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A First Record for the Bighead Goby (*Neogobius kessleri* Günther, 1861) along the Turkish Eastern Black Sea Coast

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Abstract: The, bighead goby is reported for the first time from the Turkish Eastern Black Sea coast in Kale (Taşlı) Stream (Rize), Erenler Stream (Çayeli-Rize), Kantarlı Stream (Pazar-Rize), Fırtına Stream (Ardeşen-Rize), Işıklı Stream (Ardeşen-Rize), Çağlayan Stream (Fındıklı-Rize) and Yeşil Stream (Fındıklı-Rize). A total of 70 individuals from different sampling stations were caught by an electro-shocker. Systematic characteristics of this species were examined and then compared with those reported in previous studies.

Key Words: Gobiidae, Bighead goby, Eastern Black Sea streams (Rize), Turkey.

Türkiye'nin Doğu Karadeniz Kıyıları için Yeni Bir Kayıt; Büyükbaş Kayabalığı (*Neogobius kessleri* Günther,1861)

Özet: Bu çalışmada, *Neogobius kessleri* Günther, 1861 türü Türkiye'nin Doğu Karadeniz kıyılarında ilk defa tespit edilmiştir. Toplam 70 birey Kale (Taşlı) Deresi (Rize), Erenler Deresi (Çayeli-Rize), Kantarlı Deresi (Pazar-Rize), Fırtına Deresi (Ardeşen-Rize), Işıklı Dere (Ardeşen-Rize), Cağlayan Dere (Fındıklı-Rize) ve Yeşil Dere (Fındıklı-Rize)'den toplanmıştır. Farklı istasyonlardan toplam 70 birey Elekro-şoker kullanarak toplanmıştır. Bu türün sistematik karakterleri daha önce yapılan çalışmalarla karşılaştırarak test edilmiştir.

Anahtar Sözcükler: Gobiidae, Büyükbaş kayabalığı, Doğu Karadeniz Dereleri (Rize), Türkiye.

Introduction

Studies concerning the freshwater fish fauna of Turkey began in the middle of the 19th century and have continued up to the present. Both Turkish and foreign researchers have carried out many studies on this subject. Among these, Sözer (1941) and Erazi (1942) were pioneers in documenting the distribution of the gobiids in the waters (both inland and seas) of Turkey. The spatial distribution of some gobiids in Turkey was also given by Kosswig and Battalgil (1943), Berg (1949), Slastenenko (1955-56), Geldiay (1969), Geldiay and Balık (1996), Kuru (1975, 1980), Balık (1979, 1985), Erk'akan (1983), Meriç (1986), Akşiray (1987), Kutrup (1994), Eryılmaz (2002) and Bilecenoğlu et al. (2002). Until now, the only known *Neogobius* members in the fish fauna of the Turkish Black Sea coast were *Neogobis fluviatilis* Pallas 1811, *Neogobius platyrostris* Pallas 1811, *Neogobius eurycephalus* Pallas 1811, *Neogobius melanostomus* Pallas 1811 and *Neogobius ratan* Nordmann 1840. Therefore, the objective of this study is to report *N. kessleri* on the Turkish Eastern Black Sea coast and to give some systematic characteristics of the species.

Materials and Methods

The bighead gobies were caught by electro-fishing (220 VAC transformed to 220 VDC, 2.1 KW) at various sites of the streams (Kale Stream, Erenler Stream, Kantarlı Stream, Işıklı Stream, Fırtına Stream, Çağlayan Stream and Yeşil Stream) during 2000 and 2002 (Figure 1). Fish samples were fixed in 4% formalin and transferred to the laboratory for processing. The taxonomic key given by Whitehead et al. (1984) was used to identify the species.

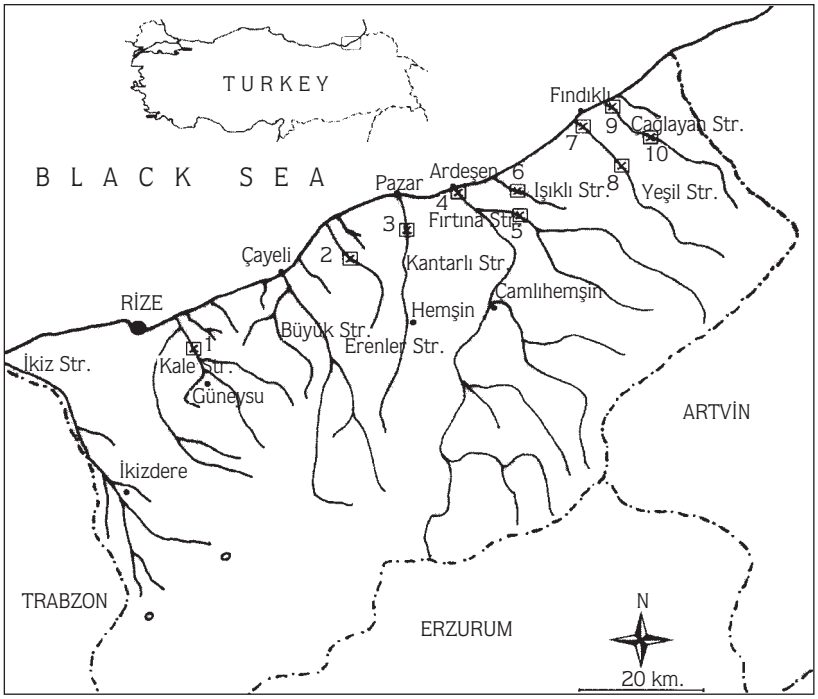

Figure 1. Sampling stations.

Meristic features of the bighead goby specimens were determined by using a loop and a stereo binocular microscope with x4 magnification. Metric features of the gobiid specimens were measured by using a millimetric fish ruler and digital compasses. Colour patterns of the specimens were also determined when they were alive.

Results

Taxonomic section

Classis: Teleostei

Ordo: Perciformes

Familia: Gobiidae

Neogobius kessleri Günther, 1861

D_1: VI (VII), D_2: I 16-18, P: 18-21, A: I 12-15, Sq: 63-75, V: 32-35.

Description

General body shape of the bighead goby is shown in Figure 2.

The body is elongate, anteriorly cylindrical, laterally compressed in posterior section. Genipors are vertical and in 6 rows. Nape scaled completely, scales ctenoid. Width of upper lip almost uniform, not exceeding two-thirds of the lateral preorbital area. Head length is 0.25 to 0.33 of standard length. Head width is 1.55 to 1.08 of own depth. Interorbital distance is 0.85 to slightly less than eye diameter. Snout is 0.26 to 0.32 of head length. Pelvic disc with angular lateral lobes, about 0.18-0.27 width of rear edge. Caudal peduncle depth is about 0.66 of own length. The colour is reddish-yellow to dark grey with dark brown to black spots.

Discussion

The bighead goby inhabits fresh and brackish waters and prefers rocky places and is widely distributed on the coast of the NW Black Sea, Caspian Sea, Ukraine, the River Dniepr, the River Dniestr, the River Don and the River Moscom (Slastenenko, 1955-56; Smirnow, 1986; Sokolov et al., 1989). Meristic features of specimens distributed along the NW Black Sea coast were given as D_1. VI, D_2. I (15) 16-18 (19), A. I 11-15 (16), Sq. (59) 64-79 by Berg (1949) and as D_1. V-IV, D_2. I 16-18, A. I 11-15, Sq. 64-79 by Slastenenko (1955-56). Meristic features of the specimens collected in present study were D_1. VI (VII), D_2. I 16-18, A. I 12-15, Sq. 63-75. The number of the first dorsal rays was reported as VI by Berg (1949) and V-VI by Slastenenko (1955-56),

Figure 2. General body shape of bighead goby.

whereas this meristic character was VI-VII in the present study.

Depth of the caudal peduncle of the samples was reported to be twice the length of the caudal peduncle by Berg (1949) and more than 1.5 times by Slastenenko (1955-56). This ratio ranged from 1.40 to 1.82 (mean 1.56) in the present study.

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