

SPAWNING SEASON OF THE LIZARDFISH *SAURIDA UNDOSQUAMIS* (RICHARDSON, 1848) AND *SYNODUS SAURUS* (LINNAEUS, 1758) IN ANTALYA BAY ON THE EASTERN MEDITERRANEAN COAST OF TURKEY

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Abstract

Saurida undosquamis and *Synodus saurus* had ripe gonads all year round. The spawning season of *S. undosquamis* is from April to September. For *S. saurus*, the spawning season is from March to October.

Keywords : Demersal, Eastern Mediterranean, Fishes, Spawning.

The lizardfish, *Saurida undosquamis* (Richardson, 1848) has a wide Indo-Pacific distribution from Japan and the Philippines through the Indian Ocean to the Red Sea [1]. The first report in the Turkish Seas was by Kossing (1951) [2]. *Synodus saurus* (Linnaeus, 1758) occurs in Madeira, the Canaries, Cape Verde, the Mediterranean, and off the Moroccan coast. In the western Atlantic, it is known from Bermuda through the Bahamas and Lesser Antilles (the Leeward Islands) [3]. The objective of this research is to study the spawning season of these two species of lizardfish in Antalya Bay on the eastern Mediterranean coast of Turkey.

Fishes from the present study were randomly collected from the fish markets, bazaars and fishing port of Antalya on a monthly basis between April 2002 and August 2003, but some samples were obtained from the small fishing boats fishing by gillnets/longline due to the bottom trawl being forbidden in Antalya Bay from April to August. Length measurements were made by considering fork length (FL) and a 1 mm. sensitivity fish measuring ruler was used. Also scales with 0,1 g and 0,01 g. sensitiveness were used in measuring whole body weight (W) and the gonads. Sex was established by macroscopic examination of gonads. To determine the spawning season a gonadosomatic index (GSI=(gonad weight (GW)/ (the total fish weight (TW)-GW)*100) was calculated [3]. Temperatures of sea water values were obtained from the Republic of Turkey Ministry of Environment and Forestry and the Turkish State Meteorological Service. Of the total of 738 specimens of *S. undosquamis* that were dissected, 437 (59%) were females and 301 (41%) were males. In *S. saurus* 230 (42%) out of 546 sexed specimens were females and 316 (58%) were males. The spawning season of both species as indicated by the year-round GSI is long [Figure 1].

of *S. saurus* revealed that most of this species spawn between March and October. For *S. undosquamis*, the results of this study are similar to the results of many studies about the spawning season [1, 2, 4, 5, 6, 7]. Golani (1993) reported that the spawning season of *S. saurus* was from February to August on the Mediterranean coast of Israel. Sousa et al. (2003) found that the most intensive reproduction period of *S. saurus* was during Spring and Summer in the Azores, and this species had an asynchronous posture. The results of these studies are similar to the results of our study.

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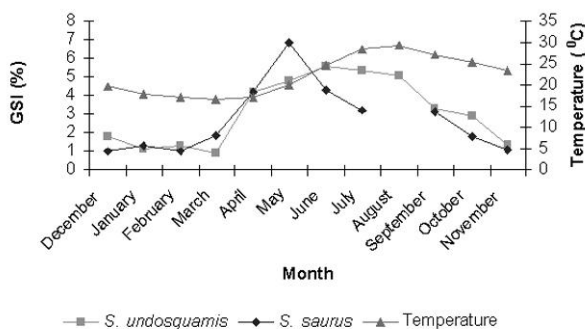


Fig. 1. Gonadosomatic index (GSI) variation of *S. undosquamis* and *S. saurus* during sampling period, with temperature of sea water

The lizardfish had ripe gonads during the sampling period. The maximum values of GSI of *S. undosquamis* were found between April and September. For *S. saurus*, the maximum values of GSI were determined between March and October. In the present study, the spawning of *S. undosquamis* and *S. saurus* was affected negatively during winter when the temperature decreased in the Mediterranean, although both species had ripe gonads throughout the year [see figure 1]. The intensity of spawning in each month during the sampling period showed that most *S. undosquamis* spawn between April and September. The monthly gonado somatic index