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SHORT COMMUNICATION

Maximum size of *Stephanolepis diaspros* (Tetraodontiformes: Monacanthidae)

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ABSTRACT

Reticulated leatherjacket, *Stephanolepis diaspros* Fraser-Brunner, 1940 is one of the very first Lessepsian settlers in the Mediterranean. On 22 June 2020 a specimen of *Stephanolepis diaspros* (catalogue number: ESFM-PIS/2020-02) with 305 mm in total length (TL) was captured by an angler off Yassıcaada, Urla, Izmir Bay on sandy bottom at a depth of 18 m. The present ichthyologic record demonstrates maximum size of *S. diaspros* species and even, this large size is unique in the Mediterranean and the world seas until a new one is reported.

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Introduction

Reticulated leatherjacket, *Stephanolepis diaspros* Fraser-Brunner, 1940 is one of the very first Lessepsian settlers in the Mediterranean (Tortonese, 1986; Froese and Pauly, 2019), and lives inshore in sandy and rocky habitats with vegetation to a depth of 20 m (Golani et al. 2006; Froese and Pauly, 2019). Common sizes of *S. diaspros* are 7-15 cm, with the maximum as 20 cm (Golani et al. 2006) and 25 cm TL (Froese and Pauly, 2019).

Stephanolepis diaspros is especially well established in the eastern Mediterranean; however, it is still rare in the Aegean Sea. It has been reported from the Aegean Sea in 1943 for the first time (Tortonese, 1947) and it occasionally occurs in the region, reaching as far as to the Sea of Marmara (Bilecenoğlu and Yokeş, 2013). Also, it reached to the Adriatic Sea (Dulčić and Pallaoro, 2003), Gulf of Palermo, Sicily (Catalano and Zava, 1993), Tunisia (Ben Amor and Capapé, 2008; Zouari-Ktari et al. 2008) and Maltese waters (Deidun et al. 2015).

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This paper reports a new maximum size of *S. diaspros* and even, its large size is unique in the Mediterranean and the world seas for the time being.

Material and Methods

On 22 June 2020, a specimen of *S. diaspros* (Figure 1) with 305 mm in total length (TL) was captured by an angler off Yassıcaada, Urla, Izmir Bay (38°24.271 N - 26°47.589 E), on sandy bottom at a depth of 18 m (Figure 2). The bait was European razor clam. The specimen was measured to the nearest millimetre, fixed in 6% formaldehyde solution and deposited in the Ichthyological Collection of Fisheries Faculty, Ege University with the catalogue number: ESFM-PIS/2020-02.

Figure 1. The specimen of *Stephanolepis diaspros* with 305 mm TL (ref. ESFM-PIS/2020-02), captured off Yassıcaada, Urla in the Bay of İzmir (Photo: O. Akyol)

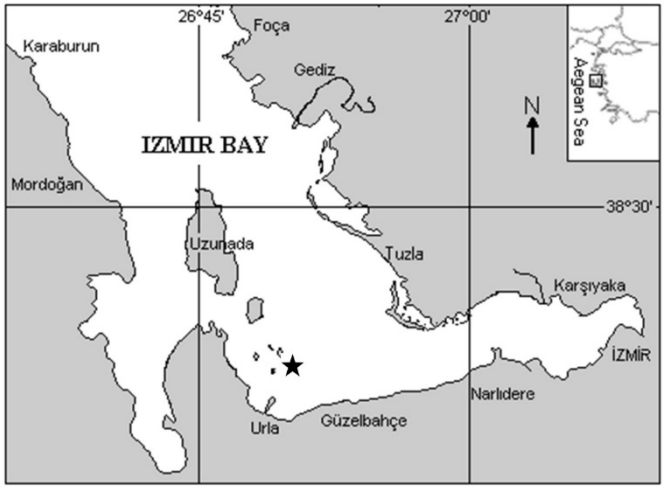

Figure 2. Capture site (black star) of *Stephanolepis diaspros*

Results and Discussion

Description, measurements and percentage in total length (Table 1) of *S. diaspros* are in total accordance with those in Tortonese (1986), Golani et al. (2006), Froese and Pauly (2019).

Table 1. Morphometric measurements as percentage of total length (TL%) and meristic counts recorded in *Stephanolepis diaspros*, captured from İzmir Bay, Aegean Sea

Measurements	Size (mm)	Proportion (TL%)
Total length (TL)	305	-
Standard length (SL)	260	85.2
Pre-second dorsal fin length	138	45.2
Pre-anal fin length	152	49.8
Pre-pectoral fin length	74	24.3
Maximum body depth	122	40.0
Head length	73	23.9
Eye diameter	13	4.3
Preorbitary length	51	16.7
Meristic counts		
First dorsal fin rays	I	
Second dorsal fin rays	30	
Anal fin rays	30	
Pectoral fin rays	13	
Weight (g)	464	

Gücü et al. (1994) firstly reported *S. diaspros* from Mersin and Iskenderun bays, the north-eastern Mediterranean coast of Turkey during 1983, 1984 and 1989 intermittent trawl surveys. This might be the oldest catch record of *S. diaspros* in the Turkish waters and the other previous records of *S. diaspros* are shown in Table 2.

As seen, the size reported in this study might be the maximum for the Mediterranean. Recently *S. diaspros* with 100-300 mm in length was reported by Servonnat and Drakulic (2015) from Lipsi Island, Greece. Even though, it had 300 mm maximum length that close to our finding, this was observed during underwater visual census. Such a report on maximum length needs further approval since it tends to produce less accurate estimates of fish length due to optical characteristics of water (*see*, Harvey et al. 2001a, b; 2002).

Conclusion

In conclusion, maximum size is one of the important parameters used in life history studies and fishery science (Borges, 2001). In addition, the present ichthyologic record demonstrates maximum size of *S. diaspros* species and even, this large size is unique in the Mediterranean and the world seas until a new one is reported.

Table 2. Previous records of *Stephanolepis diaspros* in various seas between 1983 and 2020

Date	n	TL range (mm)	Depth (m)	Area	References
1983/84-89	8	77-206	<100	Anamur-İskenderun	Gücü et al. (1994)
1991-1994	3	100-145	40	Karataş, İskenderun	Torcu and Mater (2000)
1994-1996	2	161-72	40	Karataş, İskenderun	Başusta and Erdem (2000)
1997-1998	207	71-130	10-80	Mersin-İskenderun	Taşkavak and Bilecenoğlu (2001)
2001-2003	52	73-142	5-100	NE Mediterranean	Sangun et al. (2007)
?	3	98-212	10-20	Yeşilova Bay	Oz et al. (2007)
May2003-Dec.2005	1124	37-237	0-40	Gulf of Gabes, Tunisia	Zouari-Ktari et al. (2008)
2004-2007	550	70-261	?	Gulf of Suez, Red Sea	El-Ganainy and Sabra (2008)
2007-2008	56	80-135	12-120	İskenderun Bay	Erguden et al. (2009)
2008-2009	16	80-190*	5-35	S. Aegean Sea	Corsini-Foka et al. (2010)
2009-2010	7	96-139	?	Antalya Bay	Türker et al. (2020)
2010-2011	158	80-202	31-110	İskenderun Bay	Yemişken et al. (2014)
28-29 Nov.2012	2	ca.200	10	Sea of Marmara	Bilecenoğlu and Yokeş (2013)
27 Sep.2013	1	130	20	Piran, Slovenia	Lipej et al. (2014)
10 Dec.2013	1	200	34	Lampedusa Island	Deidun et al. (2015)
20 July 2014	1	170	20	Egadi Island, Sicily	Balistreri and Parasporo (2015)
July-Aug.2014	17	100-300**	1-6	Lipsi Island, Greece	Servonnat and Drakulic (2015)
27 Oct.2014	1	177	6	Urla, İzmir Bay	Akyol and Özgül (2015)
15-19 Sep.2014	3	115-239	6-25	Pemera-Limassol, Cyprus	Iglésias and Frotté (2015)
10 Jan.2018	1	257	1	Türkbükü, Güllük Bay	Akyol et al. (2018)
22 June 2020	1	305	18	Yassıcaada, Aegean Sea	This study

Note: *SL; **estimated by underwater observation

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Compliance with Ethical Standards

Authors' Contributions

Author GM: Conceptualization, investigation, editing; Author OA: Methodology, writing – original draft, writing – review & editing.

Conflict of Interest

The authors declare that there is no conflict of interest.

Ethical Approval

For this type of study, formal consent is not required.

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