

Description of *Chicoreus (Triplex) franzettiae* n. sp. (Gastropoda: Muricidae) from the Philippine Islands

Roland HOUART
Research Associate
Institut royal des Sciences naturelles de Belgique
and
Muséum national d'Histoire naturelle, Paris, France
UMR7205 ISyEB
roland.houart@skynet.be

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ABSTRACT. A new species of *Chicoreus (Triplex)* Perry, 1810 is described from Siargao Island in the Philippines. It is compared with *C. (T.) banksii* (Sowerby II, 1841), *C. (T.) strigatus* (Reeve, 1849), *C. (T.) paini* Houart, 1983 and young specimens of *C. (T.) microphyllus* (Lamarck, 1816) which also occur in the Philippines or nearby areas.

RESUME. Une nouvelle espèce appartenant au sous-genre *Chicoreus (Triplex)* Perry, 1810 est décrite de l'île Siargao aux Philippines. Elle est comparée à *C. (T.) banksii* (Sowerby II, 1841), *C. (T.) strigatus* (Reeve, 1849), *C. (T.) paini* Houart, 1983 et à de jeunes *C. (T.) microphyllus* (Lamarck, 1816) également présents aux Philippines ou dans les régions avoisinantes.

INTRODUCTION

The genus *Chicoreus* was divided into four subgenera by Houart (1992) as *Chicoreus* s.s., *Chicoreus (Triplex)* Perry, 1810, *C. (Rhizophorimurex)* Oyama, 1950 and *C. (Chicopinatus)* Houart, 1992.

Chicoreus (Triplex) is the subgenus with by far the highest number of living species, estimated at up to 61 by Houart (2018). Of those, most live throughout the Indo-Pacific while 15 occur also in the Philippines (Houart, 2008a). Since then, a single species was added from the Philippines by Houart (2008b).

Material and methods

Material

The shells were collected by fishermen in the Philippines. Eight specimens were examined by the author as well as images of additional material in the J. P. Barbier collection.

Methods

The characters used to describe shell morphology address the general aspect of the shell, its shape, size, and colour, the shape of the spire including the number and features of the teleoconch whorls, details of the suture and of the subsutural ramp, details of axial and spiral sculpture, the aperture, the siphonal canal and the operculum. The description is based on the type material.

Abbreviations

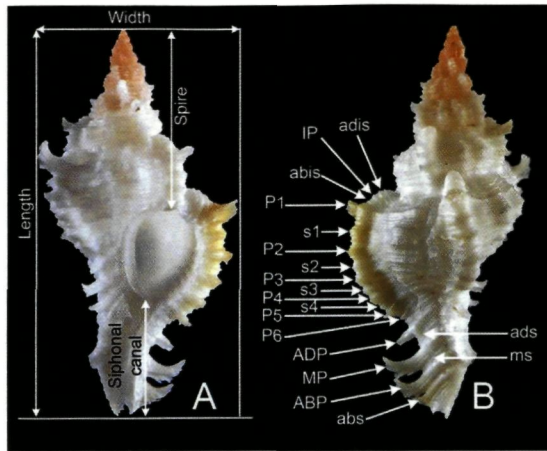
Terminology used to describe the spiral cords and the apertural denticles (after Merle 2001 and 2005) (Fig. 1B).

Convex part of teleoconch whorl and siphonal canal

ab: Abapical (or abapertural); abis: Abapical infrasutural secondary cord (on subsutural ramp); ABP: Abapertural primary cord on the siphonal canal; abs: Abapertural secondary cord on the siphonal canal (between ABP and MP); ad: Adapical (or adapertural); adis: Adapical infrasutural secondary cord (on subsutural ramp); ADP: Adapertural primary cord on the siphonal canal; ads: Adapertural secondary cord on the siphonal canal; IP: Infrasutural primary cord (primary cord on subsutural ramp); MP: Median primary cord on the siphonal canal; ms: Median secondary cord on the siphonal canal; P: Primary cord; P1: Shoulder cord; P2-P6: Primary cords of the convex part of the teleoconch whorl; s: Secondary cord; s1-s5: Secondary cords of the convex part of the teleoconch whorl (example: s1 = secondary cord between P1 and P2; s2 = secondary cord between P2 and P3, etc.).

Aperture

D1 to D5: abapical denticles;
ID: Infrasutural denticle.

**Figure 1**

A. Selected measurements.

B. Spiral sculpture

SYSTEMATICS

Family Muricidae Rafinesque, 1815

Subfamily Muricinae Rafinesque, 1815

Genus *Chicoreus* Montfort, 1810Subgenus *Triplex* Perry, 1810Type species by monotypy: *Triplex foliatus* Perry, 1810 (= *Murex palmarosae* Lamarck, 1822), Indo-West Pacific.***Chicoreus (Triplex) franzettiae* n. sp.**

Figs 1, 2A-F

Type material. Holotype Muséum national d'Histoire naturelle, Paris, France, MNHN-IM-2000-35027, 2 paratypes R. Houart, 5 paratypes J.P. Barbier.**Type locality.** Philippine Islands, Siargao Island, Dapa area, by tangle nets around 30 to 40 meters.**Distribution.** To date, known only from the type locality.**Description.** Shell small for the subgenus, up to 42.7 mm in length (paratype J.P. Barbier). Length/width ratio 1.84-2.00. Slender, lanceolate, fragile, weakly spinose and nodose. Subsutural ramp narrow, weakly sloping, lightly convex. Shell entirely white or light orange, occasionally with light orange varices or with blackish brown coloured primary cords, apex and first teleoconch whorls pink. Aperture white.

Spire high with protoconch of undetermined nature, eroded in all examined specimens, up to 8 weakly convex, elongate, very weakly shouldered, nodose teleoconch whorls. Suture of teleoconch whorls impressed.

Axial sculpture of teleoconch whorls consisting of varices and intervarical nodose ribs. Each varix with short or very short, lightly frondose, narrow, open primary spines. Adapical spine extending from P1 spiral cord longest. Spines decreasing in length

abapically. Each teleoconch whorl with 3 varices and 2 nodose ribs between each pair of varices from third or fourth whorl, preceding whorls with 1, 2 or rarely 3 intervarical ribs. Spiral sculpture of low, rounded, narrow, primary, secondary and tertiary cords. Last teleoconch whorl with adis, IP, abis and tertiary cords on subsutural ramp, followed by P1 to P6, s1-s5 secondary cords and several narrow tertiary spiral cords on convex part of teleoconch whorl. P1-P5 approximately of same strength, P6 very narrow. Siphonal canal with ADP, ads, MP, ms, ABP, abs. ADP-ABP primary cords giving rise to fairly long, adapically recurved, frondose spines. MP spine longest.

Aperture moderately large, ovate. Columellar lip narrow, almost completely weakly erect except on small portion adapically, smooth and with strong, narrow parietal tooth at adapical extremity. Anal notch deep, moderately broad. Outer lip erect, denticulate, with moderately strong, split, elongate denticles within: ID, D1-D5.

Siphonal canal moderately long, 29.8-33.0 % of total shell length, broad, dorsally bent at tip, narrowly open, with 3 frondose, short spines extending from ADP, MP and ABP spiral cords.

Operculum dark brown, ovate, with apical nucleus in lower right. Attached surface with about 14-17 growth lines and broad callused rim.

Remarks. *Chicoreus (Triplex) franzettiae* n. sp. may be compared with four more or less related species from the Philippines or from nearby localities, although several shell characters differentiate these from the new species.*Chicoreus (Triplex) banksii* (Sowerby II, 1841), maybe the *Triplex* species with the most variable shell characters in the Philippines (Fig. 2G-M) differs in being constantly broader and larger compared with shells having the same number or fewer teleoconch whorls as in *C. franzettiae* n. sp. The shell ornamentation in *C. banksii* being highly variable regarding the length of spines and the intervarical axial sculpture, those characters have not been taken into account here. However, in addition to being larger and wider, *C. banksii* also differs in having a lower spire and a comparatively longer siphonal canal in all forms. Eight specimens of *C. banksii* selected for their different shape and length, taken from the 38 specimens from the Philippines in my research collection were compared, using selected measurements (Fig. 1A), with the eight examined specimens of the new species.The length/width ratio is an average of 1.47 with a minimum of 0.98 and a maximum of 1.75 in the eight specimens of *C. banksii* compared to 1.94 (minimum of 1.84 and maximum of 2.00) in *C. franzettiae* n. sp. The length of the siphonal canal is an average of 39% of the total shell length in *C. banksii* (minimum of 33% and maximum of 44%) while it is an average of 31% in the new species (minimum of 30% and

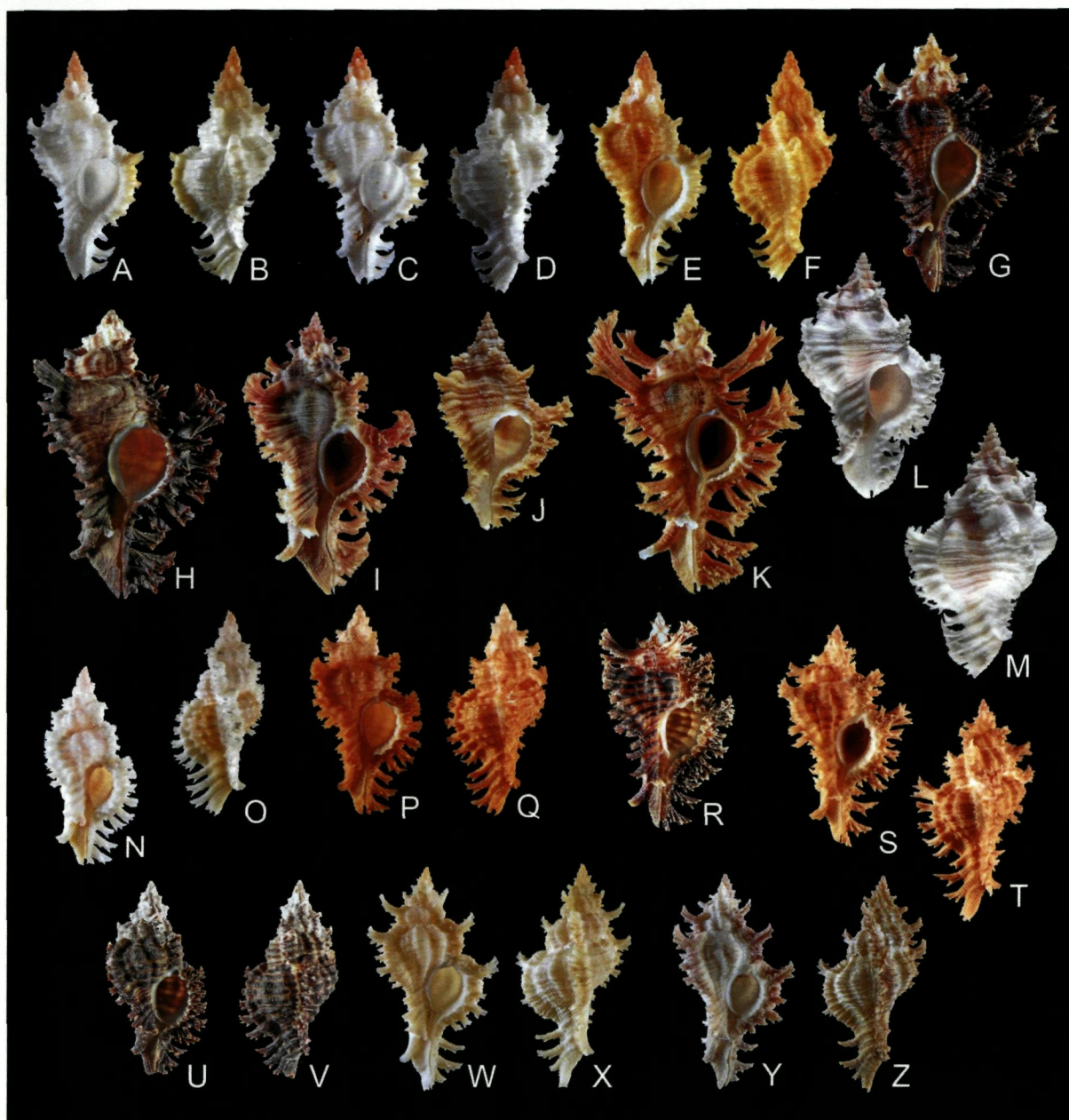


Figure 2

A-F. *Chicoreus (Triplex) franzettiae* n. sp. Philippine Islands, Siargao Island, Dapa area, by tangle nets around 30 to 40 meters.

A-B. Holotype MNHN-IM-2000-35027, 36.2 mm; C-D. Paratype R. Houart, 40.0 mm; E-F. Paratype R. Houart, 36.6 mm.

G-M. *Chicoreus (Triplex) banksii* (Sowerby II, 1841)

G. Philippine Islands, Samal, Island, Birat, 100-200 m, 51.4 mm; H. Philippine Islands, Sulu Sea, Jolo Island, 65.2 mm; I. Philippine Islands, Tungkil Island, 57.8 mm; J. Indonesia, off Kalimantan, 130 m, 29.7 mm; K. Philippine Islands, Zamboanga, 68.3 mm; L-M. Philippine Islands, Zamboanga, 47.2 mm (all R. Houart coll.).

N-Q. *Chicoreus (Triplex) strigatus* (Reeve, 1849), Northern Taiwan Strait.

N-O. 35.3 mm; P-Q. 34.3 mm.

R-T. *Chicoreus (Triplex) paini* Houart, 1983, Palau Archipelago.

R. 38.5 mm; S-T. 43.0 mm.

U-V. *Chicoreus (Triplex) microphyllus* (Lamarck, 1816), Banda Sea, Moluccas, 32.7 mm (juvenile).

W-Z. *Chicoreus (Triplex) axicornis* (Lamarck, 1822), Papua New Guinea, Madang, Laing Island, Hansa Bay.

W-X. 38.1 mm; Y-Z. 36.0 mm

(G-Z: all R. Houart coll.)

maximum of 33%). Finally, the length of the siphonal canal compared to the height of the spire also differs in both species, an average of 93% of the height of the spire in *C. banksii* (minimum 79% and maximum of 109%) compared to 65% in *C. franzettiae* n. sp. (minimum of 58% and maximum of 76%).

Chicoreus (Triplex) strigatus (Reeve, 1849) (Fig. 2N-Q) also has a narrow shell with a high spire but the short varical spines are always more elaborate and squamous, especially obvious on the last teleoconch whorl varices; the aperture is usually narrower with a typical narrow and deep anal sulcus in all examined specimens as opposed to a broader and shallower sulcus in *C. franzettiae* n. sp. In addition, the last teleoconch whorl in *C. strigatus* almost consistently has 3 narrow intervarical ribs instead of two in the new species.

Chicoreus (Triplex) paini Houart, 1983 (Fig. 2R-T), close to *C. strigatus* but basically with a lower spire, longer spines and longer siphonal canal, differs also from *C. franzettiae* n. sp. in having a broader shell with longer, more elaborate varical spines, in having a lower spire, a comparatively longer siphonal canal and a deeper anal sulcus.

Juvenile specimens of *Chicoreus (Triplex) microphyllus* (Lamarck, 1816) (Fig. 2U-V) of the same length as adults of *C. franzettiae* n. sp. differ in having fewer teleoconch whorls, a narrower last teleoconch whorl, more numerous intervarical ribs, different, more squamous varical spines with long P5 and P6, a comparatively narrower aperture and a deeper anal sulcus.

Finally, small specimens of *Chicoreus (Triplex) axicornis* (Lamarck, 1822) with short spines (Fig. 2W-Z) differ in having a comparatively longer siphonal canal, a narrower aperture, broader varices, a shorter

spire and a different arrangement of the varical spines, in *C. axicornis* the P1 and P3 spines are obviously longer than the other ones.

Etymology. At his request, I am pleased to name this new species after Jean-Pierre Barbier's mother surname, Franzetti.

ACKNOWLEDGEMENTS

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