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## *SIMPLISTRIGILLA* IN THE WESTERN ATLANTIC OCEAN (MOLLUSCA, BIVALVIA)

by

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With one plate

In a recent monograph on the tellinid genus *Strigilla*, the absence of a representative of the subgenus *Simplistrigilla* was noted in the Western Atlantic region (Boss, 1969). *Simplistrigilla* was described by Olsson (1961) with the species *S. strata* Olsson, 1961, as type. The species is rare with a considerable range in the Panamic Province of the eastern Pacific Ocean, occurring from El Lagartillo, Panama, southward to Punta Blanca, Ecuador. The unusual feature possessed by this species is in the nature of the scissulae or oblique incised lines which descend across the shell from the anterior dorsal margin toward the ventral and posterior margins. In *S. strata* these scissulations do not change direction or form a complex of flexures along the posterior dorsal surface of the shell, whereas all other species of *Strigilla* possess a variously flexed sculpture. Using this peculiarity of sculpture, Olsson established *Simplistrigilla* and he also noted that the larval shell or the nepionic surface of the umbo in *S. strata* is relatively large, distinct, lacking the scissulate sculpture and having extremely fine, hair-like concentric sculpture.

Scissulate sculpture itself, known to be diagnostic for most taxa of *Strigilla*, has arisen independently in several tellinoid lineages (Boss, 1966) and has been shown to have functional significance in that it facilitates burrowing (Stanley, 1969; 1970).

A sample collected by the H. Nl. M. S. "Luymes" off Suriname during the program of Research of the Continental Shell of Suriname (Onderzoek Continentale Plat Suriname) was sent to me by Mrs. Hanneke Nijssen-Meyer and

proved to be a new species of *Simplistrigilla*. I had earlier segregated what I took to be aberrant specimens of *Strigilla mirabilis* (Philippi, 1841) which possessed irregular *Simplistrigilla*-like sculpture along the posterior dorsal slope of the surface of the valves. The present material, consisting of 3 unmatched valves (2 right and 1 left), provided the necessary additional evidence to enable me to note with relative certainty the occurrence of a new species of *Strigilla* in the western Atlantic fauna having affinities with *S. strata* Olsson and belonging to *Simplistrigilla*.

The abbreviations RMNH for Rijksmuseum van Natuurlijke Historie, and MCZ for Museum of Comparative Zoology, are used in the text.

***Strigilla (Simplistrigilla) surinamensis*** new species (pl. 1 fig. 1, 2, 4a, 4b)

Types. — Holotype: RMNH, right valve, 8.0 mm × 7.5 mm (pl. 1 figs. 1, 4a). Paratypes: RMNH, left valve; MCZ 278401, right valve (all from the type-locality). Type-locality: "Luymes", Sta. M 84, 6°19.6'N 54°04.5'W, NW of the Maroni River, Suriname, depth 22.2 m, collected by Van Veen grab.

Description. — Shell small, nearly extending to 10 mm in length and to 9 mm in height, irregularly subovate, slightly inequilateral, probably equi-valve though no matched specimens known, thin to subsolid, little inflated, right valve more convex and usually without posterior flexure. Umbos slightly in front of middle, distinctly elevated above hinge line and rather pointed. Anterior margin smoothly and broadly rounded; ventral margin weakly convex, and rising gently behind; anterior dorsal margin not clearly set off, short, nearly straight; posterior dorsal margin longer, more or less straight, and rather steeply inclined; posterior margin poorly defined, irregularly rounded, forming broad convex truncation. Sculpture consisting of strongly incised more or less evenly spaced scissulations descending across surface of the valve from anterior dorsal margin and ascending over posterior dorsal slope without flexing. Posterior ridge lacking in either valve, ligament not observed; escutcheon weak, shallow and lanceolate; lunule short, broad (particularly in right valve) and depressed. Nymphal plates narrow and flattened. In the left valve, the cardinal complex consists of an anterior, small, narrow elongate bifid tooth with subequal lobes and of a posterior thin, elongate laminate tooth coextensive with the nymphal plate; anterior lateral tooth subdistal, rather strong and pointed; posterior lateral tooth distal and weak. In the right valve, the cardinal complex consists of a slightly skewed posterior bifid tooth with subequal lobes and of an anterior, thin laminate tooth adpressed to the base of the lunule; anterior lateral tooth sub-proximal,

strongly pointed, and socketed above; posterior lateral tooth distal, weaker, pointed and socketed above. Lateral dentition of right valve stronger than left. Muscle scars poorly impressed. Anterior adductor broad and elongate; posterior adductor irregularly subquadrate. Pallial sinus obscure, apparently more or less equal in opposite valves, rising slightly, convex above and falling in an arcuation to a confluence with the pallial line some distance from the anterior adductor muscle scar. Cruciform muscle scars obscure, rounded and near posterior ventral border. White internally and externally, rarely with yellowish discoloration.

Size. — Length: 9.1, 8.0 (holotype), and 7.5 mm. Height: 8.5, 7.5 (holotype), and 7.1 mm. (See also note on page 28).

Remarks. — The species is the first known *Simplistrigilla* in the western Atlantic and is an analog of *S. strata* of the eastern Pacific. It differs from *S. strata* in minor characters, namely, a less pointed posterior outline, a weaker, more closely set arrangement of the oblique sculpture and a somewhat less strongly developed and smaller nepionic area. Per same area of shell surface, there are 12 to 14 scissulae in *S. surinamensis*, 8 or 9 in *S. strata*. A western Atlantic species which might easily be confused with *S. surinamensis* is *S. (Pisostrigilla) mirabilis* similar in size and coloration but differing in its more closely set sculpture (pl. 1 fig. 3). Further, *S. mirabilis* has a complex of zig-zag sculptural flexures along the posterior dorsal slope of the valve and a more distally placed right posterior lateral tooth (pl. 1 fig. 4c).

*Strigilla surinamensis* is itself quite variable as indicated in the figures. The distinctness and elevation of the umbo as well as the strength and development of the dentition exhibit considerable variation (pl. 1 figs. 1, 2, 4a, 4b).

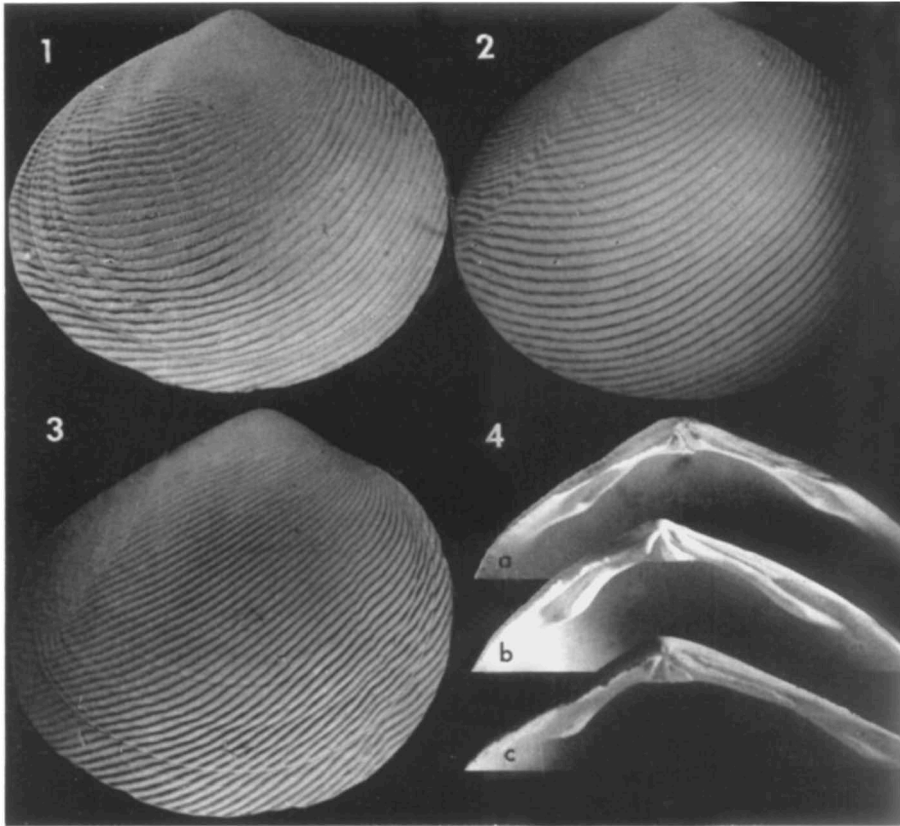
Altena (1968) discussed the marine bivalves of Suriname and recognized the occurrence of both *Strigilla pisiformis* Linnaeus (1758) and *S. gabbi* Olsson & McGinty 1958. The former was found rarely in the Holocene sand deposits while the latter occurred commonly on the beaches of the sea coast and estuaries; neither was taken alive. *S. surinamensis* was dredged offshore on the shelf but the specimens were not alive. Other species of the genus which probably occur offshore include *S. carnaria* Linnaeus (1758), *S. producta* Tryon 1870, and *S. pisiformis* Linnaeus (1758) (Boss, 1969).

Specimens examined and range. — The species has not been taken alive. It occurs off Surinam, at the type-locality and has been found at Fort Morgan, Alabama, U.S.A. (pl. 1 figs. 2, 4b); a sample simply listed as from "Floriada" is also in the MCZ.

Note added in proof. — Additional specimens have been found at H. Nl. M. S. "Luymes", Sta. M 85, 6°28.7' N 54°02.2' W, NW of the Maroni River, Suriname, depth 36 m; they are to be considered paratypes. Maximum measurements of length and height are extended to 12 and 10 mm, respectively.

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1, external view of the right valve of the holotype of *Strigilla surinamensis* new species; 2, external view of the right valve of a specimen of *S. surinamensis* from Fort Morgan, Alabama (MCZ 278402; length 8 mm); 3, external view of the right valve of *S. mirabilis* (Philippi, 1841) (MCZ 235983; length 8 mm); 4, right hinges of holotype of *S. surinamensis* (4a), of *S. surinamensis* (MCZ 278402) (4b), and of *S. mirabilis* (MCZ 235983) (4c). All specimens coated with magnesium.