

Chicoreus (Triplex) setionoi n. sp. (Gastropoda: Muricidae)
from Arafura Sea, Pacific Ocean

Roland HOUART
Research Associate
Institut royal des Sciences naturelles de Belgique
Rue Vautier, 29, 1000 Bruxelles
roland.houart@skynet.be

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ABSTRACT. *Chicoreus (Triplex) setionoi* n.sp. is described from 40-80 m in the Arafura Sea. The species is compared with the Recent *C. (T.) axicornis* (Lamarck, 1822), *C. (T.) banksii* (Sowerby, 1841) and *C. (T.) longicornis* (Dunker, 1864), all occuring approximately in the same geographical area, and with the fossil *C. (T.) batavianus* (Martin, 1884) from the Miocene of Java.

INTRODUCTION. Only one Recent species of *Chicoreus (Triplex)* and one Recent *Chicomurex* have been discovered and described (Houart, 1995 and 1999) since my revision of the genus *Chicoreus* and related genera in the Indo-West Pacific (Houart, 1992).
C. (T.) dodongi Houart, 1995 was described from Samar, Philippine Islands, in 2-10 m, and has been discovered since then to be a fairly common species with a probably restricted geographical range.

Chicomurex rosadoi Houart, 1999 also probably lives within a limited geographical area off south Mozambique, in 135-140 m. Only very few specimens have been dredged since its description.
C. (T.) setionoi n.sp. was trawled by fishermen in the Arafura Sea, at about 40-80 m depth, but without any other more precise locality data. However its very particular shell morphology differentiate it from any known Indo-West Pacific Recent or fossil *Chicoreus* species.

IP:	Infrasutural primary cord (primary cord on shoulder)
adis:	Adapical infrasutural secondary cord (shoulder)
abis:	Abapical infrasutural secondary cord (shoulder)
P1:	Shoulder cord
P2-P6:	Primary cords of the convex part of the teleoconch whorl
s1-s5:	Secondary cords of the convex part of the teleoconch whorl
s1: secondary cord between P1 and P2; s2: secondary cord between P2 and P3, etc.	
SIPHONAL CANAL	
ADP:	Adapical siphonal cord
MP:	Median siphonal cord
ABP:	Abapical siphonal cord

Table 1. Abbreviations (after Merle, 2001).

SYSTEMATICS

Family **MURICIDAE** Rafinesque, 1815
Subfamily **MURICINAE** Rafinesque, 1815
Genus *Chicoreus* Montfort, 1810
Subgenus *Triplex* Perry, 1810
Type species by monotypy: *Chicoreus (Triplex) foliatus* (Perry, 1810) [= *Chicoreus (Triplex) palmarosae* (Lamarck, 1822)], Indo-West Pacific.

Chicoreus (Triplex) setionoi n.sp.
Figs 1-2

Type material

Holotype MNHN. Paratypes: 1 AMS C.204867, 1 coll. O. Setiono, 2 Roland Houart.

Type locality
Arafura Sea, 40-80 m, in fisher nets, with *Volutoconus bednalli* (Brazier, 1878).

Distribution
Arafura Sea, living at 40-80 m.

Description
Shell medium sized for the subgenus, up to 59.10 mm in length at maturity (holotype), slender, spinose, lightly built. Spire high with 2-2.40 protoconch whorls and up to 6 convex, slender, weakly shouldered, spinose teleoconch whorls. Suture impressed. Protoconch large, conical, whorls rounded; last whorl with a narrow, weak keel

abapically. Terminal varix delicate, thin, raised, weakly curved.

Axial sculpture of teleoconch whorls consisting of high, rounded ribs and varices. Each varix with long, acute spines. Shoulder spine (P1) longest. First whorl with 12 ribs, second with 10 ribs, starting varices, third and fourth with 3 varices and 2 strong intervarical nodes, fifth with 3 varices and 2 or 3 strong nodes, last whorl with 3 varices and 2 or 3 low nodes.

Spiral sculpture of narrow, rounded, primary, secondary, tertiary cords and numerous threads. First whorl with one cord on shoulder (IP) and 4 primary cords on convex part of whorl (P1-P4); second with IP, P1-P4 and s3; third, fourth and fifth whorls with adis, IP, abis, P1-P4, s3; s3 almost of same strength as primary cords. Other secondary cords quite undistinguishable from tertiary cords and threads on and between primary cords. Last whorl with abis, IP, adis, P1-P6 giving rise to short or long varical spines: IP very short, P1 (shoulder spine) longest, P2 narrow, very short spine, P3 medium sized spine, P4 slightly longer than P3, P5 and P6 short. IP, P2 and P6 shortest, strongly abaperturally bent. Other spines (P1, P3, P4, P5) weakly adaperturally curved and adapically bent at extremity. Other spiral sculpture of last whorl consisting of s1 and s2 (narrow), s3 and s4 (medium sized), and s5 (narrow), of tertiary cords and of numerous threads. Secondary and tertiary cords almost of same strength on early whorls, except s3.

Aperture broad, rounded. Columellar lip narrow, smooth, rim partially erect, adherent at adapical extremity. Anal notch narrow, deep. Outer lip erect, crenulate. Siphonal canal long, narrow, abaxially recurved, with 2, occasionally 3 open spines on adapical portion (ADP, MP, ABP). ADP strongly developed, with long spine in paratype RH; weakly developed and spineless in other specimens.

Uniformly brown or dark brown.

Operculum roundly-ovate with terminal nucleus. Radula unknown.

Remarks

Chicoreus (Triplex) setionoi n.sp. is closely related to *C. (T.) axicornis* (Lamarck, 1822) and belongs to the same group of species defined by Houart (1992: 46), including *C. (T.) axicornis*, *C. (T.) banksii* (Sowerby, 1841), *C. (T.) bourguignati* (Poirier, 1883), *C. (T.) brunneus* (Link, 1807), *C. (T.) elisae* Bozzetti, 1991, *C. (T.) groschi* Vokes, 1978 and *C. (T.) ryosukei* Shikama, 1978.

C. setionoi clearly differs from most of these species but has similar points with *C. axicornis* and *C. banksii*. *C. axicornis* (Figs 5-6) has a relatively variable shell morphology with short or long spines. However, *C. setionoi* differs in having long, non foliaceous, narrowly open, acute varical spines with a broad base vs foliaceous, broad on entire length and

broadly open spines in *C. axicornis*. The last teleoconch whorl in *C. setionoi* is narrower compared to the breadth of the spines, and the siphonal canal is longer relatively to the shell length (46.5-50.5 % of total shell length vs 37.6-43.8 % in *C. axicornis*) (Tables 2 and 3). In *C. axicornis* the 6 spines on the last teleoconch whorl correspond to the 6 primary cords (P1-P6). P1 is usually the longest, P2 is the shortest, P3 is weakly longer, P4 is long, P5 and P6 are short. The same basic structure is observed in all forms. A quite identical structure is observed in *C. setionoi*, however the third (P3) and fifth (P5) spines are much longer on last teleoconch whorl than in any form of *C. axicornis*.

Long spined shells of *C. banksii* (Fig. 4) differ in having 4 or 5 foliaceous spines, decreasing in length abapically and in having a comparatively shorter siphonal canal with longer and more numerous foliaceous spines. The other species of that group are not closely related.

C. setionoi also resembles *C. longicornis* (Dunker, 1864) (Fig. 3). Although being superficially similar in having long varical spines on the last teleoconch whorl, *C. longicornis* differs in having these spines completely sealed. Moreover there are only two, very exceptionally three straight spines on each varix. The protoconch is more globose, ending with a broad, rounded and thick terminal varix, and there is a single adapically recurved, sealed spine on the siphonal canal.

C. batavianus (Martin, 1884), a fossil from the Miocene of Java, commented and illustrated by Houart (1992: 136, figs 465-467) has more shouldered whorls, fewer and shorter spines, and a straighter, comparatively broader siphonal canal.

Other Recent and fossil species are very different and do not need to be compared here.

Etymology

Named after Owen Setiono, Jakarta, who procured and kindly donated the type material.

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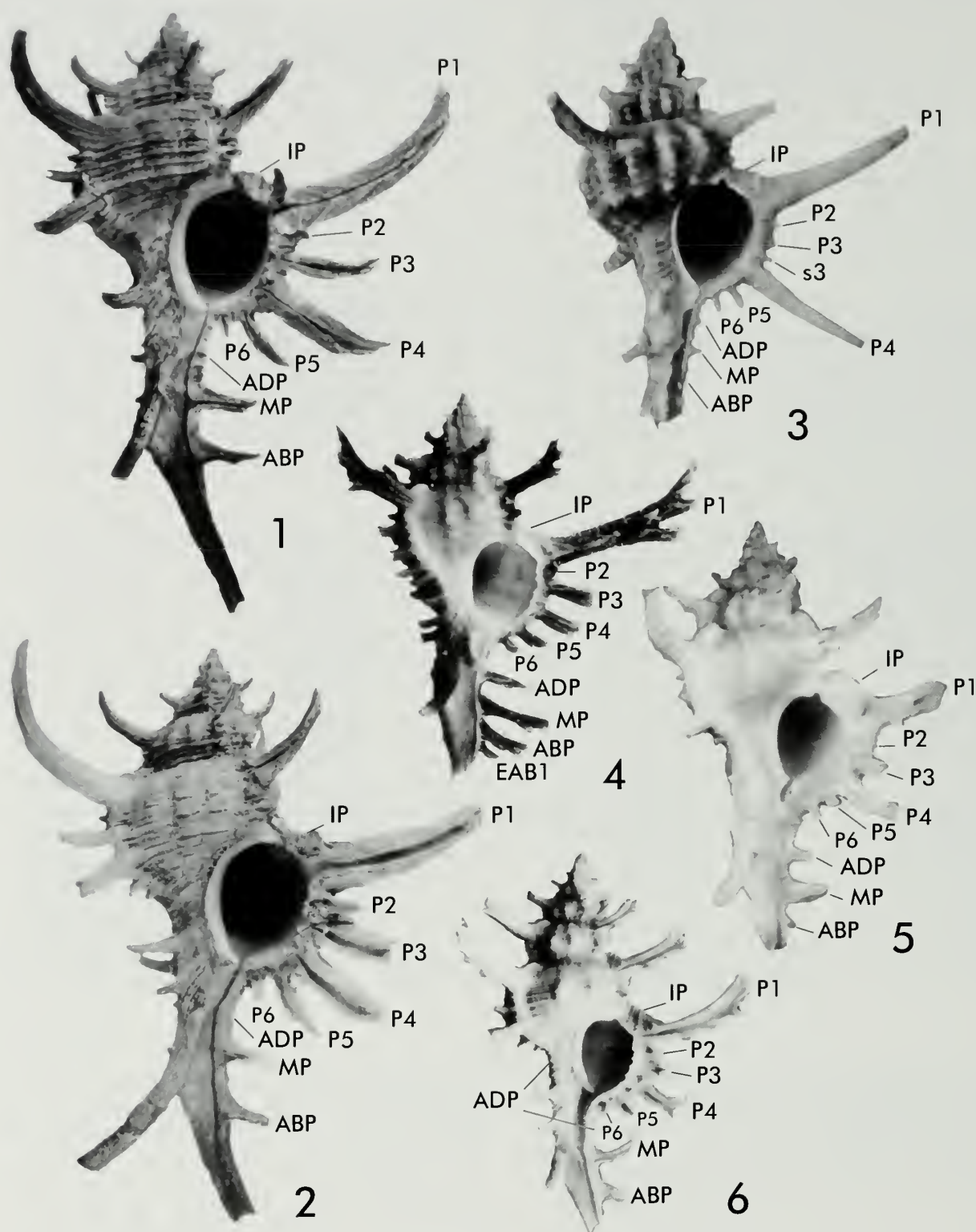
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Material	Length of shell	Length of siphonal canal
Holotype MNHN	59.10 mm	29.91 mm
Paratype coll. O. Setiono	55.20 mm	25.70 mm
Paratype coll. Roland Houart	51.63 mm	25.96 mm
Paratype AMS C. 204867	48.26 mm	23.14 mm
Paratype coll. Roland Houart (juv.)	33.92 mm	16.52 mm

Table 2. Measurements of *Chicoreus (Triplex) setionoi* n.sp.

Material (all coll. Roland Houart)	Length of shell	Length of siphonal canal
Chagos Bank, Indian Ocean	77.25 mm	30.44 mm
Burma, Andaman Sea	66.60 mm	28.18 mm
Taiwan	65.74 mm	24.71 mm
Phuket, Thailand	62.18 mm	26.10 mm
Phuket, Thailand	62.17 mm	24.95 mm
Celebes	61.07 mm	25.56 mm
Northeastern Australia	60.50 mm	26.47 mm
Aliguai Island, Philippines	60.49 mm	25.24 mm
Batangas Island, Philippines	55.40 mm	22.10 mm
Taiwan	50.55 mm	21.66 mm
Philippines	50.09 mm	20.91 mm
Kaoshiung, Taiwan	41.63 mm	16.32 mm
Papua New Guinea	39.62 mm	15.28 mm
North of Sri Lanka	37.29 mm	14.64 mm
Queensland, Australia	35.63 mm	14.65 mm

Table 3. Measurements of *Chicoreus (Triplex) axicornis* (Lamarck, 1822)



1-2. *Chicoreus setionoi* n.sp. Arafura Sea, 40-80 m, in fisher nets.

1. Holotype MNHN, 59.10 mm.. 2. Paratype coll. O. Setiono, 55.20 mm.

3. *C. longicornis* (Dunker, 1864). Australia, Queensland, coll. Roland Houart, 39 mm.

4. *C. banksii* (Sowerby, 1841), Australia, North Queensland, MNHN, 35.5 mm.

5-6. *C. axicornis* (Lamarck, 1822).

5. Taiwan, MNHN, 65.5 mm. 6. Indian Ocean, lectotype MNHN, 59 mm.