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FIRST RECORD OF SPOTBASE BURRFISH, *CYCLICHTHYS SPILOSTYLUS* (ACTINOPTERYGII: TETRAODONTIFORMES: DIODONTIDAE), FROM THE MARINE WATERS OF TURKEY

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Abstract. A single adult specimen of spotbase burrfish, *Cyclichthys spilostylus* (Leis et Randall, 1982), was recorded for the first time on 26 December 2011 from the Mersin Bay, north-eastern Mediterranean, Turkey. This is the first record of the spotbase burrfish *C. spilostylus* from the marine waters of Turkey and third record on the continental shelf in the Mediterranean basin. This is the 61th record of an Indo-Pacific alien fish species present along the marine waters of Turkey.

Keywords: first record, spotbase burrfish, *Cyclichthys spilostylus*, Mediterranean Sea, Turkey

After the opening of the Suez Canal, a migration started from the Red Sea to the Mediterranean and up to date totally 83 Red Sea and the Indo-Pacific origin fish species have penetrated into the Mediterranean Sea (Edelist et al. 2011, Golani et al. 2011, Salameh et al. 2011, Bariche and Heemstra 2012). Up to now, 60 alien fish species originally from the Red Sea and the Indo-Pacific Ocean, have been reported in Turkish marine waters (Turan and Yaglıoglu 2011, Çinar et al. 2011, Bilecenoğlu 2012, Dalyan et al. 2012).

On 26 December 2011, a single specimen of spotbase burrfish, *Cyclichthys spilostylus* (Leis et Randall, 1982) was captured by a trawler in the vicinity of Mersin Bay, Turkey (36°38′44″N, 34°36′18″E) at a depth of 71m (Fig. 1). This record constitutes the first record of this species in the Mediterranean coast of Turkey. The specimen was deposited at the Faculty of Fisheries, Mustafa Kemal University, Iskenderun-Hatay. With the present report, the number of valid Lessepsian fish migrant species recorded in the Turkish marine waters of Turkey has reached sixty one.

Description of the Turkish specimen: The picture of the captured specimen is given in Fig. 2. The meristic counts and morphometric measurements of the captured single specimen is given in Table 1 and compared with other publication (Leis 1986, Golani et al. 2010). Body inflatable, dorsal anal, and caudal fins rounded, dorsal fin slightly in front of anal fin, pectoral fin wide with vertical margin, pelvic fin absent, mouth large and terminal, body wide and head with three-rooted and four-rooted stout spines fixed in an erect position, no spines on the caudal peduncle.

Colour of the fresh specimen. The spotbase burrfish specimen had dark and brown-grey body, belly white, yel-

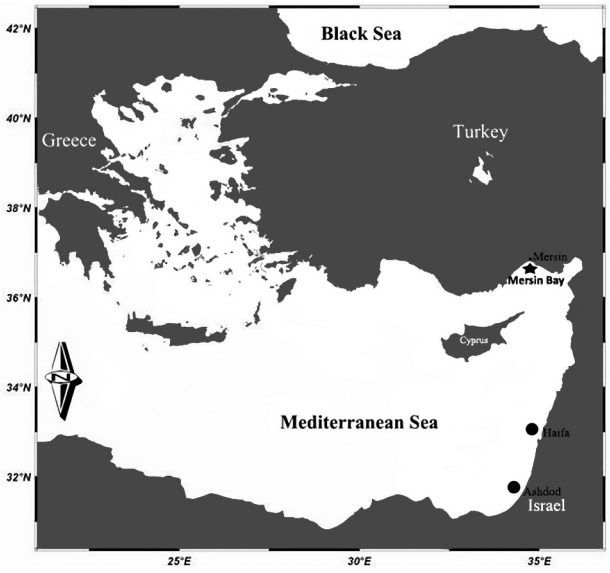

Fig. 1. Map showing records of *Cyclichthys spilostylus* in the Eastern Mediterranean: ●, previous records; ★, present record

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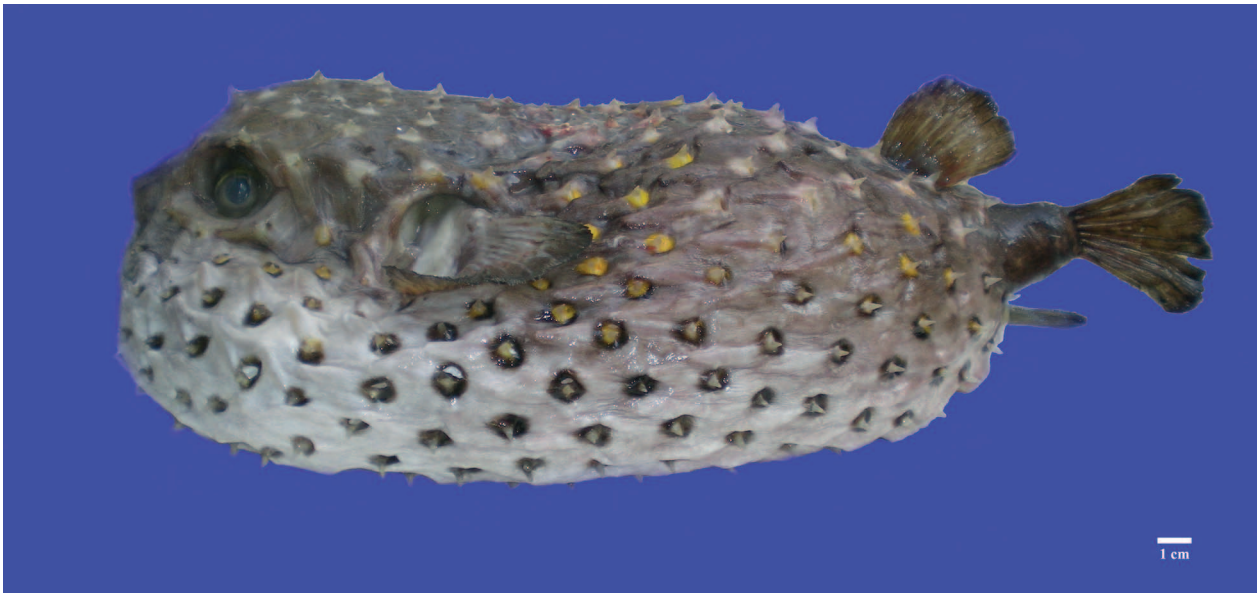

Fig. 2. The specimen of *Cyclichthys spilostylus*, captured in the Mersin Bay, Turkey; 465 mm TL (Photo: Y.K. Bayhan)

low-orange spots at the base of spines on the back. Black spots were present at the base of spines on belly. All measurements, meristic counts, morphological descriptions, and the colour agreed with the previous descriptions by Leis (1986) and Golani et al. (2010).

Remarks. The family Diodontidae is represented in the Mediterranean Sea by three species: spot-fin porcupinefish, *Diodon hystrix* L.; spotfin burrfish, *Chilomycterus reticulatus* (L.); and *C. spilostylus* (see Leis and Randall 1982, Leis 1986, Leis 2001, Follesa et al. 2009). The spotbase burrfish was photographed for the first time from the Galapagos Island in March, 1978 (Humann 1993) and this species was first described as *Chilomycterus spilostylus* by Leis and Randall (1982)

Table 1

Metric characters and meristic counts of *Cyclichthys spilostylus* captured in Mersin Bay, Turkey, compared with other Mediterranean records

	Character or count	Presently reported study		Leis (1986)	Golani et al (2010)
	Number of specimens		1	2	1
Metric character [mm]	Total length	465		281–295	—
	Standard length	401		—	291
	Head length	120	29.9% SL	—	31.1% SL
	Snout length	35	29.2% HL	—	38.0% SL
	Maximum body depth	280	69.8% SL	—	—
	Minimum body depth	256	63.8% SL	—	—
	Caudal peduncle length	24	5.9% SL	—	5.7% SL
	Eye diameter	41	34.2% HL	—	29.7% SL
	Preorbital distance	94	78.3% HL	—	—
	Postorbital distance	62	51.6% HL	—	—
	Interorbital distance	109	90.8% HL	—	60.4% SL
	Predorsal length	324	80.7% SL	—	78.0% SL
	Preanal length	374	93.2% SL	—	78.6% SL
	Prepectoral length	156	38.9% SL	—	—
	Dorsal fin length	36		—	—
	Anal fin length	25		—	—
	Pectoral fin length	41		—	—
	Caudal fin length	54		—	—
Meristic c.	Dorsal fin rays	12		11–13	11
	Anal fin rays	11		10–12	9
	Pectoral fin rays	21		20–22	18
	Caudal fin rays	8		—	7

from the Red Sea. Later it was assigned to the genus *Cyclichthys* (see Matsuura et al. 1993, Leis 2006, Golani et al. 2010). The first Mediterranean record of *C. spilostylus* was made 1993 from Ashdod, Israel (Golani 1993). About 17 years later, this species was rerecorded again from the Israel waters (Haifa Bay) (Golani et al. 2010).

C. spilostylus lives solitary and can reach up to 350 mm in total length (Golani et al. 2002). Froese and Pauly (2012) suggested that the maximum total length of this species was 340 mm. Recently, Golani et al. (2010) reported that the standard length was 291 mm in the Mediterranean (Haifa Bay, Israel). In the presently reported study, the specimen examined was 401 mm in standard length and 465 mm in total length. Thus, the presently described *C. spilostylus* represents the highest documented values of maximum length and weight for this species. In addition, to the best of our knowledge, our specimen's total length is the longest record that has been reported for the entire Mediterranean.

C. spilostylus is distributed along coastal waters in the vicinity of reefs and found on coral or rocky substrate at depths of 3 to 90 m (Leis and Randall 1982, Froese and Pauly 2012). Although adults are usually found near rocky bottoms, young individuals are known to be pelagic (Froese and Pauly 2012). It feeds on hard-shelled invertebrates (Leis 2001). *C. spilostylus* is distributed throughout the Red Sea, Indian Ocean, South Africa, South China Sea, Philippines, Japan, Australia, Eastern Pacific, and Mediterranean (Matsuura et al. 1993, Randall 1995, Golani et al. 2010, Froese and Pauly 2012).

The presently reported finding is the first record of *C. spilostylus* from the marine waters of Turkey and the third record on the continental shelf in the Mediterranean basin. The occurrence of this species in the Mediterranean Sea is most probably due to migration from the Red Sea via the Suez Canal (Golani et al. 2002). While a single specimen does not necessarily indicate existence of an established population in Turkish waters, on the other hand, the past and present records indicate a northward migration of the species with current in the Mediterranean. The sea currents probably help this species to migrate northward. Moreover the lack of records of juvenile specimens of *C. spilostylus* may indicate that it is not spawning in the Mediterranean and, only migrating from the Red Sea via the Suez Canal.

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