

# BLOTCHED PICAREL, *SPICARA MAENA* L. 1758, IN THE TRAMMEL AND GILL NET CATCHES IN THE AEGEAN SEA (TURKEY)

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## Abstract

In this study, the length frequency distribution, preliminary data of gill and trammel net selectivity and observed sex inversion ratios for blotched picarel in the Aegean Sea are presented. Males were significantly larger than females in mean TL ( $p < 0.05$ ). Sex reversal was mainly observed when the body length reached 16.0-17.0 cm. Females were observed up to a total length of 18.1 cm.

**Keywords:** *Fishes, Coastal Waters, Aegean Sea.*

## Introduction

The blotched picarel, *Spicara maena* L. 1758, is a common fish species in Turkish waters. It is caught with gill and trammel nets in the Turkish coastal fishery. Published data on the biology and net selectivity of this species are limited. There has been only one study concerning length-weight relationship for this species in Turkish waters [1]. The aim of this study is to give some new information on sex inversion length and preliminary data of trammel and gill net selectivity for the blotched picarel in Turkish waters.

## Materials and methods

Experimental trials were conducted in Gökceada Island (northern Aegean Sea, Turkey), at depths of less than 30 m from April 2004 to February 2005. Multifilament trammel and gill nets of four different mesh sizes (16, 18, 20 and 22 mm bar length) were used. All nets were the same in terms of length, hanging ratio, twine and colour. The constructed nets were also similar to those used by the local fishers. Fish samples obtained by the fishery trials were classified according to their species and the net they have been captured with. A total of 783 *Spicara maena* were analyzed. The student's *t*-test was used to test difference in mean size with sex.

## Results and discussion

Total length of the specimens ranged from 11.0 to 21.9 cm (mean  $14.8 \pm 1.9$  cm). The length of females (N=133) ranged from 11.5 to 18.1 cm TL (mean  $14.6 \pm 1.7$  cm) and that of males (N=142) from 13.5 to 21.9 cm TL ( $17.1 \pm 2.3$  cm) (Fig.1). Male picarel was significantly larger than female fish ( $p < 0.05$ ).

The blotched picarel is a protogynous hermaphrodite [2]. Dulčić et al.[3] report that in the Adriatic Sea the sex reversal of 56.1% of blotched picarel was observed at lengths between 17.5 and 18 cm; the minimum and maximum sex inversion lengths were 16.7 and 19.8 cm, respectively [3]. In this study, we observed the sex inversion (50% of blotched picarel population) at 16.0 and 17.0 cm TL; we also found that the minimum and maximum sex inversion lengths were 13.5 and 18.9 cm TL, respectively. (Fig.1).

Preliminary data of trammel and gill nets selectivity for blotched picarel are shown in Table 1. The number of captured blotched picarels using gill nets of mesh sizes 16 and 18 mm was more than those captured by other nets. As the mesh size increased, average total length and total weight increased as well.

Tab. 1. *Spicara maena*. Preliminary data of trammel and gill net selectivity.

Mesh size (mm)	N	TL (cm)		W (g)	
		Range	Mean±SD	Range	Mean±SD
16G	249	11.0–18.6	13.4±1.0	12.8–79.8	25.6±6.4
18G	219	12.7–18.9	14.7±0.9	21.0–77.7	34.2±9.3
20G	76	12.9–19.2	15.7±1.5	27.1–105.6	46.8±16.8
22G	34	13.0–20.3	17.7±1.6	31.0–124.4	76.6±24.1
16T	75	11.5–18.5	13.6±1.5	14.5–79.4	27.3±10.8
18T	73	12.0–20.3	14.6±1.6	18.8–110.2	36.0±16.5
20T	47	12.8–21.9	15.3±2.0	22.4–135.3	42.4±23.1
22T	10	16.8–19.0	18.2±0.6	49.5–85.5	72.9±12.2

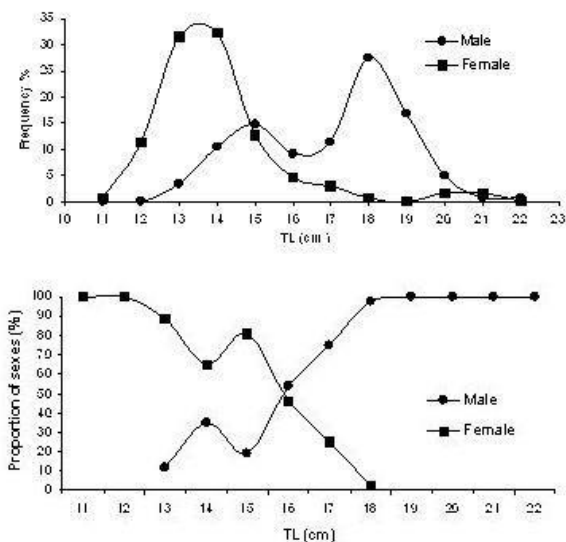


Fig. 1. Length frequency distribution for blotched picarel in the Aegean Sea (top) and sex of blotched picarel by length and percentage of females and males in the population (bottom)

Acknowledgments: This study was supported by the Research Fund of the University of Istanbul, project number 48/23012003.

## References

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