



## Short communication

# Occurrence of the Lessepsian migrant, *Lagocephalus sceleratus* (Gmelin 1789) (Osteichthyes: Tetraodontidae), in İskenderun Bay (north-eastern Mediterranean, Turkey)

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### Introduction

The silverstripe blaasop, *Lagocephalus sceleratus* (Gmelin, 1789), belongs to the Tetraodontidae. Distributed in the Indo-West Pacific Ocean (Smith and Heemstra, 1986), primarily at depths ranging from 18 to 100 m, it is also a reef inhabitant (Randall, 1995).

Akyol et al. (2005) demonstrated its occurrence in Gökova Bay, and Bilecenoglu et al. (2006) reported the species in the bays of İzmir and Antalya. A previous record from the Mediterranean Sea by Mouneimne (1977) was a misidentification of a *Lagocephalus suezensis* specimen (Golani, 1996). *L. sceleratus* was reported from Jaffa along the Israeli coast in 2004 (Golani and Levy, 2005; Galil, 2007; Eisenman et al., 2008). The species was also recorded in the waters of Crete and Rhodos in 2003 and 2005 (Corsini et al., 2006; Kasapidis et al., 2007). A recent record from the northern part of the Edremit Bay, Behramkale coast (Türker-Çakır et al., 2009), confirmed the presence of the species in the northern Aegean Sea.

In this paper, we present a new occurrence and the associated morphometric and meristic properties of *L. sceleratus* from İskenderun Bay, eastern Mediterranean Sea, Turkey.

### Materials and methods

Four specimens were caught in a trammel-net by a commercial fisherman hauling at a depth of 40 m in February 2009 while fishing in the İskenderun Bay (36°19'.00 N–36°56'.00 N; 35°18'.50 E–36°23'.00 E). The specimens were identified at

species level. They were measured with a digital caliper and later fixed in 10% buffered formaldehyde, and subsequently preserved in 75% ethanol and deposited in the Hydrobiology collection of the Department of Biology, University of Balıkesir, Turkey.

### Results and Discussion

Total lengths of the specimens ranged from 388 to 611 mm. The body was elongated and cylindrical, slightly compressed laterally and ventrally. The dorsal area was grey-brownish with black, regularly distributed spots of equal size and covered predorsally with small spinules. Wide silver bands were present laterally, from the mouth to the caudal fin. The belly was white and rough. A silver blotch was present in front of the eye. The pectoral fin base was black and the dorsal and anal fins were shortbased and posterior in position, while the caudal fin was lunate. Meristic measurements and counts (Table 1) were in agreement with the previous descriptions of the species (Smith and Heemstra, 1986; Akyol et al., 2005; Bilecenoglu et al., 2006; Kasapidis et al., 2007; Türker-Çakır et al., 2009).

This fish is known to carry tetrodotoxin (Sabrah et al., 2006; Kasapidis et al., 2007; Bentur et al., 2008; Katikou et al., 2009). It is considered a most delicious sea food in Suez City, Egypt, were it is illegally sold in spite of several fatal poisonings reported in this city (Zaki and Mossa, 2005). Two cases have also been reported from Israel and Lebanon

Table 1

Morphometric (mm) and meristic data of *Lagocephalus sceleratus* specimens captured on February 2009 at 40 m depth, İskenderun Bay, north-eastern Mediterranean Sea. Morphometric measurements also given as proportions of total and head lengths

Parameters	Individuals			
	1	2	3	4
Total length ( $L_T$ ), mm	388	409	410	611
Fork length (LF), mm	365	385	385	572
Body depth, mm (% $L_T$ )	54 (13.9)	56 (13.7)	55 (13.4)	85 (13.9)
Head length, mm (% $L_T$ )	102 (26.3)	103 (25.2)	103 (25.1)	153 (25.0)
Predorsal distance, mm (% $L_T$ )	213 (54.9)	227 (55.5)	226 (55.1)	330 (54.0)
Preanal distance, mm (% $L_T$ )	202 (52.1)	211 (51.6)	202 (49.3)	297 (48.6)
Orbit diameter, mm (% $L_H$ )	25 (24.5)	24 (23.3)	24 (23.3)	33 (21.6)
Preorbital distance, mm (% $L_H$ )	51 (50.0)	53 (51.5)	55 (53.4)	89 (58.2)
Interorbital distance, mm (% $L_H$ )	40 (39.2)	43 (41.7)	42 (40.8)	61 (39.9)
Dorsal finrays	12	12	12	12
Anal finrays	10	11	10	10
Pectoral finrays	16	16	16	17

(Golani et al., 2006). After consuming *L. sceleratus*, the main manifestations include vomiting, diarrhea, headache, paraesthesia, slurred speech, muscle weakness, dyspnea, hypertonia, tachycardia, respiratory arrest, seizures and coma (Bentur et al., 2008).

The Suez Canal opens fish migration from the Indo-Pacific Ocean and Red Sea to the Mediterranean Sea. The eastern Mediterranean Sea is especially susceptible to biological invasions because it is a crossroad between the Ponto-Caspian and the Indian Sea / Red Sea regions and the maritime traffic from the Indian Ocean and fosters the widespread distribution of alien species; fish and shellfish farms may also provide access for non-indigenous species (CIESM, 2007). This phenomenon (Lessepsian migration) and man-made disruptions of the ecological balance have contributed to the spread of tetrodotoxin-containing fish from the Indo-Pacific region to the Mediterranean Sea. The public at large and, specifically, fishermen should be made fully aware of the potential for tetrodotoxin poisoning in the region.

Considering that *L. sceleratus* was recorded for the first time in the Mediterranean in 2003 (Akyol et al., 2005), it can be concluded that it is currently among the faster expanding Lessepsian immigrants. Rapid expansion from the north-eastern Mediterranean (İskenderun Bay) to the north Aegean Sea and westward (East Peloponnese) (Peristeraki et al., 2006) may indicate its overall ability to colonize successfully under different environmental conditions.

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