Description of two new species of *Chicoreus* (*Siratus*) (Gastropoda, Muricidae) from Honduras and Nicaragua

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ABSTRACT. Two new species of *Chicoreus* (*Siratus*) are described from Honduras and East Nicaragua. *C. (S.) hennequini* n.sp. from Honduras is compared to *C. (S.) articulatus* (Reeve, 1845), *C. (S.) beaui* (Fischer & Bernardi, 1857), and *C. (S.) caudacurta* Houart, 1999. *C. (S.) bessei* n.sp. from Honduras and Nicaragua is compared to *C. (S.) consuela* (Verrill, 1950), *C. (S.) cailleti* (Petit de la Saussaye, 1856), and *C. (S.) motacilla* (Gmelin, 1791).


INTRODUCTION

*Siratus* is highly represented in the Western Atlantic with a total of 18 Recent taxa (only two in the Indo-West Pacific), and a large number of fossils (Vokes, 1963, 1990). Some of these species have been recently discovered (Garcia, 1999; Houart, 1999) while another one will be described soon (Merle et al, in press). The large number of synonyms (36 names for 18 valid taxa) is representative of the polymorphic shell morphology (see also Vokes, 1980) and from a wrong analysis of the shell structure. The descriptive method used here for the spiral sculpture and the aperture is based on Merle (1999).

<table>
<thead>
<tr>
<th>P</th>
<th>Primary cord</th>
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<tr>
<td>s</td>
<td>secondary cord</td>
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<td>t</td>
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<td>ab</td>
<td>abapical (or abapertural)</td>
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<td>IP</td>
<td>Infrastructural primary cord (primary cord on shoulder)</td>
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<td>adis</td>
<td>adapical infrastructural secondary cord (shoulder)</td>
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<td>abis</td>
<td>abapical infrastructural secondary cord (shoulder)</td>
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<td>P1</td>
<td>Shoulder cord</td>
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<td>P2-P6</td>
<td>Primary cords of the convex part of the teleoconch whorls</td>
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<td>s1-s6</td>
<td>secondary cord of the convex part of the teleoconch whorls</td>
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<td></td>
<td>s1 : secondary cord between P1 and P2; s2 : secondary cord between P2 and P3, etc.</td>
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<td>ADP</td>
<td>adapertural primary cord on the siphonal canal</td>
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<td>MP</td>
<td>median primary cord on the siphonal canal</td>
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<tr>
<td>ABP</td>
<td>adapertural primary cord on the siphonal canal</td>
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<td>EABP</td>
<td>extreme adapertural primary cord on the siphonal canal</td>
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<td>ads</td>
<td>adapertural secondary cord on the siphonal canal</td>
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<td>ms</td>
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<td>adapertural secondary cord on the siphonal canal</td>
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<td>eabs</td>
<td>extreme adapertural secondary cord on the siphonal canal</td>
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<td>APERTURE</td>
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<td>ID</td>
<td>Infrastructural denticle</td>
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<td>D1 to D6</td>
<td>Abapical denticles</td>
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</tbody>
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Table 1 : text conventions (based on Merle, 1999)
Other abbreviations.
IRSNB : Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium.
MORG : Museu Oceanografico de Rio Grande, Brazil.
RH : collection of the author.
lv : taken alive.
dd : empty shell.

SYSTEMATICS
Family MURICIDAE Rafinesque, 1815
Subfamily MURICINAE Rafinesque, 1815
Genus Chicoreus Montfort, 1810
Subgenus Siratus Houart, 1880
Type species : Purpura Sirat "Adanson" Houesseame, 1880 (= Murex senegalensis Gmelin, 1791), Recent, Brazil, by original designation.

Chicoreus (Siratus) hennequini n.sp.
Figs 1-3

Type material.
Honduras, Roatan Island, Mangrove Bight, 16°16'70" N, 86°34'47" W, 220 m, holotype (lv). MNHN.
Paratypes : 2 IRSNB IG 29094 (1 lv, 1 dd), 2 coll. R. Houart (2 lv).

Other material examined.
East Honduras, Roatan Island, 200 m, coll. R. Houart (1 lv).

Distribution.
East Honduras, Roatan Island, living at 200-220 m.

Description.
Shell up to 62 mm in length at maturity (holotype), slender, weakly spinose, lightly built. Spire high with 1.75 protoconch whorls and up to 7 convex, nodose teleoconch whors. Suture impressed. Protoconch small (c. 1.2 mm broad x 1 mm high), whors rounded, smooth, with a narrow, strong, single keel abapically. Terminal varix eroded in all examined specimens.

Axial sculpture of teleoconch whors consisting of high, narrow, webbed varices, each with a single, short, acute, shoulder spine, and webbed expansion abapically. Other axial sculpture of low, strong, narrow, nodose, rounded intervarical ribs. First whorl with 12 axial ribs, second with nine ribs followed by 1 varix and three additional ribs, third to penultimaste whorl with 3 varices and 4 intervarical ribs, last whorl with 3 varices and 5, occasionally 6 ribs. Presence of small nodules at intersection of axial ribs and spiral cords.

Spiral sculpture of low, strong, narrow, primary, secondary and tertiary cords, and occasional weak threads. First whorl rounded with 4 primary cords (IP, P1-P3), second whorl weakly shouldered with 1 primary cord on shoulder (IP) and 3 on convex part of whorl (P1-P3), third to penultimaste whorl with identical shoulder sculpture : 1 primary cord between 2 secondary cords (adis, IP, abis). Convex part of the whorl : third whorl with 3 primary cords and one secondary cord between first and second primary (P1, s1, P2, P3); fourth with 3 primary cords and one secondary cord between first and second primary cords, occasionally between second and third cord and between third cord and suture of whorl (P1, s1, P2, P3) or (P1, s1, P2, s2, P3, s3), fourth to penultimaste with 3 primary cords and one secondary cord between each pair of primary cords (P1, s1, P2, s2, P3, s3). Convex part of last whorl with 6 primary cords with secondary cord between each pair (P1, s1, P2, s2, P3, s3, P4, s4, P5, s5, P6, t6d, s6, t6b), and an occasional low thread between P1 and s1; P4, s4 and P5. Shoulder of last whorl with one primary cord, 2 secondary cords (adis, IP, abis), and an occasional additional thread between suture and adis, and between abis and P1.

Aperture broad, ovate. Columellar lip narrow, with 3 weak, elongate knobs abapically and strong, elongate, parietal tooth. Anal notch narrow, deep. Outer lip weakly erect, denticulate, with 1-3 crenulations and weak denticles within : ID on shoulder; D1-D6 splitted. Occasional additional, small denticle between s6 and t6. Denticles occasionally obsolette. Siphonal canal long, narrow, weakly dorsally recurved, abaxially bent, narrowly open, with 3 cords adaperturally (ADP, ad, MP). MP cord ending as an acute, weakly adaperturally curved, open spine at variix.

Light tan with some dark brown spiral cords, usually P1, s1, P2, P4, s4, P5, P6, s6, t6. Operculum light brown, ovate with terminal nucleus.

Remarks.

Chicoreus (Siratus) hennequini n.sp. is most similar to C. (S.) articulatus (Reeve, 1845), C. (S.) beaui (Fischer & Bernardi, 1857), and C. (S.) caudacurta Houart, 1999. C. articulatus (Fig. 4) is a species with a polymorphic shell structure, although a careful study of the different forms, currently considered as synonyms, would be interesting. Notwithstanding, all these forms are separable from C. (S.) hennequini n.sp. C. articulatus has 3 high, nodose, intervarical axial ribs from third to last whorl instead of 4-6 narrow ribs in C. hennequini. C. articulatus has approximately the same spiral sculpture although with stronger, higher, more widely spaced cords. The sculpture of the siphonal canal consists of 5 cords (instead of 4 in C. hennequini). Fourth cord ending as
HOUART

Two new *Siratus* from Honduras

**Figures 1-6.**

1-3. *Chicoreus (Siratus) hennequini* Houart, n.sp. Honduras, Roatan Island, Mangrove Bight, 16°16.70' N, 86°34.77' W, 220 m.

1-2. Holotype MNHN, 62.2 mm.
3. Paratype R. Houart, 52 mm.

4. *Chicoreus (Siratus) articulatus* (Reeve, 1845). Honduras, Puerto Cortés, 120 m, mud, 54.2 mm, RH.

5-6. *Chicoreus (Siratus) bessei* Houart, n.sp. Honduras, Roatan Island, Pulpitt Rock, 170 m, holotype MNHN, 72.6 mm.
a long, acute, open spine on the canal, fifth as a small spine. The aperture is smaller and the colunnellar lip bears 4-7 folds abapically and irregular folds adapically. *C. (S.) caudacurta* (Fig. 13-14) from off Vera Cruz, eastern Mexico, has an approximately similar, although lower, spiral sculpture. However, it differs in having a broader protoconch without any keel and with fewer whorls, a comparatively much higher spire, a stouter last teleoconch whorl with a broader aperture, lower, narrower varices, and fewer, broader axial intervarical ribs, lower on last whorl. Some forms of *C. (S.) beauii* (Fig. 15) resemble *C. (S.) hennequini*, however *C. beauii* is definitively separated in having a multispiral, conical protoconch. It also has more numerous primary, secondary and tertiary spiral cords, and a broader siphonal canal.

**Etymology.**

Named for Mr. F. Hennequin, Velines, France.

*Chicoreus* (*Siratus*) *bessei* n.sp.

**Figs 5-9**

**Type material.**

Honduras, Roatan Island, Pulpitt Rock, 170 m, holotype MNHN.

Paratypes: 1 IRSNB IG 29094, 2 coll. R. Houart; Honduras, North coast, 200 m, 2 coll. D. Pisor 1 (all taken alive).

**Other material examined.**

East Honduras, South coast of Roatan Island, 250 m, coll. R. Houart (1); Honduras, North coast, 200 m, coll. D. Pisor (2); off East Nicaragua, Banco Quita Suefa, coll. R. Houart (2), coll. B. Besse (2) (all taken alive).

**Distribution.**

North Honduras, Roatan Island, and East Nicaragua, living at 170-250 m.

**Description.**

Shell up to 73.8 mm in length at maturity (paratype), slender, heavy, nodose. Spire high with 1.5-1.75 protoconch whors and up to 7 broad, nodose teleoconch whors. Suture adpressed. Protoconch small (c. 1 mm broad x 0.8 mm high), whors rounded, minutely striate. With a narrow, weak keel abapically. Terminal varix heavy, erect, weakly curved.

Axial sculpture of teleoconch whors consisting of high, strong, narrow, nodose, spineless varices with low webbed expansion abapically. Other axial sculpture of high, strong, rounded intervarical ribs. First whorl with 12 ribs, second with 9, third with 3 varices and 1 or 2 intervarical ribs, fourth with 2, occasionally 3 intervarical ribs, fifth with 2 or 3, occasionally 4, sixth with 3 or 4, last whorl with 3 varices and 2-4, usually 3, intervarical ribs. Spiral sculpture of low, narrow, primary, secondary and tertiary cords. First and second whors rounded with 4 primary cords (IP, P1-P3), third whorl weakly shouldered with 1 primary cord on shoulder (IP) and 3 on convex part of the whorl (P1-P3), fourth and fifth whors with identical shoulder sculpture: 1 primary cord between 2 secondary cords (adis, IP, abis); convex part of fourth whorl with P1, P2, P3, s3, fifth and sixth with P1, P2, s2, P3, s3. Shoulder of sixth whorl with 3 cords: adis, IP, abis and an occasional thread (tertiary cord) between suture and adis, and between abis and P1. Convex part of last whorl with 6 primary cords with secondary cord between each pair (P1, s1, P2, s2, P3, s3, P4, s4, P5, s5, P6, s6, t6b), one or more occasional low threads between P1, s1; s1, P2; P2, s2; s2, P3; P3, s3.

Aperture large, ovate. Columnellar lip narrow, rim partially erect, adherent at adapical extremity. Strong parietal tooth. Anal notch broad, deep. Outer lip weakly erect with 1-3 crenulations and weak or strong, elongate denticles within: ID on shoulder; D1-D2 rarely split, D3-D6 split. Occasional additional, small denticle between s6 and t6b. Siphonal canal long, strongly dorsally bent, narrowly open, with 5, approximately similar spiral cords adaperturally. Fourth apical cord usually with short, open, acute spine on canal. Occasionally with single, narrow, shallow thread between each pair of cords.

Shell tan, yellow-tan or light chestnut-brown with lighter coloured, usually cream, nodules. Erratically brown coloured spiral cords. Dark brown band on and between P1 and P2, between P5 and P6, and on adapertural portion of siphonal canal. Occasionally uniformly creamy-white with faint traces of light brown bands.

Operculum dark brown, ovate, with terminal nucleus. Radula unknown.

**Remarks.**

All the specimens examined from Honduras have an identical tan coloured shell with sparsely brown coloured spiral cords and dark brown bands. The four specimens of East Nicaragua which I examined are uniformly light cream, occasionally with faint traces of light brown bands.

Three species are more or less similar to *C. (S.) bessei* n.sp.: *C. (S.) consuela* (Verrill, 1950), *C. (S.)*
Figures 7-12.
7-9. *Chicoreus (Siratus) bessei* Houart, n.sp.
7. Honduras, Roatan Island, Pulpitt Rock, 170 m, paratype IRSNB, 56 mm.
8-9. off East Nicaragua, Banco Quita Sueña, RH, 55.2 mm.
10-11. *Chicoreus (Siratus) cailleti* (Petit de la Saussaye). St. James, Barbados, 94 m, RH, 51.9 mm.
12. *Chicoreus (Siratus) consuela* (Verrill, 1950). Anses d’Arlets, Martinique, 14 m, sand and coral, RH, 55.3 mm.
cailleti (Petit de la Saussaye, 1856), and C. (S.) motacilla (Gmelin, 1791).
C. consuela (Fig. 12) has a narrower, more elongate shell with a shorter and broader siphonal canal with different ornamentation, broader, fewer and stronger spiral cords, and a conical protoconch of 2-2.25 whorls.
C. cailleti (Fig. 10-11) usually has a more spinose shell with a broader, weakly shouldered last teleoconch whorl, usually with fewer spiral cords, broader intervacular ribs, and a stronger folded columellar lip.
C. motacilla also has the particular brown spiral bands, but the last teleoconch whorl is stouter and spiny. The shell is broader with stronger and broader intervacular axial ribs, and higher, stronger spiral cords.

Etymology.

Named for Mr. B. Besse, Puerto Cortés, Honduras.

ACKNOWLEDGEMENTS.

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**Figures 13-15.** 13-14. *Chicoreus (Sirus) caudacurta* Houart, 1999. Eastern Mexico, off Vera Cruz, 400-500 m, holotype MORG 39520, 45.8 mm.
15. *Chicoreus (Sirus) beauii* (Fischer & Bernardi, 1857). Florida, off Egmont Key, 73 m, RH, 56.5 mm.
Figure 16. (A-D: scale bars 5 mm; E-F: scale bars 1 mm)
A. Spiral sculpture (apertural view) of Chicoreus (Siratus) hennequini n.sp., East Honduras, Roatan Island. 200 m. coll. R. Houart.
B. Spiral sculpture (apertural view) of Chicoreus (Siratus) bessei n.sp., East Honduras, South coast of Roatan Island. 250 m. coll. R. Houart.
C. Profile view of the intervarical nodules of Chicoreus (Siratus) hennequini n.sp.
D. Profile view of the intervarical nodules of Chicoreus (Siratus) bessei n.sp.
E. Protoconch and first teleoconch whorl of Chicoreus (Siratus) hennequini n.sp.
F. Protoconch and first teleoconch whorl of Chicoreus (Siratus) bessei n.sp.
(drawings D. Merle and J. M. Pacaud)