



Spread of the arrow bulleye *Priacanthus sagittarius* Starnes, 1988 in the Mediterranean Sea

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Abstract

Habitat of the family Priacanthidae is tropical and subtropical Atlantic, Indian, and Pacific oceans. The features of the family members are generally very big eyes, deep bodies, upturned mouth, and generally reddish color. In this paper, we report the presence of an arrow bulleye *Priacanthus sagittarius* in coast of Turkey waters in the Mediterranean Sea. On the 27th December, 2017, a single specimen of *P. sagittarius* was collected by Mr. Hüseyin Çınar, captain of the commercial bottom trawler Furkan Reis vessel, off the Taşucu, Mersin (36°07'2.82"N 33°51'6.42"E) Turkey coasts. The specimen of *P. sagittarius* was collected at a depth of approximately 100 m by a bottom trawl net; the mesh size of 22 mm. The collected specimen of arrow bulleye *P. sagittarius* was 255 mm in total length (TL) and 307 g in total weight (TW). The finding of the present study is the first record of specimen along shores of the Mediterranean of Turkey. This record suggests that this species is spread towards west along in the Mediterranean.

Keywords: *Priacanthus sagittarius*; spread; Coast of Turkey; Mediterranean

1. Introduction

Habitat of the family Priacanthidae is tropical and subtropical Atlantic, Indian, and Pacific oceans. The features of the family's family members are generally very big eyes, deep bodies, upturned mouth, and generally reddish color (Starnes, 1988). The family Priacanthidae contains four genera (two genera is synonym) such as the genus *Priacanthus* and 19 species. *Priacanthus sagittarius* (Starnes, 1988) belong to the genera *Priacanthus* (Eschmeyer, 2014; Farrag et al., 2016). First record of arrow bulleye *P. sagittarius* in the Mediterranean was reported by Goren et al. (2010). After this time, *P. sagittarius* was reported in the Mediterranean by Golani et al. (2011) and Farrag et al. (2016). In addition, Elongate bulleye *Priacanthus prolixus* Starnes, 1988 belonging to the genera *Priacanthus* was reported from the coasts of İskenderun Bay of the Mediterranean by Gürlek et al. (2017). In this paper, we report the presence of an arrow bulleye *P. sagittarius* in the coasts of the Mediterranean Sea of Turkey.

2. Materials and methods

On the 27th December, 2017, a single specimen of *P. sagittarius* was collected by Mr. Hüseyin Çınar, captain of the commercial bottom trawler Furkan Reis vessel, off the Taşucu, Mersin (36°07'2.82"N 33°51'6.42"E) Turkey coasts (Figure 1).



Figure 1. Sampling location.

The specimen of *P. sagittarius* was collected at a depth of approximately 100 m by a bottom trawl net; the mesh size of 22mm. The specimen was identified according to Starnes (1988); Golani et al. (2011); Farrag et al. (2016). In all counts, measurements and in morphological characterization Hubbs and Lagler (1947) were followed. The specimen stored in 4% formal solution and was deposited in the Museum of the Faculty of Fisheries, Akdeniz University (AU-SUF/2017-4).

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3. Result and discussion

The collected specimen of arrow bulleye *P. sagittarius* was 255 mm total length (TL) and 307 g weight (TW) (Figure 2). Body elongate; caudal fin slight rounded; Soft rays of dorsal and anal fins relatively long; Pectoral fins were relatively short and broadly pointed, shorter than pelvic spines.



Figure 2. *Priacanthus sagittarius*.

P. sagittarius samples other meristic counts and body proportions: Dorsal fin rays X + 13; anal fin rays III +13; pectoral fin rays 19, and pelvic fin rays I + 5. Head length is 76,17 mm; body depth is 81 mm; eye diameter is 35,17 mm.

Color: Body red, becoming slightly pinkish in lateral part. a black spot on the upper half of the membrane between the first and second dorsal spines; the upper margin of the first dorsal margin and posterior of body is dark red. Posterior end of soft dorsal ray portion and caudal fin with light grey zone and dark margin. between 1-3 pelvic rays orange-brown with black point at base.

One undefined specimens was caught by a commercial trawler from Taşucu, Mersin Bay. Specimen was identified *P. sagittarius* according to Starnes, (1988). These samples can be distinguished from other species belong genus *Priacanthus* in the Red Sea by having black marks on the pelvic fin base, a dark spot on the upper margin of the membrane between 1-2 dorsal spines, in addition to the long 10th dorsal spine (more than twice the length of the 2nd dorsal spine) and rounded caudal fin according to Goren et al. (2010); Golani et al. (2011).

The sample was collected by commercial trawl operation at a depths of about 100 m and on the rocky bottom. Its depth range is between "60 to 100 m", according to Starnes (1988). Its habitat is "in sheltered reefs in moderate depths, usually in caves or under coral plates (Kuiter and Tono-zuka, 2001); may also be found in rocky and open areas (Allen and Erdmann, (2012); Froese and Valdestamon, 2018). While Goren et al. (2011) reported the distribution of this specimen ranged between surface and 440 m, Golani et al. (2011) also agreed same depth range.

P. sagittarius grows to maximum 279 mm (Starnes, 1998) and feeds mainly on zooplankton, cephalopods, crustaceas and small fishes (Allen and Erdmann, 2012).

4. Conclusion

With the opening of the Suez Canal in 1869, many alien species and numbers have increased in the Mediterranean (Zenetos et al., 2012; Katsanevakis et al., 2014). *P. sagittarius* has widely Indo-west Pacific distribution from the Red Sea to Japan, Australia to Samoa (Starnes, 1988). Previous studies than this report, it was recorded from the Coast of Tel-Aviv by Goren et al. (2010), from The Haifa Bay, Israel by Golani et al. (2011) and from Egyptian waters by Farrag et al. (2016). The finding of the present study is the first record of specimen along shores of the Mediterranean of Turkey. This record suggests that this species is spread towards to west along in the Mediterranean.

Some species originated from Red Sea are not economically and consumable. Some species are even in the group of dangerous sea organisms. However, some are evaluated economically. From this point of view, the last species we recorded is a species that can be consumed, harmless and economical.

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