

***Volvarina pontesi*, a new bathyal marginellid  
(Mollusca, Gastropoda)  
from off Brazil**

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ABSTRACT. *Volvarina pontesi* is described from the bathyal zone off southeastern and southern Brazil. The new taxon differs from other congeneric species by its large size and unusually elongated spire.

#### INTRODUCTION

An unknown marginellid was obtained at bathyal depths off southern Brazil during the GEOMAR IV (Marine Geology IV) cruise performed by N. Oc. *Almirante Saldanha* of the "Diretoria de Hidrografia e Navegação" (DHN) of the Brazilian navy in 1972. Additional material of the same species was collected on the slope of southern and southeastern Brazil by the RV *Atlântico Sul* of "Fundação Universidade do Rio Grande" (FURG) in 1987, and by the RV *Marion Dufresne* during the French-Brazilian MD55 cruise realized by "Terres Australes et Antarctiques Françaises" (TAAF) in 1987. The small number of live-collected specimens hampered further anatomical studies, but shell and radular morphology allocate the new species in the genus *Volvarina* Hinds, 1844.

RIOS (1985), having in mind future taxonomic work with the present species, introduced the nomen nudum *Ledavolvarina* on the third cover of his 1985 book. Acronyms used through the text are: MNHN, Muséum National d'Histoire Naturelle, Paris, France; MNRJ, Museu Nacional, Rio de Janeiro, Brazil; MORG, Museu Oceanográfico E. de C. Rios, Rio Grande, Brazil; USNM, National Museum of Natural History, Smithsonian Institution, Washington, USA.

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**Family Marginellidae Fleming, 1828****Genus *Volvarina* Hinds, 1844*****Volvarina pontesi* sp.n.**

(Figures 1-8)

Shell (Figures 1-6) solid, cylindrical-fusiform, tapering at base, imperforate, reaching 15.1 mm length and 4.3 mm width, smooth, glossy. Protoconch round, white, with 1.5 whorls, 0.9 mm diameter. Transition from protoconch to teleoconch inconspicuous. Spire high, acute, apical angle about 20°. Suture distinct, not canalculated, covered by transparent enamel. Teleoconch with four or five straight whorls. Aperture elongate (length/width about 7), about 0.5 of shell length, narrower adapically. Outer lip straight or slightly concave. Columella with 4 small, abapical plicae, all of same size. Anterior canal shallow, wide. Outer lip straight, smooth internally. Parietal region smooth. Periostracum absent.

Radula (Figures 7 & 8) rachiglossate, formula 0-R-0, with about 28 rows and 0.17-0.20 mm length. Rachidian tooth multicuspid, asymmetrical, with 19-23 cusps. Four to six large cusps unevenly distributed among small cusps.

**Holotype.** MORG 17889, 15.1 mm length, 4.3 mm width, N.Oc. *Almirante Saldanha* GEOMAR IV cruise, station 2820, Van Veen grab.

**Type Locality.** Off Itajaí, Santa Catarina State, Brazil (27°00' S - 46°10' W), 1140 m depth, sandy mud bottom.

**Paratypes.** Paratype 1, MNRJ 4850, length 13.2 mm; paratype 2, USNM 749862, length 13.3 mm; both from type locality; paratype 3, MORG 24983, off Torres, Rio Grande do Sul State, RV *Atlântico Sul*, 200 m depth, length 13.6 mm; paratypes 4-8, MORG 26075, off Rio de Janeiro State, Brazil (23°42' S - 42°07' W), Bouchet, Leal & Métivier 05/1987, RV *Marion-Dufresne* MD55 cruise, station CB-104, 430-450 m depth, Blake trawl, muddy bottom, lengths 13.5-14.0 mm; paratypes 9-12, MNHN, unnumbered: paratype 9, length 14.4 mm; paratype 10, length 13.5 mm; paratype 11, length 14.1 mm; paratype 12, length 13.5 mm; last four from off Rio de Janeiro State, Brazil (23°47' S - 42°10' W), Bouchet, Leal & Métivier 05/1987, RV *Marion-Dufresne* MD55 cruise, station CB-105, 610 m depth, Blake trawl, muddy bottom.

**Etymology.** Named after fisherman Leopoldino R. Pontes from Rio Grande, Brazil, who provided material to the Museu Oceanográfico (MORG) for three decades. Mr. Pontes collected extensively mollusks and shells aboard the fishing vessels *Pescal 2*, *Mestre Gerônimo* and *Akaroa*.

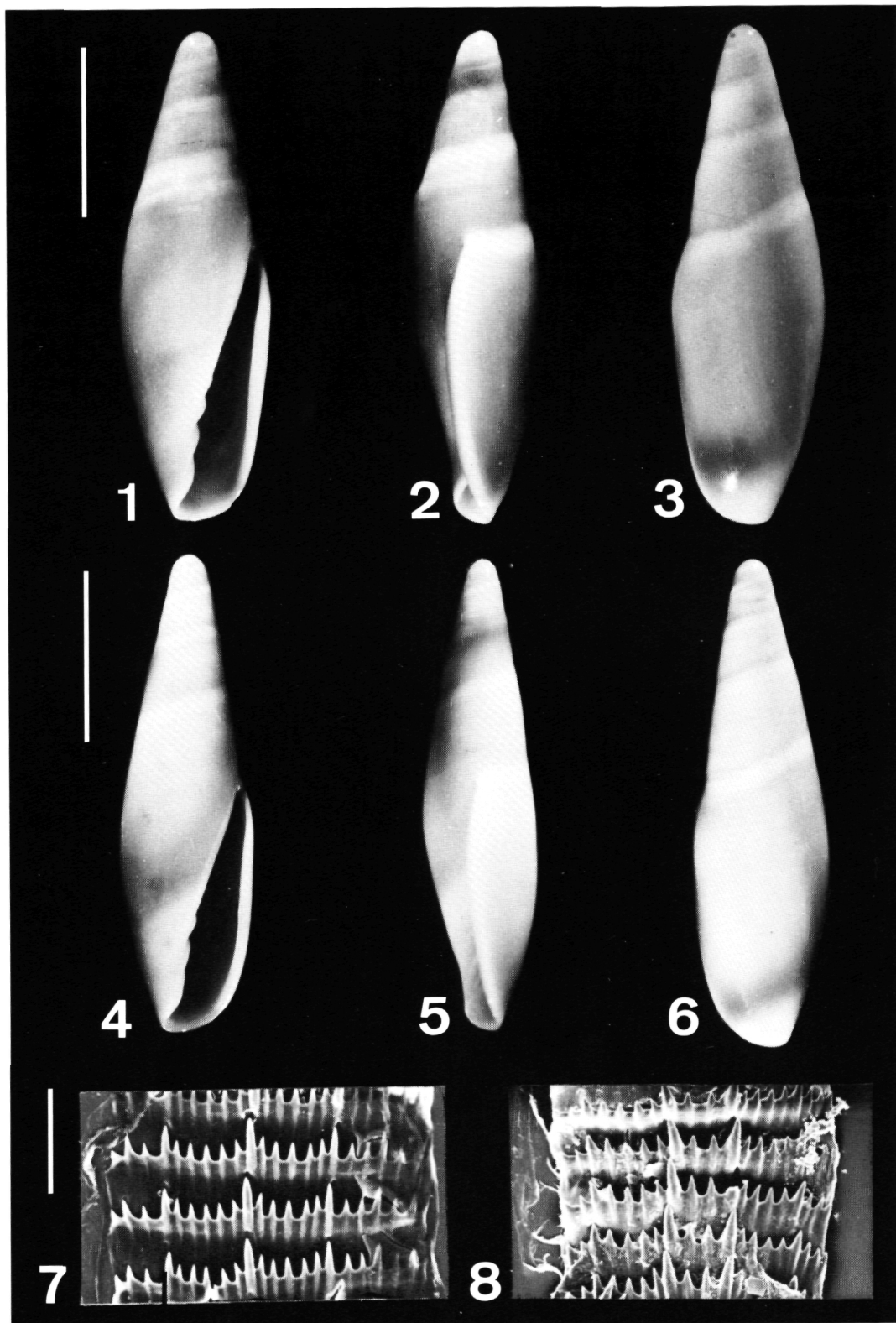
**Remarks.** General shell morphology and radula allocate the new species in the genus *Volvarina* (COAN, 1965; COAN & ROTH, 1976; ROTH, 1978). The comb-like radular tooth is somewhat similar to those in *Volvarina bilineata* (Krauss, 1848) (COOVERT & COOVERT, 1987) and *Volvarina philippinarum* (Redfield, 1848)

**Figures 1-8** (opposite). *Volvarina pontesi* sp.n.;

1-3. Holotype, MORG 17889, 13.8 mm length, 4.3 mm width;

4-6. Paratype 9, MNHN, 14.4 mm length, 4.0 mm width;

7-8. Radula. Scale bars: Figures 1-6 = 5 mm; Figure 7-8 = 0.05 mm.



(COAN, 1965). Future studies in comparative anatomy may, however, indicate that *V. pontesi* belongs in a separate genus.

*Volvarina pontesi* is promptly distinguishable from most *Volvarina* by its large size, slender shape and rather high spire. The new species is somewhat similar in shell morphology to the Patagonian-Magellanic *Volvarina warrenii* (Marrat, 1876) [= *V. patagonica* (Martens, 1881) and *V. dozei* (Rochebrune & Mabile, 1889), from which it differs by a more elongate shell with relatively longer spire, white protoconch and early teleoconch whorls, which are dark in *V. warrenii* and *V. dozei*, and the absence of a well-delineated, white band in the middle of the body whorl, present in the other two species (CARCELLES, 1946; POWELL, 1951). It somewhat resembles *V. gracilis* C.B. Adams, 1851 (see illustration in CLENCH & TURNER, 1950). However, *V. gracilis* is a much smaller species, reaching around 7 mm in length, whereas adult *V. pontesi* measures about 13 mm. The relationship length of aperture/total length in the new species is about 0.5; the same ratio is about 0.7 in *V. gracilis*.

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#### LITERATURE CITED

- CARCELLES, A.R., 1946. Notas sobre dos especies Argentinas de Marginellidae. *Notas del Museo de La Plata* 9, Zoología 92: 51-57.
- COAN, E.V., 1965. A proposed reclassification of the Family Marginellidae. *Veliger* 7(3): 184-194.
- COAN, E.V. & B. ROTH, 1976. Status of the genus *Hyalina* Schumacher, 1817 (Mollusca: Gastropoda). *Journal of Molluscan Research* 42: 217-222.
- CLENCH, W.J. & R.D. TURNER, 1950. The western Atlantic marine mollusks described by C.B. Adams. *Occasional Papers on Mollusks* 1 (15): 233-403.
- COOVERT, G.A. & H.K. COOVERT, 1987. Preparation of marginellid radulae. *Marginella Marginalia* 2 (4): 20-26.
- POWELL, A.W.B., 1951. Antarctic and subantarctic Mollusca. Pelecypoda and Gastropoda. *Discovery Reports* 26: 47-196.
- RIOS, E.C., 1985. Seashells of Brazil. 328 pp. Museu Oceanográfico, Fundação Universidade do Rio Grande.
- ROTH, B., 1978. New species and records of tropical west American Marginellidae (Mollusca: Neogastropoda). *Contributions in Science of the Natural History Museum of Los Angeles County* 292: 1-18.