

## New information on Cuban *Rissoina* (Mollusca: Rissoidae)

### 1. *Rissoina fenestrata* and *R. Vanderspoeli*

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**ABSTRACT.** Some new information on two species of the genus *Rissoina* from Cuba is presented. One of them is *Rissoina fenestrata* (Schwartz, 1860) whose type material was not found, but the species characters based on the figure and text of the original description, are used in comparison with those from a population found in Cuba and assigned to this *taxon*. Another species, *Rissoina vanderspoeli* was known only from the original description which had only drawings and no information on microsculpture. Scanning electron micrographs of the shell, microsculpture, and protoconch are now shown.

#### INTRODUCTION

In a catalogue updating the species of molluscs from Cuba (Espinosa, Fernández-Garcés & Rolán, 1985) 23 species of the subfamily Rissoininae were listed. Many of them were figured by Redfern (2001). Others were described recently (Espinosa & Ortea, 2002).

Many of these taxa are poorly known, sometimes only from bibliographic references or from scarce figures. The authors are currently studying this group and this is the first of several papers in which they intend to add to the existing information about several species or populations.

In the present paper, we present information on the characters of two Caribbean species of *Rissoina*, clarifying the identity of one.

#### Abbreviations

MNHN: Museum National d'Histoire Naturelle, Paris  
MHNS: Museo de Historia Natural de Santiago (coll. E. Rolán)  
CFG: collection of R. Fernández-Garcés  
s: shell

#### SYSTEMATICS

Genus *Rissoina* d'Orbigny, 1840

#### *Rissoina fenestrata* Schwartz, 1860

Figs. 1-10

**Type material.** The type was not found (see Remarks).

**Other material studied.** Cuba: 1 s from Cienfuegos (MHNS); 3 s from Havana, 4 from María la Gorda, Guanahacabibes, 4 more from Rancho Luna (all in CFG).

**Type locality.** Cuba.

**Description.** The original description (Schwartz, 1860) in German is as follows: "*Schale stark, weiss, ziemlich glänzend, halbdurehscheierend, gethürmt, mit verlängertem, konisch zugespitztem Gewinde und geraden Aussenlinien; die Spitze ist bei den meisten Exemplaren abgestumpft, es fehlen die Embryonahindungen, in welchem Falle dann die Schale nur sieben convexe, von einer tiefen Nath getrennte, grob gegitterte Windungen hat. Die 12-14 sehr ausgebildeten Längsrippen bilden mit den Gleichstarken Querstreifen ein fenestrigitterartiges Netz mit weiten, viereckigen Zwischenräumen. An den oberen Windungen sind zwei bis drei, an der Schlusswindung dagegen fünf solcher Querstreifen, welche die Rippen rechtwinkeling durchkreuzen und an den Berührungsstellen erhöhte Vereinigungsköpfe bilden. Noch ist an derselben Windung ganz unten ein von den Rippen gekörnter Halswulst zu bemerken. Die Mündung ist wenig schief, verschmälert,*

halbeiförmig, im oberen Mundwinkel zugespitzt, in unteren breit, canalartig ausgerandet; die Aussenlippe ist geschweift, unten stark vorgezogen und aussen mit einem grob und quergestreiften und dazwischen sehr fein langgefalteten Wulste stark verdickt; die Spindel lippe ist schmal, etwas geschweift, der Spindelrand mässig schief, in der Mitte eingedrückt, unten durch den Ausguss abgekürzt und abgestumpft. Länge 0.16 Wr. Zoll oder 4.3 Millim. Breite 0.065 Wr. Zoll oder 1.7 Millim".

Schwartz (1860) also presented a Latin description: *R. testa solida, alba, semipellucida, susplendida, turrata, spira elongata, conico-acuminata; anfractibus convexis 7, sutura profunda divisis, striis longitudinalibus transversisque robustis valde fenestratis; anfractu ultimo antice callo noduloso circumdato; apertura semiovalata, angustata, angulo superiori acuta, inferiori etargato-effusa; labro sinuato, inferne valde producto, extus varice longitudinali exili et transverso crasse striato valde incrassato; labio angusto inferne subsinuato, margine columellari subobliquo, in medio impresso, infra canali abbreviato et obtusato.*

The most important characters we like to emphasize are the following:

Shell (Figs. 1-8) elongate, ovoid-conic, solid. Protoconch (Fig. 9) of 1 and  $\frac{1}{4}$  whorls with a diameter of 370  $\mu\text{m}$  and nucleus about 140  $\mu\text{m}$ . The surface of the protoconch is sculptured with elevated nodules, very irregularly shaped, a little elongated and arranged obliquely or axially. Teleoconch of 5-6 whorls, which are sculptured with one spiral cord on the first whorl, two on the subsequent ones and four on the penultimate, the upper one being very small and close to the suture, which is very shallow. On the body whorl, four more spiral cords appear below the periphery. The axial sculpture is formed by orthocline ribs which cross the spiral cords forming strong nodules at the points of intersection. Suture not deep. Under high magnification (Fig. 10) it is possible to see that there are very small spiral threads crossed by growth lines. Aperture almost semicircular. Peristome continuous. External lip thickened by strong nodules, which are the ends of the spiral cords. Dimensions: larger shells measure 4.6 mm; the

holotype is 3.35 mm long.

**Distribution.** The material studied was collected in Havana, in Guanahacabibes, in the west coast of Cuba, and the south, in Cienfuegos Bay.

**Remarks.** For several years, some shells collected by the junior author (RFG) in the Cienfuegos area were included in the taxon *R. fenestrata*. Other material from other areas was added in recent years.

The same nominal taxon was used in several works, but a problem arose when the Cuban shells were compared with published figures: they all seemed to belong to different species.

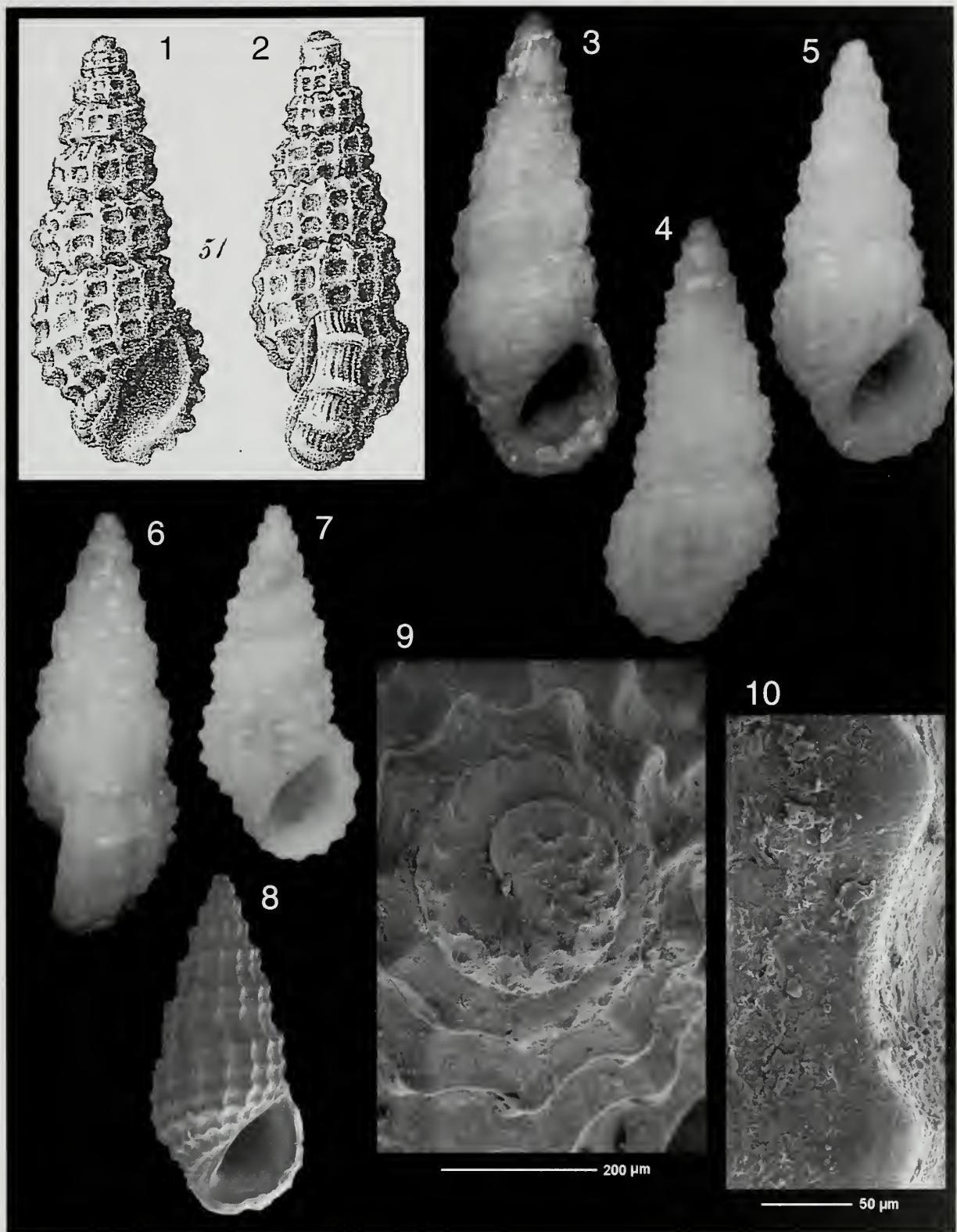
In the original description of *Rissoina fenestrata* Cuba was given as its locality (Schwartz, 1860). This was recorded later by Arango & Molina (1880). This taxon appeared more recently in De Jong & Coomans (1988), who showed the two figures of the original description (pl. 22, 117) and a scanning electron micrograph (SEM) of a shell (pl. 11, 117) whose location was indicated as St. Martin. Other shells collected in Aruba and Curaçao were mentioned. According to these authors, the species was also figured by Desjardin (1949, pl. 10, fig. 2) as *R. sagraiana*. More recently still, Leal (1991, pl. 9, figs. A-B) showed, under the name *R. fenestrata*, a SEM of a shell collected in Vitoria Seamount.

We have tried to locate the type material of *Rissoina fenestrata*. According to Dance (1986), Schwartz's collection was in the Vienna Museum, although some types could be in the Cuming collection. Therefore, we contacted with the Museum of Natural History of Vienna, but the holotype of this species was not found (Anita Eschner, pers. comm.). In the Schwartz collection, under the name of *R. fenestrata*, three lots were present: one of them from Java (Indonesia), another one from Mauritius (Indian Ocean) and the third without locality; this last one consisted of a shell without protoconch, totally eroded and measuring 3.5 mm (different from the size mentioned in the original description). It was not possible to consider any of these lots as the type of this species. Our inquiry to The Natural History Museum of London about the Cuming collection also received a negative answer (Roberto Portela-Míguez, pers. comm.).

#### Figures 1-10. *Rissoina fenestrata* (Schwartz, 1860)

1-2. Lectotype, original figures, shell of 4.3 mm. 3-8. Shells; 3-4. 4.55, 4.4 mm, María la Gorda, Guanahacabibes, Cuba (CFG); 5-6. 4.2 mm, Habana, Cuba; 7-8. Cienfuegos, Cuba 3.4 (CFG) and 3.35 mm (CER); 9. protoconch; 10. microsculpture.





The original description stated that the figured shell of *Rissoina fenestrata* was in the Deshayes collection. So, we tried to look for it in other museums such as the MNHN (Virginie Héros, pers. comm.), but it was not found. We learned that the Deshayes collection once housed in Ecole des Mines (Paris), had been transferred to the University of Lyon in 1975. One year later, Philippe Bouchet went to Lyon and tried to locate the types to transfer them to Paris, and most of them are now in MNHN. Some, however, are probably missing.

Later attempts by the MNHN to find the remaining Deshayes' types were fruitless.

Thus the type is probably lost. In the absence of type material, we based the diagnosis of our material in the description, and we considered that the two figures in Schwartz (1860, pl. 7, figs. 51) as lectotype of *R. fenestrata*.

Based on the original description and the characters shown in the lectotype, we can be sure that the species figured by Leal (1991: pl. 9 figs. A-B) is not *R. fenestrata*. Likewise the shell in De Jong & Coomans (1988: fig. 117) under this name does not belong to this species. Both originate in different locations and differ from the Cuban shells. Thus they can not be assigned to this taxon. Also, the figure of *R. sagraiana* in Desjardin (1949) considered as *R. fenestrata* by De Jong & Coomans (1988), is dubious, differing slightly from the lectotype, but it could eventually belong to this species.

The comparison of our material with the original description and figure of *R. fenestrata* presented some incongruous characters, which will be commented upon here:

1- In the original description convex whorls and deep suture are mentioned, which can also be seen in the illustration of the lectotype. On the contrary, our material has a very shallow suture when it is juvenile, but some larger shells tend to show those characters (Fig. 3).

2- The type is mentioned as measuring 4.3 mm and having 7 whorls (probably including the protoconch). The indication that the shells have lost the embryonic whorls may be erroneous, because the wide protoconch was interpreted as being blunt, suggesting lost nuclear whorls.

3- In the original figure, the body whorl has a depression above the cord around the siphonal canal. This is not noticeable in our juvenile shells (Figs. 7, 8), but it is present in some adult ones (Figs. 3, 5).

These discrepancies notwithstanding, we conclude that only the material collected in Cuba belongs to this species. Their shell characters are presented with great details herein.

### *Rissoina vanderspoeli* De Jong & Coomans, 1988

Figs. 11-18

**Type material.** Holotype and numerous paratypes in the Zoologisch Museum of Amsterdam (not examined). Two paratypes in the MHNS.

**Other material examined.** More than 300 shells from sediments: Cuba, Cienfuegos, Rancho Luna, Guanahacabibes, etc. (MHNS, CFG).

**Description.** Shell (Figs. 11-14): see De Jong & Coomans (1988). Some details of the shells could only be seen after the examination of SEM's: the entire shell surface has a very fine dense spiral microsculpture of small threads, with 1-5 very fine between wider ones (Fig. 18). Protoconch (Figs. 15-16) with 1 ¼ whorls ending abruptly on the teleoconch; it presents 4-5 spiral cords, the second of them forming an angular shoulder. Under high magnification very fine perforations aligned in rows, in some parts with axial lines can be seen between the cords (Fig. 17).

**Distribution.** According to De Jong & Coomans (1988), Aruba and Curaçao. We have material from Curaçao and Cuba.

**Remarks.** There are no problems with this distinctive taxon, although heretofore it had been represented only by a pair of small line-drawings in the original description, which made it difficult to be sure of its diagnosis.

The comparison of two paratypes from the Netherlands Antilles and the Cuban material confirms all to the same species.

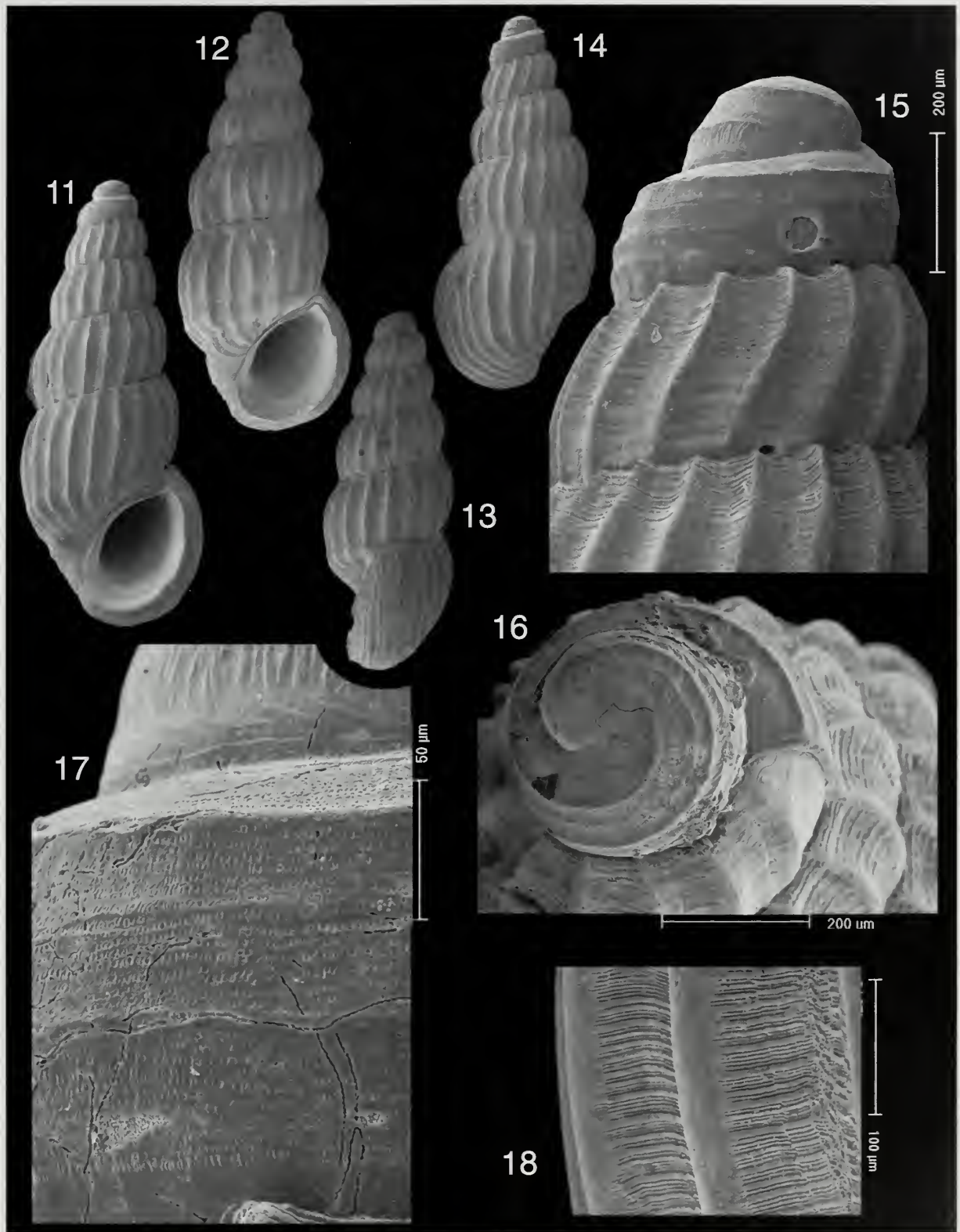
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**Figures 11-18.** *Rissoina vanderspoeli* De Jong & Coomans, 1988

**11-14.** shells, 3.1, 3.1, 3.0, 2.5 mm. Guanahacabibes (MHNS); **15-16.** protoconch; **17.** detail of the microsculpture of the protoconch; **18.** microsculpture of the teleoconch.





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