorl consists of 18-20, irregular in width, irregularly spaced, ribs. The ribs on the upper body whorl are in general closer set than those on the bottom body whorl. On the lower third of the body whorl, the spiral ribbing tends to alternate in thickness.

Aperture elongate, outer lip thin with axial and spiral sculpture pattern showing through, columella curved, parietal callus slightly developed in some specimens.

Habitat: The specimens were retrieved from a sand/mud bottom. Bathymetrical range of about 100-250 m in the Philippines and already found alive at 40 m at Hansa Bay, N of Papua New Guinea.

Distribution: Only known from the south of the Philippines and the north of Papua New Guinea.

Derivatio nominis: *Terebra poppei* sp. nov. is named in honour of Guido T. Poppe, a famous conchologist, with an unmeasured love for shells and whose many travels around the world keep on revealing wonders of the sea.

Remarks: It appears that the material originating from Papua New Guinea was collected at relatively shallow depths (up to 80 m) while the Philippine population was retrieved at depths of 100-240 m. This is probably due to the difference in sampling/fishing techniques in both areas. The commercial shell-fisheries in the Philippines are known to use tangle nets and trawls starting from a depth of around 100 m. While the sampling in Papua New Guinea was mainly focused on trawls or dredges at depths ranging from 30-80 m. It is highly probable that in both areas the bathymetrical range is continuous from 30 m to 240 m or deeper.

Although both species have yet only been recorded from two localities i.e. the southern Philippines and north-eastern Papua New Guinea, it is most likely that the distribution area is continuous and more expanded as in most Indo-Pacific Terebridae. Both are uncommon and seem to coexist.

The pattern of *T. dedonderi* sp. nov. tends to diminish in large specimens (20-25 mm). Large specimens seem to lack the secondary brown spiral band on the last and penultimate whorl but is still visible in earlier whorls and is most often covering the whole first body whorls of the teleoconch.

Internal characteristics such as radula and operculum could unfortunately not be studied because all the material provided to me at this moment are dried or cleaned specimens, with either the animal removed or completely retracted.

There is no doubt that these species belong to the genus *Terebra* Bruguière, 1789 but their subspecific status has been left unrecorded as the revision of the systematics of Terebridae is an ongoing study in its initial stages.

Discussion: The first specimens that I studied of both species were juveniles and at that stage they are easily confused with one another and with juveniles of other species, it is only after closer observation of the microstructure, that one can distinguish both species due to their difference in sculpture.

T. poppei sp. nov. can easily be distinguished from *T. dedonderi* sp. nov. by its straighter outline and lack of subsutural groove. Furthermore *T. poppei* sp. nov. lacks in most cases the secondary brown spiral band often found in *T. dedonderi* sp. nov. and by its much shorter protoconch.

T. dedonderi sp. nov. can easily be distinguished from its closest relative *T. fuscotae-niata* Thiele, 1925 by its more convex whorls, specific sculpture and more numerous axial ribs.

T. poppei sp. nov. differs from its closest relatives, *T. polygyrata* Deshayes, 1859 and *T. textilis* Hinds, 1844, by its lack of a subsutural groove, its less broad outline and protoconch. The protoconch of *T. polygyrata* Deshayes, 1859 is dome-shaped and bulbous and consists of only 1.5 whorls. The protoconch of *T. textilis* Hinds, 1844 is similar in shape of that of *T. poppei* sp. nov. but can be unmistakably differentiated from *T. textilis* Hinds, 1844 by its lack of a subsutural groove.

Acknowledgements: I would like to thank Guido T. Poppe, Belgium, and Fernand De Donder, Belgium, for bringing these species to my attention and for giving me the opportunity to study their material. I would also like to express my gratitude towards Dr. J.L. Van Goethem, KBIN, for giving me access to the material retrieved from Papua New Guinea and for critically re-reading this manuscript. I would like to thank Dr. Philippe Bouchet, MNHN, for critically re-reading this manuscript and for the

unlimited access to the Terebridae-types and -collection of the MNHN. Thanks also to Kathy Way and Amelia McLellan, both NHM, for offering me the opportunity to study some types as comparative material. I would also like to thank my good friend Bruno Anseeuw, Belgium, for his continuous support and aid, without which it would be impossible for me to study this family of shells.

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Summarizing translation into Dutch/ Samenvattende Nederlandse vertaling

Dit artikel introduceert twee nieuwe soorten in de familie Terebridae: *Terebra dedonderi* sp.nov. en *Terebra poppei* sp.nov., beide afkomstig van de zuidelijke Filipijnen en Papua Nieuw Guinea.

Terebra dedonderi sp.nov. (tot 25mm) is wit met een lichtbruine spiraalband op de subsuturale band. Vaak komt een tweede bruine spiraalband voor in het midden van de omgangen. De witte, doorschijnende protoconch bestaat uit 4-5 omgangen. De omgangen zijn convex, de subsuturale groef ondiep. De axiale sculptuur bestaat uit 17-20 ribben terwijl de spiraalsculptuur op de subsuturale band bestaat uit 7-8 ribbeltjes. De omgangen zelf dragen 8-10 zwaardere ribben. Opening langgerekt, columella gedraaid, buitenlip laat het patroon doorschijnen.

Terebra poppei sp.nov. (tot 28mm) is wit tot licht geelbruin met een donkere spiraalband over 1/6 van de omgangen. De conische protoconch bestaat uit 2-3 omgangen en is doorschijnend wit tot geelachtig wit. Omgangen convex. De axiale sculptuur bestaat uit 14-16 ribben terwijl de spiraalsculptuur uit 18-20 ribben per omgang bestaat. Opening langgerekt, columella gedraaid, parietal eelt licht ontwikkeld, buitenlip laat het patroon doorschijnen.

Beide soorten zijn onderling te onderscheiden doordat bij *T. poppei* sp.nov. de subsuturale groef ontbreekt, de protoconch korter is en de secundaire spiraalband ontbreekt.

Fig. a – e: *Terebra dedonderi* sp. nov.

Fig. a: Paratype 1, MNHN. Papua New Guinea. Hansa Bay. 21.5 x 4.2 mm.

Fig. b: Holotype, KBIN. Papua New Guinea. Hansa Bay. 23.2 x 4.8 mm.

Fig. c: Paratype 2, MNHN. Papua New Guinea. Hansa Bay. 25.0 x 4.2 mm.

Fig. d: Detail of protoconch and early whorls of paratype 2.

Fig. e: Detail of aperture and last whorls of paratype 1.

Fig. f – j: *Terebra poppei* sp. nov.

Fig. f: Paratype 21, KBIN. Papua New Guinea. Hansa Bay. 16.0 x 3.0 mm

Fig. g: Holotype, MNHN. Philippines. Aliguay. 24.8 x 4 mm.

Fig. h: Paratype 5, KBIN. Papua New Guinea. Hansa Bay. 27.2 x 4.2 mm.

Fig. i: Detail of protoconch and early whorls of holotype.

Fig. j: Detail of aperture and last whorls of paratype 5.



a



b



c



d



e



f



g



h



i



j