

## Range expansion of white anglerfish, *Lophius piscatorius* (Linneus, 1758) (Lophiidae), in the Eastern Black Sea waters of Turkey

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### Abstract

A single specimen of white anglerfish, *Lophius piscatorius* Linneus 1758, (Lophiidae) was caught as by-catch along the Eastern Black Sea (Araklı, Trabzon, Turkey). This was the first time an individual was sighted in the eastern part and considered to be a range expansion.

**Keywords:** Anglerfish, *Lophius piscatorius*, Eastern Black Sea, first catch.

### Öz

#### Türkiye'nin Doğu Karadeniz Sahillerinde Fener Balığının (*Lophius piscatorius* Linneus, 1758) (Lophiidae) Yayılımı

Fener balığı *Lophius piscatorius* Linneus 1758, (Lophiidae) Doğu Karadeniz sahillerinde uzatma ağı ile by-catch olarak yakalanmıştır (Araklı, Trabzon, Türkiye). Bu tür, bu bölgede ilk kez görüldü.

**Anahtar Kelimeler:** Fener balığı, *Lophius piscatorius*, Doğu Karadeniz, ilk kayıt.

### Introduction

Anglerfish are typical bottom living species, are found on the shelf and upper slope, from shallow waters to 1000m depth (Dardignac, 1988; Azevedo and Pereda, 1994). There are two subpopulations, the black anglerfish (*Lophiusbudegassa* Spinola, 1807) and white anglerfish, also known as monkfish, (*Lophius piscatorius* Linnaeus, 1758). While black anglerfish has a more southern distribution (Mediterranean and eastern North Atlantic from British Isles to Senegal), white anglerfish

is distributed in the Northeast Atlantic from Iceland and the southwestern Barents Sea to the Strait of Gibraltar, including the Mediterranean and the Black Sea (Caruso, 1985-1986; Farinã et al., 2008; Solmundsson et al., 2010).

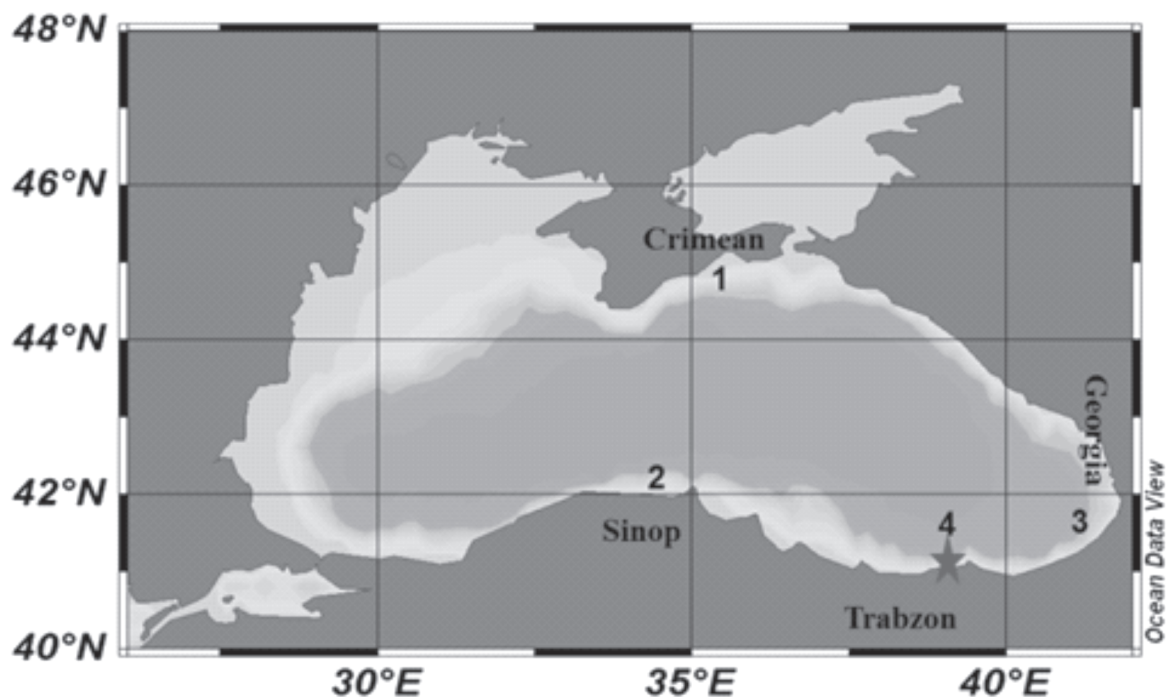
Until now, *Lophius piscatorius* was reported as reported in the waters of the Black Sea only in a few studies: in the Black Sea (Erazi, 1942; Slastenenko, 1956), from Sinop (Bat et al., 2005), from the coast of Georgia (Ninua and Japoshvili, 2008; Ninua et al., 2013). In addi-

tion to this species was first registered near the Crimean coast in the 19th century Zernov (1913) pointed out that near Sevastopol annually caught 3-4 individuals of that species. Until the 1960's *Lophius piscivorus* single but met regularly at Sevastopol and along the southern coast of Crimea, Karadag (1947, 1949, 1951), Feodosia (1949). Cases are known of his catch off the coast of the Caucasus near the entrance to the Novoros-siysk Bay (1959), and in the North-Western part of the Black sea near Odessa (1927). These data are taken from the monograph by A. N. Svetovidov "Fishes of the Black Sea" (1964). In the last 40-50 years of reliable finds of this species off the coast of the Crimea and the Northern shores of the Black sea is not registered (A. Boltachev, pers. comm.) (Figure 1).

More two hundreds of bottom trawl operations have been done covering the area between Samsun to Turkish border to Georgia

by R/V Sürat Araştırma-1 (CFRI) but the species have never been sighted until now. In addition, none of the fishermen interviewed in this area has sighted this species before (Fisherman, pers. comm.). *Lophius piscatorius* is a very rare species and occurs on sandy and muddy bottoms in the Black Sea. This species is not in the National Red Data Books.

On 26 October 2014, in the coastal of Araklı (Trabzon, Turkey) an individual (40° 58'189"N 40 °13'518"E) (Figure 1) was caught on a gill net used to catch whiting, between 03:00-06:00 pm at a depth of 45-60 m at a distance 600-700 m far from the coast. The fish was landed and transferred to Central Fisheries Research Institute (CFRI-Trabzon). The specimen was stored in the National Fish Museum at the Central Fisheries Research Institute, Trabzon. The individual was 34.1 cm total length, 28.5 cm standard length, 630 g weight and its stomach was empty.



**Figure 1.** Occurrences of white anglerfish, *Lophius piscivorus* in the Black Sea. (from 1. Svetovidov (1964), 2. Bat et al., (2005); 3. Ninua, N. and Japoshvili, B. O. (2008), 4. This study)

Its color was light brown to dark brown above and white below. The body was flattened and head was very broad. Its mouth was large. Gill openings were below and behind pectoral fin base (Figure 2; Table 1).

Past five decades, the ecological situation on the Black Sea has changed in terms of biodiversity (Daskalov, 2003). It has been shown by some authors that the number and frequency of occurrence of the Mediterranean fishes has increased remarkably (Pashkov and

Reshetnikov, 2012).

For instance, off the south coast of Black Sea (Turkey), several fish species new to Black Sea fauna, such as *Apletodon dentatus bacescui* and *Coryphoblennius galerita* (Bat *et al.*, 2006); *Gobius cruentatus* (Engin *et al.*, 2007); *Zebrus zebrus* (Kovacic and Engin 2009); *Mustelus asterias* (Eryılmaz *et al.*, 2011); *erranus hepatus* (Dalgıç *et al.*, 2013); *Lophius budegassa* (Sumer *et al.*, 2016) have been reported recently.



**Figure 2.** White anglerfish, *Lophius piscivorus*: dorsal and ventral views of the specimen.

In addition, other countries of Black Sea has registered several other new records to the ichthyofauna of the Black Sea (Boltachev *et al.*, 2009; Pashkov and Reshetnikov, 2012; Boltachev and Karpova, 2012).

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**Table 1.** Morphometric and meristic measurements of the white anglerfish, *Lophius piscatorius* in the Black Sea.

Sex	Male
Total weight (g)	630
Total length (cm)	34.1
Standard length (cm)	29.2
Snout width (cm)	2.7
Mouth width (cm)	9.2
Gonad weight (g)	28.6
Gonad length (right) (cm)	8.5
Gonad length (left) (cm)	8.6
Gonad stage	II
Number of anal fin rays	8
Number of dorsal fin rays	9
Number of left pectoral fin rays	17
Number of right pectoral fin rays	18
Number of caudal fin rays	12
Length of first cephalic dorsal spine (cm)	4.7
Length of second cephalic dorsal spine (cm)	4.2
Length of third cephalic dorsal spine (cm)	3.2
Length of fourth cephalic dorsal spine (cm)	2.1
Length of fifth cephalic dorsal spine (cm)	0.96
Length of sixth cephalic dorsal spine (cm)	0.84
Diameter of left eye (mm)	1.2*1.6
Diameter of right eye (mm)	1.1*1.6
The distance between eyes (cm)	2.5
Number of mustache	22

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