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- SHORT COMMINICATION-

Occurrence of the golden pompano, *Trachinotus ovatus* (Linnaeus 1758) (Osteichtyes: Carangidae) in Dardanelles, the Sea of Marmara

Sezginer Tuncer[1], Hatice Torcu Koç[2*], Zeliha Erdoğan[2]

[1]Department of Basic Sciences, Faculty of Marine Sciences and Thechnology, University of Onsekiz Mart, Terzioglu Campus, Çanakkale, Turkey

[2]Department of Biology, Faculty of Science and Arts, University of Balikesir, Cagıs Campus, Balikesir 10145, Balikesir, Turkey

Abstract

One specimen of *Trachinotus ovatus* (SL: 98 mm, TL: 128mm, TW: 18.43 g) was captured by a fishing line from Kepez, Çanakkale Strait (Turkey) on 5 October 2019. This record is one of the first of the species in Çanakkale Strait. Besides this study aims to confirm its occurrence of *T. ovatus* with some morphological properties from Çanakkale Strait, Some morphometric and meristic features of specimen are given.

Keywords:
Trachinotus ovatus, Çanakkale Strait, morphometry, Turkey.
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Introduction

Fishes of the family Carangidae, with 146 recognized species are mainly marine fishes of tropical and subtropical waters of Western Atlantic and Eastern Atlantic (Froese, Rainer & Pauly, 2019). The golden pompano, Trachinotus ovatus which is a termophilic species belongs to the family of Carangidae which is economically important throughout the Mediterranean Sea (Smith-Vaniz & Berry, 1981) and distributes from Eastern Atlantic: Bay of Biscay, British and Scandinavian waters to Angola, including the Atlantic Ocean, Mediterranean Sea of Turkey and offshore islands. to Fishbase (Smith-Vaniz, 1986), primarily T. ovatus which is a pelagic-neritic species found mainly at depths ranging from 50 to 200 m according to Fishbase (Reiner, 1996). Adults feed on small

* *Corresponding Author: Hatice Torcu Koç, E-mail: htorcukoc@hotmail.com*

crustaceans, mollusks and fishes (Smith-Vaniz, 1986), and can reach a total length of 70.0 cm and a weight of 2.8 kg (Ly et al. 1996; Bauchot, 2003).

Chervinski & Zorn, (1977) mentioned about occurrence and the food of juvenile pompeno *T. ovatus* from the Mediterranean while Moreno & Castro (1995) analysed community structure of juvenils of golden pompana which was relatively highly abundant in catches. Abdallah (2002) studied length-weight relationship of this species off Alexandria. Bañon et al. (2010) gave the update checklist of marine fishes from Galicia (NW Spain), while Battaglia et al. (2016) presented food composition of *T. ovatus* from the Strait of Messina (central Mediterranean Sea). Ma et al. (2014) studied the effect of salinity on the rearing performance of juvenile golden pompano *T. ovatus* in South China Sea while Assem et al. (2005) reported the reproduction of female *T.ovatus* (Carangidae). This species has been reported so far from Mediterranean Sea (Chervinski & Zorn, 1977), Norway (Samuedsen, 1983), (Galicia (NW Spain) (Banon et al. 2010), Greek waters (Motopoulos & Stergio, 2013), South China Sea (Liu et al. 2009), from Turkish territorial waters of İskenderun Bay (Başusta & Erdem, 2000), Aegean Sea (İzmir Bay) (Çelik & Oehlenschlger, 2005), with two specimens from Gökova Bay (Öğretmen et al. 2005), Bilecenoglu et al.(2002) mentioned the finding of *T.ovatus* in Aegean Sea and Mediterranean Sea, and the Sea of Marmara and Bilecenoğlu & Öztürk (2019) gave some morphometric and meristic characters of the species from İstanbul Strait.

Çanakkale Strait is a narrow, natural strait and internationally significant waterway which connects various seas along the Eastern Mediterranean, the Balkans, the Near East, and Western Eurasia, and specifically connects the Aegean Sea to the Sea of Marmara. The strait has low salinity and relatively cold waters originating from the Black Sea flow into the Aegean Sea at the upper-layer current. It is also a partway for high salinity water and relatively warm waters move from the Aegean Sea to the Sea of Marmara at the lower-layer (Beşiktepe et al. 1993). Although it is rich in fish (Altın et al. 2015), *T. ovatus* has not been determined for Çanakkale Strait so far. For this reason, we hope that this investigation will be of use to Turkish marine biodiversity.

This study aims to confirm its occurrence of *T. ovatus* with some morphological properties from Çanakkale Strait, the Sea of Marmara and represents a significant range extension to northwards in the Turkish Seas.

Material and Methods

One specimen of *Trachinotus ovatus*, was caught by a fishing line at a depth of 7 m in Kepez, Çanakkale Strait on 5th October 2019 (Figure 1) (39°27'38"N 26°32'31"E). The sample was identified at species level according to FishBase (Smith-Vanithz, 1986). The standard and total lengths (TL and SL) were taken with a dial caliper of 0.05 mm accuracy and weight (±0.01 g) was measured. Its photography was taken and later fixed in 10% buffered formaldehyde, and subsequently preserved in 75% ethanol and deposited in at Çanakkale Onsekiz Mart University, Piri Reis Marine Museum, (Çanakkale PRM-PIS 2019-0064) (Figure 2).

Figure1. A map of sampling area.

Figure 2. *Trachinotus ovatus* captured in Kepez, Çanakkale Strait, the Sea of Marmara (Photo: Sezginer Tuncer).

Results and Discussion

Standard and total lengths of the specimen were measured as 98 mm and 128 mm (Table 1). It is identified as *T.ovatus* on the following basis: Body moderately long and compressed body. Upper jaw very narrow at posterior end and extending only to below anterior third of eye. Tongue with small band of teeth. Lobes of soft dorsal and anal fins small. Length of second dorsal fin base equal to length of anal fin base, 2nd dorsal-fin lobe and pectoral fins shorter than head; scales small, cycloid, partially embedded in skin; lateral line very slightly arched over pectoral fins, straight thereafter, and without scutes. 3-5 black spots along anterior half of lateral lineback greenish-grey, sides silvery with 3-5 vertically elongate black spots on anterior half of lateral line; dorsal-, anal- and caudal-fin lobes black-tipped (Bauchot, 2003).

Table 1. Comparison of morphological features of *Trachinotus ovatus* specimen with previous studies.

Morphometric and meristic characters	Mourad (1998)	Santos et al. (2002)	Abdallah, (2002)	Baucho, (2003)	Tutman et al. (2004)	Motopoulos et al. (2013)	Guo et al. (2014)	Altın et al. (2015)	Oliveria et al. (2015)	Villegas& Hernandez et al. (2016)	Bilecenoğlu & Oztürk (2019)	This study
Locality	Alexandria	Algarve Coast	Alexandria	-	Adriatic Sea	Ionian Sea	South China Sea	Gökçeada Island	north-Eastern Atlantic	north-western Mediterranean	Istanbul Strait	Çanakkale Strait
n	423	82	45	-	80	12	456	79	33	228	2	1
Total length (L_T)	163-243	295-405	34-233	700	260-650	227-432	80-348.5	29-152	157-440	250-440		128
Fork length (L_F)											20.9-21.7*	
Standard length (L_S)	-	-	-	-	-	-	-		-	-	-	98
Weight (g)	-	-	-	-	0.1-1.8	-	3200-13250		-		-	18.43
Body depth (%L_F)	-	-	-	-	-	-	-	-	-	-	3.42-3.47	-
Head length, (%L_T)	-	-	-	-	-	-	-	-	-	-	5.52-5.67	-
Eye diameter (%L_H)	-	-	-	-	-	-	-	-	-	-	3.84-3.88	-
Dorsal fin rays	-	-	-	VII-23-27			-	-	-	-	VI+I+24	VII,29
Pectoral fin rays	-	-	-	III, 22-25			-	-	-		-	-
Anal fin rays	-	-	-	-			-	-	-	-	II+I+22	III,25
Ventral fin rays												7

*shows measurements in cm.

The first record of *T.ovatus* in the Sea of Marmara represents a new species in fish diversity of Çanakkale Strait ichtyofauna. The morphometric measurements and meristic counts (Table 1) were in harmony with the previous literature (Bauchot, 2003; Altın et al. 2015).

The Turkish Straits sea area consist of Strait of the Istanbul (Bosphorus), Strait of the Canakkale (Dardanelle) and also Sea of Marmara. The Strait of Çanakkale has very special ecological conditions in terms of marine environment which includes atmospheric and oceanographic conditions, plant and animal diversity. This area also plays a role as biological corridor and barrier between the Mediterranean Sea and the Black Sea and forms an acclimatization zone for migrating species (Öztürk & Öztürk, 1996). The relatively dense Mediterranean underflow enters the strait below a depth of 10-15 m with stable salinity (38.9-39.0 psu) and temperature (16- 17 °C) (Oğuz & Sur, 1989). The northward distribution of thermophilic fishes such as *T. ovatus* in the Mediterranean Sea, has increased in recent times, indicating the shift of tropical and subtropical taxa towards colder waters of the Mediterranean Sea primarily as a result of global warming (Dulčić et al. 1997a; Azzurro et al. 2011).

According to (Lloret et al. 2014), warm-water species have three different phases of colonization (occasional occurrence, common presence and establishment). Our present finding and the relevant literature currently support *T.ovatus* as an occasional presence in Turkish Seas.

Although *T. ovatus* has not already been a target species and has a minor commercial importance taken as by gamefish (Smith-Vanithz, 1986), it is important as a good candidate species for aquaculture due to its fast growth, high flesh quality and suitability for cage culture (Tutman et al. 2004; Ma et al. 2014) and also for fish diversity of Dardanelles Strait ichthyofauna.

Conflict of Interest: The authors declare that they have no conflict of interest.

Ethical approval: All applicable international, national, and/or institutional guidelines for the care and use of animals were followed.

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