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Occurrence of the *Histioteuthis reversa* (Verrill 1880), (Cephalopoda/Histioteuthidae) in the Gulf of Mersin/ Turkey

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Abstract

A different species of squid was caught during trawling (36°01'390''N; 033°44'220''E and 36°07'080''N; 034°00'920''E) in the Gulf of Mersin at average depth of 300-400 m. It was determined that this squid was *Histioteuthis reversa* (Verrill 1880). This is the first record of *Histioteuthis reversa* both for the Gulf of Mersin and Turkey's Mediterranean coast.

Keywords: Coast of Turkey, Mediterranean, Priacanthus sagittarius, Spread.

1. Introduction

Histioteuthidae is a family of Oegopsid squid (Finn 2016). The family was previously considered to be monotypic but the World Register of Marine Species assigns two genera to this family. This family members are mostly weakly muscled, moderately sized squid with a maximum mantle length of 33 cm. They are generally have very long, robust arms and a short mantle with small, rounded fins. Their main distinguishing feature is that the eyes are different sizes and orient in different vertical directions. The larger left eye is semitubular, mobile, generally is directed back and up as indicated by the pattern of iridophores on the eye's outer surface (Young and Vecchone 2013).

There are two species in the Mediterranean Sea belonging to Histioteuthidae family. One of these species is *Histioteuthis reversa*. *H. reversa*, commonly known as the reverse jewel squid or the elongate jewel squid, is a species of cock-eyed squid, so called because the eyes are dissimilar. The reverse jewel squid *H. reversa* is an oceanic mesopelagic species. This species founds in moderately warm water of the Atlantic, from South Africa to south of the Iceland and Newfoundland Bank (kitap lit.). Also present in the southern Indian Ocean (to 30°S) and the Mediterranean. *H. reversa* occurs is greatest abundance ower deep bottom slopes, near land masses and oceanic ridges.

There is little information about the biology and ecology of this species. In some studies, remains of whales and dolphins were found in stomach contents. (kitap lit; Prca et al. 2011). Gonzalez and Sanchez (2002) by *H. reversa* caught in waters deeper than 200 m in trawl fishing on the Iberian Peninsula in the Mediterranean. Sanchez et al. (2004) caught the same species at a depth of 405-773 m in a trawl survey in the north-west Mediterranean. This squid was also caught off the coast of Molericco, near the Baleric Islands. In this region, squid were caught between 600-900 m depth (Quetglas et al., 2014).

The existence of the species in the Eastern Mediterranean has been reported by various researchers (Salman et al. 2002; Salman 2009; Öztürk et al. 2014). However, a recognition of the existence of the species has not been observed in Turkey's Mediterranean coast. A different species of squid was caught during trawling in the Mersin Bay. The purpose of this study is to make the identification of this squid and to announce it to the scientific community.

2. Materials and Methods

Research; It was carried out on 28. January.2020 with the commercial trawler boat named Çınar Bey (33 A 1482) registered in Mersin Port. Trawl operation were in 36°01'390''N; 033°44'220''E and 36°07'080''N; 034°00'920''E coordinates (Fig. 1).

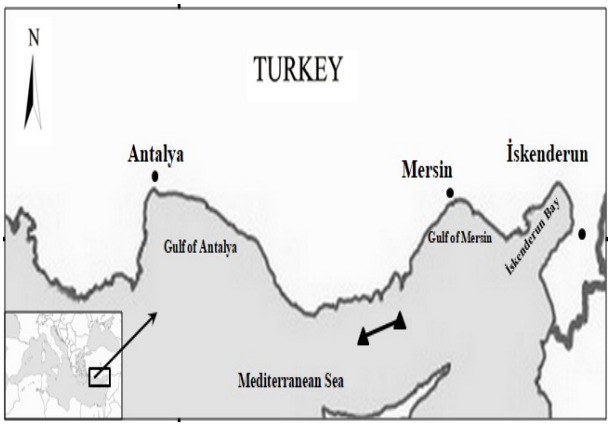

Fig. 1. Sampling location

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In this troll operation; trawl nets with a mesh opening of 22 mm were used and shooting at a depth of 1.5-2 knots and shooting at a depth of 300-400 m. It is noteworthy that among the samples caught at the end of this operation, there was a different squid type seen in the region for the first time.The Specimen was brought to the Akdeniz University Faculty of Fisheries laboratory and Voss et al (1998); According to Young and Vecchione (2018), the species was diagnosed.

3. Results and Discussion

This new squid species caught in Mersin Bay at a depth of 300-400 m has been identified as: Histioteuthis reversa (Voss et al, 1998; Young and Vecchione, 2018)(Figure 2). When the morphological features of this species are examined; It is noteworthy that there are many large and small photophores intermingled on the ventral surface of the squid mantle. 18 photophores (17 large and 1 small) were also counted around right eyelid (Figure 3). In the arms of the octopus; 4 dorsal series of smaller sized photophores were also seen (Fig. 4).

Fig. 2. *Histioteuthis reversa*

Fig. 3. 18 photophores (17 large and 1 small) around right eyelid of *Histioteuthis reversa*

Fig. 4. Mouth structure of *Histioteuthis reversa*

The weight of the captured individual is 230 g. Mantle length: 13 cm, total length was measured as 40.5 cm. The most prominent feature of the calamara caught in Mersin Bay is the size difference between the eyes. The left eye is larger, and the right eye has 18 photophores. These morphological features Voss et al (1998); H. reversa reported by Young and Vecchione (2018). H. reversa, called jewel squid, is a pelagic deep sea species (Voss et al., 1998; Gibson et al 2009). In this research, H. reversa was caught in the trawl net drawn between 300-400 m depths in Mersin Bay. Fanelli et al. (2018) also reported *H. reversa* in their research in the deep waters of the Mediterranean.

Two species belonging to the Histioteuthidae family have been reported from the Levatine sea. These species are *Histioteuthis bonelli* and *H. reversa* (Salman et al., 2002; Salman 2009). Öztürk et al. (2014) on marine molluscs in their coastal shores of Turkey checklist in our study, in which *H. reversa*; They reported that there were 50 species of cephalopod species. However *H. reversa* did not reveal the source of a statement from Turkey's Mediterranean coast. In this study, *H. reversa* Mersin Gulf and is the first statement from Turkey's Mediterranean coast.

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