

***Scaphella (Scaphella) garciai* n.sp.
(Gastropoda: Volutidae: Scaphellinae)
a new volute from off Yucatan, Mexico**

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ABSTRACT. *Scaphella (Scaphella) garciai* n. sp. is described on the basis of two specimens, one collected off San Augustine, Florida. Differences between the new species and its congeners are established.

INTRODUCTION

Recently checking his collection, Emilio Fabián García pointed out to me a specimen of the genus *Scaphella* which seemed to be a previously undescribed species. The specimen was given to him by Edith Mugridge, a well-known dealer and shell collector from Sanibel Island, Florida. Ms. Mugridge obtained many of her specimens from a number of shrimpers who worked the east coast of Florida and the Yucatan waters, and the true locality of the specimen in question became uncertain.

Taxonomic placement (in Bail & Shelton, 2001)

The genus *Scaphella* comprises several related polytypic taxa, which have been the subject of controversial classification at both the generic and specific ranks.

Based upon the shape of the radula, Pilsbry & Olsson (1953) split *Scaphella* into three genera:

- Scaphella* s.s. with but a single long narrow cusp;
- Clenchina* with a conic central cusp, flanked by two minute accessory cusps (synonym *Rehderia* Clench, 1946);

- Aurinia* H. & A. Adams, 1853 with a pointed central cusp and two well-developed side cusps.

Weaver & du Pont (1970) and Bayer (1971) downgraded those three genera to a subgeneric rank of *Scaphella*, pointing out the minor taxonomic significance of their radular difference, especially between *Clenchina* and *Scaphella* s.s., both of which are now considered synonyms.

Though relegated into synonymy of *Scaphella* by Emerson & Old, jr. (1979) and Poppe & Goto (1992), the subgenus *Aurinia* deserves to keep its subspecific status: a chief feature, emphasized by Pilsbry & Olsson, is the thin callus covering the ventral side of the shell, often incrusting a muddy deposit. Additional characters such as a complete tricuspidate radula, light structure of the shell, lack of fasciole, obsolete columellar plaits, and open pattern of irregularly spaced dots are sufficient to maintain the

polytypic *Scaphella dubia* (Broderip, 1827) in its subgeneric status.

On the contrary, *Scaphella* s.s. includes species with a strong shell, a more or less pronounced fasciole, 2 to 4 well-defined columellar plaits, mostly a dense spiral pattern of dots or bands, and a Y-shaped radula with or without vestigial side cups.

Based upon these shell characters only, *Scaphella garciai* can be temporarily placed into *Scaphella* s.s., pending additional anatomical information.

SYSTEMATICS

Family **VOLUTIDAE** Rafinesque, 1815

Subfamily **SCAPHELLINAE** H. and A. Adams, 1858

Genus *Scaphella* Swainson, 1832

Subgenus: *Scaphella* s.s.

Type species: *Voluta juniona* Lamarck, 1804, by subsequent designation (Herrmannsen, 1848: 423)

***Scaphella (Scaphella) garciai* n. sp.**
Figs 1-5, 12-14

Type locality. Unknown

Range. Until now only collected from northeastern Florida, USA (paratype).

Type material. Holotype ANSP 416213, length: 47.2 mm, width: 15.9 mm mm. locality unknown (Figs 1-3). Paratype: K. & L. Sunderland collection, length 46.0 mm, width: 15.2 mm, taken in fish trap from 300 meters depth off St Augustine, Florida (Figs 4-5).

Description. Shell small, up to at least 47.2 mm in length, elongate fusiform with strong structure and polished surface. Protoconch dome-shaped, large, of 4.3 mm in diameter on holotype, with one smooth, flattened whorl without visible calcarella. Transition protoconch/teleoconch sharp, marked by slightly concave depression (Fig. 12). Teleoconch of three and a half moderately convex, narrow whorls. Surface

entirely sculptured with numerous thin spiral cords (*ca.* 30-35 on penultimate whorl) crossed by light growth striae, giving faint reticulated appearance, weakening on dorsum of last whorl (Fig. 14). Suture adpressed, underlined by subsutural constriction forming well-marked concave ramp. Aperture narrow, elongated, occupying 0.60 % of total shell length. Outer lip thin, rapidly thickening below. Columella straight, with three thin plicae; adapical plica strongest (Fig.13). Siphonal canal narrow, tapered. Fasciole ill-defined. Shell coloration yellowish-ivory without pattern.

Animal and radula unknown.

Comparison. In overall shell characters, the most similar species to *Scaphella garciai* is *Scaphella (Scaphella) gouldiana* (Dall, 1889), which has the same nuclear structure and same spiral threads. However, *S. gouldiana* has a broader ovate shell with a short spire bearing 21-24 solid nodules; its protoconch is slightly more elevated, the spiral sculpture on the body whorl is weaker, and the subsutural band is flat and hardly distinguishable. Two equal plicae plus an abapical smaller and the presence of a pattern of spiral brown bands in *S. gouldiana* precludes also any confusion (Figs 8-9).

A still undescribed small-sized *Scaphella* from deep water off Key West, close to *S. gouldiana* shares with *S. garciai* the same protoconch shape and, on the body whorl, the same spiral sculpture and lack of pattern. However, its smaller size (average length under 40 mm), strongly angled whorls, short triangular spire bearing a spiral row of prominent axial nodules extending onto the first two-third of the body whorl, and four, strongly developed columellar plaits are quite different (Dickson, 1996) (Figs 10-11).

Scaphella neptunia (Clench & Aguayo, 1946) is a small species with a somewhat similar outline, but it differs by having a larger protoconch bearing a prominent calcarella, a shorter spire with one less whorl, a body whorl with strong spiral grooves and a pattern of spiral rows of brownish axial dashes (Figs 6-7).

Etymology. This species is named for Emilio Fabián García, the well-known conchologist who first drew attention to this taxon, and who has donated the

holotype to the Academy of Natural Sciences of Philadelphia (ANSP).

Remarks. The first occurrence of this taxon in literature has been pictured by K. & L. Sunderland (1992) but misidentified as *Scaphella aguayoi* (Clench, 1940). This shell, selected as paratype, was dredged from 260 meters by Ted Yocius off St. Augustine, FL in 1971. The holotype was labelled off Contoy Light, Yucatan, 200 m deep. However, after later investigations, no fishermen operating in the Yucatan waters have ever seen this shell. This location seems erroneous all the more that the overall characters of *S. garciai* are closer to Florida *Scaphella* than to the known Yucatan species (*S. contoyensis* Emerson & Old, Jr, 1979 and *S. macginnorum* Garcia & Emerson, 1987).

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Figures 1-11

1-5. *Scaphella (Scaphella) garcia* n.sp.

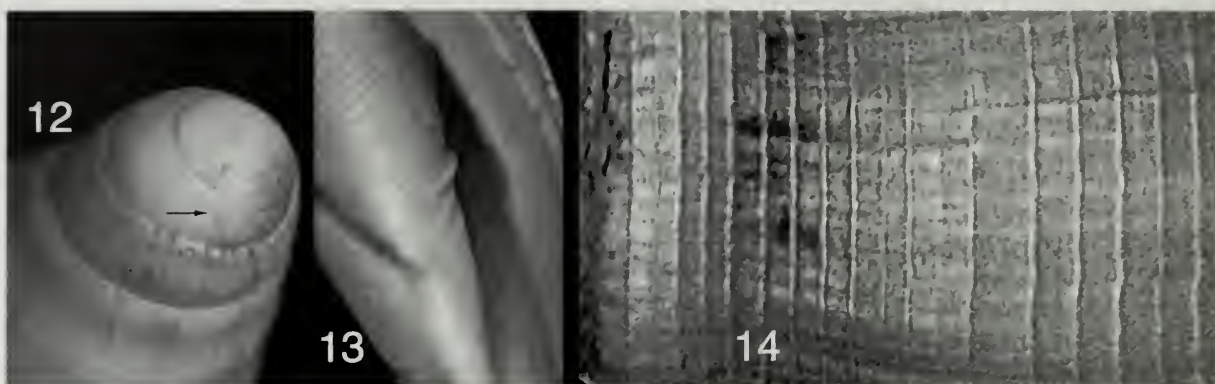
1-3. Holotype, locality unknown, 47.2 x 15.9 mm; 4-5. Paratype, off St Augustine, Florida, USA, 300 m, 46.0 x 15.9 mm.

6-7. *Scaphella (Scaphella) neptunia*, 750-800 m, Pedro Bank, southeastern Jamaica. 39.8 x 16.0 mm;

8-9. *Scaphella (Scaphella) gouldiana*, 500-600m, off Key West, Florida, USA. 60.0 x 24.1 mm;

10-11. *Scaphella (Scaphella) sp.*, 500-600 m, off Palm Beach, Florida, USA. 38.6 x 15.1 mm;





Figures 12-14

12-14. *Scaphella (Scaphella) garcia* n.sp. 12. Protoconch. Black arrow on the transition protoconch / teleoconch; 13. Columellar plaits; 14. Surface sculpture.