

***Eastonia rugosa* (Helbling, 1799) (Bivalvia, Mactridae)
occurring along the Latium coasts**

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The authors report the recovery of the Mactridae species *Eastonia rugosa* (Helbling, 1799) along the coast of Tor Caldara (Rome) in the Central Tyrrhenian Sea, Italy, where several complete specimens and single valves were collected.

Key words: Bivalvia, Mactridae, *Eastonia rugosa*, faunistics, Central Tyrrhenian sea, Italy.

INTRODUCTION

Eastonia rugosa (Helbling, 1799) (Bivalvia, Mactridae) is relatively common in the Atlantic-Mediterranean province. Its geographical distribution involves the Atlantic coasts of NW. Africa, from Senegal to Guinea (Lucas, 1974; Poppe & Goto, 1991; Ardovini & Cossignani, 2004), the eastern Atlantic Ocean, from Portugal to the Canary Islands (Gomez Rodriguez & Perez Sanchez, 1997) and the Mediterranean Sea. In the Mediterranean, this species occurs mainly in the Strait of Messina and in the SE. part (Bedulli et al., 1995), in SE. Sicily (Orlando, 1979), in S. Spain, from Malaga to Valencia and the Balearic Islands (Plà, 2000), in Morocco, Algeria and Tunisia, with as its eastern limit Cap Bon-Tunis (Zaouali, 1971). Data about its distribution to the north in the Mediterranean Sea are rather general. Only Meli (1897) has published details on the occurrence of *E. rugosa*, both living and as fossils, along the coasts of Anzio and Nettuno (Rome, Italy). He demonstrated its presence in the Roman region in the post Pliocene, during the Pleistocene and in historical times. In the twentieth century, *E. rugosa* seems to have disappeared from the Latium coasts, to reappear there most recently near Palo Laziale (Rome, Italy) (Albano, 2006) and along the sandy coasts near Rome (Smriglio & Mariottini, 2006).

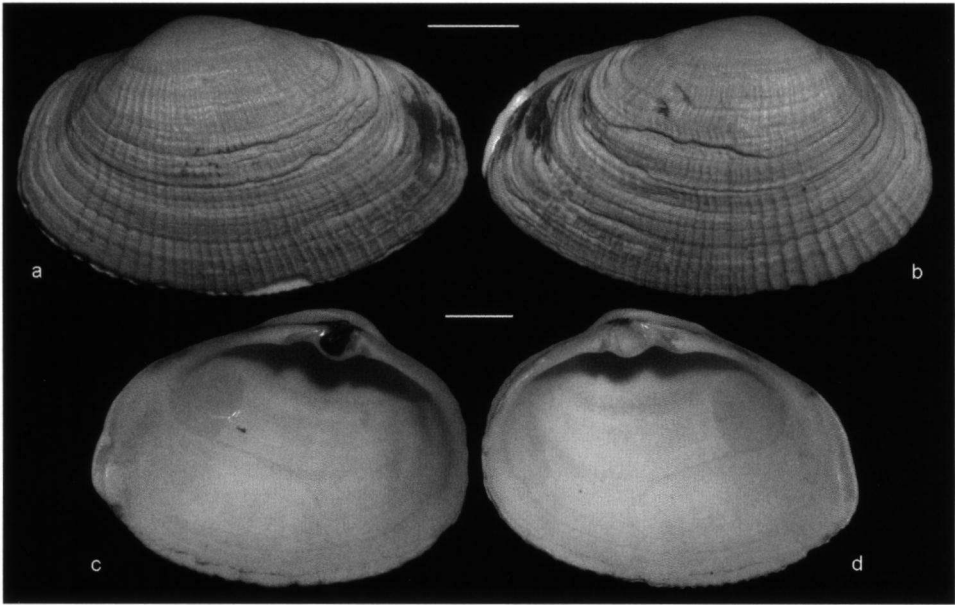


Fig. 1. *Eastonia rugosa* (Helbling, 1799), Tor Caldara beach, Rome, Italy. a, c, left valve; b, d, right valve. Dimensions: 48.8×30.4 mm.

MATERIAL

During a malacological excursion along the beach of Tor Caldara, near Anzio (Rome, Italy), in November 2005, several specimens of *Eastonia rugosa* were collected. This beach, located inside the Natural Reserve of Tor Caldara, is known for its sulphurous sources. A total of 30 complete specimens and a lot of single valves were collected. The perfect condition of the valves, still linked by a fresh ligament, made us conclude that these bivalves come certainly from a nearby habitat at low depth. Length (antero-posterior axis) and height (dorso-ventral axis) of the shells of all complete specimens were measured with a digital vernier calliper (fig. 1). The samples show a mean length of 49.2 mm (± 4.8 s.d.) and a mean height of 34.7 mm (± 3.7 s.d.); generally shell sizes vary from 40.4 mm to 59.3 mm in length and 30.6 mm to 43.8 mm in height.

DISCUSSION AND CONCLUSIONS

The data in this paper and in the literature (Albano, 2006; Smriglio & Mariottini, 2006) indicate the presence of a stable population of *Eastonia rugosa* along the Latium coasts, especially in the area between Palo Laziale (Rome) in the north and Foce Verde (Latina) in the south, and of an ideal habitat at low depth. The ecological data show that *E. rugosa* prefers soft bottoms (sand or mud) between 6 and 30 m depth (Meli, 1987; Parenzan, 1976; Poppe & Goto, 1991), often even in presence of fresh water flow (Orlando, 1979). The shell sizes of *E. rugosa* observed in this study are comparable to those reported in Recent times by Albano (2006) and Smriglio & Mariottini (2006) and by Meli (1897) at the end of the 1800s.

The reappearance of *Eastonia rugosa* along the Latium coasts could be explained by the hypothesis that the species is now in a phase of expansion, after having survived there in a small population without being noticed for a long time. Alternatively, the slow and constant increase of the Mediterranean Sea surface temperature, caused by the so-called 'greenhouse effect', may have enabled a true recolonisation. Pérès & Picard (1964) included *E. rugosa* among the Atlantic species that recently invaded the Mediterranean Sea via the Straits of Gibraltar. Therefore it is now listed among the allochthonous Mediterranean species (ICES, 2000; Occhipinti Ambrogi, 2002), species of which the dispersal is related to the increasing sea surface temperature.

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