

The second record of marlin sucker, *Remora osteochir* (Echeneidae) from the Turkish waters (eastern Mediterranean Sea)

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Abstract

This paper reports a specimen marlin sucker, *Remora osteochir*, as second record from the Turkish waters and the third for the eastern Mediterranean where the species appears to be very rare. The reasons for such scarcity are explained and a short description of the specimen is also provided.

Keywords: Turkish waters, Geographical distribution, Mediterranean Sea, Extension range.

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Introduction

Of the eight echeneid species known to date and distributed worldwide (Gray et al. 2009), four of them are found at the Turkish waters, including shark sucker *Echeneis naucrates* Linnaeus, 1758, whale sucker *Remora australis* (Bennett, 1840), marlin sucker *R. osteochir* (Cuvier, 1829) and common remora *R. remora* (Linnaeus, 1758) (Bilecenoglu et al. 2014). *Remora osteochir* is distributed in warm waters (Myoung et al. 2015), and Tortonese (1973) noted that it is the most common echeneid species in the western Mediterranean Sea. This species migrates to eastern area of Mediterranean Sea, and its first Mediterranean record was in the waters surrounding the Kastellorison Island locating in the south-eastern Aegean Sea close to the Turkish coast (Kaspiris and Ondrias 1984). Later, in April 2009, Tuncer et al. (2012) reported a specimen of *R. osteochir* for the first time from Turkish waters in the north-eastern Aegean Sea. Investigations regularly conducted in the latter area, focusing on fish species and supported by local fishermen, actively helping the researchers allow to collect a specimen of *R. osteochir*. The new record of the species presented in this paper, contribute with comments on its distribution in the same area and the Mediterranean Sea.

Material and Methods

The daily fishing activity of swordfish longline fishery was intermittently monitored on board of a longliner (*F/V Salih Reis - I*) during the operations between March 2012 and January 2013 off Fethiye, southern Aegean Sea (Fig. 1). The wooden boat is a typical Turkish swordfish vessel, and has 14 m LOA and 360 Hp engine power. The longline carries a total of 600 hooks and the mainline (totally 30 km) was throwing/pulling by a semi-automatic system. Baits were Atlantic mackerel, round sardine, and chub mackerel.

On 30 March 2012, a specimen of *R. osteochir* (Fig. 2), 154 mm TL was caught at a depth of 1000 m by 36°13'N and 29°00'E. The capture occurred together swordfish *Xiphias gladius* Linnaeus 1758 (40 kg), Mediterranean spearfish *Tetrapturus belone* Rafinesque 1810 (19 kg), and oilfish *Ruvettus pretiosus* Cocco 1829 (26 kg). *Remora osteochir* was probably hosted on *T. belone*.

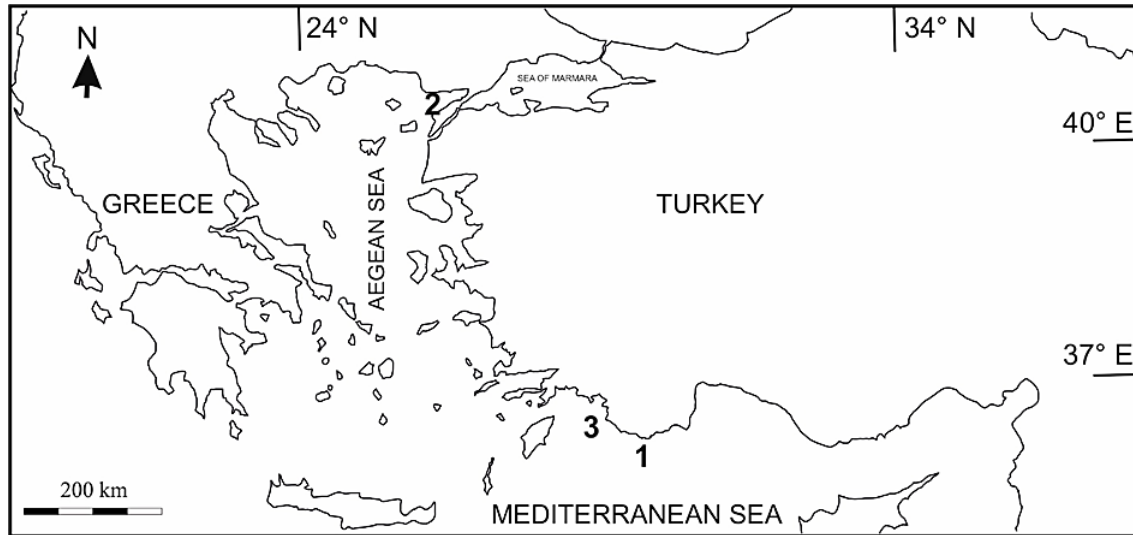


Figure 1. Map indicating the capture sites of *Remora osteochir* in the eastern Mediterranean Sea: (1) off Kastellorizo Island (Kaspiris and Ondrias, 1984); (2) off Ece Limani, Saros Bay (Tuncer et al. 2012); (3) off Fethiye (this study).

Results and Discussion

The specimen was identified as *R. osteochir* from the combination of following morphological characters: body stout and elongate, head flattened and short, sucking disc oval and elongate on the dorsal surface, lower jaw rounded, posterior end of the sucking disc posterior to the posterior end of the pectoral fin, pectoral fin rounded caudal fin truncated; upper part of body blackish and lower part of body greyish, dorsal, anal and caudal fins blackish, pectoral and pelvic fins dark greyish, iris darkish.

Some measurements were recorded in mm: total length; 154 mm, standard length; 133 mm, head length; 25 mm, sucking disc length; 60 mm, sucking disc width; 23 mm. Additionally, 16 laminae were counted in the sucking disc, 22 fin rays on the pectoral fin. Morphology, counts and colour are in total agreement with Tortonese (1973), Kaspiris and Ondrias (1984), Lachner (1986), Tuncer et al. (2012) and Myoung et al. (2015) and confirm the identification of the present specimen. Following Lachner (1986), the maximum length of the species ranges between 286 and 386 mm, while the mean standard length for the specimens from the Ligurian Sea was 131 mm (Garibaldi and Orsi Relini 2003) very close to the present specimen. Kaspiris and Ondrias (1984) reported *R. osteochir* (as *Rhombochirus osteochir*) with 176 mm TL from Kastellorison Island. About three decades after, Tuncer et al. (2012) recorded *R. osteochir* from northern Aegean Sea as 154 mm TL, 131 mm SL, and 22.4 mm head length like the same as our sample.

This is the second record of *R. osteochir* in Turkish waters, in the easternmost extension range in the area. The species is not recorded in the Levant Basin, such the coasts of Israel (Golani 2005), Syria (Ali 2018) and Lebanon (Bariche and Fricke 2019). It constitutes the third record in the eastern Mediterranean Sea, indicating how much the species is rare in this region. Captures of *R. osteochir* are probably linked to the captures of their hosts, species generally belonging to the families Istiophoridae and Xiphiidae, which are rather rare in these eastern regions as well (Nakamura 1986a, b). *Remora osteochir* as other echeneid species could be left their hosts during handling and free specimens are probably discarded at sea by fishermen, due to their low commercial value.



Figure 2. *Remora osteochir* (A) entire body, (B) disc laminae (scale bars: 50 mm)

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