

**A new species of *Colubraria* (Gastropoda: Colubrariidae)
from the Red Sea**

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Abstract: *Colubraria gilberti*, a species originating from the Red Sea, is introduced as new to science and compared with its only closely similar congener: *Colubraria tenera* (Gray, 1839). An updated list of Recent and fossil *Colubraria* species from the Red Sea is given. The species described as "*Triton soverbii* Reeve, 1844" is shown to be correctly cited as *Colubraria sowerbyi* (Reeve, 1844).

Introduction: In 2000, the second author and Zvi Orlin from Israel published a checklist of the known Red Sea molluscs. During the preparation of this list, it became clear that a colubrariid figured by Sharabati (1984) and a specimen collected by An Kamphuis in Egypt near Dahab, belonged to an undescribed species. Other material obtained from Gilbert Verbinnen, Felix Lorenz and Brian Hayes added to the idea that we were dealing with a new species, which is herein described.

Abbreviations:

DM: Collection David Monsecour, Aarschot, Belgium
GV: Collection Gibert Verbinnen, Vosselaar, Belgium
HD: Collection Henk Dekker, Winkel, The Netherlands
NHMUK: The Natural History Museum, London, United Kingdom

SYSTEMATICS

Family COLUBRARIIDAE Dall, 1904

Genus *Colubraria* Schumacher, 1817

Type species by monotypy: *Colubraria granulata* Schumacher, 1817 (= *Buccinum muricatum* Lightfoot, 1786 = *Murex maculosus* Gmelin, 1791). Recent, Indo- West Pacific.

For a detailed discussion of the problems concerning the identity of *C. granulata*, we refer to Beu & Maxwell (1987: 59). These authors looked for a secondary designation for the type species, but as Schumacher (1817) had only listed *granulata* in his new genus *Colubraria*, no secondary designation is needed (as correctly mentioned in Opinion 1765, ICZN, 1994). It is striking that it is still difficult to establish who first designated a lectotype for *Colubraria granulata* despite all the discussions surrounding the genus name *Colubraria* in literature. This needs to be sorted out elsewhere to confirm that this species belongs to **Colubrariidae** in the present sense and that it is not a species of **Bursidae**.

Colubraria gilberti sp. nov.

Plate 1, Figs 1-4; Plate 2, Figs 1-3

- ? 1903 *Triton (Epidromus) comptus* – Sturany: p. 219
 1984 *Colubraria* cf. *obscura* – Sharabati, pl. 22, figs. 2-2a.
 2000 *Colubraria* cf. *obscura* – Dekker & Orlin, p. 28 (referring to Sharabati, 1984)
 2006 *Colubraria castanea* – Mienis, 2006: p. 11, figs. 1-2
 2008 *Colubraria* sp. nov. – Dekker & van Gemert (referring to Sharabati, 1984)

Type material: Holotype: Saudi Arabia, Red Sea, Yanbu area, NHMUK 20110380, 40 x 14 mm, coll. A. Marinoni, figured by Sharabati, 1984: pl. 22 fig. 2; **Paratype 1:** Saudi Arabia, Red Sea, Yanbu area. coll. A. Marinoni. NHMUK 20110381, 34 x 12 mm, figured by Sharabati, 1984: pl. 22 fig. 2a; **Paratype 2:** Egypt, Berima, 27°15'57.80"N 33°48'15.05"O, 4-5 m deep, GV, 48.1 x 14.4 mm; **Paratype 3:** Egypt, Sinai, on reef, 15 m deep, DM, 36.4 x 12.7 mm; **Paratype 4:** Egypt, Sinai, on reef, 15 m deep, DM, 35.1 x 13.7 mm; **Paratype 5:** Egypt, Red Sea, Sinai, Gulf of Aqaba, between Dahab Village and Blue Hole, crabbed, 20 Sept. 1993, coll. An H. Kamphuis-Henzel, HD 20475, 38.1 x 13.6 mm; **Paratype 6:** Egypt, Red Sea, Sinai, Gulf of Aqaba, dived, 15 m deep, HD 26101, 34.6 x 13.7 mm; **Paratype 7:** Egypt, Red Sea, Gifâtûn Islands, Giftûn el-Kebîr, on sand, 20 m deep, ex. coll. F. Lorenz, HD 27915, 43.8 mm x 15.4 mm.

Type locality: Saudi Arabia, Red Sea, Yanbu area.

Other material studied: Egypt, Red Sea, Gifâtin Islands, SE side of Giftûn el-Kebîr, from shell grit, 48-51 m deep, ex. coll. F. Lorenz, HD 26528, broken specimen: only protoconch and first 4 teleoconch whorls.

Distribution: So far only known from the Red Sea, probably endemic.

Habitat: This species inhabits reefs, with a bathymetrical range of empty shells from the intertidal to 51 m deep. If the record of Sturany (1903) concerns the present new species (specimen must be studied), the range for a living specimen is down to 341 m deep.

Description: Shell rather small for the genus (average size about 40 mm), slender, bulbously elongate. Protoconch multispiral, consisting of slightly more than 2 virtually smooth, bulbous whorls, subcylindrical. Yet, under magnification, a minute pattern of microscopic pits becomes visible. Transition to teleoconch clearly visible, marked by the appearance of the first axial varix. Teleoconch of 8 ½ bulbous whorls, rapidly increasing in size towards the body whorl. Spiral sculpture consisting of 5-6 fine cords on first teleoconch whorl, 7-8 on 3 further teleoconch whorls, sometimes with most adapical one or most abapical one partly hidden under the suture, 11-12 on the penultimate whorl, and about 35 on the last whorl, diminishing in strength in abapical direction. Axial sculpture of 13 strong varices (including the final one), rapidly increasing in strength. Last varix situated at 360° of penultimate varix, next two varices at 270° and all other varices at about 180° intervals. Further axial sculpture of fine axial cords, forming low, rounded, beadlike chains on the intersections with the spiral sculpture: about 20 weaker cords on first teleoconch whorl, increasing in number and strength towards about 45 stronger cords on last whorl. Axial varices adorned with very fine axial grooves and the continuation of the whorl's spiral sculpture, with the more adapical spiral cords on every varix more strongly developed than the more abapical ones. Siphonal canal rather short, half-open, slightly recurved. Columellar shield thin, allowing the overall sculpture to shine through, with 3-4 tiny lirae near onset of the outer lip. Parietal shield straight, thickened, semi-detached, with 6-7 small lirae along the siphonal canal. Lip with 17 inner denticles, slightly extending into the aperture. Aperture elongate, ovate, smooth.

Shell colour off-white to beige with some irregular darker flammulae. Two spiral bands of brown blotches at the shoulder and at about 1/3 from the lower end on the final and penultimate whorl. More adapical 2 teleoconch whorls with just one such band near the shoulder. Other teleoconch without this pattern. Varices darker than overall shell colour with 2 off-white bands on the final varix. Protoconch beige. Lip with tiny brown dots aligned with the inner denticles. Aperture off-white.

Operculum and soft parts unknown.

Comparison: *Colubraria gilberti* sp. nov. can only be confused with *Colubraria tenera* (Gray, 1839) (= *Triton comptus* Sowerby III, 1875 (not A. Adams, 1855); = *Colubraria castanea* Kuroda & Habe, 1952 (nom. nov. for *comptus* Sowerby); = *Colubraria fantomei* Garrard, 1961; for a discussion on the synonymy, we refer to Parth, 1992). This Recent Indo-West Pacific species has a similar, elegant pattern and the two spiral bands of brown blotches that dominate the colour pattern. However, *C. tenera* is much larger (average size almost twice as big as *C. gilberti*), has a narrower, more conical and more deeply incised protoconch of less than 2 whorls, has a larger teleoconch consisting of about 10½ whorls (thus two more than in *C. gilberti*), its axial sculpture consists of 17 strong varices (a constant characteristic in species of *Colubraria*; thus 4 more than in *C. gilberti*), consistently positioned at 270° except for the penultimate one, which is at 360° of the final varix and the more elaborate parietal shield. Moreover, their distributional range is clearly separated and *C. tenera* favours deeper waters (about 50-150 metres), whereas *C. gilberti* is a shallower water dweller (intertidal-51 m deep).

Etymology: This species is named after Gilbert Verbinnen. Vosselaar, Belgium, for his love of the Red Sea fauna and for his contributions to the knowledge of Red Sea molluscs, as exemplified by the article series "Red Sea Mollusca" in this magazine.

Other species of *Colubria* from the Red Sea

Mienis (2006) published a list of the known Red Sea species of *Colubraria*. He listed six species, but some notes on his records should be made, which is here done per species:

1. *Colubraria castanea* Kuroda & Habe, 1952. The valid name for this species is *C. tenera* (Gray, 1839). Mienis records 3 specimens, one of which is figured. As shown above, the figured one is the new species described here. The living specimen recorded by Sturany (1903: 219) from 341 m depth should be studied, it might also be a specimen of the newly described species.

2. *Colubraria ceylonensis* (Sowerby I, 1833). One juvenile specimen recorded from Eritrea by Mienis, 2006.

3. *Colubraria muricata* (Lightfoot, 1786). A well-known large species. This is the most commonly recorded species of *Colubraria* in the Red Sea.

4. *Colubraria nitidula* (Sowerby I, 1833). One specimen recorded by Mienis from the Red Sea, without further locality details. The identity of this figured shell from the

Coen collection is not clear to us. It is certainly not *C. nitidula*, which -to our knowledge- does not occur in the Red Sea. This shell probably does not originate from the Red Sea.

5. *Colubraria obscura* (Reeve, 1844). Mienis lists 2 specimens from Elat, the one figured is *C. ceylonensis*. One specimen in collection HD (nr. 19257) from the Gulf of Aqaba is very close to the specimen figured by Mienis and confirms the identification as *C. ceylonensis*. *C. obscura* (Fig. 1) is only known from Pleistocene fossil shells (HD; GV; Abrard, 1942: 70, pl. 7 fig. 22; Wittkugel, 2009: 65, figs) from the "Raised Reefs" along the borders of the Red Sea, but not as part of the living fauna.



Figure 1: *Colubraria obscura* (Reeve, 1844).

Egypt, ± 20 km south of Hurghada, building site, 61 x 20.5 mm.
Pleistocene specimen from the collection of Friedhelm Wittkugel, Germany.

6. *Colubraria soverbii* (Reeve, 1844). Described as *Triton soverbii*. In his original description, Reeve mentioned that he dedicated this species to Sowerby, as Mienis (2006: 13) correctly mentioned. Several subsequent spellings for this specific epithet *soverbii* can be found in literature, but the correct emended spelling is *C. sowerbyi* (as used by e.g. Tapparone-Canefri, 1875; Kobelt, 1876; Tapparone-Canefri, 1880; Tryon, 1881; Stearns, 1893). Mienis (2006) recorded one specimen from Elat, which he also figured.

Sabourin (2011) published an article on the observation of colubrariid specimens feeding on fishes at The Brothers Islands, Egypt, at night. The specimens were identified as *C. tortuosa* (Reeve, 1844), but upon close inspection of the photographs kindly provided by the author (Plate 3, Figs 1-3), the specimens involved seem to be *C. muricata*. The two empty shells figured in the same article were apparently added by the editor, their locality is not mentioned in the article.

This makes that the following Recent species of *Colubraria* are known from the Red Sea:

Colubraria ceylonensis (Sowerby I, 1833)

Colubraria gilberti sp. nov.

Colubraria muricata (Lightfoot, 1786)

Colubraria sowerbyi (Reeve, 1844)

Additionally, the following species are known as Pleistocene fossils from the Red Sea:

Colubraria muricata (Lightfoot, 1786)

Colubraria obscura (Reeve, 1844)

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Plate 1:

1-4: *Colubraria gilberti* sp. nov.

1-2: Holotype. Saudi Arabia, Red Sea, Yanbu area, coll. A. Marinoni, NHMUK 20110380, 40 x 14 mm

3-4: Paratype 1. Saudi Arabia, Red Sea, Yanbu area, coll. A. Marinoni, NHMUK 20110381, 34 x 12 mm.

Plate 2:

1-3: *Colubraria gilberti* sp. nov.

1-3: Paratype 5. Egypt, Red Sea, Sinai, Gulf of Aqaba, between Dahab Village and Blue Hole, 20 September 1993, coll. An H. Kamphuis-Henzel, HD 20475, 38.1 x 13.6 mm.

4-6: *Colubraria tenera* (Gray, 1839)

4-6: Philippines, Balicasag Island, in tangle nets at 90 m deep, DM 1039A, 67.9 x 25.0 mm.

Plate 3:

1-3: *Colubraria muricata* feeding on a fish at night. The very long thin proboscis with which the blood of the sleeping fish is consumed can be seen. Photographs taken by Nadine Sabourin on a small wreck at 12 m deep on the way to The Brothers Islands in 1988.



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4



1



2



3



4



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