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SHORT COMMUNICATION

First occurrence of *Serranus hepatus* in the Bulgarian Black Sea coast

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Abstract

The brown comber (*Serranus hepatus*) is a common representative of the Mediterranean fish fauna. Recently it had been reported for the first time in the Black Sea, near the Istanbul Strait (Bosphorus). Two additional specimens were registered in the southern Bulgarian Black Sea sector; one of them was measured and reported here, in order to establish some basic morphometric traits.

Keywords: *Serranus hepatus*, brown comber, Black Sea fauna

Introduction

The brown comber (*Serranus hepatus* Linnaeus 1758) is a common inhabitant of the Mediterranean Sea. It also occurs in the eastern Atlantic from Portugal to the Canary Islands and along the African coasts southward to Senegal (Tortonese 1986; Bilecenoglu *et al*. 2002). It is a well-known species in the Aegean Sea (Bilecenoglu 2009) but not in the Black Sea (Svetovidov 1964; Vasil'eva 2007; Fricke *et al*. 2007; Yankova *et al*. 2003). Only recently a single specimen was discovered in the Black Sea near the Istanbul Strait (Bosphorus) (Dalgiç *et al*. 2013).

S. hepatus was for the first time registered in the Bulgarian Black Sea coast in 2009. A fish was captured by Mr. Adrian Stojanov in Kiten town port on 23 September 2009, at about 18:00pm (Figures1 and 2). It was caught at the depth of about 3.5 m, in a bottom line targeting gobies, baited with common earthworms. Its dimensions were 9 cm in total length, 26 g in weight. Species identification was accomplished according to Fischer *et al*. (1987). The water temperature was about 21^{o} C according to the Record for the Black Sea Water Temperature (http://www.stringmeteo.com/synop/sea_water.php?year=2009).

The distinguishing characteristics of the fish were: presence of a black spot on the beginning of the second dorsal fin, darker anal and ventral than pectoral and dorsal fins, four thick dark vertical bands on body - the last two conjugated ventrally. The scales on the lateral line counted 57. Some basic meristic measurements of the specimen are given in Table 1. After documentation, the fish was immediately released free, and again photographed when escaping alongside the harbor's dike.

Figure 1. *Serranus hepatus*, a single specimen caught near Kiten town on the Bulgarian Black Sea coast

Figure 2. The black spot at the beginning of the second dorsal fin of *Serranus hepatus*, caught near Kiten town on the Bulgarian Black Sea coast

Table 1. Basic morphological measurements of a *Serranus hepatus* specimen from Kiten town harbor

Trait	Head Length	Maximal body depth	Minimal body depth	Antedorsal distance	Anteventral distance	Anteanal distance	Dorsal fin length
% of Sl	32.76	35.12	11.41	37.49	39.00	65.69	50.59
Trait	**Anal fin length**	**Ventral fin length**	**Pectoral fin length**	**Praeorbital length**	**Eye diameter**	**Postorbital length**	**Head depth**
% of Sl	25.07	21.48	22.10	8.48	8.70	16.35	26.27

A second specimen was found by the author on 23 July 2009 in Myrios Bay near Maslen Nos Cape (Figure 3) during an underwater transect survey, but it was not documented either by capture or by photo. The depth was about 6.5m, the substrate constituted by rocks and sandy corridors between them, with water temperature 21° C.

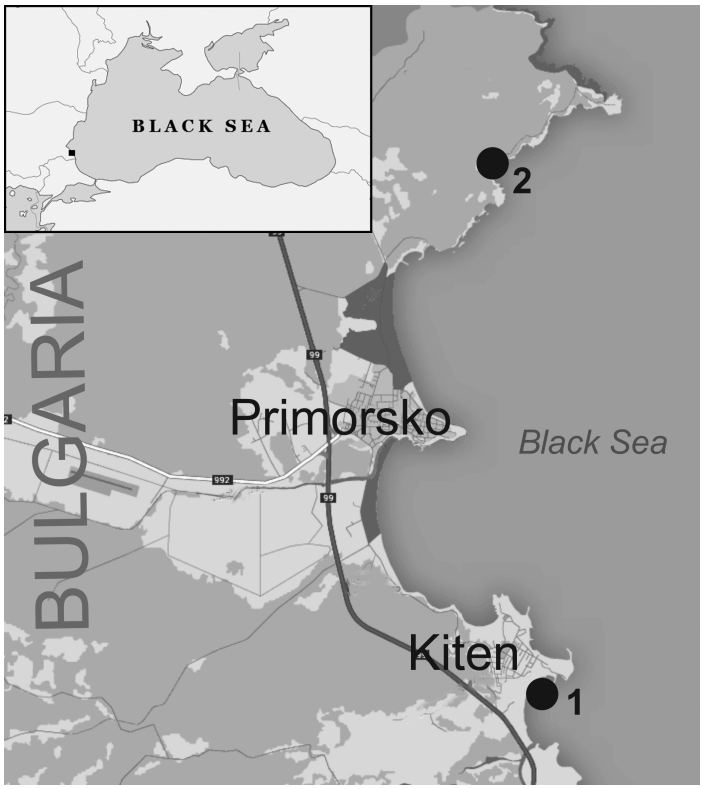

Figure 3. Sites along the Bulgarian Black Sea coast, where *Serranus hepatus* was registered: 1 – Harbor of Kiten town (N 42° 14'03'', E 27° 46'54''), 2 – Myrios Bay, Maslen Nos Cape (N 42 ° 18'00'', E 27 °46'12'')

Since they were discovered in the Bulgarian Black Sea waters for the first time, the Bulgarian name ***кафяв ханос*** (kafiav hanos=brown comber) is proposed for this species. These three registered specimens in the Black Sea could be evidence, that *Serranus hepatus* is a native inhabitant for the basin.

An identification key for Family Serranidae in the Black Sea is proposed as follows:

1a. Less than 60 scales in the lateral line. Presence of a black spot at the beginning of the second dorsal fin……..……....*Serranus hepatus*
1b. More than 60 scales on the lateral line. Absence of a black spot at the beginning of the second dorsal fin……...…….……..…….2
2a. Caudal fin shape rounded……..…...…….*Serranus scriba*
2b. Caudal fin shape concave or forked…….……..…...……*Serranus cabrilla*

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References

Bilecenoglu M. (2009) Growth and feeding habits of the brown comber, *Serranus hepatus* (Linnaeus, 1758) in Izmir Bay, Aegean Sea. *Acta Adriatica* 50(1): 105 – 110.

Bilecenoglu, M., Taskavak, E., Mater, S., Kaya, M. (2002) Checklist of marine fishes of Turkey. *Zootaxa* 113: 1–194.

Dalgiç, G., Gümüş, A., Zengin, M. (2013) First record of brown comber *Serranus hepatus* (Linnaeus, 1758) for the Black Sea. *Turkish Journal of Zoology* 37: 523-524.

Fischer, W., Bauchot, M.-L., Schneider, M. (1987) (rédacteurs). Fiches FAO d'identification des espèces pour les besoins de la peche (Rèvision 1). Méditerranée et mer Noire. Zone de péche 37. Volume II. Vertébrés. Rome, FAO, Vol 2: 761-1530.

Fricke, R., Bilecenoglu, M., Sarı, H.M. (2007). Annotated checklist of fish and lamprey species (Gnathostomata and Petromyzontomorphi) of Turkey, including a Red List of threatened and declining species. Stuttgarter Beitr. Naturk. Ser. A, Nr. 706, 169 pp.

Svetovidov, A.N. (1964) Fishes of the Black Sea. Nauka Publ. Moscow-Leningrad, 550 pp. (In Russian).

Tortonese, E. (1986) Serranidae. In: Fishes of The North-Eastern Atlantic and the Mediterranean, Vol.II (Eds., P.J.P. Whitehead, M.-L. Bauchot, J.C. Hureau, J. Nielsen, E. Tortonese) Unesco, Paris, pp.780–792.

Vasil'eva, E. D. (2007) Fishes of the Black Sea. Key to Marine, Brakish-Water, Eurihaline and anadromous species with color Illustrations collected by S.V. Bogorodsky. VNIRO Publishing, Moskow, 237 pp. (in Russian).

Yankova, M., Pavlov, D., Ivanova, P., Karpova, E., Boltachev, A., Bat, L., Oral, M., Mgeladze, M. (2013) Annotated check list of the non-native fish species (Pisces) of the Black Sea. *J. Black Sea/Mediterranean Environment* 19(2): 247-255.

Record for the Black Sea Water Temperature http://www.stringmeteo.com/synop/sea_water.php?year=2009 (Accessed on 19.02.2014)

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