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Description of two new *Jujubinus* species (Gastropoda: Trochidae) from the Sicily Channel, with notes on the *Jujubinus curinii* species complex

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Abstract

Based on shell characters, two new species of the gastropod family Trochidae, *Jujubinus eleonorae* n. sp. and *Jujubinus trilloi* n. sp., from the Sicily Channel are described. Shells of the new taxa were collected in the lower infralittoral of the Skerki and Talbot Banks, respectively. The new taxa are compared with *Jujubinus curinii* Bogi & Campani, 2005, morphologically the most closely related species.

Key words: Mediterranean Sea, Recent, *Jujubinus*, new species

Introduction

The genus *Jujubinus* Monterosato, 1884 comprises a small group of marine trochids (Gastropoda, Trochidae) living mostly in the intertidal zone down to about 80 m, and consistently associated with algal vegetation and/or marine angiosperms (Mariottini *et al.* 2013). The alpha-taxonomy and distribution of this genus remains unresolved. The genus was described by Monterosato (1884a) only briefly: “*Jujubinus*, Monts. (nov. sect.). Conchiglie piccole, ornamentate, che formano un gruppo ben distinto dal *Zizyphinus*”; (small shells, ornamented, forming a distinct group of *Zizyphinus*). In a further work by Monterosato (1884b), the description of this genus was slightly improved. Many papers dealing with this genus have been published in the last forty years. Nordsieck (1973) commenting the European distribution of *Jujubinus* species described several subgenera, some of them not ranked as valid taxa by Ghisotti & Melone (1975) in their revision of this genus. Some of the Mediterranean *Jujubinus* species were discussed by Curini-Galletti & Palazzi (1980), Curini-Galletti (1982a–c), Cretella (1992–1993), Bogi & Campani (2005) and Spanu (2011), while eastern Atlantic taxa were treated by Gofas (1991), Rolán & Templado (2001), Rolán & Swinnen (2009) and Avila *et al.* (2011) including the description of some new species.

According to WoRMS (2013) the genus *Jujubinus* is represented by 29 species; 18 are listed by CLEMAM (Gofas & Le Renard 2013) as European species, most of them restricted to the Mediterranean Sea. The typical *Jujubinus* shell has a slender trochiform shape with a sculpture consisting of 4–8 spiral threads of variable strength, often beaded, and with tiny prosocline lamellae between the spiral threads (Monterosato 1884a). The Mediterranean species *Jujubinus curinii* Bogi & Campani, 2005 shows a peculiar sculpture consisting of flat spiral threads, which are pairing in the abapical part of the last whorl, lacking lamellae between the spiral threads and with a smaller sutural cord (Bogi & Campani 2005). This species is endemic to the Strait of Messina and to our knowledge its distribution is limited to the coralligenous bottoms offshore the coast of Scilla (Calabria, Italy). The Messina Strait is considered as a separate Mediterranean biogeographical microsector (Bianchi 2004), inhabited by rich benthic invertebrate communities, and some particular assemblages that are unknown from other Mediterranean regions (Giacobbe *et al.* 2007, Bo *et al.* 2009, Salvati *et al.* 2010). Recently, we had the opportunity to examine shells of *Jujubinus* from two locations in the Sicily Channel (Skerki and Talbot Banks). The studied shells represent two new species that resemble *J. curinii* from these areas.

Jujubinus catenatus Ardovini, 2006 described from the Sicily Channel differs from the new taxa described herein by the shell shape (more elongated in *J. catenatus*) and its sculpture showing the typical prosocline lamellae between the spiral cords (absent in the *J. curinii* species complex). Furthermore, *J. catenatus* is a circalittoral species, being collected at a depth of 45–70 m, but no coordinates of the locus typicus were reported (Ardovini, 2006). Similar to the Strait of Messina, from where the endemic *J. curinii* has been described (Bogi & Campani, 2005), the Sicily Channel represents a Mediterranean location of high diversity for the genus *Jujubinus*. The occurrence of three endemic *Jujubinus* species in such a restricted geographical area could be explained by specific preferences to particular habitats exclusive to this area, possibly combined to limited larval dispersal capabilities. *Jujubinus* from the Sicily Channel is not an isolated case of gastropod endemism in the Mediterranean Sea. For example, the trochid *Gibbula nivosa* Adams, 1851 is endemic near Malta Island (Evans *et al.*, 2011), and probably has restricted larval dispersal.

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