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## Description of a new species of *Chicoreus (Triplex)* (Gastropoda: Muricidae) from the northern Red Sea, Egypt

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**KEYWORDS.** Northern Red Sea, Egypt, Gastropoda, Muricidae, *Chicoreus (Triplex)*, new species.

**ABSTRACT.** A new species of *Chicoreus (Triplex)* is described from Egypt, in the northern Red Sea, in the vicinity of Hurghada and Sharm El-Sheikh. It is compared with the other species from the Red Sea which are all illustrated.

### INTRODUCTION

There are four species or subspecies of *Chicoreus (Triplex)* occurring in the Red Sea (Houart 1992; Merle et al 2011): *Chicoreus (Triplex) peledi* Vokes, 1978, endemic to the Gulf of Aqaba; *C. (T.) corrugatus corrugatus* (Sowerby, 1841) from the Gulf of Aqaba and the Gulf of Suez, and *C. (T.) corrugatus ethiopiensis* Vokes, 1978 from the Dahlak Archipelago, Eritrea. These three taxa are endemic to the Red Sea. A fourth species, *Chicoreus (Triplex) bourguignati* (Poirier, 1883), occurs in the Indian Ocean but is also known from southern Eritrea. Eritrea and Ethiopia are separated since 1993. Since then, Ethiopia no longer borders the Red Sea, but Ethiopia was still mentioned by Houart (1992), one year before the separation of the two countries.

An additional, probably endemic new species of *Triplex*, sympatric and syntopic with *C. (T.) corrugatus corrugatus*, is here described from Egypt in the northern Red Sea.

### Abbreviations

dd: empty shell.

lv: live collected specimen.

FL: collection of Felix Lorenz.

IRSNB: Institut royal des Sciences naturelles de Belgique, Brussels, Belgium.

MNHN: Muséum national d'Histoire naturelle, Paris, France.

RH: collection of Roland Houart.

*Terminology used to describe the spiral cords and the apertural denticles (after Merle 2001; 2005) (Fig 2A-C). Terminology in parentheses: variable feature*

*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;  
ad: adapical (or adapertural);  
adis: adapical infrasutural secondary cord (on subsutural ramp);  
ADP: adapertural primary cord on the siphonal canal;  
IP: infrasutural primary cord (primary cord on subsutural ramp);  
MP: median primary 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-s6: 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.);  
t: tertiary cords.

### Aperture

D1 to D5: abapical denticles;

ID: Infrasutural denticle.

### SYSTEMATICS

Family **MURICIDAE** Rafinesque, 1815

Subfamily **MURICINAE** Rafinesque, 1815

Genus *Chicoreus* Montfort, 1810

Subgenus *Triplex* Perry, 1810

Type species by original designation: *Triplex foliatus* Perry, 1810 (= *Murex palmarosae* Lamarck, 1822)

*Chicoreus (Triplex) teva* n. sp.

Figs 1, 2A, 3A-G

**Type material.** Northern Red Sea, Egypt, in the vicinity of Hurghada, 10-40 m, holotype (lv) MNHN

IM-2000-30793; northern Red Sea, 50 km off Sharm el-Sheikh, Sinai, Egypt, 27°48' N, 33°55' E, 25-28 m, from the wreck of the MV Thistlegorm, 1 paratype FL (lv), 2 paratypes RH (1 lv, 1 dd).

**Other material.** Northern Red Sea, Giftun Kebir, Hurghada, Egypt, 20-25 m, 2 RH (lv)

**Distribution.** Northern Red Sea, Egypt, in the vicinity of Hurghada and Sharm el-Sheikh, living at 10-40 m.

**Description.** Shell small for the subgenus, up to 29 mm in length (paratype FL). Length/width ratio 1.86-2.10. Slender, lanceolate, heavy, weakly spinose, nodose. Subsutural ramp broad, strongly sloping, convex. Entirely orange or pinkish red. Aperture light pink, columellar lip darker coloured.

Spire high with 1.5-1.75 protoconch whorls and up to 6 strongly convex, elongate, very weakly shouldered, nodose teleoconch whorls. Suture of teleoconch whorls adpressed.

Protoconch small, whorls rounded, minutely punctate near terminal lip, glossy, with a narrow, single keel adapically, keel occasionally covered by first teleoconch whorl. Maximum width 1000 µm, height 900 µm. Terminal lip delicate, weakly curved.

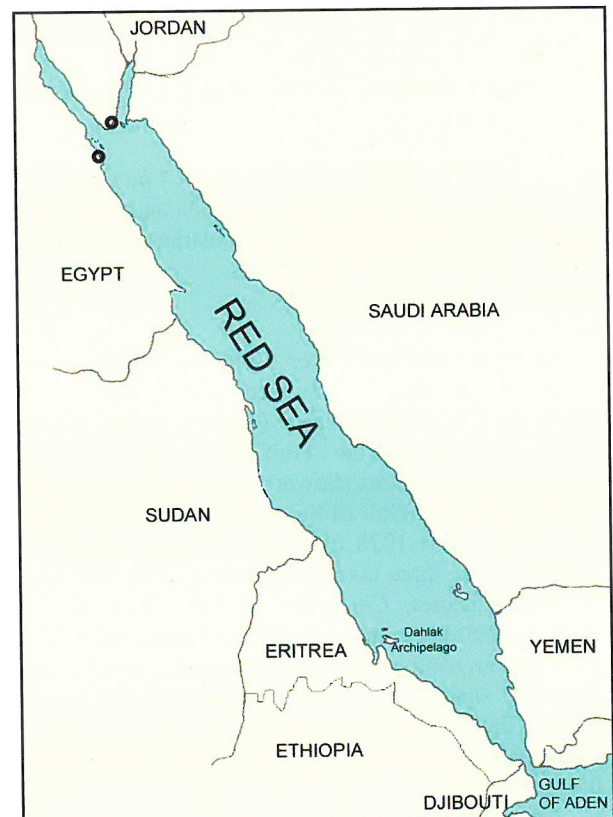
Axial sculpture of teleoconch whorls consisting of ribs, varices and intervariceal nodose ribs. Each varix with short, frondose, narrow, open primary spines. Abapical spines extending from P4 and P5 spiral cords longest. First teleoconch whorl with 13 ribs, occasionally varices already starting, second whorl with 3 varices and 3 intervariceal ribs, third and fourth whorls with 3 varices and 2 or 3 intervariceal nodose ribs, fifth and last whorl with 3 varices and 2 nodose, high ribs between each pair of varices. Spiral sculpture of low, rounded, broad, nodose, primary and secondary cords and many narrow threads on and between cords. Intersection of axial ribs and spiral cords giving rise to higher nodes, especially conspicuous on last teleoconch whorl. Last teleoconch whorl with adis, IP, abis and several threads on subsutural ramp, followed by P1 to P6, s1-s5 secondary cords and several narrow spiral threads on convex part of teleoconch whorl. P1-P4 broadest cords, P5 weakly narrower, P6 very narrow. Siphonal canal with ADP, MP, ABP and several threads. ABP spine strongly bent abapically.

Aperture small, ovate. Columellar lip narrow, almost completely adherent except on small portion

abapically, smooth or with one or two narrow, small knobs abapically and with strong, narrow parietal tooth at adapical extremity. Anal notch deep, broad. Outer lip erect, denticulate, with moderately strong, elongate denticles within: ID, D1, D2 split, D3 split, D4 or D4 split and D5 or D5 split.

Siphonal canal moderately long, 29-31% of total shell length, broad, dorsally bent at tip, narrowly open, with 3 frondose, short spines extending from ADP, MP and ABP spiral cords; ABP spine shortest.

Operculum and radula unknown.



**Figure 1.** Map of the Red Sea with the location of *Chicoreus* (*Triplex*) *teva* n. sp.

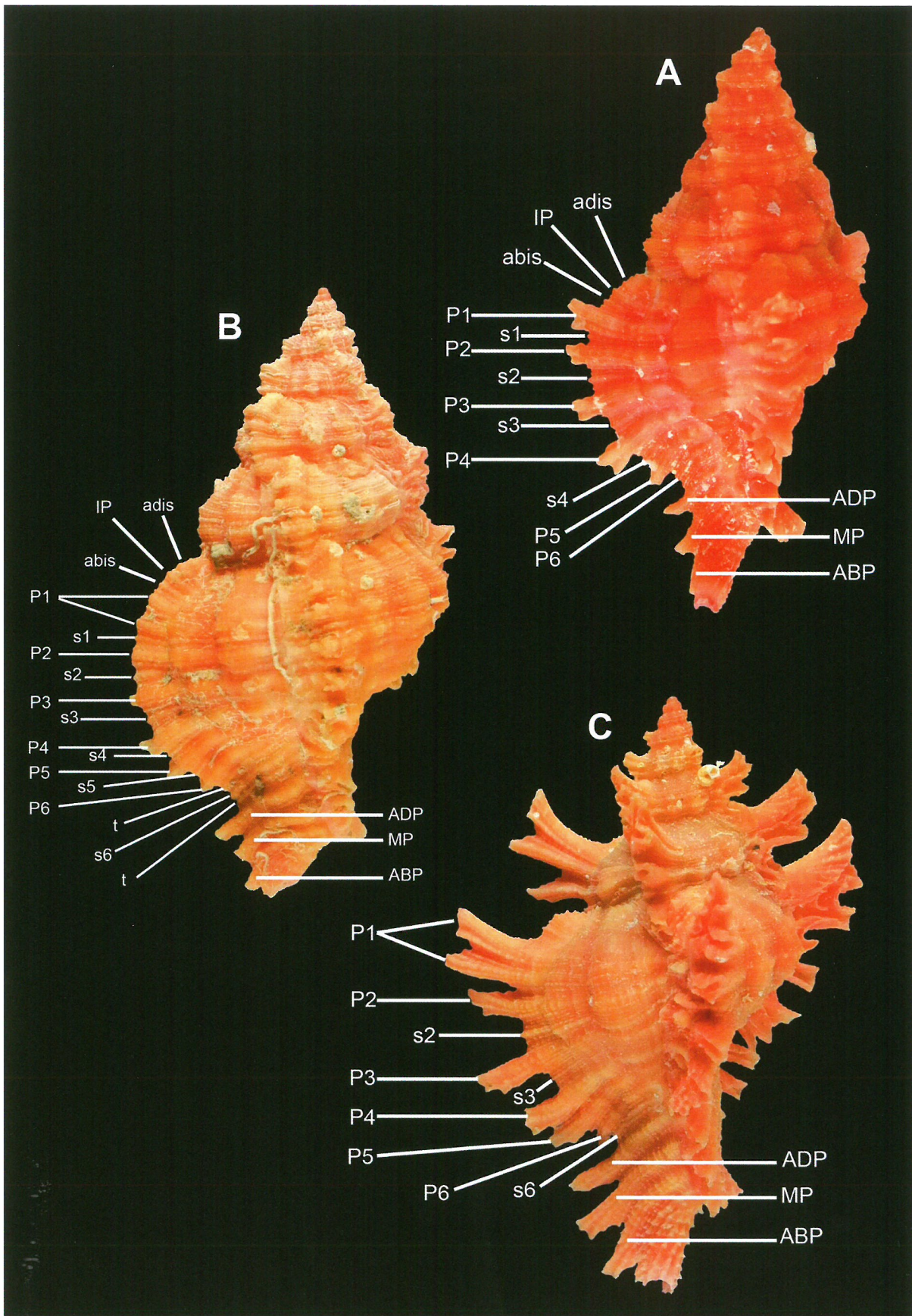
**Remarks.** *Chicoreus* (*Triplex*) *corrugatus corrugatus* is known from the long-spined form (Figs 2C; 3K) and the short-spined form (Figs 2B; 3H-J). There are no other differences between these two forms except the length of the spines and both are considered conspecific.

#### Figure 2A-C. Spiral cord morphology

**A.** *Chicoreus* (*Triplex*) *teva* n. sp., northern Red Sea, Egypt, in the vicinity of Hurghada, 10-40 m, holotype MNHN IM-2000-30793, 28.8 mm.

**B-C.** *Chicoreus* (*Triplex*) *corrugatus corrugatus* (Sowerby, 1841), northern Red Sea, 50 km off Sharm el-Sheikh, Sinai, Egypt, 27°48' N, 33°55' E, 25-28 m, from the wreck of the MV Thistlegorm

**B.** IRSNB I.G. 33142/INV.104978, 36.7 mm; **C.** IRSNB I.G. 33142/INV.104979, 34 mm.



*Chicoreus (Triplex) teva* n. sp. and *C. (T.) corrugatus corrugatus*, both short- and long-spined forms are sympatric and even syntopic and the short-spined form could be confused with the new species, chiefly because they also have a same orange or dark pink colour. *Chicoreus (Triplex) corrugatus corrugatus* grows larger, but some specimens may have the same length, and the short-spined form is then very close, but a few differences are permanent and separate them definitively. In *C. (T.) corrugatus corrugatus* the aperture is rounder and broader, but chiefly, the P1 spiral cord of *C. (T.) corrugatus corrugatus* is split in all examined specimens, including on the P1 spine on the varices (Fig. 2B-C). The secondary cords in *C. (T.) corrugatus corrugatus* are also broader and higher and the P4-P6 spines are occasionally webbed, connected by a flange that is not observed in *C. (T.) teva* n. sp. *Chicoreus (Triplex) corrugatus ethiopiensis* (Fig. 3L-M) from the Dahlak Archipelago differs in its light brown colour with some darker coloured spiral bands or cords. It differs also in having a split P1 cord and in having the abapical foliaceous spines joined by a low flange. The IP cord is also more obvious and the aperture is completely white compared to the pink aperture of *C. (T.) teva* n. sp. The two other species occurring in the Red Sea, *C. (T.) bourguignati* (Fig. 3N) and *C. (T.) peledi* (Fig. 3O) are very different and don't need to be compared further here.

**Etymology.** *Teva*: *teva* is Hebrew for nature; the name was suggested by Dr. Michael A. Mont and Dr. Ken Vogelstein, supporters of the expeditions conducted by the second author that led to the discovery of the new species.

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#### Figure 3A-O

**A-G.** *Chicoreus (Triplex) teva* n. sp.

- A-B.** Northern Red Sea, Egypt, in the vicinity of Hurghada, 10-40 m, holotype MNHN IM-2000-30793, 28.8 mm; **C-F.** Northern Red Sea, 50 km off Sharm el-Sheikh, Sinai, Egypt, 27°48' N, 33°55' E, 25-28 m, from the wreck of the MV Thistlegorm, paratype coll. FL, 29 mm; **G.** Northern Red Sea, 50 km off Sharm el-Sheikh, Sinai, Egypt, 27°48' N, 33°55' E, 25-28 m, from the wreck of the MV Thistlegorm, paratype coll. RH, 20.2 mm.
- H-K.** *Chicoreus (Triplex) corrugatus corrugatus* (Sowerby, 1841), northern Red Sea, 50 km off Sharm el-Sheikh, Sinai, Egypt, 27°48' N, 33°55' E, 25-28 m, from the wreck of the MV Thistlegorm
- H-I.** IRSNB I.G. 33142/INV.104977, 25.3 mm; **J.** IRSNB I.G. 33142/INV.104978, 36.7 mm; **K.** IRSNB I.G. 33142/INV.104979, 34 mm.
- L-M.** *Chicoreus (Triplex) corrugatus ethiopiensis* Vokes, 1978, Eritrea, Dahlak Archipelago, coll. RH, 40.6 mm.
- N.** *Chicoreus (Triplex) bourguignati* (Poirier, 1883), Assab, Eritrea, December 1975, 2-5 m, coll. RH, 72.5 mm.
- O.** *Chicoreus (Triplex) peledi* Vokes, 1978, northern Red Sea, Gulf of Aqaba, Eilat, 40 m, coll. RH, 65.5 mm.

