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First Record of *Pterois volitans* (Linnaeus, 1758) from the Aegean Sea

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Sercan YAPICI,*Onder YILDIRIM

Mugla Sıtkı Kocman University, Faculty of Fisheries, 48000, Kotekli, Mugla, Turkey

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ABSTRACT

The first record of the *Pterois volitans* in Aegean sea is here reported. A single specimen was collected by spearfisherman from Akiye Creek (South Aegean Sea). These findings suggest that the first evidence of existence of *P. volitans* in the Aegean Sea.

INTRODUCTİON

Nowadays, it is well known that the introduction and establishment of alien species have altered habitat and marine communities in the Mediterranean. Alien biota in the Aegean Sea includes 775 alien species of which 105 are exotic fish species consisting of more than 65 species of Indo-Pacific origin (Zenetos *et al*., 2012). Bilecenoğlu *et al*., (2014) stated 512 fish species belonging to 150 families along the Turkish coasts, where 55 non-indigenous fish species are reported (Ergüden *et al*., 2013).

The genus *Pterois* Oken, 1817, belonging to Scorpaenidae, mainly called lionfish or firefish. It is characterized by venomous dorsal, anal and pelvic fin spines (Allen & Erdmann, 2008). *P. volitans* and *P. miles* are a recent, significant and dangerous invasive species in the Mediterranean Sea as well as in the west Atlantic and the Caribbean Sea. *P. miles* (Bennett, 1828), reported by Golani & Sonin (1998) as first *Pterois* species in the Mediterranean, has been expanded along Israel, Lebanon, Cyprus, Turkey and Greece (Crocetta & Bariche in Dailianis *et al*., 2016 and references therein) while *P. volitans* was reported only Levant (Gürlek *et al*., 2016; Gökoğlu *et al*., 2017).

MATERIALS AND METHODS

On 29 October 2016, a single specimen of *P. volitans* (Fig. 1) was caught by spearfisherman at a depth of 2 m on a sandy bottom from the Akiye Creek (36.4756° N – 28.3539° E) connected with Dalyan Lagoon, SE Aegean Sea. All morphometric measurements were made to the nearest 0.01 mm using dial calipers. The specimen is identified and agreed based on the description provided by Allen & Erdmann (2008).

RESULTS

Measurements of the specimen (in mm) are: total length 215.0, standard length: 158.0, head length: 40.66, pectoral fin length: 155.0, body depth: 58.16. Weight (g): 113.48. Meristic counts are D: XIII-11, A: III-7, P: 14, V: I-5, C: 12. The below lateral line scale count is 23. The numbers of spots on median fins of the specimen are 84, 58 and 47 for caudal, dorsal and anal fin, respectively.

DİSCUSSİON

Considering a literature related to *Pterois spp*, the lionfish is the best model fish that how a non-native species could establish in the recipient environment and potentially compete with native fishes. The genus *Pterois* in the Atlantic and Mediterranean has succeeded one of the most rapid and destructive invasions in the histories of marine ecosystems. The effects of *P. volitans* and *P. miles* in the Atlantic are regarded as similar because results of the studies have been depended on combined data. In fact, most of *Pterois* species can be distinguished from each other with few morphologic features and meristic counts, however, there had been a taxonomical conflict for a while, whether *P. miles* is the synonym of *P. volitans* or not because they are very similar morphologically. Schultz (1986) provided evidence based on meristic characters for the recognition. He revealed that *P. volitans* has 11 soft-dorsal rays and seven soft-anal rays whereas *P. miles* has 10 soft-dorsal rays and six soft-anal rays (Allen & Erdmann 2008). Kochzius *et al*., (2003) corroborated on the basis of mtDNA sequencing that *P. miles* is a valid species. *P. miles* is recognized as single species belonging this genus in the Mediterranean until recently because *P. volitans* does not occur in the western Indian Ocean and the Red Sea; its distribution is now restricted to eastern Indian Ocean (Dr. Ronald Fricke pers. comm.). However, *P. volitans* become widespread in the Atlantic Ocean due to aquarium release; similarly, it could introduce in the Mediterranean somehow (e.g. ship ballast water, aquarium releases). In conclusion, our and previous reports (Gürlek *et al*., 2016; Gökoğlu *et al*., 2017) have been indicated that *P. volitans* could join in the Mediterranean fauna. Therefore, monitoring, risk assessment and raise awareness are needed around the Mediterranean for lionfishes.

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Figure Caption

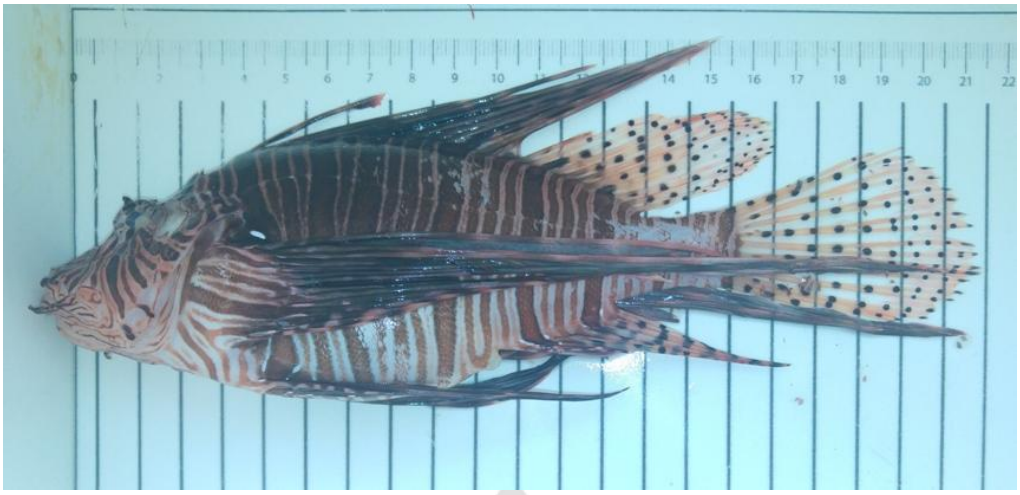

Figure 1. A specimen of *Pterois volitans* from the Aegean Sea (Turkey)