

SHORT COMMUNICATION

First record of the ocean sunfish, *Mola mola* (Linnaeus 1758), from the Black Sea

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Abstract

The ocean sunfish, *Mola mola* (Linnaeus 1758), is considered as a cosmopolitan species which is naturally found in almost all of the oceans as well as in the Mediterranean Sea. A specimen of *M. mola* was observed by a fisherman in the surface water off the coast of Rize, Turkey, in March 2016. The fish most probably entered the Black Sea from the Aegean Sea through the Turkish Straits System. This is the first record of *M. mola* in the Black Sea.

Keywords: *Mola mola*, non-indigeneous species, mediterrization

The ocean sunfish also known as head fish and moon fish, *Mola mola* (Linnaeus 1758), is the largest living bony fish (Osteichthyes), belonging to Family Molidae, Order Tetraodontiformes (Potter and Howell 2011). There are only two identified sunfish species belonging to genus *Mola*; *M. mola* and *M. ramseyi*. *M. ramseyi* is mainly distributed in the southeastern Pacific Ocean (FishBase 2016). Meanwhile, *M. mola* is a highly migratory fish species, circum globally distributed in temperate and tropical waters of all oceans as well as Mediterranean Sea (Silvani *et al.* 1999; Yoshita *et al.* 2009). It has been known as an open water fish species, reside offshore waters but also observed in coastal waters (Pope *et al.* 2010). In Turkish waters, *M. mola* inhabits the Mediterranean and Aegean coasts but rarely seen in the Marmara (Bayhan and Kaya 2015; IUCN, 2016). According to tagging studies, *M. mola* spend majority of their time in the surface waters (up to 50 m) but can dive up to 400-600 meters deep (Sims *et al.* 2009; Potter and Howell 2011). *M. mola* is known for its unusual and unique body shape characterized by deep and sharply truncated shape, rough texture of skin, elongated spineless dorsal and anal fins, caudal fin replaced by a leathery, rudder-like lobe known as a pseudocaudal fin or clavus, terminal mouth, small eyes, size reaching 4.2 m and weighing up to 2300 kg

(Potter and Howell 2011; Matsuura 2015). Very little is known about their basic ecology, reproductive biology and population dynamics (Pope *et al.* 2010). Since it is not a commercially important fish (Fulling *et al.* 2007), biggest threat against this species is the high rates of by-catch throughout most of its ranges. In some areas, sharp declines of the species have been documented. Hence, *M. mola* is listed as Vulnerable (VU) in IUCN Red Lists (IUCN 2016).

A close encounter with *M. mola* occurred during fishing on a 6-m fishing vessel in the coast of Rize, Turkey, in March 2016 (Figure 1). The sunfish seen at surface was slowly approached and photographs were taken by a smart phone camera (Figure 2). The length of the fish was predicted as at least 1.3-1.5 meters.

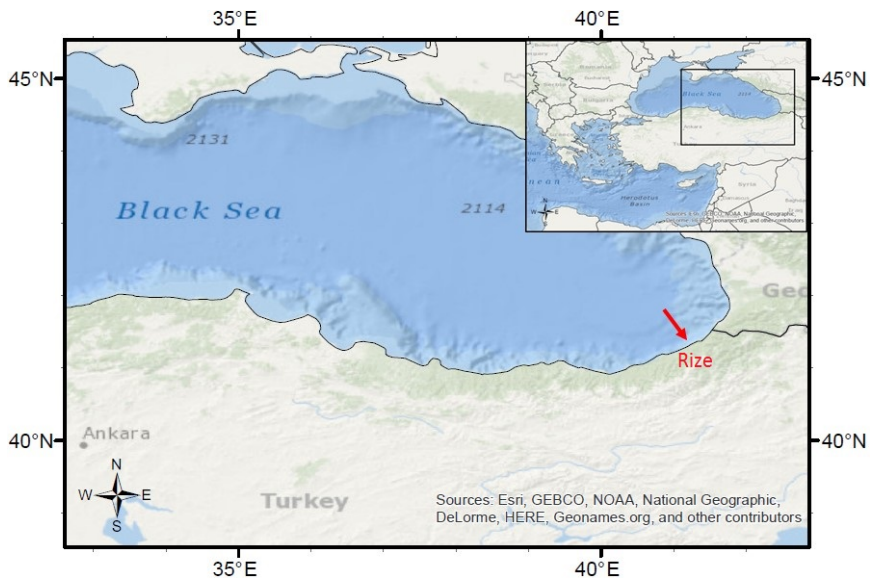


Figure 1. Encounter location with *Mola mola*

Observed sunfish was a healthy looking, active but clumsy swimmer. A minute or less after the close encounter it dived out of the sight with aggressive dorsal fin movement. Observed morphological traits of the fish was compared with the described species in literature. Here we report the first record of *M. mola* in the Black Sea.

The Black Sea is an inland sea which connects to the Mediterranean Sea through the Istanbul and Çanakkale Strait. Environmental changes, aquaculture, ornamental fish trades and marine transportation are major key factors of non-indigenous species invasion (Hill 2008). There have been 20 non-native fish species reported in the Black Sea since 1905 (Yankova *et al.* 2013). According to new findings on introduced species and natural comers, biodiversity of the

Black Sea is changing by the on-going natural process called “Mediterranization” (Yankova *et al.* 2013).



Figure 2. *Mola mola* photographed by Erdal Özbulut

Karadeniz’de Güneş Balığı *Mola mola* (Linnaeus 1758)’nın ilk kaydı

Özet

Güneş balığı, *Mola mola* (Linnaeus 1758), doğal olarak Akdeniz de dahil olmak üzere hemen hemen bütün okyanuslarda bulunan kozmopolit bir türdür. *M. mola* bir balıkçı tarafından Rize, Türkiye açıklarında yüzey suyunda Mart 2016’da gözlenmiştir. Balığın Ege Denizi’nden Karadeniz’e boğazlar yoluyla girdiği tahmin edilmektedir. Bu Karadeniz’deki ilk *M. mola* kayıdır.

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