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Short Communication

First record of the Spiny blaasop *Tylerius spinosissimus* (Regan, 1908) (Tetraodontidae) from the Turkish coasts

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Abstract

The non-indigenous tetraodontid of Indo-Pacific origin *Tylerius spinosissimus* is recorded for the first time in Turkish waters and for the third time in the Mediterranean Sea. This record increases to 53 the number of Indo-Pacific alien fish species present along the coasts of Turkey.

Keywords: *Tylerius spinosissimus;* Spiny blaasop; Eastern Mediterranean; Turkey.

A large number of non-indigenous fish species of Red Sea and Indo-Pacific origin occurs today in the Mediterranean Sea, of which at least 77 species have been introduced via the Suez Canal, (GOREN *et al.,* 2009, 2010; GOLANI, 2010; GOLANI *et al.,* 2010; BARICHE, 2010 a, b; ZENETOS *et al.,* 2010).

To date, 52 alien fish species, originally from the Red Sea and the Indo-Pacific Ocean, have been reported in Turkish waters (BILECENOGLU *et al.,* 2009; BILECENOGLU 2010), including the recent finding of Apogon fasciatus (White, 1790) (TURAN *et al.,* 2010). The occurrence of a new alien tetraodontid, the spiny blaasop Tylerius spinosissimus (Regan, 1908) from the waters of Turkey in the Northeastern Mediterranean Sea is reported here. At present, Turkish marine fauna counts six alien species of the family Tetraodontidae: *Lagocephalus spadiceus, L. suezensis, L. sceleratus, Sphoeroides pachygaster, Torquigener flavimaculosus* and *Tylerius spinosissimus* (TURAN *et al.,* 2007 a, b; CORSINI-FOKA *et al.,* 2010). Of the alien tetraodontid species of the Turkish marine fauna (TURAN *et al.,* 2007 b) only *S. pachygaster* is of tropical Atlantic origin.

One small specimen of *Tylerius spinosissimus* (19.2 mm in standard length) was collected by purse seine in Iskenderun Bay (36° 20' 737" N - 35° 47' 463" E) on November 30, 2010, at about 52 m of depth (Fig. 1). The sample was preserved in 4% formaldehyde solution and deposited at the Muse-

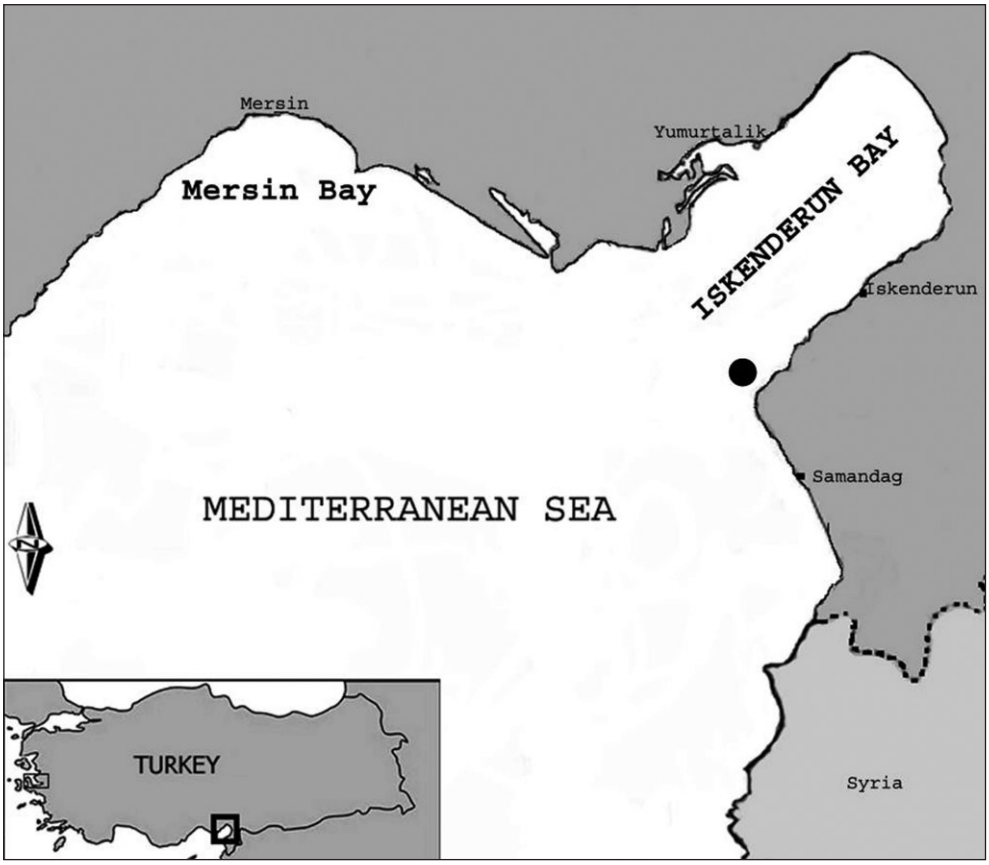

Fig. 1: Sampling location (●) of *Tylerius spinosissimus.*

um of the Faculty of Fisheries, Mustafa Kemal University, Iskenderun-Hatay (collection number: MSM-PIS/2010-9).

The specimen was identified as *Tylerius spinosissimus* with the diagnostic characteristics described by SMITH & HEEMSTRA (1986) and MATSUURA (2001). In the body of *T. spinosissimus* there are short thorns on the belly, the rear margin of the caudal fin is black, the back is dark brown, the belly whitish and fins are transparent. Measurements were carried out to the nearest 0.1 mm by a caliper, and meristic counts were made under the reflected light of a stereomicroscope. Meristic character counts along with morphometric measurements in comparison with other publications (CORSINI *et al.,* 2005; CORSINI-FOKA *et al.,* 2010) are given in Table 1.

According to SMITH & HEEMSTRA (1986), MATSUURA & TYLER (1997) and FROESE & PAULY (2010), the spiny blaasop is a tropical bathydemersal species present in the Southeast Atlantic and widely distributed in the Indo-West Pacific Ocean, from South and East Africa and Mozambique to North-western Australia, the Philippines, Taiwan, and South China.

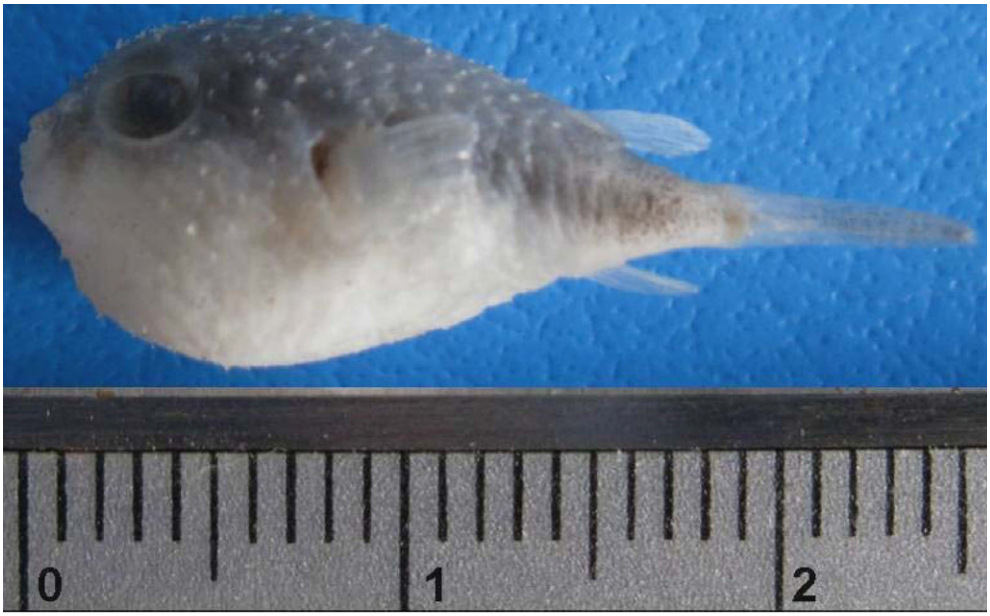

Fig. 2: *Tylerius spinosissimus* (Regan, 1908) from Iskenderun Bay, Turkey.

The first and second record of *Tylerius spinosissimus* in the Mediterranean Sea were both described from the bay of Trianda, north-western coast of Rhodes Island, south-eastern Aegean Sea, the first based on a specimen collected in February 2004 by trawl-net at a depth of 90 m (CORSINI *et al.,* 2005), the second based on a specimen caught in January 2009 by boat seine at 50-90 m of depth (CORSINI-FOKA *et al.,* 2010). The record of *Tylerius spinosissimus* from Israel (GOLANI *et al.,* 2011), constitutes a considerable extension of its distribution range in the Mediterranean.

It is to be emphasized that the spiny blaasop has never been recorded in the Red Sea (ANONYMOUS, 2010). As already mentioned above, the first two records of the species in the Mediterranean were located at Rhodes Island, very far from the Suez Canal. The finding of the species from Iskenderun Bay, North-eastern Mediterranean Sea, represents the third record from the Mediterranean basin and shows that *T. spinosissimus* has extended its range easterly and counterclockwise along the Levantine coasts, suggesting also a probable establishment of its population in the area (GOLANI *et al.,* 2010). Although it is not to be ruled out that the occurrence of *Tylerius spinosissimus* could be undetected in other regions of the Levantine basin due to its very small size, its introduction into the Mediterranean through Lessepsian migration is under discussion (CORSINI-FOKA & ECONOMIDIS, 2007), mainly because of the evident discontinuity of its distribution. Therefore, the introduction of *T. spinosissimus* in the Mediterranean Sea may be due to ship-mediated transport (CORSINI-FOKA *et al.,* 2010; ANONYMOUS, 2010). According to VELLA &

Table 1
Meristic and morphometric characters for the three specimens of *Tylerius spinosissimus* from the Mediterranean Sea.

	Characters	Our Data	CORSINI et al. (2005)	CORSINI - FOKA et al. (2010)
Meristic characters	Dorsal fin rays	8	8	8
	Anal fin rays	6	6	6
	Caudal fin rays	10	10	10
	Pectoral fin rays	15	14	15
	Total length	24.4	-	30.3
	Standard length	19.2	17.4	23.3
	Maximum body depth	9.3	-	10.1
	Caudal peduncle least depth	1.6	-	1.5
	Caudal peduncle length	3.6	-	4.4
	Head length	9.2	-	10.1
Morphometric measurements (mm)	Eye diameter	2.8	-	3.1
	Preorbital distance	2.2	-	2.8
	Postorbital distance	4.8	-	4.2
	Interorbital distance	3.3	-	3.8
	Dorsal fin length	3.5	-	4.8
	Anal fin length	2.2	-	2.4
	Pectoral fin length	3.6	-	4.3
	Predorsal length	14.8	-	16.9
	Preanal length	14.5	-	17.3
	Total length / Standard length	1.3	1.4	1.3
	Standard length / Head length	2.1	2.0	2.3
	Standard length / Predorsal length	1,3	1.2	1.4
	Standard length / Preanal length	1,3	1.2	1.4
	Head length / Caudal peduncle least depth	5.8	5.5	6.7
	Head length / Caudal peduncle length	2.6	2.7	2.3
	Head length / Eye diameter	3.3	-	3.3
	Head length / Preorbital distance	4.2	3.8	3.6
	Head length / Postorbital distance	1.9	2.6	2.4

DEIDUN (2008), *Selene dorsalis* might have come to the Mediterranean Sea by ship ballast water. YILMAZ *et al.* (2004) and GOREN & GALIL (2008) discussed the route of invasion for another small fish species and concluded that the Antenna codlet, *Bregmaceros atlanticus,* arrived in the Mediterranean with discharged ballast water.

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