

On *Archimediella dicosmema* (Fontannes, 1881) (Gastropoda Turritellidae) from the Lower Pliocene of Catalonia (Spain)

Mauro M. Brunetti

Calle Navas 106 14511 Las Navas del Selpillar (Spain)

ABSTRACT The discovery of a rare species of the family Turritellidae Lovén, 1847 (Gastropoda), described by Fontannes in 1881 and of which there are very few subsequent reports or illustrations, is reported. Due to the particular sculpture of the shell, this taxon is ascribed to the genus *Archimediella* Sacco, 1895.

KEY WORDS Turritellidae; *Archimediella*; Pliocene; Zanclean.

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INTRODUCTION

During surface research in the fossiliferous basin of Papiol (Barcelona, Catalonia, Spain), a specimen of “*Turritella*” *dicosmema* Fontannes, 1881 was found by a local researcher, which was given to me for the purpose of carrying out a study on this rare and interesting species.

MATERIAL AND METHODS

As already mentioned, the specimen comes from the fossiliferous deposit known as Papiol (Barcelona, Catalonia, Spain) 41°26'3"N - 2°0'2"E, which is no longer accessible today. This site is characterized by the presence of grey-blue clays referable to the Zanclean (Pliocene), above which rest yellowish sands; the grey-blue clays rest on the Paleozoic and, locally, on bioconstructed limestones of the Miocene. The clays are rich in malacological fauna and the entire section is covered by reddish Quaternary materials. For the generic and

supra-generic determinations, the WoRMS (2023) was followed.

ABBREVIATIONS. L = maximum shell length; CMB = M. Mauro Brunetti collection (Las Navas del Selpillar, Spain).

RESULTS

Systematics

Classis GASTROPODA Cuvier, 1795
Superfamilia CERITHIOIDEA J. Fleming, 1822
Familia TURRITELLIDAE Lovén, 1847
Genus *Archimediella* Sacco, 1895
Type species: *Turritella cochlias* Bayan, 1873

Archimediella dicosmema (Fontannes, 1881)

Turritella dicosomema - Fontannes, 1881: 190, tav. 10, fig. 21.

Turcoidella dicosomena Fontannes var. *pseudocincta* - Sacco, 1895: 29, tav. 3, fig. 10.



Figures 1-3. *Archimediella dicosmema* (Fontannes, 1881). Fig. 1: holotype, Millas et de Banyuls (Eastern Pyrenees, France), Lower Pliocene, L = 68 mm, original drawing from Fontannes, 1879-1882. Fig. 2: Papiol (Barcelona, Catalonia, Spain), Lower Pliocene, L = 68.7 mm CMB. Fig. 3: same specimen as in Fig. 2, detail of the apical whorls.

Turcoidella dicosomena (sic) Fontannes var. *colligens* - Sacco, 1895: p. 30, tav. 3, fig. 11.

MATERIAL EXAMINED. Papiol (Barcellona, Catalonia, Spagna), Zanclean (Pliocene), 1 specimen, V.2023, M. Cervantes legit (AB04-CMB).

ORIGINAL DESCRIPTION (Fontannes, 1881). “*Testa elongata, turrata; spira acuta; anfractibus 15–17, lente crescentes; primi 9–10. anfractibus embryonalibus exceptis, carinati, utrinque excavati, suturis parum profundis, cingulo angusto, obtuso marginatis, discreti; sequentes convexiusculi. Carina mediana attenuata, postice plicis longitudinalibus crassis, nodosis, obliquis, plus minusve arcuatis, interstitiis sequalibus separatis, notati; anfractus ultimus totius longitudinis aequans, paulum deflexus, ad peripheriam subangulosus, basi vix convexus. postice plicis 13–14 ornatus; in superficie tota costulae concentricae densissimae, primo angustissimae, subaequales, dein paulo latiores, obtusae, in seriebus inaequalibus, obsoletis, dispartitae; apertura magna, subquadrangularis; labrum sinuosum; coluniella subconcava; callum crassum, mediocriter expansum. Longitudo, 68 millim; latitudo, 21 millim.*”.

REMARKS. The specimen illustrated by Fontannes (1881) (Fig. 1) comes from “*les argiles sableuses de Millas et de Banyuls (Pyrénées-Orientales). — Assez rare*”. Morphological characteristics of this species are: the narrow and elongated shape of the shell, the first 9 whorls keeled (Fig. 3), the presence,

in the following ones, of a strong axial sculpture composed of prominent nodules (13–14 on the last whorl). These characters make the species described by Fontannes (1881) unmistakable and not comparable with other Pliocene species and, in my opinion, make it fall within the genus *Archimediella* Sacco, 1895. The taxa *pseudocincta* and *colligens* varieties described by Sacco (1895) fall within the normal variability of the species. Finally, although the specimen examined is partially damaged, with almost all of the last whorl missing, the characteristics of the shell coincide perfectly with the *A. dicosmema* depicted by Fontannes 1879–1882 (Fig. 1).

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