

Additional Record of *Sphoeroides pachygaster* (Tetraodontidae) in the Aegean Sea (Fethiye, Turkey)

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Abstract: *Sphoeroides pachygaster* has been well-known in the Mediterranean since the first recorded from Balearic Islands in 1979, and then, it has rapidly reached to eastern Levantine. It is widely distributed throughout the Mediterranean, especially in Italian waters, including Strait of Sicily. However, it is still rare in the Turkish seas. A single specimen of the blunthead puffer, *Sphoeroides pachygaster* was caught by a commercial trammel netter off Göcek, Fethiye Bay at a depth of 125 m on 05 July 2020. This short note contributes to the ichthyofaunal richness of the Turkish Aegean Sea with an additional record of *S. pachygaster*.

Keywords: Blunthead Puffer, Measurement, Additional Record, Mediterranean

Ege Denizi'nde (Fethiye, Türkiye) *Sphoeroides pachygaster* (Tetraodontidae)'in İlave Kaydı

Özet: *Sphoeroides pachygaster*, 1979'da Balear Adaları'ndan ilk kayıttan bu yana Akdeniz'de iyi bilinmektedir ve daha sonra hızla Doğu Levantin'e ulaşmıştır. Akdeniz boyunca, özellikle Sicilya Boğazı da dahil olmak üzere İtalyan sularında yaygın olarak dağılmıştır. Ancak, Türk denizlerinde hala nadirdir. Balon balığı *Sphoeroides pachygaster*'in bir örneği, 05 Temmuz 2020'de Göcek, Fethiye Körfezi'nde 125 m derinlikten ticari bir uzatma ağı teknesi tarafından yakalandı. Bu kısa not, ilave bir *S. pachygaster* kaydıyla Ege Denizi'nin ihtiyofaunal zenginliğine katkıda bulunmaktadır.

Anahtar Kelimeler: Balon Balığı, Ölçüm, İlave Kayıt, Akdeniz

Introduction

The blunthead puffer, *Sphoeroides pachygaster* (Müller & Troschel, 1848) is a marine benthopelagic pufferfish and it usually swims at depths of 50–250 m, up to 400 m (Golani, Öztürk, & Başusta, 2006; Froese and Pauly, 2019). *S. pachygaster* was originally known in the Atlantic, from Ireland to South Africa, but also the Indian Ocean. It is circumglobal in tropical and temperate seas (Froese and Pauly, 2019).

Sphoeroides pachygaster has been well-known in the Mediterranean since the first recorded from Balearic Islands in 1979 (Oliver, 1981), and then, it

has rapidly reached to eastern Levantine (Golani et al., 2006). *S. pachygaster* is widely distributed throughout the Mediterranean, especially in Italian waters, including Strait of Sicily (Ragonese, Jereb, and Morara, 1997; Psomadakis, Ceddia, and Vacchi, 2008; Giordano et al., 2012). However, all records of *S. pachygaster* in the Mediterranean were well-documented by Lipej, Mavric, and Paliska (2013). Newly, *S. pachygaster* was recorded from Northern Cyprus on March 2020 (Akbor, Snape, Ayas, & Çiçek, 2021). It is obviously that a substantial population seems to be at present definitively established.

In Turkish seas, Eryılmaz, Özuluğ, and Meriç, (2003) and Eleftheriou et al., (2011) reported totally four specimens of *S. pachygaster* from Saros Bay, Bozcaada Island, and Iskenderun Bay. Akyol and Aydın (2017) recorded *S. pachygaster* from Izmir Bay, Aegean Sea, and recently, Erguden, Ayas, & Erguden (2020) reported a single specimen from Mersin Bay. Thus, this ichthyological note presents a sixth certain location of this species off Göcek in the Bay of Fethiye, south-eastern Aegean Sea.

Material and Methods

On 05 July 2020, a single specimen of *Sphoeroides pachygaster* (Figure 1) was captured by a commercial trammel net at a depth of 125 m off Göcek, the Bay of Fethiye (Coordinates 36°41.866 N - 28°57.997 E, Figure 2). The specimen was fixed in a 6% formaldehyde solution and deposited in the fish collection of Ege University, Fisheries Faculty (ESFM-PIS/2020-03).



Figure 1. *Sphoeroides pachygaster*, captured off Göcek, Fethiye (A) distended, (B) whole body (horizontal bar: 50 mm)



Figure 2. Sampling location (black star) of *Sphoeroides pachygaster* in the Aegean Sea

Results and Discussion

All measurements, counts, ratios (Table 1) and colour patterns determined are in accordance with the descriptions of Eryılmaz et al. (2003), Golani et al. (2006) and Froese and Pauly (2019). Among the tetraodontid fishes in the Mediterranean, *S. pachygaster* is uniquely of Atlantic origin. Akyol and

Aydın (2017) compiled the previous records (Golani, 1996; Zachariou-Mamalinga and Corsini, 1994; Eryılmaz et al., 2003; Peristeraki, Lazakaris, Skarvelis, Georgiadis, and Tserpes, 2006; Peristeraki et al., 2006; Zenetos, Vassilipoulou, Salomidi, and Poursanidis, 2008; Eleftheriou et al., 2011; Abdul Rahman, Galiya, and Kara Ali, 2014; Farrag, El-Haweet, Akel, and Moustafa, 2016;) and stated that 25

specimens plus one from Northern Cyprus (Akboru et al., 2021) and one from Erdemli coast, Mersin Bay (Erguden et al. 2020) have been recorded from the Levantine Sea since 1991. All successive records from eastern Mediterranean Sea are shown in Table 2.

S. pachygaster is still considered rare in Turkish seas with only 6 findings reported earlier. However, this specimen is the seventh record since 1999 and 4th

record since 2016 in Turkish waters. This additional record with other reports in 2020 indicate a more common occurrence of this species in the Eastern Mediterranean and the Aegean Sea in recent years.

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Table 1. Morphometric measurements as percentage of total length and meristic counts recorded in *Sphoeroides pachygaster*, captured off Göcek, Fethiye

Measurements	Size (mm)	Proportion (TL%)
Total length (TL)	257	
Standard length (SL)	227	88.3
Pre-dorsal fin length	170	66.1
Pre-anal fin length	178	69.3
Pre-pectoral fin length	89	34.6
Head length	78	30.4
Eye diameter	14	5.4
Preorbitary length	39	15.2
Meristic counts		
Dorsal fin rays		8
Anal fin rays		8
Pectoral fin rays		15
Weight (g)		455

Table 2. Successive records of *Sphoeroides pachygaster* from eastern Mediterranean Sea

Location	Depth (m)	Record date	n	Size (mm, TL)	References
Ashdod, Israel	250	23 May 1991	2	140-183	Golani (1996)
Netanya, Israel	360	02 June 1992	1	175	Golani (1996)
Rhodes, Greece	60	Nov. 1992	5	?	Zachariou-Mamalinga and Corsini (1994)
Saros Bay, Turkey	180	Oct. 1999	1	167	Eryılmaz et al. (2003)
Bozcaada, Turkey	125	May 2001	1	395	Eryılmaz et al. (2003)
Sikinos, Greece	101	26 Aug.2003	1	?	Peristeraki et al. (2006)
Sikinos, Greece	104	12 June 2005	2	?	Peristeraki et al. (2006)
Serifos, Greece	155	14 June 2005	1	?	Peristeraki et al. (2006)
Serifos, Greece	150	Oct. 2005	2	297-436	Zenetos et al. (2008)
Leros, Greece	166	04 July 2006	1	?	Peristeraki et al. (2006)
Astypalaia, Greece	137	11 July 2006	1	?	Peristeraki et al. (2006)
Karataş, Turkey	305	26 Oct.2010	1	450	Eleftheriou et al. (2011)
Samandağ, Turkey	200	28 Oct.2010	1	187	Eleftheriou et al. (2011)
Latakia, Syria	250	14 Sep.2012	4	312-466	Abdul Rahman et al. (2014)
Alexandria, Egypt	?	2012-2015	?	?	Farrag et al. (2016)
Izmir Bay, Turkey	80	13 Apr.2016	1	192	Akyol and Aydın (2017)
Northern Cyprus	250	11 Mar. 2020	1	520	Akboru et al. (2021)
Mersin Bay, Turkey	400	16 May 2020	1	490	Erguden et al. (2020)
Göcek, Turkey	125	05 July 2020	1	257	This study

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