

Short Communication

The Occurrence of *Atyaephyra desmarestii* (Millet, 1831) (Decapoda: Atyidae) in the Seyhan Reservoir (Seyhan River Basin)

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Abstract

During a recent ecological study, *Atyaephyra desmarestii* (Millet, 1831) is reported for the first time in the Seyhan Reservoir (Seyhan River Basin) from the stomach contents of the species (*Silurus glanis* Linnaeus, 1758; *Oncorhynchus mykiss* (Walbaum, 1792)).

Key words: *Atyaephyra desmarestii*, *Athyphera*, Seyhan River Basin, Turkey, new locality

Introduction

Atyaephyra desmarestii is distributed in the fresh waters of Europe, North Africa and the Middle East, up to Iran (Anastasiadou *et al.* 2004). There are *A. desmarestii* subspecies (*A. desmarestii desmarestii*, *A. desmarestii orientalis*, *A. desmarestii stankoi* and *A. desmarestii mesopotamica*), but it is certain that the key characters currently used to separate *A. desmarestii* subspecies are invalid.

It seems that there is only one very variable species with many ecophenotypes (Anastasiadou *et al.* 2004).

A native specie to Mediterranean Basin *A. desmarestii* is distributed in estuarine habitats with high salinity, high and low altitude (0-700m). The specie is found in rich aquatic vegetation and hypogean brackish water habitats (Holthuis 1961; Özbek *et al.* 2009).

A. desmarestii for the first time was reported by the Holthuis (1961) from the Bileybi Antalya (estuary of the Boga River, 0-10m altitude), Döşemealtı Lake, Antalya (300m altitude) and Aksu River Kahramanmaraş (700m altitude). Holthuis (1961) distinguished two subspecies under the names *A. d. desmarestii* and *A. d. orientalis*, giving a detailed description of *A. d. orientalis* from Turkey. Other previous records *A. desmarestii* as *A. d. orientalis* from Turkey were those Kıkğöz Lake (Antalya) (Özbek and Ustaoglu 2005) Kırkgöz Springs (Özbek and Ustaoglu 2005; Özbek *et al.* 2009) Yuvarlakçay (Köyceğiz- Muğla) (Özbek *et al.* 2004). Also the species reported the Orontes River basin of Syria part by Bouvier (1913). But the species has not been reported from the Seyhan River Basin so far.

Here we report the occurrence of *A. desmarestii* from the stomach content of two fish species (*Silurus glanis* Linnaeus, 1758; *Oncorhynchus mykiss* (Walbaum 1792) for the first time from the Seyhan River Basin.)

Materials and Methods

The Seyhan Reservoir (Seyhan River Basin) is located in Adana (Kilikya basin). It was constructed in 1956 for irrigation, flood control and drinking. It can store 1200,00 hm³ of water. The reservoir surface is 67.82 km². The reservoir approximately 4 km in width and 23 km in length and the depth varies from 0 to 45 m (Kırgız 1984). In the region, the reservoir has the highest fishery production despite that the reservoir has a medium-sized source (Özyurt and Aşar 2002). The reservoir has an mesotrophic characters and average temperature and pH of reservoir is

determined (respectively 26.43; 7.41) (Çevik *et al.* 2007). An ecological study of fish fauna of the Seyhan Reservoir (37°5'17" N, 35°17'34" E) was carried out from January to May 2008 (Figure 1). A total of 16 *A. desmarestii* Millet, 1931 specimens were found in the stomach content of two rainbow trout (*O. mykiss*) and one catfish (*S. glanis*) (Figure 2).

Fish were captured with trammel nets from January and May 2008. The age of specimens was comprised between two and seven years old. Morphometric and meristic characteristics of specimens ($n = 3$) are recorded.

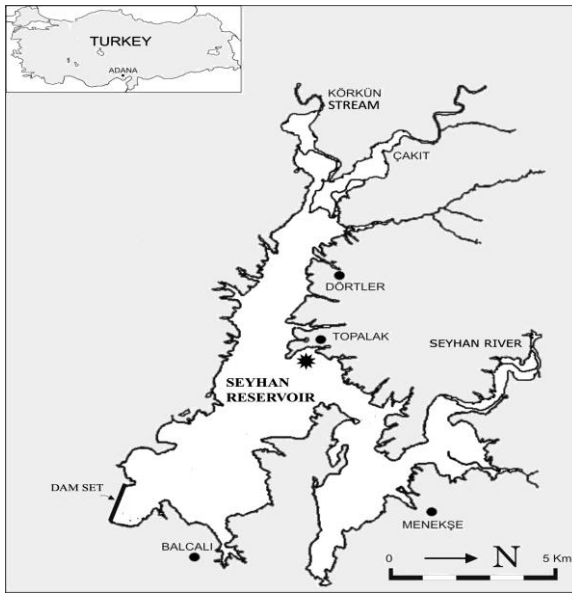


Figure 1. Sampling location (★) of *A. desmarestii*.

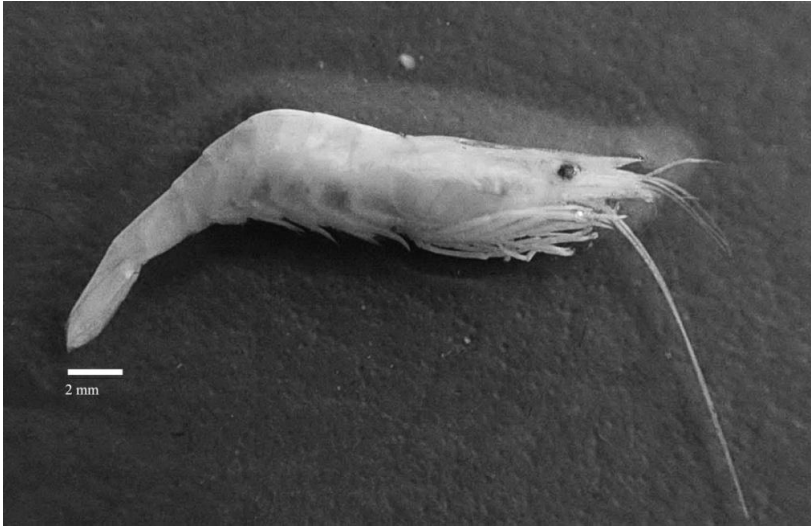


Figure 2. Lateral view of *Atyaephyra desmarestii*.

Result and Discussion

According to previous studies, 29 fish species occur in the Seyhan River Basin (Alagoz 2005). The specimens of shrimp were collected in the Seyhan Reservoir (6 shrimp specimens in stomach of two male specimens of trout; TL: 31.5-33 cm, W: 422.08- 457.77 g, Age: 2 and three and 10 shrimp specimens in stomach one male specimen of catfish; TL: 100 cm, W: 7.500 g and Age: 7).

Aquatic invertebrates, crustaceans and microalgae are the most food source for rainbow trout (Kara and Alp 2005; Erguden Alagoz *et al.* 2010). Catfish feed on arthropoda, diptera larvae, insects, small fish, zooplankton and on plant materials (Schoonbee 1969; Bruton 1979; Yalçın *et al.* 2001). According to Casimiro and Fidalgo (2007), *A. desmarestii* represents an important link in the aquatic food webs (Descouturelle 1980; Fidalgo 1985) and its sensitivity to toxicants still has to be established.

Consequently, in the light of this data, *A. Desmarestii*, as a food source for some fish species was found in the Seyhan River Basin. So far, the shrimp has not been reported from any localities within the Basin locality. The Mediterranean Basin native species *A. desmarestii* was first reported in the Seyhan River Basin. The species seems to work as an important link in the aquatic food webs and further studies are needed the relations between population and aquatic food consumption.

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Seyhan Baraj Gölü’ndeki (Seyhan Nehir Havzası) *Atyaephyra desmarestii*’nin (Millet, 1831) (Decapoda: Atyidae) Bulunurluđu

Özet

Seyhan Baraj Gölü’nde (Seyhan Nehir Havzası) yapılan bir ekolojik alıřma sırasında, *Atyaephyra desmarestii* (Millet, 1831) ilk defa bu nehir havzasından rapor edilmiřtir. *Atyaephyra desmarestii* balıkların mide içeriđinden bulunurluđu rapor edilmiřtir. *Silurus glanis* Linnaeus, 1758 ve *Oncorhynchus mykiss* (Walbaum 1792) balık türlerinin besin tercihi olarak *Atyaephyra desmarestii* ilk kez kayıt edilmiřtir.

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