



Occurrence of the Scalloped Ribbonfish *Zu cristatus* (Lampridiformes) in the Gulf of Antalya, Türkiye

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Abstract

The commercial trawler named “İdris Reis” caught a fish species that they had never seen or known before while catching shrimp in deep waters at the 36°25'04" N 30°37'17" E coordinates Gulf of Antalya on 04.04.2022. The species of fish caught was identified as *Zu cristatus* (Bonelli, 1819). With this study, one more species was added to the Gulf of Antalya fish fauna.

Keywords:

Gulf of Antalya, scalloped ribbonfish, Zu cristatus

Article history:

Received 23 February 2023, Accepted 05 June 2023, Available online 07 August 2023

Introduction

The scalloped ribbonfish *Zu cristatus* (Bonelli, 1820) is a cosmopolitan mesobathypelagic species that occurs in tropical to temperate waters of the Atlantic and Indo-Pacific. *Z. cristatus* is a member of the Trachipteridae family which has 2 genera and 10 species, It has been reported that this fish inhabit waters at depth between 0-800 m (Quigley & Henderson 2014), the head swims up and its diet consists of small fishes and squids (Whitehead et al., 1984).

The majority of studies are based on records from the regions where the species is caught. For this reason, there is no detailed information about the biology of the fish. Studies on the biology of fish generally consist of studies on egg, larvae and fry. It has been reported that 16 individuals, mostly young juveniles, were caught between 1846 and 1973 in the Adriatic Sea (Jardas, 1980).

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According Dulcic (2002), the eggs and larvae of this fish in the Mediterranean were first described by Sanzo in 1918 and Sparta in 1956. Based on these descriptions, Dulcic (2002) also detected the eggs of fish in the Adriatic Sea.

There is no record of *Zu cristatus* being caught in Gulf of Antalya, on the Mediterranean coast of Turkey. This study constitutes the first occurrence of the existence of *Zu cristatus* in the Gulf of Antalya. With the study, one more species has been added to the Gulf of Antalya fish fauna.

Materials and Methods

Sampling and Morphological Analysis

The commercial trawler named “İdris Reis” caught a fish species that they had never seen or known before while catching shrimp in deep waters (450 m) at the $36^{\circ}25'04''$ N $30^{\circ}37'17''$ E coordinates of Gulf of Antalya on 04.04.2022 (Figure 1). This fish was taken from fishermen and brought to the laboratory of Akdeniz University Fisheries Faculty. The species was identified and determined as *Zu cristatus*, which is rare in the Mediterranean.



Figure 1. The map of Gulf of Antalya where *Zu cristatus* is obtained.

First the fish was transported alive in a bucket with an air pump to the Antalya Fishing Shelter and then delivered to the laboratory of Faculty of Fisheries, Akdeniz University, Antalya. In lab metric and meristic characters of the captured fish were determined (Figure 2).

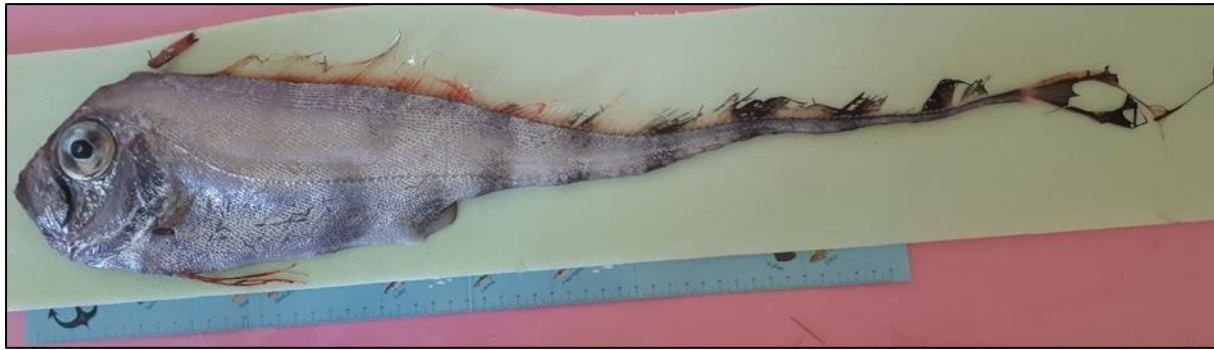


Figure 2. Scalloped Ribbonfish *Zu cristatus*, captured from Antalya, in the Gulf of Antalya/Mediterranean Sea, Turkey (Photo by M. Gökoğlu).

Results

The fish species caught for the first time (on 04.04.2022) by a trawl net in the 450 m deep waters of Antalya Bay was determined as *Zu cristatus*. There are not any records of this fish species being caught in the Gulf of Antalya before.

In this study, the captured specimen was 72 cm. in total length, 59 cm. in standard length, and 490 g in total weight. Meristic data of *Zu cristatus* specimen were as follows: dorsal fin rays 130; anal fin III + 8; pectoral fin rays 15; pelvic fin rays 5; eye diameter 3,5 cm. There were about 8-9 dark vertical bars on the body.

Discussion

The scalloped ribbonfish *Zu cristatus* (Bonelli, 1820) (Pisces: Trachipteridae) is a meso-bathypelagic and cosmopolitan fish, inhabiting the Mediterranean Sea, Azores and Madeira in the Atlantic, Pacific and Indian Oceans (Dulcic, 2002). This fish is very rare in the Mediterranean. (Bianco et al., 2006). However, in the ichthyological literature, the existence of *Zu cristatus* has been confirmed and documented mainly in the Adriatic Sea, Ligurian Sea, Tyrrhenian Sea, the coasts of Spain and Algeria, and the Gulf of Tunisia (north of Tunisia) (Bradai & El Ouaer, 2012).

Bradai & El Ouaer (2012) also caught this fish on the Tunisian coast and determined the total length of the fish as 170 mm. Psomadakis et al., (2007) reported that *Zu cristatus* reaches a maximum length of 118 cm. These researchers had been caught two adult individuals with a total length and weight of 1219 mm, 2800 g and 1115 mm, 2160 g in the Gulf of Genoa. According to Quigley & Henderson (2014), *Z. cristatus* adults are found at depths of 150 - 800 m in summer, while young ones prefer shallower waters. In our study, fish were caught in the deep waters (450 m) of Antalya Bay. During the literature scanning on *Z. cristatus*, no record of this fish was reported from Antalya Bay. However, Gökoğlu & Özen (2021) reported *Trachipterus trachipterus* belonging to the Trachipteridae family from Gulf of Antalya.

In this study, *Zu cristatus* was first reported from the Gulf of Antalya and another species was added to the Gulf of Antalya fish fauna

Conflict of Interest

The authors declare that they have no competing interests.

Author Contributions

E.B. got this material and M.G., F.Ç. and A.Y. is written this paper.

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