

## First record of the non-indigenous fangtooth moray *Enchelycore anatina* from Rhodes Island, south- eastern Aegean Sea

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### Abstract

The collection of one specimen of the non-indigenous fangtooth moray *Enchelycore anatina* of tropical Atlantic origin was for the first time found in an area of the south -eastern Aegean Sea. This record might not indicate a recent establishment in the area and is hereby considered an overlooked species, attributed to lack of fish studies on rocky bottoms.

**Keywords:** *Enchelycore anatine*; Tropical; Atlantic; Aegean Sea; Mediterranean Sea.

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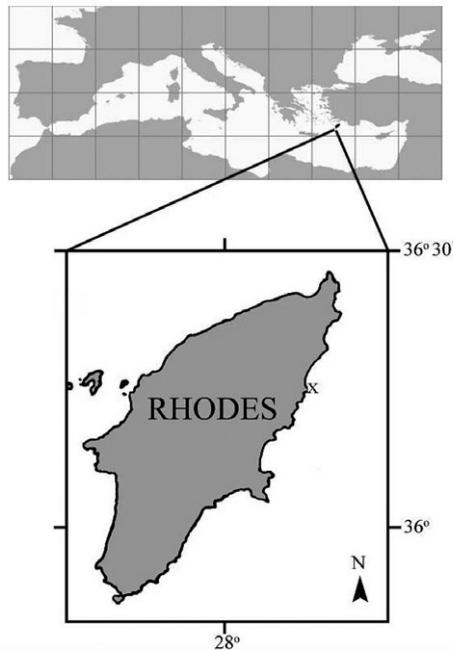
*Enchelycore anatina* Lowe, 1839 (Muraenidae) is a demersal inshore species inhabiting rocky bottoms rich in crevices, generally between the depth range of 3-60 m. *E. anatina* is an active predator mainly feeding on cephalopods and fish, reaching 120 cm in total length. It is a tropical Atlantic species mainly distributed in the eastern Atlantic from St. Helena Island in the south to the Azores in the north (GOLANI *et al.*, 2002). One specimen of the fangtooth moray *E. anatina*, 82 cm in total length and 532 g in wet weight, was caught by gillnets at Kolimbia bay (located on the south-eastern coasts of Rhodes Island) (Fig. 1) over rocky bottoms, at 20-25 m. in depth. The species was easily distinguished from its confamilial

species due to the presence of larger yellowish body dots arranged in longitudinal rows, the visible teeth when the mouth closed and the origin of the dorsal fin above the branchial opening (GOLANI *et al.*, 2002; GOLANI *et al.*, 2006) (Fig. 2). The first record of the species in the Mediterranean was in Israel off Tel-Aviv-Jaffa in 1979 (BENTUVIA & GOLANI, 1984). Since then, five additional records of the species have been mentioned in the Mediterranean, one from Elafonissos Island, south-western Aegean Sea (GOLANI *et al.*, 2002), one from the Likya shores of Turkey (YOKES *et al.*, 2000), one from the coasts of Turkey (CINAR *et al.*, 2005) one from Cyprus (KATSANEVAKIS *et al.*, 2009) and one from an updated

review of alien species in Turkey (BILECENOGLU, 2010). All these records of the species, restricted to the eastern Mediterranean, indicate an overlooked establishment. Although surveys over rocky bottoms have not been carried out in the area, this record indicates the need to quantitatively and qualitatively describe the fish assemblages associated with coastal rocky bottoms. The fangtooth moray's success in long distance dispersal is speculated to be attributed to its long pelagic larval stage (GOLANI *et al.*, 2006). Even though only one specimen was identified, regular contact with local fishermen ascertains that this species is established in the area, although irregularly found. As an indication of its establishment, local fishermen assert that they catch approximately 4-5 individuals of the fangtooth moray with gillnets during the summer period. Several fishermen from the

area stated that this species with its characteristic fang-like teeth is not only found along Rhodes Island's rocky bottoms but even in Kastellorizo Island. I hereby confirm the recent underwater observations made by BILECENOGLU (2010), stressing the significant abundance of this species in the Aegean Sea, an overlooked species. The species is deposited at the Hydrobiological Station of Rhodes with deposition number NIS:1.

Invasive species have the ability to change ecosystem functioning. The eastern basin of the Mediterranean Sea is much more prone to invasions of subtropical and tropical species than the western basin and Greece and Turkey are among the most influenced countries for a variety of reasons, such as more arid natural landscape, maintenance of a lower number of species (i.e. leaving empty niches) and the freshwater barrier of



*Fig. 1:* Map of Rhodes Island. Site where the specimen was found (X).



**Fig. 2:** The fangtooth moray *Enchelycore anatina* captured at Kolimbia bay, Rhodes Island on the 13th of April 2010 (Photos: Stratos Koufos).

the Nile River inhibiting the westerly expansion of species (RILOV & GALIL, 2009). The rate of introductions into the Mediterranean has increased over the last decade and it is estimated that there is one new introduction every 9 days (ZENETOS *et al.*, 2008; ZENETOS, 2010). Continuous mon-

itoring and in situ observations are extremely important in order to understand ecosystem functioning and changes in community structure. Recent additions to the marine alien fauna in Greece confirm this (ZENETOS *et al.*, 2007; CORSINI-FOKA & KALOGIROU, 2008; ZENETOS *et al.*, 2008).

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