

First record of *Paradentalium infractum* (Odhner, 1931) (Mollusca, Scaphopoda, Dentaliidae) from the east coast of Venezuela

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(With 9 figures)

1. Introduction

Dentalium infractum was described by Odhner (1931) from the abundant malacological material collected by Swedish Antarctic Expedition, station 1, 33° 00' S and 51° 10' W, at 80 m. As observed by Scarabino (1973: 193), the geographical coordinates given in the original description corresponds, in fact, to southern Brazil and not from Uruguay as stated by Odhner (1931). Scarabino (1973) recorded this species from southern Brazil to Uruguay. Subsequently, Penna-Neme (1974) identified specimens of *D. infractum* from other Brazilian localities: Rio de Janeiro, São Paulo, Santa Catarina and Rio Grande do Sul. Penna-Neme (1974) also described as a congeneric species, *D. elegantulum* from Alagoas (10° 37'-41'S) that Scarabino (1985, 1994) synonymized with *D. infractum* thereby extending northwards to the geographical distribution of this species. Scarabino (1985, 1994) treated this species as belonging to the genus *Antalis* and recently, Caetano et al. (2006) transferred this species to *Paradentalium*.

During 2004, a series of dredgings were carried out off the continental shelf of Venezuela with the aim of characterising the environment of a potential petroleum production area. During these activities, some shells of the scaphopod *Paradentalium infractum* were obtained from about 22 m depth in sand-mud bottoms. Here, we present the first record of this species from the coast of Venezuela which constitutes a significant range extension for this species. The studied material was deposited in the molluscs collection of the Departamento de Zoologia, Universidade do Estado do Rio de Janeiro (Col. mol. UERJ).

1.1. Systematics

Class Scaphopoda Bronn, 1862

Order Dentaliida Da Costa, 1776

Family Dentaliidae Gray, 1847

Genus *Paradentalium* Cotton and Godfrey, 1933

Paradentalium infractum (Odhner, 1931)

Figures 1-3

Dentalium infractum Odhner 1931: 1, pl. 1, Figures 1-3, 8, 10, 12, pl. 2, Figures 15-17, 22, 23.

Dentalium (Dentalium) infractum: Scarabino 1973: 195, pl. 1, Figures 2, 2a.

Dentalium (Antalis) infractum: Penna-Neme 1974: 110, Figures 2, 4, 5, 6.

Dentalium (Antalis) elegantulum Penna-Neme 1974: 108, Figures 1, 3.

Antalis infractum: Scarabino 1985: 198, pl. 72, Figure 1013; 1994: 306, pl. 106, Figure 1501.

Antalis infracta: Steiner and Kabat 2004: 602.

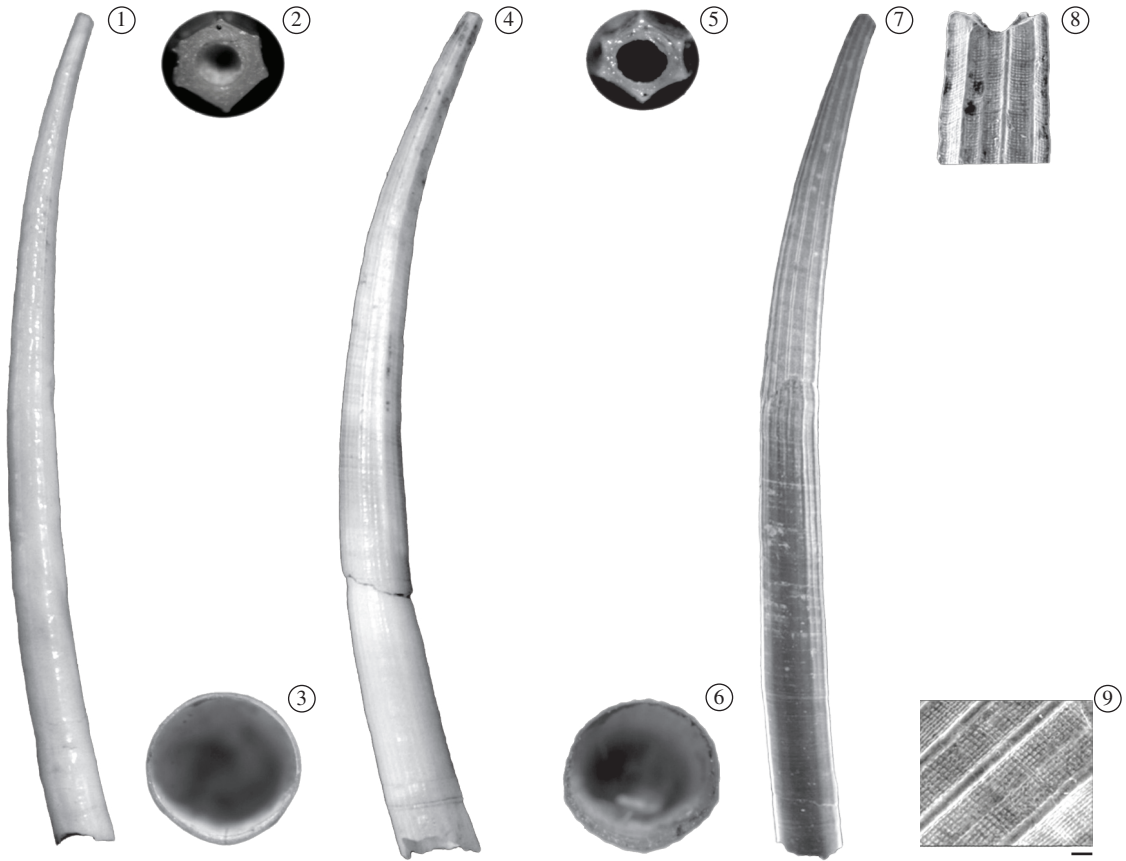
Paradentalium infractum: Caetano et al., 2006: 9, Figures 16-19.

Diagnosis: Shell medium (up to 49 mm long), slender, regularly and slightly curved, white to yellowish with white opaque bands, polished and shining. Sculptured with six thin primary ribs that disappeared near the central section of the shell and secondary ribs variable in number, remaining parts of the shell surface smooth. Intercostal spaces straight to convex. Apical section hexagonal and oral section circular.

Material examined: Col. mol. UERJ 3708, Venezuela (Gulf of Paria, 09° 48' N and 62° 11' W), 5 empty shells, 22 meters, ix.2004.

Distribution: Venezuela (present paper); Brazil: Alagoas, Bahia to Rio Grande do Sul (Odhner, 1931; Penna-Neme, 1974; Scarabino, 1973, 1975, 1985, 1994); Uruguay: off Rio de la Plata (Scarabino, 1973). Living 40-190 m, empty shells 5 to 269 m.

Remarks: *Antalis cerata* and *Paradentalium disparile* are the most similar species to *P. infractum* in the western Atlantic. *Paradentalium infractum* and *A. cerata* (Figures 7-9) shared the pattern of alternating sculptured and smooth portions along the shell but the latter species has an apex with nine to twelve ribs whereas *P. infractum* has a hexagonal apical section (Figure 2). Further, *A. cerata* has a microscopic reticulation in the intercostal spaces (Figure 9). The apex consists of six ribs in both *P. disparile* (Figure 5) and *P. infractum* (Figure 2) but in *P. disparile* the secondary ribs are more numerous and stronger occurring over the entire shell, so that *P. disparile* has no smooth portions on the shell surface.



Figures 1-9. 1-3) *Paradentalium infractum*, Col. mol. UERJ 3708, Venezuela, Gulf of Paria, 09° 48' N and 62° 11' W, 22 m, shell length: 28 mm; 4-6) *Paradentalium disparile*, Col. mol. UERJ 3791, from the same locality as for *P. infractum*, shell length: 29 mm; 7-9) *Antalis cerata*, IBUFRJ 14253 (Col. Moluscos, Departamento Zoologia, Universidade Federal do Rio de Janeiro), Brazil, 18° 58' 53" S and 37° 51' 06" W, 247 m, shell length: 27 mm. Scale bars: 100 µm.

Paradentalium infractum was long considered to be a cold-water species being recorded from Rio de Janeiro, Brazil to Rio de la Plata, Uruguay. The records from Alagoas, north Brazil and from Venezuela (present paper) indicate a wider geographical distribution such as that observed in other Western Atlantic scaphopod species, e.g., *Polyschides tetraschistus* occurs from North Carolina, USA to Argentina.

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