

Visual Records of *Lobotes surinamensis* (Bloch, 1790) in the North-Eastern Mediterranean, Turkey

Deniz Ergüden^{1*}, Deniz Ayas², Sibel Alagöz Ergüden³

¹Faculty of Marine Science and Technology, University of Iskenderun Technical, Iskenderun, Hatay, Turkey

²Fisheries Faculty, Mersin University, Mersin, Turkey

³Imamoglu Vocational School, Cukurova University, Adana, Turkey

Correspondent: deniz.erguden@iste.edu.tr; derguden@gmail.com

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Deniz Ergüden: [Orcid 0000-0002-2597-2151](https://orcid.org/0000-0002-2597-2151)

Deniz Ayas: [Orcid 0000-0001-6762-6284](https://orcid.org/0000-0001-6762-6284)

Sibel Alagöz Ergüden: [Orcid 0000-0003-4363-433X](https://orcid.org/0000-0003-4363-433X)

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Abstract: In this study, five tripletails, *Lobotes surinamensis*, were reported for the first time in Mersin Bay (North-eastern Mediterranean coast of Turkey). Four juveniles were observed during diving expeditions in Yeşilovacık, Mersin Bay, on 04 November 2015 and 23 September 2016, while the fifth juvenile was recorded in Ayaş/Erdeмли, Mersin Bay on 26 June 2018. This report is the first observation for this location and fills an essential gap in the species' range distribution. This study is also important as it is the first visual record of juveniles in this region. This finding will be helpful for both fisheries management and conservation efforts of this species.

Keywords: Lobotidae, Observation, Mersin Coast, Eastern Mediterranean, Turkey

Kuzeydoğu Akdeniz, Türkiye'de *Lobotes surinamensis*'in (Bloch, 1790) Görsel Kayıtları

Özet: Bu çalışmada, Mersin Körfezi'nde (Türkiye'nin Kuzeydoğu Akdeniz kıyısı) yüzeyde ve şamandıra çevresinde beş adet üç kuyruk, *Lobotes surinamensis* örneği rapor edilmiştir. 4 Kasım 2015 ve 23 Eylül 2016 tarihlerinde Mersin Körfezi Yeşilovacık'ta yapılan dalış sırasında *L. surinamensis*'in dört juvenil bireyi gözlemlendi ve *L. surinamensis*'in diğer yavru bireyi 26 Haziran 2018'de Mersin Körfezi Ayaş/Erdeмли'de kaydedildi. Bu rapor, bu bölge için ilk gözlemdir ve türlerin yayılış alanı ve dağılımındaki önemli bir boşluğu doldurmaktadır. Bu çalışma, bu bölgedeki türlerin genç bireylerinin ilk görsel kayıtları nedeniyle de büyük önem taşımaktadır. Ayrıca, mevcut çalışma balıkçılık alanında faydalı olacak ve aynı zamanda bu türlerin hem balıkçılık yönetimine hem de korunmasına katkıda bulunacaktır.

Anahtar Kelimeler: Lobotidae, Gözlem, Mersin Sahili, Doğu Akdeniz, Türkiye

Introduction

The family Lobotidae is represented in the Mediterranean Sea by single genera as *Lobotes*. The tripletail *L. surinamensis* (Bloch, 1790) is a warm water marine fish species and usually solitary. It is found in tropical and subtropical waters (Carpenter, 2003). This species is distributed in the Western Atlantic: New England and Bermuda southward to Argentina and Falkland Islands, Eastern Atlantic: the Mediterranean Sea as well as from Madeira Island

(Portugal) to the Gulf of Guinea and Indo Pacific: Costa Rica to Peru, and the Western Pacific: Japan, Fiji, and Tuvalu as well as in the tropical and subtropical waters surrounding Australia (northern Australia to southern Queensland, New Guinea to New Britain and also reported as a rare presence from Ponape, Hawaii, and Tahiti (Froese & Pauly, 2020). Deidun et al. (2010) stated that this species expanded from the Atlantic Ocean to the Mediterranean Sea via the Strait of Gibraltar.

The first record of *L. surinamensis* species in the Mediterranean was in 1875 (Doderlein, 1875). Further reports of the occurrence of the species in the entire Mediterranean was made from Spain (Palom, 1991), Balearic islands (Riera, Grau, Grau, Pastor, Pou, & Quetglas, 1999), Italian waters (Adriatic and central Mediterranean coast) (De Pirro, Tosi, & Vanni, 1996; Zava, Gianguzza, & Riggio, 2007; Bettoso, Comisso & Kruzic, 2016; Tiralongo, 2016; Tiralongo, Coco, Lombardo & Messina, 2018; Azurro et al., 2020), Croatian waters (Dulčić & Dragičević, 2011; Dulčić, Dragičević, Lipej & Štifić, 2014), Maltese islands (Camilleri, Ragonese, Darmanin, & Rosso, 2005; Deidun, Vella, Sciberras, & Sammut, 2010), Ionian Sea (Licchelli & Denitto, 2020), Aegean Sea (Bini, 1968; Economidis, 1973; Economidis & Bauchot, 1976; Akyol & Kara, 2012; Bilge, Filiz, & Gülşahin, 2017), Turkish waters (Gücü & Bingel, 1994, Başusta & Erdem, 2000; Tuncer & Önal, 2016; Ergüden, Ergüden, Bayhan, & Altun, 2018), Cyprus coast (Kleitou & Crocetta, 2016), Lebanon coast (Elbaraasi et al., 2019), the Greek Seas (Ondrias, 1971; Fischer, Bauchot, & Schneider, 1987; Minos & Economidis, 2007; Kavadas & Bekas, 2014; Minasidis, Doumpas, Kleitou, Spryridopoulou, Papadamakis, & Giovos, 2020), and Algerian coast (Hemida, Capape, Diatta, & Golani, 2003), Tunisian waters (Qunifi-Ben Amor & Ben Amor, 2016).

The tripletail *L. surinamensis* is a demersal and thermophilic species (Riede, 2004) that lives at depths from 0 to 70 m (Fricke, Kulbicki, & Wantiez, 2011); it usually prefers brackish waters and shallow waters less than 10 m and (Myers, 1999; Kuitert & Tonzuka, 2001). This species is abundant in the South and East Mediterranean (Akyol & Kara, 2012; Bilge et al., 2016; Minasidis et al., 2020).

This study presents the first visual records of juvenile specimens of *L. surinamensis* in its natural habitat in Turkey's northeastern Mediterranean coast.

Material and Methods

Locations where *L. surinamensis* were observed are indicated in Figure 1. Four of the *L. surinamensis* specimens were observed on 2 different occasions, around a buoy near the surface during a diving expedition in Yeşilovacık (Mersin Bay) (Coordinate: 36° 11' 054"N, 33° 39' 295"E) on 04 November 2015 and 23 September 2016 (Figure 2). The other specimen of *L. surinamensis* was recorded in Ayaş/Erdemli (Coordinate: 36° 29' 076'' N, 34° 10' 426''E), Mersin Bay on 26 June 2018. This specimen was photographed during underwater diving at a depth of about 1 m by a digital underwater camera (Canon Powershot G12) (Figure 3). Species identification was carried out according to Heemstra (1986) and Tortonese (1990).

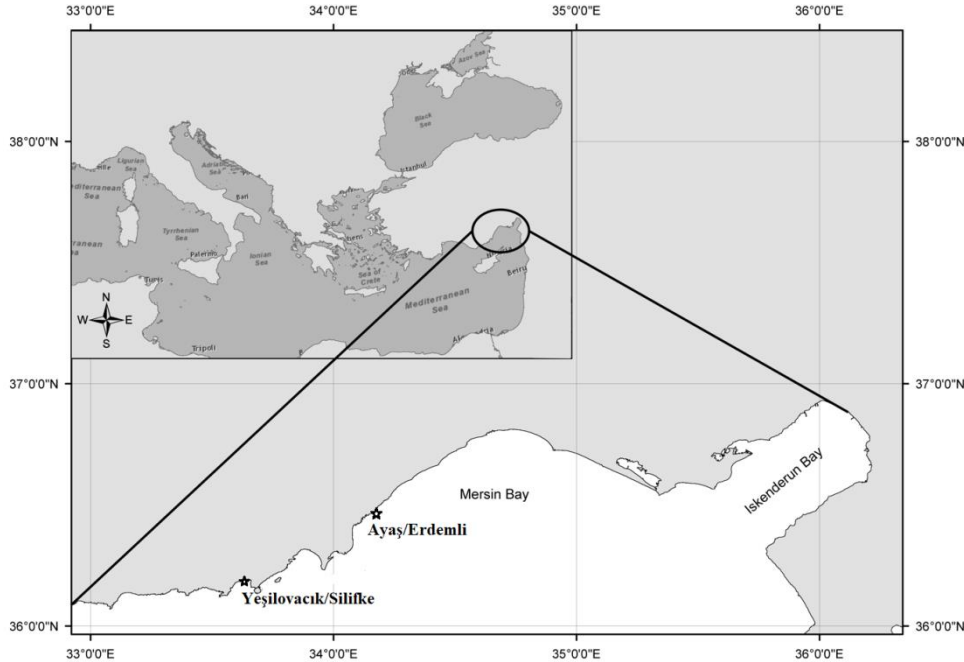


Figure 1. Locations of the occurrences of juvenile specimens of *Lobotes surinamensis* in Mersin Bay. Stars indicate locations.

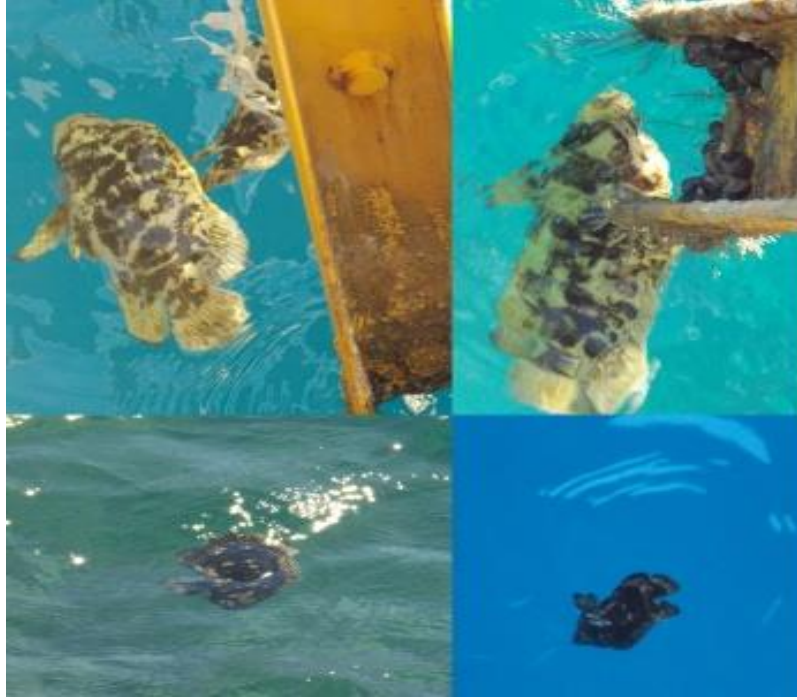


Figure 2. Four juvenile *Lobotes surinamensis* individuals visual recorded in the Yeşilovacık Bay, northeastern Mediterranean



Figure 3. Juvenile *Lobotes surinamensis* underwater view recorded in the Erdemli coast, northeastern Mediterranean

Results and Discussion

The Atlantic tripletail is a very characteristic fish with a deep body and a triangle-shaped head. The eyes are small, but the mouth is large. The pectoral fins are shorter than the pelvic fins (Heemstra, 1986). Juvenile specimens are colored in a mottled yellow, brown, and black.

In this study, five individuals of *L. surinamensis* was observed and reported at 0-1 m depth in its natural habitat in Erdemli and Yeşilovacık coast (Mersin Bay). Specimens were observed around buoys on

rocky and sandy bottoms, partially covered with barnacles and bivalves (*Brachidontes pharaonis*).

The maximum size of this species was reported as 110 cm in total length (TL) with typical TL of 80.0 cm by Robins & Ray (1986), and Bouhlef (1988). In the present study, the size range of specimens approximately ranged between 25 -30 cm. It seems that this species recently established a population in the area of Yeşilovacık Bay, as indicated by the presence of a number of observed juveniles (Deniz Ayas, pers. comm.).

Both juveniles and adults of tripletails are well known for their unusual behavior of floating just beneath the surface. (Menezes & Figueiredo, 1980; Carvalho-Filho, 1999; Riera, Grau, Grau, Pastor, Pou, & Quetglas) and occasionally drifts over reefs (Lieske & Myers, 1994). Their presence near the surface may be related to feeding strategy. Prey items which tripletails feed on are probably also associated with the floating structures. However, *L. surinamensis* feed on a variety of foods, mostly small fish species and also benthic invertebrates.

Tripletail juveniles are usually found swimming on their side at the surface as single individuals or in very small groups consisting of two to four individuals (Breder Jr, 1949). Similarly, in this study, one single juvenile specimen was recorded from Erdemli coast close to the surface. The other 4 individuals were observed as a group on two different occasions in Yeşilovacık Bay. It is likely that this group of 4 juveniles observed in Yeşilovacık Bay on November 4th 2015, were the same group consisting 4 juveniles observed 11 months later, on September 23rd, 2016, in the same location.

Although the tripletail has been reported from the Mediterranean Sea and the Aegean Sea previously, we report the presence of *L. surinamensis* individuals for the first time from Mersin coasts in the northeastern Mediterranean, Turkey, based on underwater sightings and surface photographs in their natural habitat. Our findings are the first visual records of juvenile specimens of this species in the northeastern Mediterranean coast of Turkey.

The tripletail is mainly caught using haul seines, gill nets, and line gear but they are also infrequently targeted by recreational fishers. To date, there is no significant unknown threat to the Mediterranean population. In Turkey there no data on commercial fisheries of this species as it is still rare to be considered as an economical species. However, monitoring studies are needed to obtain data on the Mediterranean population of this species in Turkey. This study will be useful for studying the natural habitats of juvenile tripletails and will also contribute to sustainability and conservation of this species in the future.

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