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Notes on fossil turrids 1 (Mollusca: Gastropoda). *Elaeocyma dertonensis*, new name for *Drillia exilis* Bellardi, 1877 not Pease, 1868

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Abstract

Elaeocyma dertonensis nom. nov. is proposed for *Drillia exilis* Bellardi, 1877 not *Drillia exilis* Pease, 1868 from the Upper Miocene (Tortonian) of Stazzano, Italy. Based on protoconch sculpture and teleoconch development of spiral sculpture, the species is assigned to genus *Elaeocyma* Dall, 1918 in the family Turridae H. & A. Adams, 1853.

Riassunto

Nel 1877 Luigi Bellardi descrisse *Drillia exilis* basandosi su due esemplari provenienti dal Tortoniano (Miocene superiore) di Stazzano (Italia). Gli autori hanno verificato che lo stesso nome era stato già utilizzato 9 anni prima da Pease (1868) per una specie attuale di Tahiti (Polinesia). In letteratura, la specie di Pease viene assegnata al genere *Iredalea* Oliver, 1915 (Kilburn, 1988) o *Clavus* Monfort, 1810 (Higo *et al*., 1999). Glibert (1960) considera *Drillia exilis* Bellardi 1877 specie valida, assegnandola ad *Elaeocyma* Dall, 1918, considerato sottogenere di *Clavus*. Nel 1974 Malatesta ha discusso e figurato *Elaeocyma exilis* per il Pliocene di Poggio Rotondo (Italia), comparando la specie con *Pleurotoma maravignae* Bivona, 1838, specie tipo di *Crassopleura* Monterosato, 1884, un genere strettamente correlato ad *Iredalea* (Kilburn, 1988: 184). In base all'analisi dei due sintipi di *Drillia exilis* (BS.011.05.081) conservati nella collezione Bellardi e Sacco del Museo di Scienze Naturali di Torino, gli autori sono propensi a considerare estremamente dubbio il dato di Malatesta; esistono, infatti, numerose e significative differenze tra la sua descrizione e la sua figura di *Elaeocyma exilis* e i caratteri rilevabili sugli esemplari tipici.

I due sintipi di *Drillia exilis* sono differenti da ogni altra specie nota di *Crassopleura* (o *Iredalea*) mentre la forma generale ed il tipo di scultura assiale li rendono apparentemente simili a specie del genere *Splendrillia* Hedley, 1922; tuttavia *Drillia exilis* presenta, al contrario di quelle, un'evidente scultura spirale e una protoconca estesamente carenata. Sulla base dei caratteri morfologici osservati e delle comparazioni discusse, si propone di assegnare *Drillia exilis* Bellardi 1877 al genere *Elaeocyma* Dall, 1918, così come definito da Powell (1966) e da McLean in Keen (1971). In base agli articoli 52, 57 e 23 del Codice di Nomenclatura Zoologica Internazionale (ICNZ) (1999), il nome proposto da Bellardi è da considerarsi omonimia primaria e non può essere più utilizzato. Non essendo stata rilevata la disponibilità di sinonimi, noi proponiamo *Elaeocyma dertonensis* **nom. nov**. in sostituzione di *Drillia exilis* Bellardi, 1877 non *Drillia exilis* Pease, 1868.

Key words

Mollusca, Gastropoda, Turridae, *Elaeocyma*, Miocene, new name, Italy.

Introduction

In 1877 (145) Luigi Bellardi described *Drillia exilis* based on two specimens from the Tortonian (Upper Miocene) of Stazzano, Italy (Ferrero Mortara *et al*., 1981: 74). Unfortunately, the same name has been applied nine years before by Pease (1868: 220) to a recent species from Tahiti (Polynesia) which in the current literature is either assigned to *Iredalea* Oliver, 1915 (Kilburn, 1988) or *Clavus* Montfort, 1810 (Higo *et al*., 1999). Glibert (1960: 51) listed *Drillia exilis* Bellardi, 1877 as a valid species from "Plaisacien, Altavilla (Italie)" and assigned it to *Elaeocyma* Dall, 1918, which he treated as a subgenus of *Clavus*. Later, Malatesta (1974: 419) discussed and figured *Elaeocyma exilis* from the Pliocene of Poggio Rotondo (Italy) and compared it with *Pleurotoma maravignae* Bivona, 1838, type species of *Crassopleura* Monterosato, 1884, a genus closely related in shell characters to *Iredalea* (Kilburn, 1988: 184).

Examination of the type material, consisting of two syntypes, of *Drillia exilis* stored in Bellardi-Sacco Collection (Museo Regionale di Scienze Naturali, Torino), led us to consider Malatesta's record as very doubtful. There are numerous remarkable discrepancies between Malatesta's (1974) description and figure of *D. exilis* and actual features of the species. Glibert's (1960) record from the "Plaisancien"of Altavilla was possibly based on a similar misidentification. However, since we have not examined his material and we cannot comment further on this subject.

The two syntypes (BS.011.05.081) of *Drillia exilis* are very different from any *Crassopleura* (or *Iredalea*) species being much more similar in shape and axial sculpture to members of the widely distributed genus *Splendrillia* Hedley, 1922. From them, *D. exilis* differs in possessing a well developed spiral sculpture and a distinctly keeled protoconch. Some species referable to *Splendrillia* as currently accepted, such the recent Indo-

Pacific *Drillia persica* (E.A. Smith, 1888) var. *jacintha* Melvill, 1917, *Pleurotoma (Drillia) resplendens* Melvill, 1898 and *Drillia worthingtoni* E.A. Smith, 1904, have a prominent ridge near protoconch termination which however is not developed into a strong keel occurring over entire second protoconch whorl as in *Drillia exilis*. *Splendrillia formosa* Powell, 1944 from the Middle Miocene of Victoria, Australia resembles *D. exilis* in possessing a developed spiral sculpture but lacks a keeled protoconch. Given its morphological features, *Drillia exilis* can be assigned to *Elaeocyma* Dall, 1918 as defined by Powell (1966) and McLean *in* Keen (1971) even though the apertural features of both syntypes are unknown. Dall (1918: 317) proposed *Elaeocyma* for species having "an oily gloss, thin shells, and prominent riblets usually crossed by rather widely spaced spiral striations" and selected *Drillia empyrosia* Dall, 1899, from off San Pedro (California), as type species. The same author (Dall, 1919) also described numerous species, mostly from the Gulf of California, he referred to *Elaeocyma* but which were assigned to other genera by subsequent Authors (see McLean *in* Keen, 1971). More recently, McLean *in* Keen (1971) has discussed and figured the eastern Pacific *Elaeocyma* species. Japanese authors use *Elaeocyma* for some Tertiary and recent species but almost all these taxa are more properly referable to genus *Splendrillia* as used in current literature (Kilburn, 1988; Wells, 1995).

On the basis of ICNZ (1999) articles 23,52,53.3,60.1 and 60.3 the name proposed by Bellardi is a primary homonym and must not be used; as no synonyms are available we propose *Elaeocyma dertonensis* nom. nov. to replace *Drillia exilis* Bellardi, 1877 not *Drillia exilis* Pease, 1868.

Elaeocyma dertonensis nom. nov. represents the first reliable documentation of the genus *Elaeocyma* in the Neogene of the Mediterranean area.

Taxonomy

Family TURRIDAE H. & A. Adams, 1853
Subfamily DRILLIINAE Olsson, 1954
Genus *Elaeocyma* Dall, 1918
Type (O.D.): *Drillia empyrosia* Dall, 1899:127

Elaeocyma dertonensis nom. nov.
Fig. 1 a-d

Description

Shell narrowly claviform (breadth/length 0.29-0.35; aperture/total length 0.33-0.36), with a very high spire of relatively straight outlines, and short, contracted base. Teleoconch consisting of up to 6 whorls which are well rounded, more angular on early whorls, with periphery just below middle, not forming a distinct shoulder. Upper half of each whorl concave, suture moderately shallow, not undulating, lacking a subsutural cord. Aperture somewhat broadly ovate. Outer lip badly damaged in both specimens. Inner lip somewhat slightly curved, with a moderately thick callus and an indication of posterior pad (in smaller syntype). Judging from growth lines, the anal sinus is deep and asymmetrically U-shaped. Dominant sculpture of low, opisthocline axial ribs obsolete or absent below suture. Ribs becoming weak on later whorls; there are about 11 ribs on penultimate whorl (exact number impossible to count as the dorsal surface is covered by a rather thick layer of glue in both shells). Shell surface sculptured by low spiral threads of primary and secondary magnitude. Penultimate whorl of larger syntype with about 19 spiral threads, of these seven occur on the sutural ramp remaining twelve crossing ribs; base of last whorl with about 25 threads. Protoconch somewhat bluntly conical of $1^3/_4$ whorls; first whorl slightly depressed; second with a well developed keel below middle and numerous microscopic spiral threads (**Fig. 1b-c**).

Dimensions: larger syntype 10.9 × 3.8mm, aperture 3.6mm; smaller syntype 9.3 × 2.7mm, aperture 3.4mm.

Etimology

dertonensis = coming from Dertona (the Latin name for Tortona), alluding to the geographical area where the species was found and its Tortonian age.

Remarks

Elaeocyma dertonensis differs from *Pleurotoma sigmoidea* Bronn, 1828, a species described from the Pliocene of Italy and which Malatesta (1974) assigned to *Elaeocyma*, in protoconch features (keeled compared to smooth) and teleoconch sculpture. *E. dertonensis* has well developed spiral threads while in *P. sigmoidea* the shell surface lacks spiral sculpture other than few threads on the neck (Chirli, 1997: pl. 12, figs. 6-9). *Pleurotoma sigmoidea* is currently assigned either to *Cerodrillia* Bartsch and Rehder, 1939 (Della Bella & Tabanelli, 1990: 267) or *Crassopleura* Monterosato, 1884 (Bernasconi & Robba, 1984:272).

Among its described congeners, *Elaeocyma dertonensis* superficially resembles *Elaeocyma ricaudae* Berry, 1969, from Baja California, in development of spiral sculpture but differences are otherwise obvious (see McLean *in* Keen, 1971: sp. 1590).

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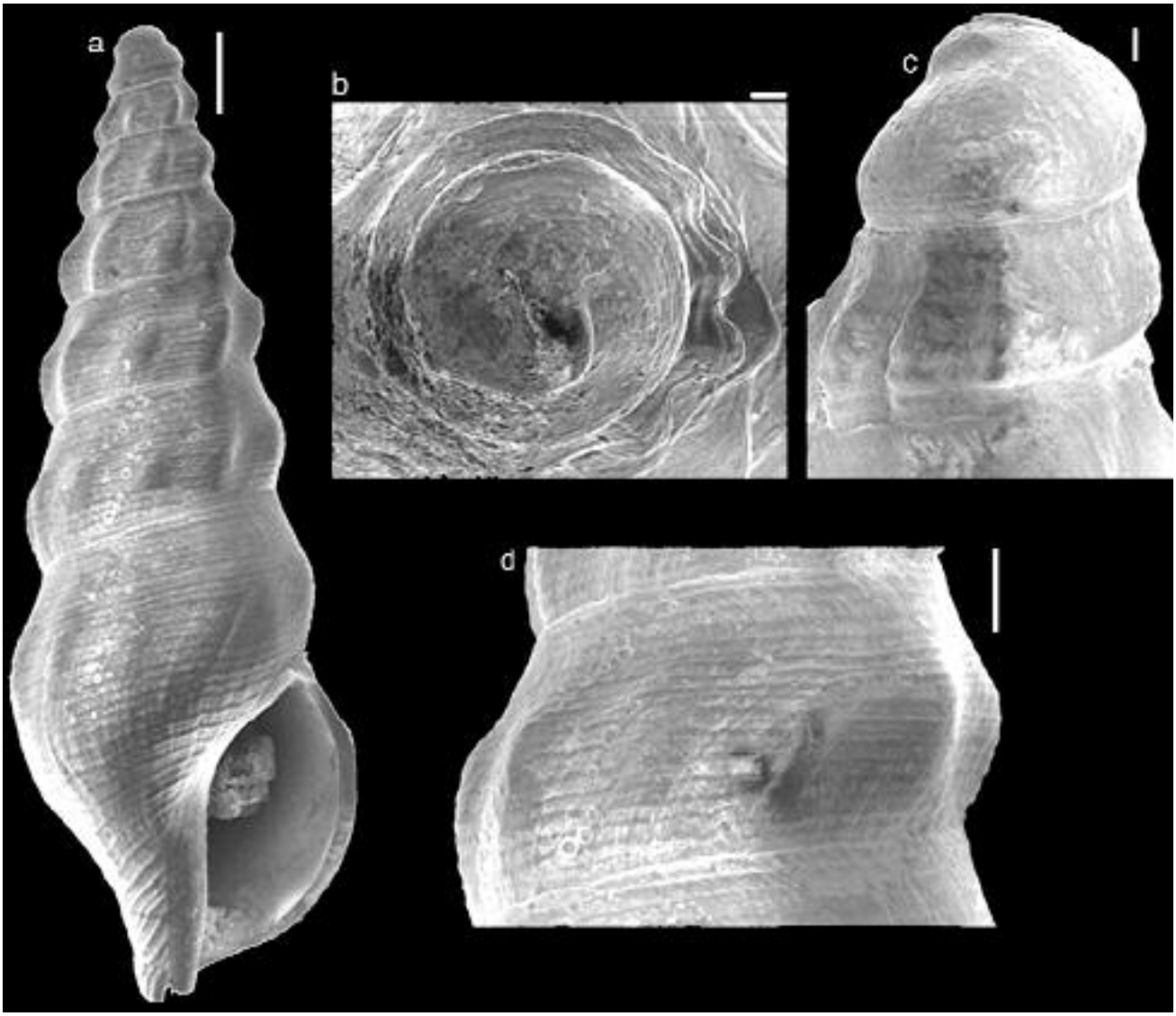

Fig. 1. a-d. *Eleocyma dertonensis* nom. nov. (specimens not coated); **a.** larger syntype of *Drillia exilis* Bellardi, 1877 (BS.011.05.081), scale bar 1 mm; **b-c**. smaller syntype (BS.011.05.081), protoconch, scale bar 100 µm; **d**. larger syntype, teleoconch, scale bar 500 µm.

Fig. 1. a-d. *Eleocyma dertonensis* nom. nov. (campione non rivestito); **a.** sintipo più grande di *Drillia exilis* Bellardi, 1877 (BS.011.05.081), scala 1 mm; **b-c.** sintipo più piccolo (BS.011.05.081), protoconca, scala 100 µm; **d.** sintipo più grande, teleoconca, scala 500 µm.

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