

## SHORT COMMUNICATION

### First record of the Indo-Pacific lionfish *Pterois miles* (Bennett, 1828) (Osteichthyes: Scorpaenidae) for the Turkish marine waters

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#### Abstract

A first record of the lionfish *Pterois miles* (Bennett, 1828) is reported for the Turkish marine waters, observed in Iskenderun Bay, Northeastern Mediterranean on 13 April 2014. The lionfish is the first non-native marine fishes, established in the family Scorpaenidae for the Turkish marine waters.

**Keywords:** Lessepsian species, lionfish, *Pterois miles*, first record, Turkish marine waters

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#### Introduction

Lionfishes are commonly found in reef fish communities (Green and Côté 2009; Morris and Whitfield 2009; Kulbicki *et al.* 2012). To date two lionfishes, *Pterois volitans* (Linnaeus 1758) and *Pterois miles* (Bennett 1828), are most successful species in the Atlantic and Indo Pacific. *P. miles* is a invasive species commonly found in the Indian Ocean and Red Sea (Froese and Pauly 2014). *P. volitans* is mainly found in the Indo-West Pacific (Froese and Pauly 2014).

A single specimen of *P. miles* has been the first record from the Mediterranean coast, Haifa Bay in 1991 (Golani and Sonin 1992), and later the two lionfish specimens were reported from Lebanon coast in the Mediterranean Sea (Bariche *et al.* 2013). Two unidentified lionfish specimens were also observed in Cyprus coast by Evripidou (2013). Bariche *et al.* (2013) stated that this reported species seemed to be most likely *P. miles*, which had been probably introduced into the Mediterranean Sea from the Red Sea via the Suez Canal. Golani and Sonin

(1992) also reported that *P. miles* invaded the Mediterranean from the Red Sea via the Suez Canal.

A single specimen of *P. miles* was captured in Iskenderun Bay (Kaleköy), Northeastern Mediterranean part of Turkey ( $36^{\circ}17' N$   $35^{\circ}46' E$ ) at a depth of 25 m on a rocky bottom on 13 April 2014 (Figure 1).



**Figure 1.** Sampling location (●) of *Pterois miles*

Morphometric measurements were taken on the left side of the specimen by a digital caliper to a nearest 0.1 mm. Total length (TL, mm), standard length (SL, mm), and total weight (TW, g) were also measured. The specimen was identified as *P. miles* with the diagnostic characteristics described by Golani and Sonin (1992) and Bariche *et al.* (2013). The specimen was preserved in 4% formaldehyde solution and deposited at the Museum of the Faculty of Marine Sciences and Technology, Mustafa Kemal University, Iskenderun-Hatay (collection number: PIS-2014-1) (Figure 2).



**Figure 2.** Lionfish, *Pterois miles*, captured in Iskenderun Bay, Turkey  
(Photo: Cemal Turan)

The captured specimen was 276 mm in total length, 211 mm in standard length and 278.80 g in total weight. Morphometric measurements and meristic data of *P. miles* specimen were as follows: dorsal fin rays XIII + 10; anal fin III + 6; pectoral fin rays 13; pelvic fin rays I, 6; caudal fin rays; 14, gill rakers 14; body depth 32.2; head length 30.80 of % SL snout length 31.2; eye diameter 54.16 and the inter-orbital width, 34.21 % of head length (HL). Pelvic longest fin ray 39.81 and pectoral longest ray 64.90 % of SL; supraorbital tentacles 33.85 % of HL. Color of the lion fish agree with previous descriptions given by Golani and Sonin (1992) and Bariche *et al.* (2013).

*P. miles* was considered for many years to be synonym of *P. volitans* (Dor 1984; Golani and Sonin 1992). *P. miles* closely resembles to *P. volitans*, which makes it hard to distinguish these species by morphology. The identification of these species is based on the following characteristics: number of dorsal-fin rays, pectoral-fin length (pectoral rays very long reaching at least the midpoint of anal fin base in *P. miles*), and size of spots on vertical fins. Adult specimen has a band of small spines along the cheek (Kuiter *et al.* 2001). However, these two species can be separated on the basis of mtDNA sequencing (Schultz 1986; Kochzius *et al.* 2003; Freshwater *et al.* 2009). Kochzius *et al.* (2003) used mitochondrial DNA analyses to show that specimens identified as *P. miles* and

*P. volitans* were genetically distinct, which was also supported by other studies (Schultz 1986; Hamner *et al.* 2007; Freshwater *et al.* 2009).

*P. miles* has been generally found in water depths from 25 to 85 m on hard bottom, coral reefs and artificial substrate, sometimes found under ledges and hiding in crevices (Hare and Whitfield 2003). Adult *P. miles* specimen can reach the maximum size of 35 cm in standard length (Sommer *et al.* 1996; Froese and Pauly 2004). Dorsal anal and pelvic fin spines of *P. miles* are highly venomous that may cause injure and fatalities for divers and fishermen (Sommer *et al.* 1996; Schofiel 2009).

Consequently, the first record of the lionfish *Pterois miles* is reported here for the Turkish water, and the lionfish is the first non-native marine fish, established in the family Scorpaenidae for the Turkish water. The occurrence of this species in the Turkish water is due to its range expansion from the southern to the northern Mediterranean.

We assume that this species may be spread by dispersion from the northeastern Turkish coast by water currents. At the same time, this species may extend its diatribution along the Mediterranean coast of Turkey from east to west.

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## **İndo-Pasifik kökenli olan aslan balığı *Pterois miles* (Bennett, 1828) (Osteichthyes: Scorpaenidae)'nın Türkiye Denizleri için ilk kaydı**

#### **Özet**

Türkiye Denizleri için aslan balığı *Pterois miles*'nin ilk kaydı Kuzeydoğu Akdeniz bölgesi olan İskenderun Körfezinden 13 Nisan 2014'te yakalanarak bu çalışmada bildirilmiştir. Aslan balığı Türkiye denizlerinde Scorpaenidae familyasından olan ve Akdeniz'e endemik olmayan ilk türdür.

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