Turkish Journal of Agriculture - Food Science and Technology, 7(5): 799-801, 2019
DOI: https://doi.org/10.24925/turjaf.v7i5.799-801.2448

Turkish Journal of Agriculture - Food Science and Technology

Available online, ISSN: 2148-127X | www.agrifoodscience.com | Turkish Science and Technology

Occurrence of Rudderfish (*Centrolophus niger* Gmelin, 1789) in Saroz Bay (Northern Aegean Sea, Turkey)

Özgür Cengiz[1,a,*], Şükrü Şenol Paruğ[2,b], Bayram Kızılkaya[3,c]

[1]*Fisheries Faculty, Van Yüzüncü Yıl Üniversitesi, 65080 Van, Turkey*
[2]*Fisheries Faculty, Kastamonu University, 37200 Kastamonu, Turkey*
[3]*Faculty of Marine Science and Technology, Çanakkale Onsekiz Mart University, 17100 Çanakkale, Turkey*
[*]*Corresponding author*

ARTICLE INFO

Research Article

Received : 28/01/2019
Accepted : 12/03/2019

Keywords:
Centrolophus niger
Rudderfish
Saroz Bay
Northern Aegean Sea
Turkey

ABSTRACT

A single specimen of the rudderfish (*Centrolophus niger* Gmelin, 1789) was caught using the handline by fishermen on 14 April 2016 in İbrice Bight (Saroz Bay). This paper represents the first record of *C. niger* for Saroz Bay.

Türk Tarım – Gıda Bilim ve Teknoloji Dergisi 7(5): 799-801, 2019

Karabalığın (*Centrolophus niger* Gmelin, 1789) Saroz Körfezi'nde (Kuzey Ege Denizi, Türkiye) Bulunuşu

MAKALE BİLGİSİ

Araştırma Makalesi

Geliş : 28/01/2019
Kabul : 12/03/2019

Anahtar Kelimeler:
Centrolophus niger
Karabalık
Saroz Körfezi
Kuzey Ege Denizi
Türkiye

ÖZ

Bir adet karabalık (*Centrolophus niger* Gmelin, 1789) 14 Nisan 2016 tarihinde İbrice Limanı (Saroz Körfezi) açıklarında balıkçılar tarafından olta ile yakalanmıştır. Bu çalışma Saroz Körfezi için *C. niger*'in ilk kaydını sunmaktadır.

[a] *ozgurcengiz17@gmail.com* *https://orcid.org/0000-0003-1863-3482*
[b] *senolparug@kastamonu.edu.tr* *https://orcid.org/0000-0002-7991-4651*
[c] *bayram342001@yahoo.com* *https://orcid.org/0000-0002-3916-3734*

Introduction

The rudderfish (*Centrolophus niger* Gmelin, 1789) belonging to Centrolophidae family is a pelagic, mesopelagic and epibenthic deep-water fish that inhabits temperate seas and has a wide range in the Atlantic, Indian and Pacific Oceans. This species is generally found over the continental shelf at depths of 40-1050 m. They feed predominately on large pelagic crustaceans' small fishes, squid and plankton (Frose and Pauly, 2018). This paper represents the first record of *C. niger* for Saroz Bay.

Material and Methods

Saroz Bay, which is situated in the Northeastern Aegean Sea, is connected to the North Aegean with a depth of approximately 600 m to the west. The shelf extends at a water depth of 90–120 m. The length of the bay is about 61 km and the width at the opening to the Aegean Sea is about 36 km (Eronat and Sayın, 2014). As Saroz Bay had been closed to bottom trawl fishing since 2000 (Cengiz et al., 2011) and no industrial activity was prevalent in the area (Sarı and Çağatay, 2001), the bay can be considered as a pristine environment (Cengiz et al., 2013).

A single specimen of *Centrolophus niger* (Figure 1) was caught using the handline by fishermen on 14 April 2016 in İbrice Bight (Saroz Bay) (Figure 2) at a depth of about 15 m. The specimen was identified based on Mater et al. (2009), photographed and some meristic characters were measured. And then, it was fixed and preserved in 6% formalin solution.

Figure 1 *Centrolophus niger* captured in İbrice Bight, Saroz Bay

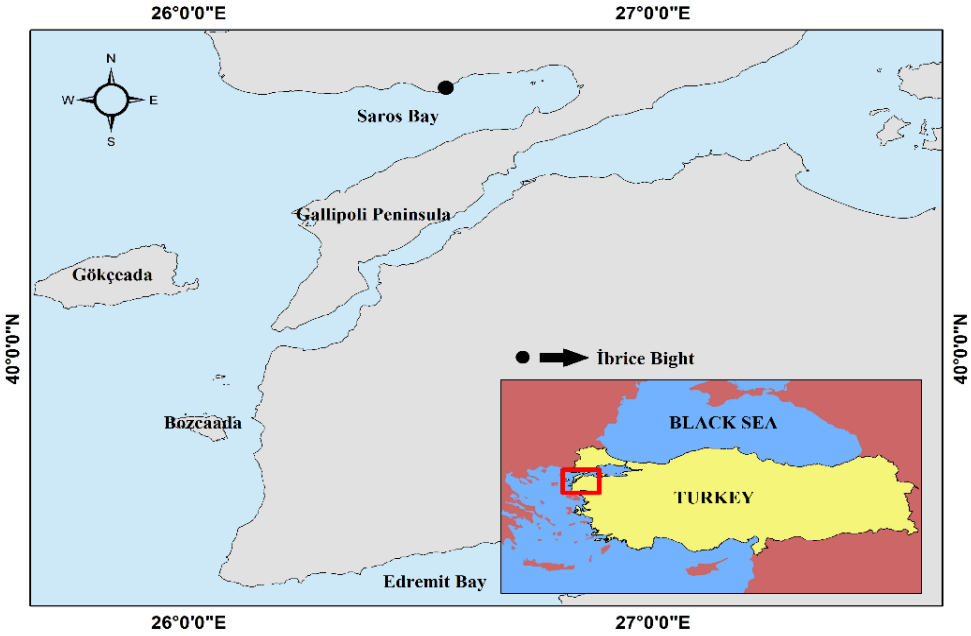

Figure 2 İbrice Bight where *Centrolophus niger* was captured (indicated by a full dot)

Results and Discussion

A single specimen of *Centrolophus niger* with 22.5 cm in total length was caught using the handline by fishermen 14 April 2016 in İbrice Bight (Saroz Bay). Diagnostic characters were: dorsal fin rays IV+33, anal fin rays III+21, pectoral fin rays 21, pelvic fin rays 6. Body elongate, color bluish/purplish, pectoral and pelvic fins darker than body color. Large mouth with no teeth on the palate, snout longer than eye diameter. All these characters closely correspond to those listed by Muus and Nielsen (1999), Ceyhan and Akyol (2011) and Ayas et al. (2018).

As to Turkish waters, the rudderfish has been reported by Akyol (2008) and Ceyhan and Akyol (2011) in İzmir Bay (Central Aegean Sea), by Ergüden et al. (2012) in İskenderun Bay (Northeastern Mediterranean), by Ayas et al. (2018) in Mersin Bay (Northeastern Mediterranean). Although several studies on fish communities have been done in the Saroz Bay (Koç et al., 2004; Altuğ et al., 2011; Cengiz et al., 2011; Keskin et al., 2011a; 2011b), *C. niger* has never been caught or mentioned for this area. In addition, local fishermen had never caught the rudderfish or shown the knowledge of this species. But, in the table that Çoker and Akyol (2018) submitted on the fish diversity of Saroz Bay, although they has shown the existence of species as if it existed in the Saroz Bay, the involved species has been reported by Gönülal (2017) in Gökçeada Island, an area which is completely independent of the Saroz Bay. In this connection, the faunal changes observed are related to climate change and water warming (Dulčić et al., 1999; Dulčić and Grbec, 2000). However, the climate change controls the rate of change in the geographical distribution of marine species or populations in the sea (Papaconstantinou, 2014) and these changes may affect the status of the Turkish marine fauna and give rise to rare occurrences in Northern Aegean Sea (Cengiz, 2014; Cengiz and Tunçer, 2015).

Conclusion

Although the presence of this species does not clearly indicate that there is an established population, these findings together with previous information (Gönülal, 2017) suggest that the species, even if rarely, inhabited in the northern Aegean coasts, its spread into the area is not a single event and could re-occur in different sections of the northern Aegean in the coming period. At this juncture, this occurrence may be the base for future monitoring of possible spreading of the species.

Acknowledgement

The authors would like to thank the fisherman Engin TUNÇ and Semih KALE for their supports.

References

Akyol O. 2008. New record of the juvenile blackfish, *Centrolophus niger* (Centrolophidae), from the Aegean Sea (Izmir Bay, Turkey). Cybium, 32: 91-92.

Altuğ G, Aktan Y, Oral M, Topaloğlu B, Dede A, Keskin Ç, İşinibilir M, Çardak M, Çiftçi PS. 2011. Biodiversity of the northern Aegean Sea and southern part of the Sea of Marmara, Turkey. Marine Biodiversity Records, 4: 1-17.

Ayas D, Ergüden D, Çiftçi N, Bakan M. 2018. The new locality record of *Centrolophus niger* (Gmelin, 1789) from Büyükeceli Coast (North-Eastern Mediterranean Sea). Çanakkale Onsekiz Mart University Journal of Marine Sciences and Fisheries, 1: 48-52.

Cengiz Ö, İşmen A, Özekinci U, Öztekin A. 2011. Saroz Körfezi (Kuzey Ege Denizi) balık faunası üzerine bir araştırma. Afyon Kocatepe Üniversitesi Fen Bilimleri Dergisi, 11: 31-37.

Cengiz Ö, Özekinci U, İşmen A, Öztekin A. 2013. Age and growth of the four-spotted megrim (*Lepidorhombus boscii* Risso, 1810) from Saros Bay (Northern Aegean Sea, Turkey). Mediterranean Marine Science, 14(1): 36-44.

Cengiz Ö. 2014. On occurrence of flying gurnard (*Dactylopterus volitans* Linnaeus, 1758) in the Gallipoli Peninsula (Northern Aegean Sea, Turkey). Turkish Journal of Agricultural and Natural Sciences, Special Issue 1: 1340-1342.

Cengiz Ö, Tunçer S. 2015. Second record of Atlantic lizardfish, *Synodus saurus* (Linnaeus, 1758), from the Northern Aegean Coast of Turkey. Acta Zoologica Bulgarica, 67: 447-450.

Ceyhan T, Akyol O. 2010. Occurrence of the blackfish, *Centrolophus niger* (Gmelin 1789) (Osteichthyes: Centrolophidae), in Izmir Bay, Aegean Sea. Journal Applied Ichthyology, 27: 139-140.

Çoker T, Akyol O. 2018. An evaluation on the fish diversity of Saroz Bay and Gökçeada Island (Northern Aegean Sea). Turkish Journal of Maritime and Marine Sciences, 4: 81-92.

Dulčić J, Grbec B, Lipej L. 1999. Information on the Adriatic ichthyofauna - effect of water warming? Acta Adriatica, 40: 33-43.

Dulčić J, Grbec B. 2000. Climate change and Adriatic ichthyofauna. Fisheries Oceanography, 9: 187-191.

Erguden D, Yaglioglu D, Gurlek M, Turan C. 2012. An occurrence of the blackfish, *Centrolophus niger* (Gmelin, 1789) in Iskenderun Bay, (north-eastern Mediterranean, Turkey). Journal of the Black Sea / Mediterranean Environment, 18: 97-101.

Eronat C, Sayın E. 2014. Temporal evolution of the water characteristics in the bays along the eastern coast of the Aegean Sea: Saros, İzmir, and Gökova bays. Turkish Journal of Earth Sciences, 23: 53-66.

Froese R, Pauly D. (Editors) 2018. Fishbase. World Wide Web electronic publication. www.fishbase.org, version (06/2018).

Gönülal O. 2017. Length-weight relationships of 16 fish species from deep water of Northern Aegean Sea (500-900 m). Turkish Journal of Fisheries and Aquatic Sciences, 17: 995-1002.

Keskin C, Turan C, Ergüden D. 2011a. Distribution of the demersal fishes on the continental shelves of the Levantine and North Aegean Seas (Eastern Mediterranean). Turkish Journal of Fisheries and Aquatic Sciences, 11: 413-423.

Keskin C, Ordines F, Guijarro B, Massuti E. 2011b. Comparison of fish assemblages between the Sea of Marmara and the Aegean Sea (north-eastern Mediterranean). Journal of the Marine Biological Association of the United Kingdom, 91: 1307-1318.

Koç HT, Aka Z, Cakır DT. 2004. An investigation on fishes of Saros Bay (Northern Aegean Sea). Journal of the Institute of Science and Technology of Balıkesir University, 6: 4-12.

Mater S, Kaya M, Bilecenoğlu M. 2009. Marine Fishes of Turkey (4th press), Ege University Fisheries Faculty Publishings, No. 68, İzmir. (In Turkish).

Muus BJ, Nielsen JG. 1999. Sea fish. Scandinavian Fishing Year Book, Hedehusene, Denmark. 340 p.

Papaconstantinou C. 2014. Fauna Graeciae. An updated checklist of the fishes in the Hellenic Seas. Monographs on Marine Sciences, 7, Athens 2014, HCMR, 340 pp.

Sarı E, Çağatay MN. 2001. Distributions of heavy metals in the surface of the Gulf of Saros, NE Aegean Sea. Environment International, 26: 169-173.