

First record and new combination of a rissoid gastropod from off south Brazil

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Resumo

Primeiro registro e nova combinação de um gastrópode Rissóideo no sul do Brasil. Após mais de trinta e cinco anos de sua descrição original, *Rissoa cruzi* Castellanos & Fernández, 1974 é registrada pela primeira vez em águas Brasileiras. A análise das características da rádula e da concha indica que a espécie não está corretamente alocada no gênero *Rissoa*. Baseado na análise conchiliológica é proposta a realocação de *R. cruzi* no gênero *Alvania* Risso, 1826 e é feita uma comparação com outros rissóideos.

Unitermos: Atlântico Sul, Brasil, nova combinação, novo registro, Rissoidae

Abstract

After 35 years of its original description, *Rissoa cruzi* Castellanos & Fernández, 1974 is first recorded in southern Brazilian waters. An analysis of both shell and radular characteristics indicated that *R. cruzi* does not conform to its current generic assignment. Based on shell characters, *R. cruzi* is placed in the genus *Alvania* Risso, 1826. A comparison with other rissoids from the same region is also provided.

Key words: Brazil, new combination, new record, Rissoidae, South Western Atlantic

Introduction

Rissoa cruzi Castellanos & Fernández, 1974 was first described based on material collected in the intestinal tract of the asteroidean *Astropecten brasiliensis* Müller & Troschel, 1842 from Uruguay and from material collected by the vessel “Austral” in Bahia Blanca, Argentina.

After the original description there was only one record of the species from Uruguay (Scarabino, 2004).

Ponder and Worsfold (1994) state that the species described by Castellanos and Fernandez (1974), although not available to them for study, could be recognized (based on its description and illustrations) as a taxon different than those dealt with in their report.

Among the gastropods collected on the continental slope off Rio Grande, State of Rio Grande do Sul, Brazil during the “Bentos” operation of the “Recursos Vivos da Zona Econômica Exclusiva” REVIZEE (Wiggers

and Veitenheimer-Mendes, 2004) there was a possibly undescribed species of the genus *Alvania* Risso, 1826. This genus *Alvania* comprises a group of rissoids only absent in the Antarctic and Subantarctic regions (Ponder, 1985). Rios (1994) records six species of this genus from Brazil: *Alvania aberrans* (C. B. Adams, 1850), *A. auberiana* Orbigny, 1842, *A. caribaea* (Orbigny, 1842), *A. deliciosa* Jeffereys, 1884, *A. faberi* Jong & Coomans, 1988 and *A. xanathias* (Watson, 1885). An additional species, *Alvania valeriae* Absalão (1993), has been described from southeast Brazil.

Specimens collected off Rio Grande by Wiggers and Veitenheimer-Mendes (2004) as *Alvania* sp. are herein recognized as *Alvania cruzi* comb. nov. and are compared with *A. valeriae*, *A. faberi* and other similar species.

Material and Methods

All material was composed of empty shells and was deposited in the collection of the Departamento de Zoologia of the Universidade Federal do Rio Grande do Sul, lot UFRS 1387. Identification was confirmed by comparison with material described by Castellanos and Fernández (1974) as “other localities” and deposited in the Museo de La Plata, La Plata, Argentina (MLP), not numbered.

Shell measurements were taken under a dissecting microscope equipped with an ocular micrometer. The number of whorls was estimated to the nearest quarter of a whorl. Spiral ornamentation on body whorl is defined as the spiral threads between the suture and the region touched by the aperture’s parietal region. Sculptures located below the aperture’s parietal region are considered to be on base. Photographs were taken using a Nikon Coolpix 995 digital camera adapted on a dissecting microscope and were digitally processed.

Institutional abbreviations used are: MLP, Museo de La Plata – Argentina; UFRS, Coleção do Departamento de Zoologia da Universidade Federal do Rio Grande do Sul – Brazil.

Systematics

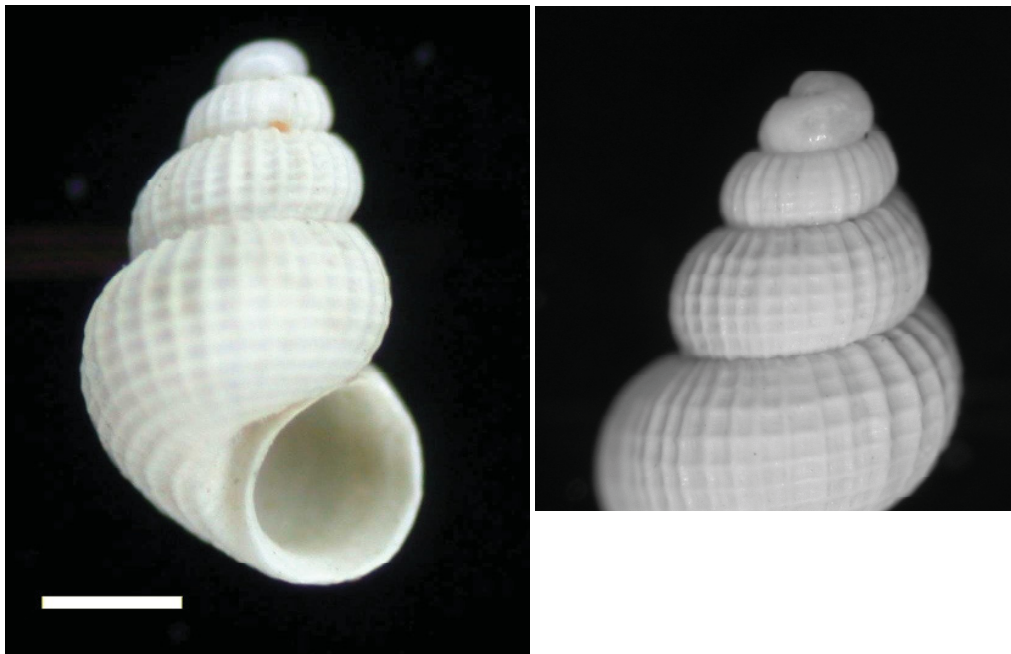
Family Rissoidae H. & A. Adams, 1854

Genus *Alvania* Risso, 1826

Type species: *Alvania europea* Risso, 1826.

Alvania cruzi (Castellanos & Fernández, 1974)
comb. nov.

(Figures 1-2)



FIGURES 1-2: *Alvania cruzi* nov. comb. Specimen from UFRS 1387; 1) ventral view. 2) dorsal view. Scales 0.5mm.

Rissoa cruzi Castellanos and Fernández, 1974

Alvania sp. sensu Wiggers and Veitenheimer-Mendes, 2004

Diagnosis: *Alvania cruzi* comb. nov. differs from other congeners by having usually 6 (5-7) spiral threads on the body whorl, and the protoconch globose with 1.25-1.5 smooth whorls.

Description: Shell minute, 2.2 to 3mm long, white. Protoconch smooth, with 1.25-1.5 whorls. Teleoconch with 3 convex whorls and suture well impressed, not canaliculated. Sculpture reticulated with 6 (5-7) spiral threads on body whorl and usually 5 (4-6) spiral threads on the base. Axial sculpture is highly variable, from 28 to 41 axial ribs, but usually with 30 to 35, on body whorl, which does not form nodules at intersections. Spaces between axial ribs are usually homogeneous, but in some individuals it decreases as it reaches the aperture, which is elliptic, almost circular, sometimes thickened. Umbilicus small, clink-like, well defined.

Type material: Holotype and one paratype, Uruguay, 35°14'S; 52°36'W [off Rocha], 140m, in the intestinal tract of *Astropecten brasiliensis* (MLP, not numbered).

Material examined: BRAZIL, **Rio Grande do Sul**; REVIZEE station 6839 (32°55'S-50°34'W), off Rio Grande, 99m, 47 ex. (UFRS 1387). ARGENTINA, **Buenos Aires**, Bahia Blanca, col. "Austral" A.R.A. 11 ex. (MLP, not numbered).

Range: From Bahia Blanca, Argentina to Rio Grande do Sul, Brazil.

Discussion

According to Ponder (1985) the axial sculpture in *Rissoa* is usually predominant and spiral cords are weak, low, usually do not cross axial ribs and the radula has one pair of basal denticles where the outer pair of basal denticles derived from the lateral margins ventral edge of each tooth with moderately developed U-shaped extension.

Neither the radular nor the shell characteristics of *Rissoa cruzi* Castellanos and Fernández, 1974 conform

with the genus *Rissoa* Desmarest, 1814. Radular characters as described by Castellanos and Fernández (1974) show a single pair of basal denticles and would lead us to assign this taxon in the genus *Onoba*, as "Onoba have a generalized rissoid radula with only a single pair of basal denticles on the central teeth and no denticle arising from the lateral margin" (Ponder, 1985) or in the genus *Alvania*, as Ponder (1985) noted that "the radular characters of *Alvania* are similar to those of *Rissoa*". Unfortunately, no radula from our material was available for study and therefore Castellanos and Fernández' (1974) observations could not be confirmed. Furthermore, Castellanos and Fernández' (1974) illustration is based on optical microscopy and the origin of the basal denticles is not clear. It is therefore impossible to count the number of cusps on the marginal teeth.

The shell characters of *A. cruzi* are similar to those of a number of other species included in the genus *Alvania*, and consequently we place this species in that genus.

Absalão (1993) described *A. valeriae* and compared it with the Brazilian species *A. auberiana*, *A. deliciosa* and *A. xanthias* and with the Caribbean species *A. colombiana* Romer & Moore, 1988, *A. porcupinae* (Jeffereys, 1884), *A. zylensis* (Gofas & Warén, 1982) and *A. imperspicua* Palary, 1920.

Absalão (1993) stated that *A. valeriae* is unique among its southwestern Atlantic congeners for it has a large number of axial ribs that clearly dominate the 12-14 spiral threads, a slightly canaliculated suture, and 2.5 protoconch whorls. Although *A. cruzi* comb. nov. closely resembles *A. valeriae* in shell sculpture and shape, it differs from the latter in having only 5-7 spiral threads that dominate the 30-35 axial threads, the suture is not canaliculated and it has only 1.25-1.5 protoconch whorls. Geographical range is also very distinct, as *A. valeriae* is recorded from Espírito Santo to Rio de Janeiro – Brazil, and *A. cruzi* is recorded from Rio Grande do Sul – Brazil to Bahia Blanca – Argentina.

Jong and Coomans (1988) describe *A. deboeri*, *A. moolenbeeki*, *A. arubensis*, *A. caribaea* and *A. faberi*. All but *A. faberi* can be readily distinguished from *A. cruzi* on shell characters. The protoconch of *A. cruzi* is

similar to that of *A. faberi* as both have 1.25 protoconch whorls, but the shell of *A. cruzi* is much longer, as it reaches 2.2-3mm with 3 teleoconch whorls, while *A. faberi* reaches 1.3mm with 4.25 teleoconch whorls. The sculpture is also very distinct, as *A. faberi* has only 3 spiral threads crossed by 17 axial ribs.

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