

## Range expansion of silverstripe blaasop, *Lagocephalus sceleratus* (Gmelin, 1789), to the northern Aegean Sea

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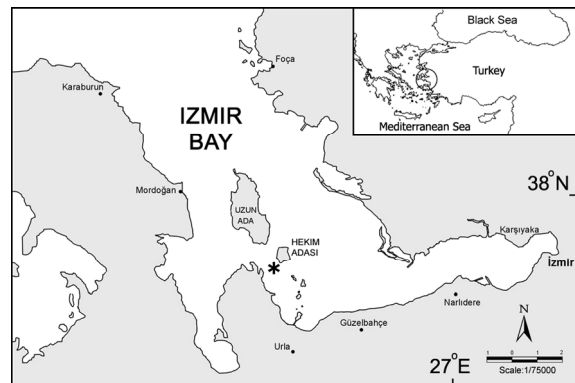
### Abstract

Following the recent occurrence of *Lagocephalus sceleratus* (Gmelin, 1789) in the Mediterranean Sea, our findings reveal that the species is now very common along the Levant coasts of Turkey. A specimen was recently captured in Izmir Bay (Aegean Sea), representing its north-westernmost occurrence in the Mediterranean. The species has a potential risk to humans, since it contains tetrodotoxin (TTX) that maybe a source for food poisoning.

Key words: *Lagocephalus sceleratus*, Tetraodontidae, invasive species, Turkey

The silverstripe blaasop, *Lagocephalus sceleratus* (Gmelin, 1789), is a recent Indo-Pacific originated fish, known by a few records in the Mediterranean Sea. It was first collected during February 2003 from Gökova Bay (southern Aegean Sea, Turkey) (Akyol et al. 2005), and on November 2004 from Jaffa along the Israeli coast (Golani and Levy 2005). We here report the first occurrence of *L. sceleratus* along the Levantine and northern Aegean coasts of Turkey.

On 18 September 2004, a single specimen (389 mm in total length and 349 mm in standard length) of silverstripe blaasop, *Lagocephalus sceleratus*, was captured from Kemer – Antalya coast (Antalya Bay, eastern Mediterranean Sea) by trammel-nets over a sandy bottom at a depth of 30 m. Another specimen (498 mm in total length and 477 mm in standard length) was speared from Hekim Island - Izmir Bay (Aegean Sea) on 21 April 2006, at a depth of 10-12 m (Figure 1).



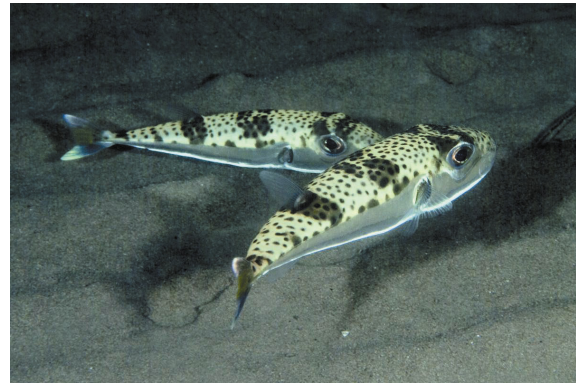
**Figure 1.** Capture locality of *Lagocephalus sceleratus* in the Aegean Sea (Hekim Adasi / Izmir Bay) (indicated by an asterisk)

**Description:** Body elongate, somewhat compressed laterally and inflatable. No scales on the body, except for small spinules on the belly and on the dorsal surface extending to origin of dorsal fin. Dorsal and anal fins located far posteriorly, containing no spiny rays. Dorsal

finrays 12, anal finrays 10 (Antalya spec.), 12 (Izmir spec.), pectoral finrays 18, caudal finrays 20. Head length 26.2% (Antalya spec.), 25.6% (Izmir spec.) of total length, predorsal length 57.6% , 58.8%, preanal length 57.7%, 58.8% of total length, in Antalya and Izmir specimens respectively. Eye diameter 22.5%, 22.2%, snout length 49.8%, 48.1%, postorbital length 27.4%, 26.9%, interorbital distance 41.2%, 40.8%, of head length, in Antalya and Izmir specimens respectively. Pelvic fins absent. Two quite distinct lateral lines; the upper forming an interconnecting pattern on sides of head and body. Top of pectoral fin base below lower margin of eye. A raised skinfold along lower side of caudal peduncle. Gill opening a single slit in front of pectoral fins. Pectorals with wide base and a round posterior edge. The body is dark brownish with regularly distributed black dots dorsally, and white ventrally. A distinct wide silver band on the lower part of the flanks and a silver blotch in front of eyes. Pectoral fin base is black. All counts and measurements agree with descriptions of Akyol et al. (2005).

The family Tetraodontidae contributed the highest number of alien fish in the Mediterranean Sea: *Lagocephalus spadiceus*, *L. suezensis*, *L. sceleratus*, *Sphoeroides pachygaster*, *Torquigener flavimaculosus* and *Tylerius spinosissimus* (Corsini et al. 2005, Golani et al. 2006). Only *S. pachygaster* is of tropical Atlantic origin, the rest have entered the Levantine basin via the Suez Canal. The rapid population increase of *L. sceleratus* along the Turkish coast and its spread into the Aegean, repeats a spread pattern previously observed for *L. suezensis* (Bilecenoglu et al. 2002).

*Lagocephalus sceleratus* is found in the Red Sea and the tropical Indian and Pacific Oceans. Following its first occurrence in the Mediterranean in February 2003 (Akyol et al. 2005), no any additional specimens were collected until the early autumn of 2004, despite extensive surveys off the Turkish Levant shores. By the first half of 2005, artisanal fishermen (especially of Gökova Bay) reported catching the species frequently with gill-nets. Similarly, off the Levantine coast several scuba divers observed the species in Antalya Bay (Figure 2). There were instances of fishermen attempting to market large *L. sceleratus* specimens (>30 cm total length) in regional fishing ports (L. Konuk, pers. comm.). Like other alien pufferfishes



**Figure 2.** Two *Lagocephalus sceleratus* (Gmelin, 1789) specimens observed on 14 May 2005 at the Adrasan coast (Antalya Bay) at a depth of 3 m. Specimens had total lengths of ca. 20 cm (Photograph courtesy by Alp Can)

inhabiting the Mediterranean, the silverstripe blaasop contains tetrodotoxin (TTX) that may cause food poisoning. Two cases of poisoning of persons who had consumed this fish were reported from Israel and Lebanon (Golani et al. 2006).

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Range expansion of *Lagocephalus sceleratus*

**Annex**

Records of *Lagocephalus sceleratus* in the eastern Mediterranean Sea in 2003-2006\*

| Location                      | Geographic coordinates |               | Record date | Number of specimens observed or obtained | Collector / Reference |
|-------------------------------|------------------------|---------------|-------------|--|-----------------------|
|                               | Latitude, °N           | Longitude, °E |             |  |                       |
| Akyaka (Gokova Bay), Turkey   | 37°09'                 | 28°16'        | 17.02.2003  | 1  | Akyol et al. 2005     |
| Kemer (Antalya Bay), Turkey   | 36°33'                 | 30°34'        | 18.09.2004  | 1  | L. Konuk              |
| Jaffa coast, Israel           | -                      | -             | 08.11.2004  | 1  | Golani and Levy 2005  |
| Jaffa coast, Israel           | -                      | -             | 24.02.2005  | 1  | Golani and Levy 2005  |
| Bodrum (Gokova Bay), Turkey   | -                      | -             | 10.03.2005  | 2  | M. Bilecenoglu        |
| Adrasan (Antalya Bay), Turkey | 36°18'                 | 30°28'        | 14.05.2005  | 2  | A. Can                |
| Kas (Antalya Bay), Turkey     | 36°12'                 | 29°37'        | 03.10.2005  | 1  | M. Bilecenoglu        |
| Izmir (Izmir Bay), Turkey     | 38°26'                 | 26°45'        | 21.04.2006  | 1  | S. Akalin             |

\* Full reference to the data: Bilecenoglu M, Kaya M and Akalin S (2006) Range expansion of silverstripe blaasop, *Lagocephalus sceleratus* (Gmelin, 1789), to the northern Aegean Sea. Aquatic Invasions 1(4): 289-291