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STUDIES ON WEST INDIAN MARINE MOLLUSCS, 1. *RISOMUREX MOSQUITENSIS*,
A NEW CARIBBEAN SPECIES, WITH REMARKS ON THE STATUS OF THE GENUS *RISOMUREX*
(GASTROPODA: MURICIDAE)

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ABSTRACT

After studying the holotype of *Engina schrammi* Crosse, 1863, it became evident that the genus *Risomurex* Olsson & McGinty, 1958, is based on misidentified shells. Material recently collected at the Caribbean coast of Costa Rica included a new species, *Risomurex mosquitensis*, which is preferred to be considered the type-species of *Risomurex*. Relations with congeneric species are discussed. St. Thomas is designated type-locality for *Ricinula rosea* Reeve, 1846.

INTRODUCTION

Among molluscs collected on the Caribbean coast of Costa Rica in October 1982, there were some specimens of a muricid species, which was mentioned by Olsson & McGinty (1958: 40, fig. 2a, 55) from Panama, and by Radwin & D'Attilio (1976: 255, pl. 2 fig. 1) from the Canal Zone. They discussed and figured shells believed to be conspecific with *Engina schrammi* Crosse, 1863, from Guadeloupe.

Olsson & McGinty based the description of their genus *Risomurex* on these specimens. However, studies on the type-material of *Engina schrammi* made it clear that these authors had misidentified their specimens, which actually turned out to be still undescribed. The new records from Costa Rica make a description of

the species necessary.

Risomurex mosquitensis nov. spec.
(figs. 1, 3-4)

Type material.-

Holotype: 11.7 x 6.9 mm (fig. 3), with protoconch, animal not preserved (leg Th.C.M. Kemperman; ZMA no. 384001); paratype: 11.5 x 7.3 mm, protoconch missing, animal not preserved (leg. P.M. Mudde & M. van Dijk; ZMA 384002).

Type locality.-

Puerto Vargas, Parque Nacional Cahuita, Mosquito Gulf, Costa Rica (fig. 1). Both animals were found living on coral rubble and sand in shallow water, 13-X-1982.

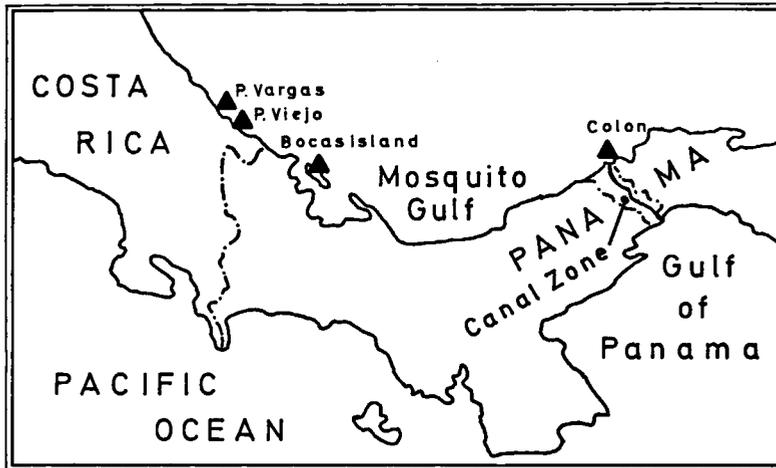


Fig. 1. Localities of *Risomurex mosquitensis*.

Other material.-

Two specimens, 10 x 7 mm (fig. 4) and 9½ x 6 mm, washed ashore, dead, Puerto Viejo, Costa Rica (leg. Th.C.M. Kemperman, 19-X-1982; ZMA and collection Kemperman).

Synonymy.-

Risomurex schrammi, in Olsson & McGinty, 1958: pl. 2 figs. 2, 2a. (Non *Engina schrammi* Crosse, 1863.)

Risomurex roseus, in Warmke & Abbott, 1962: pl. 19 fig. B. (Non *Ricinula rosea* Reeve, 1846).

Muricopsis schrammi, in Radwin & D'Attilio, 1976: pl. 2 fig. 1. (Non *Engina schrammi* Crosse, 1863.)

Description.-

Shell small, biconical to fusiform, with elevated spire, siphonal canal of medium length. Protoconch with 1¼ whorls, strongly keeled with thickened posterior edge, thus the apex becomes somewhat immersed. Sculpture of body whorl consisting of eight to nine low axial ridges, and eight strong primary spiral

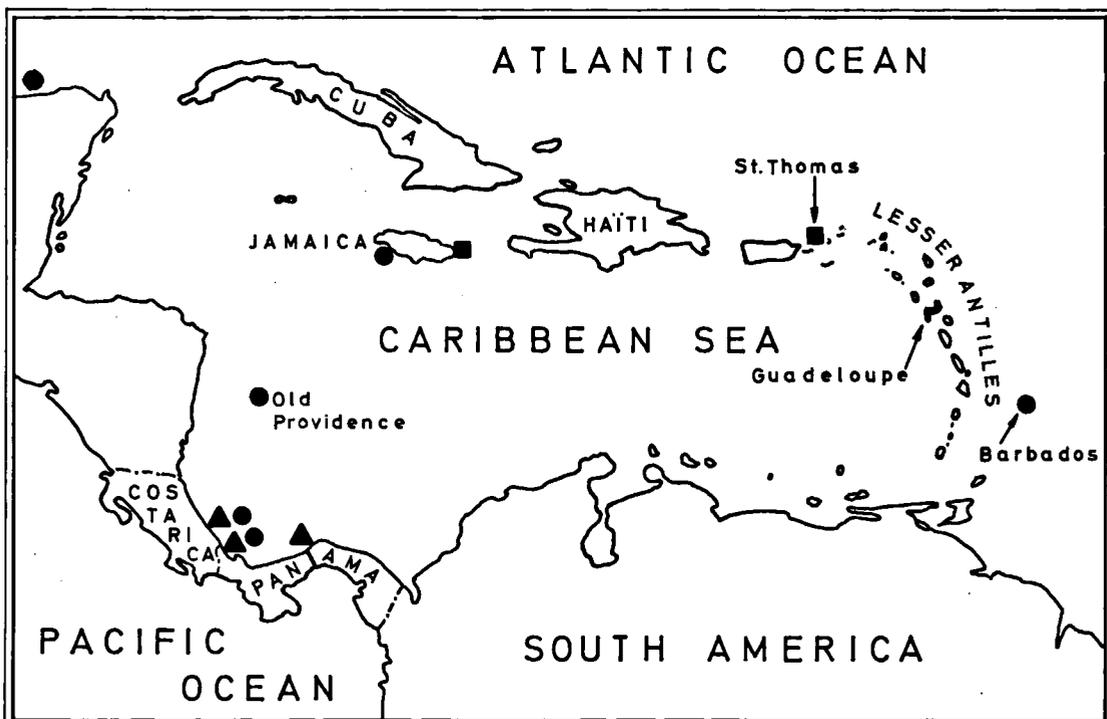


Fig. 2. The genus *Risomurex* in the Caribbean Sea: *R. mosquitensis* - triangles; *R. muricoides* - circles; *R. roseus* - squares; *R. schrammi* - Guadeloupe.

cords, thickened on the ridges, thus giving the shell a nodulose appearance. Secondary spiral cords very thin, rasp-like in combination with growth-lines which are obsolete but sharp. Aperture ovate with five teeth on inner side of outer lip, fourth abanterior being stoutest and fifth being smallest, inconspicuous in subadult specimens; outside of outer lip thickened, with seven short but sharp spines; columella with two small denticulations. Periostracum thin, greyish brown, deciduous.

Background colour coral-red, brownish black between primary spiral cords. Protoconch and first post-nuclear whorl as well as anterior part of columella and siphonal canal coral-red. Aperture red to violet-grey with white teeth.

Distribution.-

Risomurex mosquitensis is so far only known from shallow water on the Caribbean coast of Costa Rica and Panama (fig. 1).

Etymology.-

The species is named after the Mosquito Gulf at the Caribbean side of the Central American mainland (fig. 1).

Differential diagnosis.-

Risomurex mosquitensis differs from *Risomurex schrammi* in shape and colour. *R. schrammi* (figs. 6-7) is smaller and the whorls are more convex. The colour is rose, ornamented with three brown lines on the last whorl: one near the suture, a median one just above the aperture, and one near the base. *R. schrammi* was originally reported from Guadeloupe (fig. 2), it has not been mentioned from other localities.

R. roseus (Reeve, 1846) is about the same size as *R. mosquitensis*, but is pink with three wide brown bands on the last whorl (fig. 8). It is found at the Antilles.

R. deformis (Reeve, 1846) is smaller, more globose and pinkish-rose coloured with many brown bands (fig. 5).

R. muricoides (C.B. Adams, 1845), syn. *R. caribbaeus* (Bartsch & Rehder, 1939), is more slender (fig. 9), and dark grey with white and yellowish spiral cords. It is known from several localities in the Caribbean Sea, and was recently reported from Yucatan peninsula

(Vokes & Vokes, 1983: 92, pl. 12, fig. 14).

DISCUSSION

We have studied the holotype of *Engina schrammi* Crosse, 1863, preserved in the Muséum National d'Histoire Naturelle, Paris. The measurements are 9 x 5 mm (fig. 6); this is 1 mm less in diameter than Crosse (1863: 82, pl. 1 fig. 7) mentioned in his original description. The colour pattern of the shell differs a little in comparison with the original illustration (fig. 7). However, with Fisher-Piette (1950: 21) we are convinced that the shell represents the holotype of *Engina schrammi*, especially since there is no other type-material available (P. Bouchet, in litt.). The original label reads: "*Engina schrammi*, Crosse / Guadeloupe / Jl. de Conchyliologie, 1863, / p. 82, pl. I, fig. 7, Typús".

The holotype of *Engina schrammi* leaves no doubt that "*Muricopsis schrammi* (Crosse)" in Radwin & D'Attilio (1976: pl. 2 fig. 1) as well as "*Risomurex schrammi* (Crosse)" in Olsson & McGinty (1958: 2, fig. 2, 2a) are misidentifications. The specimen figured in Radwin & D'Attilio is from Devil's Beach, Canal zone; the material of Olsson & McGinty was collected at Bocas Island and Colon, Panama (fig. 1). From the descriptions, figures and localities we are convinced that their material is conspecific with the shells found at Puerto Vargas and Puerto Viejo, Costa Rica, described here as *Risomurex mosquitensis*.

THE GENUS *RISOMUREX*

From the discussion above we must conclude that the designation of a type-species for the genus *Risomurex* Olsson & McGinty, 1958, was based on misidentified material. According to article 70a of the I.C.Z.N. it is up to the Commission to decide whether the type-species of *Risomurex*, (1) remains *Engina schrammi* Crosse, in which case the description of the genus is not based on the actually intended species, or (2) becomes *Risomurex mosquitensis*, in accordance with the original intention of Olsson & McGin-

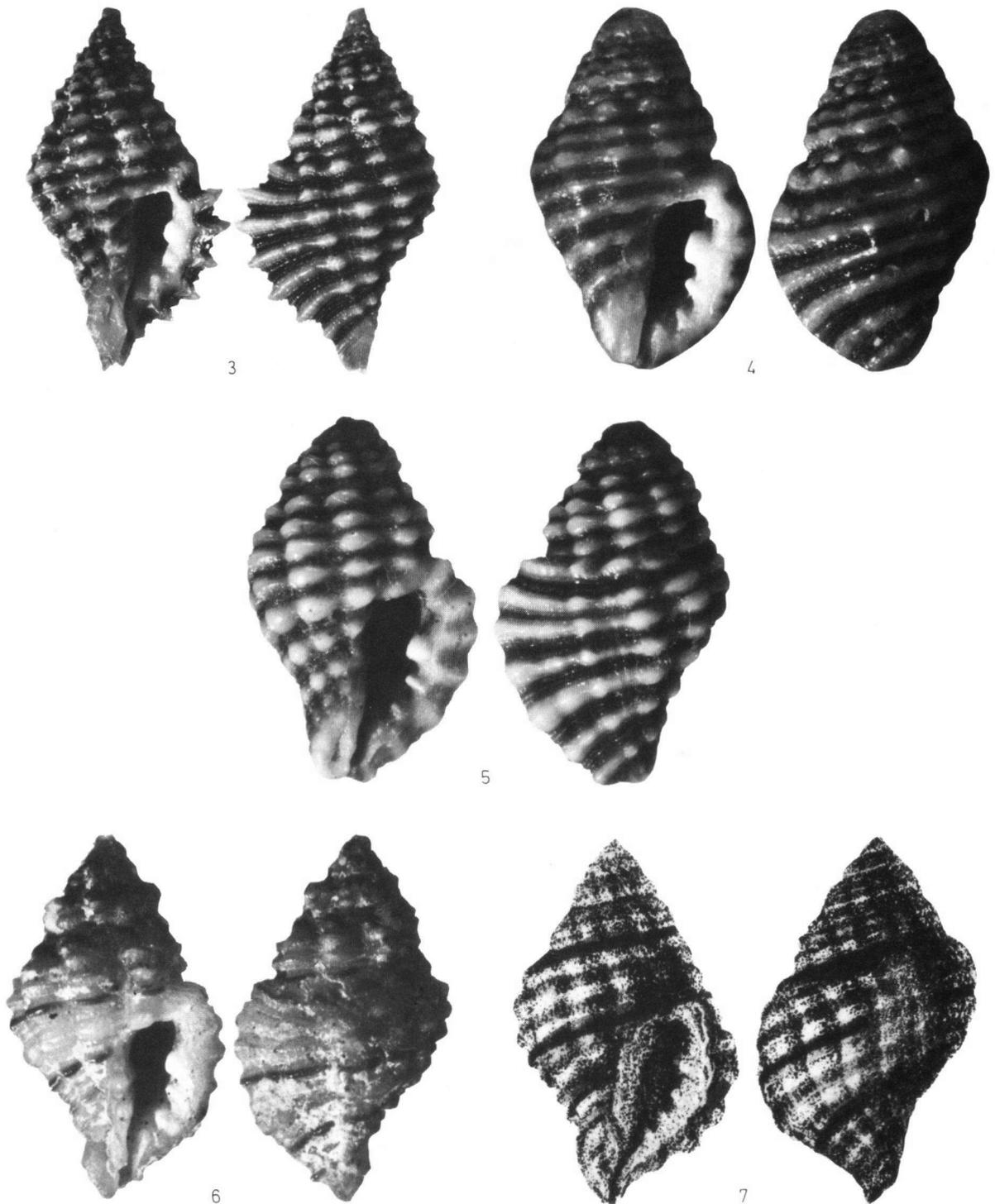


Fig. 3. *Risomurex mosquitensis* nov. spec., Costa Rica. Holotype, length 11.7 mm, Puerto Vargas (ZMA no. 384001).

Fig. 4. *Risomurex mosquitensis*, beach-worn specimen, length 9½ mm, Puerto Viejo (ZMA).

Fig. 5. *Risomurex deformis*, holotype of *Ricinula deformis* Reeve, length 8.8 mm (BMNH no. 1968472).

Fig. 6. *Risomurex schrammi*, holotype of *Engina schrammi* Crosse, length 9.0 mm, Guadeloupe (MNHN).

Fig. 7. Type figure of *Engina schrammi* (after Crosse).

ty. We prefer to consider *R. mosquitensis* the type-species, because the research of the original authors was founded on specimens of this taxon. A proposal to this effect will be submitted to the I.C.Z.N.

The decision about the type-species of *Risomurex* does not have consequences for the validity and status of the genus, because we consider *Engina schrammi* also to belong to *Risomurex*.

Radwin & D'Attilio (l.c.: 165) synonymize *Risomurex* with *Muricopsis* Bucquoy, Dautzenberg & Dollfus, 1882. The type-species of *Muricopsis* is *Murex blainvillii* Payraudeau, 1826 (fig. 10) by original designation. We recognize *Risomurex* as a valid genus; the protoconch and general shell shape of both taxa are sufficiently distinct.

Next to the type-species, Olsson & McGinty placed *Fusus muricoides* C.B. Adams, 1845 (fig. 9) in *Risomurex*, non *F. muricoides* Deshayes, 1835 (a fossil from the Paris Basin).

We have studied the four syntypes of *Ricinula rosea* Reeve, 1846, of which one is figured here (fig. 8). The cited type-locality in Reeve (1846: *Ricinula* spec. 46) "Island of Masbate", Philippines, is also doubted by the present authors. We agree with Radwin & D'Attilio (l.c.: 170, 225, pl. 2 fig. 5) that it is an Antillean species. The type locality is here-with corrected to St. Thomas, Virgin Islands (fig. 2), from where specimens are present in ZMA.

Cernohorsky (1978: 76) placed *Ricinula rosea* in *Morula* Schumacher, 1817, the type-species being *Purpura uva* Röding, 1798 (= *Morula papillosa* Schumacher, 1817). However, denticulations on the columella, the shell-shape and the sculpture of *Morula uva* make this unlikely. Cernohorsky's misconception of *Risomurex roseus* is based on the misidentification of the species in Warmke & Abbott (1962: 106, pl. 19 fig. B). We prefer to agree with Olsson & McGinty that *R. rosea* belongs to *Risomurex*.

Ricinula deformis Reeve, 1846, resembles beach-worn specimens of *Risomurex mosquitensis* (fig. 4). The holotype of *R. deformis* (fig. 5) is not beach-worn; the measurements are 8.8 x 6.8 mm and the type locality is unknown. Reeve (1846: *Ricinula* spec. 44) indicated that the shell is "Peculiarly characterized by the de-

pressed obesity of the spire." In addition, the whorls are more globose than those of *R. mosquitensis*. The colour is pinkish-rose with brown bands. *Risomurex deformis* is also placed in *Risomurex*.

The type-material of *Ricinula ferruginea* Reeve, 1846, was also studied (fig. 11); it is not considered to belong to *Risomurex*. Dall (1889: 217) introduced a variety, *Sistrum ferrugineum* (Reeve) var. *rubidum*, which is mentioned by Olsson & McGinty in the synonymy of their "*Risomurex schrammi*" (= *R. mosquitensis*). We consider *Sistrum ferrugineum rubidum* a nomen dubium, since no type-material is known, no type locality is given and the poor description makes identification impossible.

Olsson & McGinty (1958: 41) also placed "*Ocenebra*" *alveata* (Kiener) in *Risomurex*, because of the radula figured by Troschel (1869: 119, pl. 11 fig. 10), but without proof that Troschel's specimen was correctly identified. *Murex alveatus* Kiener, 1843 (syn. *M. intermedius* C.B. Adams, 1850) belongs to the genus *Favartia* Jousseume, 1880; in addition *Favartia alveata* (fig. 12) is type-species of the subgenus *Cari-biella* Perilliat, 1972.

At present we consider the following species to belong to the genus *Risomurex*:

R. mosquitensis Kemperman & Coomans ("type-species"), Costa Rica and Panama;

R. muricoides (C.B. Adams, 1845), Caribbean Sea;

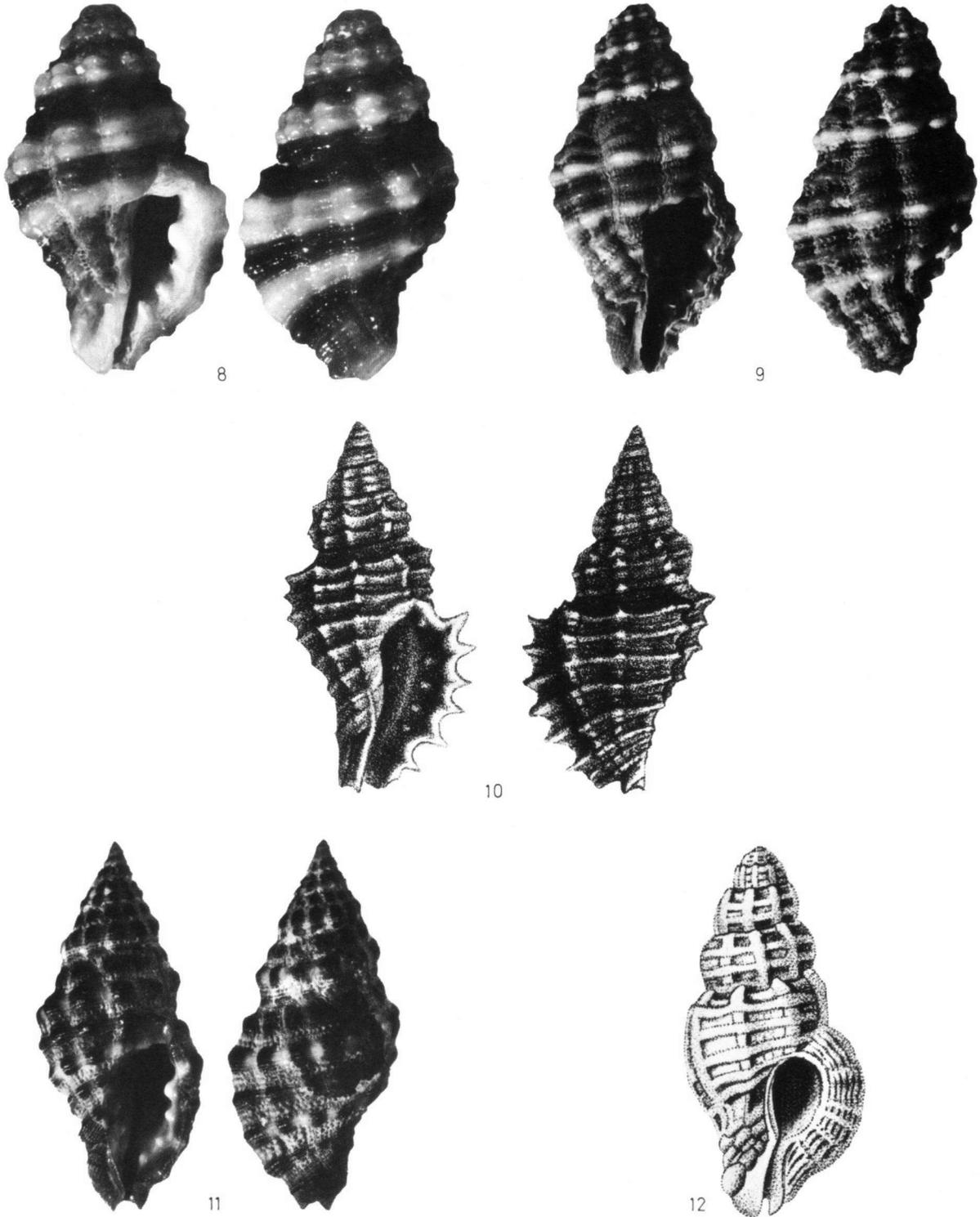
R. schrammi (Crosse, 1863), Guadeloupe.

R. roseus (Reeve, 1846), Antilles;

R. deformis (Reeve, 1846), loc. unknown.

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- Fig. 8. *Risomurex roseus*, syntype of *Ricinula rosea* Reeve, length 11.2 mm (BMNH no. 1968458).
 Fig. 9. *Risomurex muricoides* (C.B. Adams), length 11.4 mm, Costa Rica, Puerto Vargas (ZMA).
 Fig. 10. *Muricopsis blainvillii*, type figure of *Murex blainvillii* Payraudeau, length 34 mm, Corsica (after Payraudeau).
 Fig. 11. *Sistrum ferrugineum*, syntype of *Ricinula ferruginea* Reeve, length 14.2 mm (BMNH no. 1968462).
 Fig. 12. *Favartia (Caribiella) alveata*, type figure of *Murex alveatus* Kiener, length 22 mm (after Kiener).

material. Mr. J. Zaagman has prepared the maps and Mr. L. van der Laan the photographs.

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