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A rare record of European finless eel *Apterichthys caecus* (Linnaeus, 1758) (Family: Ophichthidae) from the Eastern Mediterranean

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Record,
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Mersin Bay,
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ABSTRACT

The European finless eel *Apterichthys caecus* was recorded from the Mersin Bay. One specimen was caught by a scoop net at a depth of 42 m on 20 June 2021 in the Taşucu coast, Turkey. *A. caecus* is extremely rare in the eastern part of the Mediterranean Sea. However, this report is the fourth record from Turkish marine waters and the first record in the Mersin Bay (Northeastern Mediterranean, Turkey).

1. INTRODUCTION

The genus *Apterichthys* Duméril 1805 is represented with 21 valid species worldwide. This genus comprises two species in the Mediterranean, namely Slender finless eel *Apterichthys anguiformis* (Peters, 1877) and European finless eel *Apterichthys caecus* (Linnaeus, 1758) (Froese & Pauly, 2021).

A. caecus was known from the western and eastern basins of the Mediterranean and the west coast of Africa (McCosker & Hibino, 2015). Golani (1996) reported a single specimen from the coast of Israel. Fricke et al. (2007) reported the occurrence of this species from Antalya as the first record from Turkish waters based on the collection of a single specimen.

Although the occurrence of *A. caecus* has been reported from Turkish marine waters in the Mediterranean Sea in previous years (Fricke et al., 2007; Gökoğlu et al., 2009; Ergüden et al., 2017), this species is extremely rare in the eastern part of the Mediterranean Sea. However, until now *A. caecus* has not been reported with certainty from the Bay of Mersin. Thus, in the present paper, we report the first records of *A. caecus* from Mersin Bay, eastern Mediterranean Turkey.

2. METHOD

One specimen of *A. caecus* (Fig. 1 and Fig. 2). was collected by a scoop net at Mersin Bay, Taşucu coast of Turkey at a depth of 42 m on 20 June 2021 (Coordinates: 36.12500°N 33.49230°E), (Fig. 3). This specimen was preserved in 4% formaldehyde and deposited in the Museum of the Marine Life, Mersin University, (catalog number: MEUFC-21-11-133). Morphometric measurements of the specimens were made to the nearest 0.01 mm using a digital caliper. All measurements, counts, morphological descriptions, and colors agree with the descriptions given by McCosker & Hibino (2015).



Figure 1. Dorsal view of *A. caecus* from Mersin Bay

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Figure 2. Head of *A. caecus*

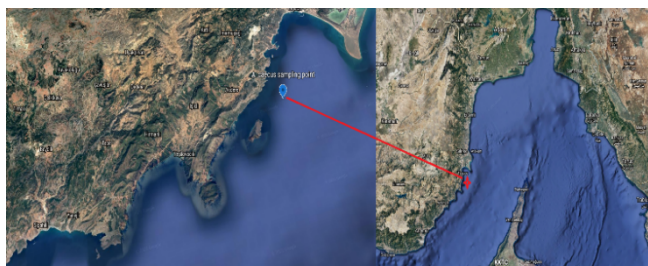


Figure 3. Sampling area

Table 1. Records of *A. caecus* in the Mediterranean Sea in 1996-2021

Author	Year	Location	Country	Depth (m)	Sampling	TL (cm)	W (g)
Golani (1996)	1994	Levantine coast, Eastern Mediterranean	Israel	-	-	24.2	-
Fricke et al. (2007)	Oct. 2005	Kaş, Antalya Bay	Turkey	1	Surface	29.1	-
Gökoğlu et al. (2009)	Feb. 2007	Antalya Bay	Turkey	8	Scuba diving (Hand net)	32.2	4.36
Ergüden et al. (2017)	March 2015	Cevlik coast, Iskenderun Bay	Turkey	20	Trammel net	32.4	4.96
This study	June 2021	Tasucu coast, Mersin Bay	Turkey	42	Scuba diving (Scoop net)	44.6	53.54

4. DISCUSSION

European finless eel *A. caecus* is found in demersal, continental shelf, usually in the sand between 0 m and 85 m (Leiby, 1990) and can reach up to 60 cm in TL (Bauchot, 1987). It commonly feeds on small fishes and benthic invertebrates.

A. caecus has been confused with *A. anguiformis* during the last two centuries (Blache and Bauchot, 1972; Leib, 1990). Later, Blache and Bauchot (1972) was re-analyzed the references for this species and revealed that these two species are different from each other. According to Blache & Bauchot (1972) *A. caecus* is distinguished from the other species, *A. anguiformis*, by having 135-138 vertebrae and a preanal distance of 40.5-42.3% of the total length. However, *A. anguiformis* has a higher vertebral count (150-157 vertebrae) than *A. caecus*.

In the present study, our measured specimen was 44.60 cm in TL and 53.55 g in TW. Thus, this specimen was found longer and higher than the previous record that has been reported for all Mediterranean samples.

3. RESULTS

Body very elongated, almost round in cross-section. The posterior tip stiffened and pointed. Anterior nostril tubular. Posterior nostril with a distinct nasal fold located just in front of the upper lip. Gill opening ventral with delicate flap. Head length (HL) 6.3% of total length (TL), body depth 1.2% of TL. Pointed snout 15.3% of HL, small eye covered by a membrane 7.1% of HL, interorbital length 8.9% of HL.

Color (fresh): dorsal surface beige, mouth black, ventral surface creamy-white, caudal tip a white. The historical captured record of the species in the Mediterranean Sea was documented in Table 1. Besides, this current specimen is also a fifth successive record from Mediterranean marine waters.,

5. CONCLUSION

Consequently, *A. caecus* is rare in the eastern Mediterranean Sea. To date, *A. caecus* has never been recorded in Mersin Bay. This study reveals the fourth record from Turkish Mediterranean waters and the first record from the northeastern Mediterranean coast of Turkey.

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Author contributions

The authors contributed equally to the article.

Conflicts of interest

The authors declare that they have no conflict of interest.

Statement of Research and Publication Ethics

For this type of study formal consent is not required.

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