

# The first report on the phenomenon of *Capoeta aydinensis* (Cyprinidae), occurring in Gökova Bay, Aegean Sea

## Gökova Körfezi'nde (Ege Denizi) *Capoeta aydinensis* (Cyprinidae) olgusu hakkında ilk rapor

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**Abstract:** A big specimen of *Capoeta aydinensis* (435 mm TL, 1040 g) was caught on 22 March 2020 by an angler from the Gökova Bay, Muğla as an unusual habitat. This case report presents occurring of an endemic freshwater fish in the marine waters and this specimen has the maximum size throughout the Anatolia.

**Keywords:** Size, freshwater fish, measurement, Akçapınar stream delta, Muğla

**Öz:** 22 Mart 2020'de büyük bir *Capoeta aydinensis* örneği (435 mm TL, 1040 g) olağandışı bir yaşam alanı olarak Muğla Gökova Körfezi'nden bir oltacı tarafından yakalanmıştır. Bu olgu sunumu, deniz sularında endemik bir tatlı su balığının bulunuşunu göstermektedir ve bu örnek Anadolu genelinde maksimum büyüklüğe sahiptir.

**Anahtar kelimeler:** Boyut, tatlı su balığı, ölçüm, Akçapınar ırmak deltası, Muğla

## INTRODUCTION

As a new endemic freshwater species, *Capoeta aydinensis* Turan, Küçük, Kaya, Güçlü & Bektaş, 2017 was described from the Büyük Menderes River and Tersakan, Dalaman, and Namnam streams in southwestern Turkey (Turan et al., 2017). *C. aydinensis* can be diagnosed from its congeners in the Mediterranean and in Anatolia by a combination of characters (Froese and Pauly, 2019). It is distinguished from the other *Capoeta* species by the following characters: one pair of barbel; a plain brownish body coloration; a well-developed keel in front of the dorsal-fin origin; a slightly arched mouth; a slightly convex lower jaw with a well-developed keratinized edge; a weakly ossified last simple dorsal-fin ray, serrated along about 60%–70% of its length, with 14–20 serrae along its posterior edge; 58–71 total lateral line scales; 11–12 scale rows between lateral line and dorsal-fin origin; 7–9 scale rows between lateral line and anal-fin origin (Turan et al., 2017).

The recent study reported that maximum age of *C. aydinensis* was 8 years; and its habitat preference is shady areas in spring, generally blurry waters in summer, high vegetation cover and blurry waters in autumn and high vegetation cover in winter (Akbaş et al., 2019). As an unusual habitat, this case report presents occurrence of an endemic fresh water fish, *Capoeta aydinensis* in marine waters of Gökova Bay, Aegean Sea.

## MATERIAL AND METHODS

On 22 March 2020, one specimen of *C. aydinensis* with total length of 435 mm and 1040 g weight (Figure 1) was captured by an angler, used fishing pole (0.30 mm PA) on a boat off 40-50 m far from Akçapınar Stream delta, Gökova Bay at a depth of 1.5 m (Coordinates: 37°02'00" N - 28°19'45", Figure 2). The bait was rock shrimp (*Palaemon* sp.). The rainy days had passed some days before, and the weather during fishing was sunny. The alive specimen was too strong and was very fluttering (M. Güven, pers. comm.).



Figure 1. *Capoeta aydinensis*, captured from Gökova Bay, Aegean Sea (A) whole body, (B) view of the shape of mouth, (C) view of head



Figure 2. Sampling area (black arrow and yellow star indicate sampling location)

## RESULTS AND DISCUSSION

The specimen was measured to the nearest millimeter (Table 1). All measurements, counts, proportions and color patterns determined are in accordance with the descriptions of Turan et al. (2017) and Froese and Pauly (2019).

In previous studies, Akbaş et al. (2019) reported 364 specimens (TL range: 58-348 mm) of *C. aydinensis* from Tersakan Stream (Muğla) during June 2013 – June 2014. Thereafter, 150 specimens (FL range: 130-312 mm) of *C. aydinensis* [as *C. bergamae*, it had been name used before new species definition according to Akbaş et al. (2019)] were captured from Topçam Dam Lake in Aydın province (Şaşı, 2009). Turan et al. (2017) also reported 30 specimens (SL range: 117-179 mm) in their systematic study. As seen that

this paper presents the unique largest size of *C. aydinensis* throughout the Anatolia. However, the occurrence of *C. aydinensis* in a stream delta has not been astonishing since the occurred of *C. capoeta bergamea* in Köyceğiz Lagoon system (Akin et al., 2005). Bohlen (1999) expressed that several freshwater fishes migrates into brackish water for feeding and growth but have to return into waters of lower salinity for spawning. So, this case report presents not only the biggest size but also the unusual habitat of *C. aydinensis* for the Turkish fauna.

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**Table 1.** Morphometric measurements and its percentages in the standard length and in the head length and meristic counts recorded in *Capoeta aydinensis*, captured from Gökova Bay, Aegean Sea

Morphometric characters	Size (mm)	
Total length (TL)	435	
Fork length (FL)	400	
Standard length (SL)	370	
	In percentage of standard length	
Head length (HL)	70	18.9
Maximum body depth	92	24.9
Pectoral fin length	65.1	17.6
Anal fin length	28.4	7.7
Anal fin height	49.5	13.4
Pelvic fin length	54.6	14.8
Dorsal fin length	55.6	15.0
Dorsal fin height	62.9	17.0
Pre-dorsal fin length	171	46.2
Pre-pectoral fin length	72.7	19.6
Pre-anal fin length	277	74.9
Pre-pelvic length	200	54.1
Upper caudal fin lobe	80	21.6
Middle caudal fin lobe	30	8.1
Caudal peduncle length	63.9	17.3
Caudal peduncle depth	37	10.0
	In percentage of head length	
Eye diameter	9	12.9
Head width at anterior eye margin	35.4	50.6
Head width at posterior eye margin	43.9	62.7
Head depth through eye	39.5	56.4
Head depth at snout	22.6	32.3
Inter-orbitary length	35.4	50.6
Pre-orbitary length	25.6	36.6
Post-orbitary length	41.6	59.4
<b>Meristic characters</b>		
Dorsal fin rays	III	8
Anal fin rays	III	5
Pectoral fin rays	I	13
Ventral fin rays	I	6
Ligne Lateral		60
Ligne transversal (dorsal fin origin)		10
Ligne transversal (anal fin origin)		7
Gill rakers		23

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