

Short scientific article
Received: 2015-12-02

UDC 597.535:591.9(262.32)

RECENT RECORD OF THE SERPENT EEL *OPHISURUS SERPENS* (PISCES: OPHICHTHIDAE) IN THE GULF OF TRIESTE (NORTHERN ADRIATIC SEA)

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ABSTRACT

On 19th November 2015 one specimen of serpent eel *Ophisurus serpens* (Linnaeus, 1758) (Ophichthidae) was caught by fishermen in the Gulf of Trieste. This species could be considered as exceptionally rare in the northernmost area of the Adriatic Sea, because it was recorded only once in the last hundred years.

Keywords: serpent eel, *Ophisurus serpens*, Gulf of Trieste, northern Adriatic Sea.

RECENTE SEGNALAZIONE DEL PESCE SERPENTE *OPHISURUS SERPENS* (OPHICHTHIDAE) NEL GOLFO DI TRIESTE (ALTO ADRIATICO)

SINTESI

Il 19 novembre 2015 un esemplare di pesce serpente *Ophisurus serpens* (Linnaeus, 1758) (Ophichthidae) è stato catturato dai pescatori nel Golfo di Trieste. Questa specie può essere considerata eccezionalmente rara nell'area più settentrionale del Mare Adriatico, in quanto è stata segnalata solamente una volta nell'arco di un secolo.

Parole chiave: pesce serpente, *Ophisurus serpens*, Golfo di Trieste, Alto Adriatico

INTRODUCTION

The serpent eel *Ophisurus serpens* (Linnaeus, 1758) (family Ophichthidae) is a marine, brackish, reef-associated and benthic species living from shallow waters to depths of 300 m (Bauchot, 1986). The serpent eel buries its body and exposes only the head in sandy or muddy bottoms, feeding mainly on benthic invertebrates and fish (Bauchot, 1986; Froese & Pauly, 2015). It is a cosmopolitan species, widely distributed in the Atlantic Ocean (northern coast of Iberian peninsula to South Africa, and also Madeira) and the Indo-Pacific Ocean (southern Mozambique to South Africa; north to Japan, south to Australasia) (Bauchot, 1986).

In the Mediterranean Sea, *O. serpens* has been reported from Greece, western Aegean Sea (Stergiou *et al.*, 1997); the Tuscan and Latium coasts of Italy (Biagi *et al.*, 2002); the Alboran Sea (Abad *et al.*, 2007); the Ligurian Sea (Relini *et al.*, 2007); the Tunis Southern Lagoon (Ben Amor *et al.*, 2009); and the northwestern Ionian Sea (Maiorano *et al.*, 2010). Moreover, Borges *et al.* (2003) recorded 6 specimens of *O. serpens* from the Algarve coast (southern Portugal), near the Gibraltar Strait.

This species is very rare in the Adriatic Sea, where it lives between 30 and 400 m depth on sandy and sandy-muddy bottom (Jardas, 1996). The last record was dated to 2005, when 18 specimens were caught in the eastern central Adriatic (Dulčić *et al.*, 2005).

After Perugia (1866), who reported on this species in the harbor of Trieste in 1866, the present paper represents the most recent record of this species for the Gulf of Trieste, the northernmost area of the Adriatic Sea.

MATERIAL AND METHODS

One specimen of *Ophisurus serpens* was caught on 19th November 2015, using a hydraulic dredge for the harvesting of the bivalve *Ensis minor* (Chenu, 1843). The fishermen photographed the specimen by a mobile



Fig. 1: *Ophisurus serpens* caught in the Gulf of Trieste (Photo: L. Lian).

Sl. 1: Primerek zobate jegulje iz Tržaškega zaliva (Foto: L. Lian).

phone (Fig. 1) and subsequently released it alive. *O. serpens* can be easily distinguished from all other Mediterranean snake eels by its very long snout, its slender and elongate jaws that are incapable of closing completely in adults, the presence of temporal, post-orbital and interorbital pores, and the absence of a caudal fin with a hard caudal tip (McCosker, 1977; Smith & McCosker, 2008). These characteristics, in particular the presence of pores, were immediately observed by fishermen on board, thus confirming the species identification of the specimen.

RESULTS AND DISCUSSION

The capture site of *Ophisurus serpens* was located in front of Sant'Andrea Island (Fig. 2) at a depth of approximately 3 m, on sandy bottom. Due to the release of the specimen, it was not possible to get the main morphometric data. We can only estimate a total length of about 50 cm from Fig. 1, because the expanded polystyrene box used for fish packaging is 50 cm in length. McCosker & Castle (1986) reported that maximum length for this species is 250 cm (as total length TL), whereas Jardas (1996) noted a maximum TL of 240 cm, although usual TL in catch ranged between 50 and 150 cm.

The serpent eel could be considered as a relatively rare species in the Adriatic Sea, but fishing gear for providing target species must be taken into account when considering their rarity (Dulčić *et al.*, 2005). Most of



Fig. 2: Records of *O. serpens* in the Adriatic Sea: ○ present record in the Gulf of Trieste, □ record of Perugia (1866) in the harbour of Trieste. Data in the eastern Adriatic are also presented. See Dulčić *et al.* (2005) for the details of localities.

Sl. 2: Podatki o pojavljanju zobate jegulje v Jadranskem morju: ○ novi podatek za Tržaški zaliv, □ podatek o navaji Perugia (1866) v tržaškem pristanišču. Označeni so tudi podatki o pojavljanju zobate jegulje v vzhodnem Jadranu. Podatke o natančnih lokalitetah navajajo Dulčić s sodelavci (2005).

the fishing gear could be inappropriate to catch a species living buried with only its head exposed. In fact all catches in the eastern Adriatic were done only by long line (Dulčić *et al.*, 2005). The present specimen was caught by an hydraulic dredge able to eject water under pressure (1.2–2.5 bar), easing the advancement of the gear and the harvesting of buried species (Romanelli *et al.*, 2009), such as in the case of *O. serpens*. The present record is the first official for the northern sector of the Adriatic Sea after the historical record of Perugia (1866), who reported on a specimen caught in the harbor of Trieste and deposited in the museum -“Civico Museo Ferdinando Massimiliano” in Trieste. Following the definitions for degrees of rarity suggested by Morović (1973), this species could be considered as exceptionally rare in the Gulf of Trieste, because this fish was recorded only once in the last hundred years (Bello *et al.*, 2014).

In addition, the present record represents the northernmost one for the Mediterranean, and the most recent for this basin are those of Ulaş & Akiol (2015) and Filiz *et al.* (2015) in the Turkish waters of the Aegean Sea. This record of *O. serpens* in the Gulf of Trieste confirms the precious collaboration with fishermen, who are daily involved in the marine environment, and often are the first to meet rare and/or alien species, especially fish and crabs. Without their contribution a lot of occurrences would have passed unnoticed (Azzurro *et al.*, 2013).

ACKNOWLEDGEMENT

We wish to thank fishermen Luciano Lian, Gianpietro Corso and Tiziano Ghenda from Marano Lagunare, Dr. Alessandro D’Aietti for technical assistance and Dr. Alessandro Acquavita for valuable suggestions.

NOV ZAPIS O POJAVLJANJU ZOBATE JEGULJE *OPHISURUS SERPENS* (PISCES: OPHICHTHIDAE) V TRŽAŠKEM ZALIVU (SEVERNI JADRAN)

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POVZETEK

Devetnajstega novembra 2015 so ribiči v Tržaškem zalivu ujeli primerek zobate jegulje *Ophisurus serpens* (Linnaeus, 1758) (*Ophichthidae*). Ta vrsta je v najsevernejšem delu Jadrana izjemno redka, saj je bila pred tem v zadnjih sto letih samo enkrat ulovljena.

Ključne besede: zobata jegulja, *Ophisurus serpens*, Tržaški zaliv, severni Jadran.

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