

Additional Record of Mediterranean Spearfish, *Tetrapturus belone* Rafinesque, 1810 (Istiophoridae) from Izmir Bay (Northern Aegean Sea)

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Abstract: *Tetrapturus belone* is endemic to the Mediterranean and it is more common in central parts. It is considered very rare in the Levant. On 20 October 2020, a specimen of *Tetrapturus belone* with 176 cm Lower Jaw Fork Length (LJFL) and weighing 26 kg was captured by a trammel net from the coast of Karantina Island, Urla at a depth of 11 m. This is the second record of the epipelagic *T. belone* entering the shallow waters of İzmir Bay, nine years after its first record in the same area. This ichthyologic note presents a new occurrence of the Mediterranean spearfish as an incidental catch from the small scale fishery in a certain coastal area of Urla, İzmir Bay.

Keywords: Marlin, Billfish, Incidental Catch, Urla

İzmir Körfezi'nden (Kuzey Ege Denizi) Akdeniz Kılıcı'nın, *Tetrapturus belone* Rafinesque, 1810 (Istiophoridae) İlave Kaydı

Özet: *Tetrapturus belone* Akdeniz'e endemik bir türdür ve Akdeniz'in orta kısımlarda daha yaygındır. Levant'ta ise çok nadir kabul edilir. 20 Ekim 2020 tarihinde, Urla, Karantina Adası kıyılarında, 11 m derinlikte, 176 cm (26 kg) bir *Tetrapturus belone* örneği fanyalı ağla yakalanmıştır. Dokuz yıl önce, bu epipelajik balık, 2011 yılında İzmir Körfezi'nin sığ sularına girmişti. Şaşırtıcı bir şekilde 158 cm alt çene çatal boyu (LJFL)'na sahip bu balık, aynı alanda ve derinlikte ortaya çıkmış ve ayrıca bir fanyalı ağla yakalanmıştı. Bu ihtiyolojik not, Akdeniz kılıcının Urla'nın (İzmir Körfezi) belirli bir kıyı bölgesinde küçük ölçekli balıkçılıktan tesadüfi olarak yeni bir bulunuşunu sunmaktadır.

Anahtar Kelimeler: Akdeniz kılıcı, Tesadüfi Av, Marlin, Urla

Introduction

Mediterranean spearfish, *Tetrapturus belone* Rafinesque, 1810 is an epipelagic oceanic fast swimmer in the upper 200 m, and it usually lives in pair (Golani, Öztürk & Başusta, 2006). It feeds on fishes such as *Belone belone*, *Sardinella aurita*, *Engraulis encrasicolus* (Romeo, Consoli, Castriota & Andaloro, 2009). Reported maximum length and weight for this species are 240 cm TL and 70 kg, respectively (Froese & Pauly, 2019).

The spearfish is endemic to the Mediterranean and it is more common in central parts, especially

around Italy. There are no confirmed records from the Black Sea; and is considered very rare in the Levant (Nakamura, 1986; Golani et al., 2006; Froese & Pauly, 2019). However, *T. belone* is heavily fished in Straits of Messina in August-September, occasionally in October-November (Nakamura, 1986).

Short descriptive characters of *T. belone* are as follows: body moderately slender, bill is short and round; it has two dorsal fins, the first has a long base, its anterior lobe elevated and round; and it has also

two anal fins; pectoral fins are very short, pelvic fins are twice as long; and colour is black, blue-black, lower flanks and belly silvery (Nakamura, 1986; Golani et al., 2006).

Recently, the Mediterranean spearfish with 125 cm total length was reported from the local fish market of Rhodes town on 13 February 2020, and it was captured in Lardos Bay, east coast of Rhodes at a depth of 40 m (Corsini-Foka, Insacco & Zava, 2020). It is also found in the regions of the North-eastern Aegean Sea, such as the Müsellim Strait and Izmir Bay (Akyol et al., 2005, 2013). The Mediterranean spearfish has been declared as “Least Concern (LC)” species by IUCN, but little is known about its biology and ecology (Collette & Heessen, 2015). This short paper presents an additional record of the rare *T. belone* from Izmir Bay following its previous record nine years ago.

Material and Methods

On October 20, 2020, a specimen of *Tetrapturus belone* with a total length of 176 cm (26 kg) was captured by trammel net (72 mm stretched mesh size) from the coast of Karantina Island, Urla (Coordinates: 38°22'247 N - 26° 47'377 E, Figure 1) at a depth of 11 m. Following its capture, the specimen of *T. belone* was sold at the fish auction by Urla Fishery Cooperative. Before the auction, major meristic characteristics of the specimen were measured. LJFL (i.e. lower jaw fork length) and weight (kg) measurements were taken and the specimen was photographed (Figure 2). The specimen was identified according to Nakamura (1986) and Golani et al. (2006).

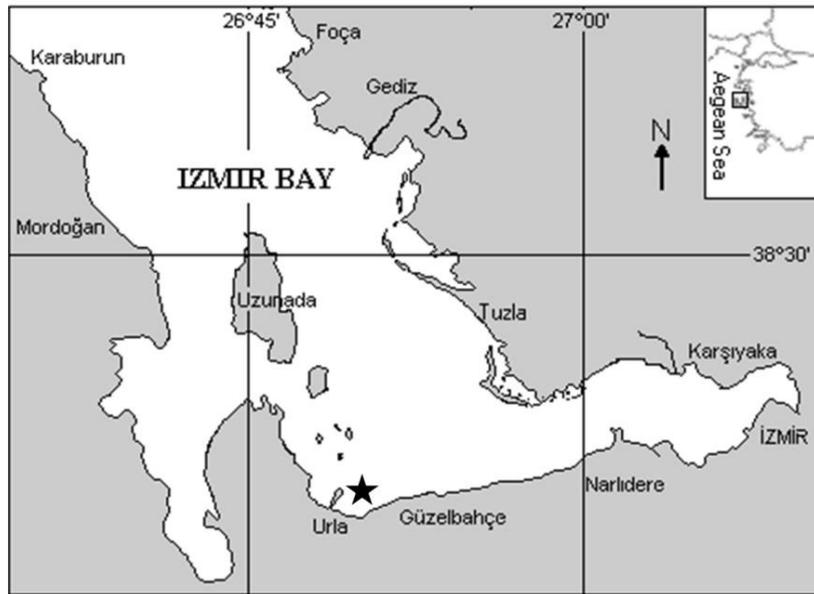


Figure 1. Map showing the capture site (black star) of *Tetrapturus belone*



Figure 2. Fresh *Tetrapturus belone* specimen, captured from İzmir Bay, northern Aegean Sea (Foto: O. Akyol)

Results and Discussion

Morphology and colour are in total agreement with Nakamura (1986), Golani et al. (2006) and Froese & Pauly (2019) and confirm the identification of the present specimen. *Tetrapturus belone* is very rare both in the Adriatic and Levant, but more common in southern Italy (Dulcic & Soldo, 2004; Golani et al., 2006; Romeo et al., 2009). In the Aegean Sea, *T. belone* is occasionally observed in pelagic swordfish gillnets and/or longlines. Recently a specimen caught by a beach-seine was reported from Rhodes Island (Corsini-Foka et al., 2020). Another specimen (120 cm LJFL) was caught by pelagic swordfish gillnet in Müsellim Strait (Edremit Bay, northern Aegean Sea) at a depth of 300 m on June 13, 2002 (O. Akyol, unpublished data). Interestingly, in 2011, a specimen with 158 cm LJFL had been caught in the shallow waters of Izmir Bay by a trammel net in the same area and depth where the current specimen was caught. (Akyol, Aydın, Gülşahin & Kara, 2013). In addition, on March 30th, 2012, a specimen of Mediterranean spearfish (19 kg) was caught together with *Remora osteochir* (marlin sucker) off Fethiye (Southwest Turkey) by longline (Akyol, Ceyhan & Capapé, 2020).

In conclusion, this ichthyologic note presents a new occurrence of the Mediterranean spearfish as an incidental catch from the small scale fishery in a certain coastal area of Urla, Izmir Bay. Distribution range of *T. belone* will likely expand towards northern latitudes as a result of global warming and thus, incidental catches of this species will become more frequent in the near future.

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