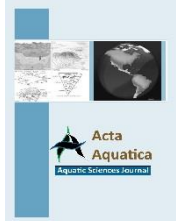




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### The first record of the mole crab (*Albunea carabus* L. 1758, Decapoda, Anomura, Hippidea) in the Gulf of Antalya

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#### Abstract

The first occurrence of the mole crab (*Albunea carabus* L. 1758) in the Gulf of Antalya. During a commercial shrimp fishery operation in May, 2016, A different type of crab was caught in the Gulf of Antalya, Bogazkent (Köprüçay). This unknown sample was brought to Akdeniz University Fisheries Laboratory and It was stored. Sample was caught with shrimp nets that were left at depths of 10-20 m in the Gulf of Antalya, Bogazkent (Köprüçay River). It has been determined that this elongated mole, caught in the identification of the species, is *Albunea carabus* L. 1758, known as the dengue. Mole crab (*Albunea carabus* L. 1758) was reported for the first time from the Gulf of Antalya via this article.

**Keywords:** *Albunea carabus*; the Gulf of Antalya; mole crab

#### 1. Introduction

Decapods in Crustacea are crabs, crayfish and shrimps which lived in freshwater and sea. Hippoidea superfamily crabs are generally known as mole crabs. This superfamily has three subfamilies. One of these subfamilies is Albuneidae and is represented with *Albunea carabus* L. 1758, which is known only as a mole crusher in the Mediterranean. Mole crabs are very rare species because they usually live buried in the bottom. Pereira et al. (2017) reported that the researchers detected this species in 2-40 m depths.

Giacobbe and Spanò (1996) first identified the mole crab *Albunea carabus* in the Tyrrhenian Sea in the Messina Strait. These researchers caught four mature males and one ovigerous female in their studies. Spano *et al.* (1998) have caught two individuals, one female and one male during the dredge sampling in the depths of 2.5 - 5 m in Sicily Strait in 1996. Seridji (2007) has identified the larvae of this species in zoea stages during plankton samplings on the Algerian coast. This species was detected for the first time in Rhodes Island, Aegean Sea by Corsini-Foka and Kalogirou (2013) and in the Egyptian waters by Abdelsalam and Ramadan (2017).

*A. carabus* also distributes on the eastern Atlantic coast except of the Mediterranean (Boyko, 2002). This species which lives in sandy bottoms usually continues its life by burying itself in the bottom. Pereira et al. (2008) obtained this species by dredge during the bivalve sampling on the Portuguese coasts. The

researchers reported this example as the first record from the Portuguese coasts.

This species was the first reported from Iskenderun Bay (Turkey) in Eastern Mediterranean by Katağan and Çevik (2003). Shrimp fishing is being done by trammel nets in the front of Köprüçay of the Gulf of Antalya. During these fishing operations, a different crab species was caught by shrimp nets. The aim of this study is to identify this unknown species and to add to biodiversity of the Gulf of Antalya.

#### 2. Materials and methods

Shrimp fishing is being done by trammel nets in the front of Köprüçay of the Gulf of Antalya (36°47'10.98"N; 31°7'58.66"E). Shrimp nets were led to the designated coordinate zone in the sunset and were gathered in sunrise. The nets used in fishing are 210 / d, pannier webs equipped with 0 number 60 mesh with 24 mm mesh size. During a commercial shrimp fishery operation in May, 2016, a different crab species was caught in the Gulf of Antalya, Bogazkent (Köprüçay River). This unknown sample was brought to the laboratory in Akdeniz University, Fisheries Faculty. In all counts, morphological features were measured. The species was identified according to Boyko (2002), Abdelsalam and Ramadan (2017). The specimen has been stored in 4% formalin solution and deposited in the Museum of the Faculty of Fisheries, Akdeniz University (AU-SUF/2018-2).

#### 3. Result and discussion

The species of crab caught by shrimp nets left in the Gulf of Antalya, Köprüçay has been determined. It has been identified as mole crab, *Albunea carabus* (Fig 1-2). The

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morphological features of this crab were similar to features reported by Boyko (2002), Abdelsalam and Ramadan (2017).

via this study. One more species has been added to biodiversity of the Gulf of Antalya via this study.



Figure 1. Dorsal view of mole crab (*Albunea carabus* L. 1758)



Figure 2. Abdominal view of mole crab (*Albunea carabus* L. 1758)

Mole crab determined in our study was male and has 20mm length and 2.8 g weight. Pereira et al. (2008) reported that carapace length was 11.31 mm and the weight was 2.20 g in male mole crabs which they caught by dredge. In the same study, it has been reported that the carapace size distribution varies between 3.3 mm and 25 mm in some of the subjects caught by some researchers.

The specimens determined in our study, have obtained from a sandy muddy deep between 10-20 m depth in off shore of Köprüçay. There is a limited number of studies on this species. These studies have reported that the mole crabs prefer the sandy bottom (Pereira et al., 2008; Scuderi et al., 2017). Again, in the studies carried out on this species, the captured depth varied between 2-50 m (Pereira et al., 2008).

In this work, this species was obtained in front of Köprüçay River. Scuderi et al. (2017) reported that this species was intensively available in the mouths of freshwater on the coasts of Catania of Eastern Sicily. They have attributed this to the existence of numerous streams in the region and the fact that these rivers create cold flood waters and strong currents in winter.

As a result, *Albunea carabus* has been reported before in only the Gulf of Iskenderun of our country. This species has been reported for the first time from the Gulf of Antalya in our country

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