

About the New Record of Striped Seabream, *Lithognathus mormyrus* (Linnaeus, 1758) (Pisces: Teleostei: Sparidae) from the Coastal Waters of the Southern Black Sea, Turkey

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Abstract: One specimen of *Lithognathus mormyrus* (SL: 203 mm, FL: 223 mm, TL: 254 mm, 196.01 g BW) was captured by using a trammel net at a depth 5 m, on 20 December 2013 from Sinop peninsula (Turkey).

Key words: Stripped seabream, *Lithognathus mormyrus*, new record, Sinop, Black Sea

INTRODUCTION

The marine fish fauna is mainly of Eastern Atlantic Ocean-Mediterranean Sea origin with some additional Black Sea endemics (Fricke *et al.*, 2007). The striped seabream, *Lithognathus mormyrus* inhabiting littoral waters on sandy or sandy-muddy bottoms down between 10 and 30 m depth, maximum of 50 m (Smith *et al.*, 1990). Fricke *et al.* (2007) reported distribution of this species for Turkish sea except from Black Sea. Distribution of outside the area, Mediterranean Sea and Eastern Atlantic from Bay of Biscay South to South Africa; Indian ocean from Southern Mozambique to South Africa; Red sea. The striped seabream was also recorded from Koycegiz Lagoon river system by Akin *et al.* (2005).

The objective of this study is to further document of *L. mormyrus* for the Black Sea and Turkish marine ichthyofauna and to provide some morphometric and meristic data on this species to the Black Sea fauna. Moreover, distribution and occurrences of the specimen in the Black Sea region was discussed.

MATERIALS AND METHODS

One specimen of *L. mormyrus* was caught by a trammel net in Turkish water of Black Sea of inner harbor of Sinop on 20 December 2013 (lat: 41°58'36"N; log: 35°06'26"E) in rocky and muddy bottoms down, at a depth of <5 m (Fig. 1).

Morphometric and meristic characteristics of the specimen were measured according to Hureau (1986) as follows: total length, fork length, standard length, body wet weight, body depth, head length, snout length, eye diameter, dorsal fin ray numbers, pectoral fin ray numbers, pelvic fin ray numbers, anal fin ray number,

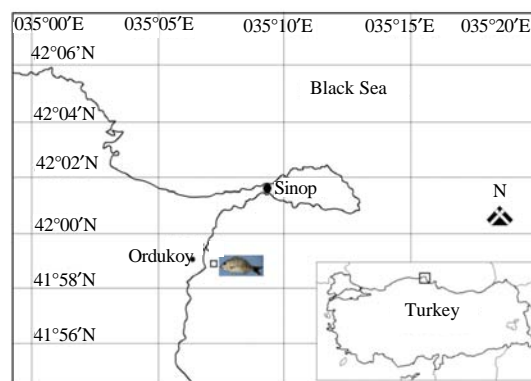


Fig. 1: Study area

caudal fin ray numbers, pre-anal length, pre-dorsal length, pre-pelvic length, pre-pectoral length, pre-orbital length, caudal height and lateral line scale numbers.

RESULTS

One specimen of *Lithognathus mormyrus* (standard length: 203 mm, fork length: 223 mm, Total length: 254 mm, body wet weight: 196.01 g; Fig. 2) was obtained during the trammel net fishing operations. Specimen was deposited at systematic laboratory, Faculty of Fisheries, Sinop University, Sinop, Turkey. Fixed in 10% formalin and preserved in 70% alcohol. Taxonomic account of specimen as follows: *Lithognathus mormyrus* (Lin. 1758), Synonyms: *Sparus mormyrus* (Linnaeus, 1758), *Pagellus mormyrus* (Linnaeus, 1758) and *Pagellus goreensis* (Valenciennes, 1830).

Morphometric and meristic characters such as total length, fork length, standard length, body wet weight, body depth, head length, snout length, eye diameter,



Fig. 2: Illustration of *Lithognathus mormyrus* (Satlnis, 2014)

Table 1: Morphometric and meristic characters of *Lithognathus mormyrus* from Sinop peninsula

Features	Values
Total length (mm)	254
Fork length (mm)	223
Standard length (mm)	203
Body wet weight (g)	196.01
Body depth (mm)	64.24
Head length (mm)	66.37
Snout length (mm)	28.49
Eye diameter (mm)	11.66
Dorsal fin number	XI + 13
Pectoral fin number	14
Pelvic fin number	III+3
Anal fin number	III+11
Caudal fin number	23
Pre-anal length (mm)	129.44
Pre-dorsal length (mm)	76.1
Pre-pelvic length (mm)	69.42
Pre-pectoral length (mm)	63.55
Pre-orbital length (mm)	28.34
Caudal height (mm)	65.97
Lateral line scale number	62

dorsal fin, pectoral fin, pelvic fin, anal fin, caudal fin, pre-anal length, pre-dorsal length, pre-pelvic length, pre-pectoral length, pre-orbital length, caudal height and lateral line scale was given in Table 1. Body depth about equal to head length, 3.8 times in standard length; eye diameter less than snout length; dorsal profile of snout convex; dorsal fin 11 spines, 13 rays; anal fin 3 spines, 11 rays; pelvic fin 3 spines, 3 rays; caudal fin 23 rays; pectoral fin rays 14, fins shorter than head; mouth protrusile, teeth feeble, outer series of conical teeth and 2 or more inner series of small molars; inter-orbital area and soft dorsal and anal fins naked. Head and body mostly silver with 13 narrow dark bars.

DISCUSSION

Torcu-Koc reported dorsal fins XI+11, anal fin III+10, lateral line 62, total length/body depth 4.0, total length/head length 0.93, head length/eye diameter 7.01, about Smith and Smith (1986) dorsal fin spines XI, dorsal fin soft rays 12-13, anal fin spine III, anal fin soft

rays 10-11 was similar of the studies results (dorsal fin 3 spines, dorsal fin 13 soft rays, anal fin 3 spines, anal fin 11 soft rays, pectoral fin 14 rays, pelvic fin 3 spines, pelvic fin 3 soft rays, lateral line 62, total length/body depth 3.95, total length/head length 3.83, head length/eye diameter 5.69). Most of the morphological characters of the specimen of *Lithognathus mormyrus* agree with previous descriptions of various material collected in the other seas (Smith and Smith, 1986).

Environmental salinity is one of the most important factors in fish physiology (Morgan and Iwama, 1991; Boeuf and Payan, 2001). Some fish species such as *Sphyrna pinguis* and *Hemiochus acuminatus* which are ecologically tolerant to temperature and salinity have recently settled in the Black Sea (Boltachev, 2009). These fishes migrated from the Mediterranean sea and are extending their Northern distribution up to the crimian peninsula (Ozturk, 2010). Blunt barracuda *Sphyrna pinguis* and a coral-dwelling fish, *Hemiochus acuminatus* have recently extended their distribution ranges to the Black Sea (Boltachev, 2009; Ozturk, 2010). These fish species are lessepsian migrants and after the Aegean sea, ultimately reached to the Black Sea. Even though temperature is a primary factor for the dispersion of lessepsian fish and lower temperature is an impeding factor for tropical fish, these fishes actually penetrated to the Black Sea (Ozturk, 2010). Conversely, a new record from Black Sea, *L. mormyrus* mainly of Eastern Atlantic Ocean-Mediterranean Sea origin is also frequently encountered in lagoons and along the Mediterranean coast (Matic-Skoko *et al.*, 2007; Monteiro *et al.*, 2010; Sumer *et al.*, 2014) was distribute and occurred in this study off Sinop peninsula in the Black Sea. Sumer *et al.* (2014) was also informed that aspects of the life history and biology of *L. mormyrus* in the Beymelek lagoon including age, growth and spawning season, the beymelek lagoon has 15-24 practical salinity units. Black Sea salinity (about 18%) was also between tolerance levels for *L. mormyrus*.

CONCLUSION

This record is one of the first of the species in the Black Sea coast of Turkish. A short description of morphometric and meristic features of the specimen are given in the study.

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