

On the occurrence of invasive ctenophore *Mnemiopsis leidyi* A. Agassiz, 1865 in Antakya Bay, Eastern Mediterranean Sea

Cemal TURAN^{1*}, Necdet UYGUR², Deniz ERGÜDEN¹,
Bayram ÖZTÜRK³ and Burcu ÖZBALCILAR¹

1. Fisheries Faculty, Mustafa Kemal University, 31200 Iskenderun, Hatay, Turkey.

2. Technical School of Princlik, Mustafa Kemal University, Iskenderun, Hatay, Turkey.

3. Department of Basic Sciences, Faculty of Fisheries, Istanbul University, Istanbul, Turkey

* Corresponding Author, C. Turan, E-mail : cturan@ymail.com, Fax: (+90) 326-614 18 66, Tel: (+90) 326-614 18 77

Abstract. The comb jelly *Mnemiopsis leidyi* A. Agassiz, 1865 is reported for the first time from the coast of Yayladagi, Antakya Bay, Eastern Mediterranean Sea, Turkey. *M. leidyi* have been observed densely along the Antakya Bay from May until June 2010. Whereas there was nor record of *M. leidyi* in July 2010. The occurrence of *M. leidyi* in the Eastern Mediterranean Sea is of great concern because of its detrimental effect on fish community.

Key words: *Mnemiopsis leidyi*, dense populations, Antakya Bay, Eastern Mediterranean Sea, Turkey.

The invasive ctenophore (comb jelly) *Mnemiopsis leidyi* A. Agassiz, 1865 is an indigenous species of western Atlantic coastal waters. In the past three decades *M. leidyi* has expanded into the Black, Caspian, Baltic and North seas with ballast waters (Mianzan 1999, Shiganova et al. 2001, Faasse & Bayha 2006). *M. leidyi* was first reported in the Mediterranean Sea (Western Aegean Sea) in 1990 from Gulfs of Saronikos and Elefsis (Shiganova et al. 1999, 2001a,b, 2004) and then İşinibilir & Tarkan (2002) also reported *M. leidyi* around Gokceada Island, northern Aegean Sea. Uysal & Mutlu (1993) recorded *M. leidyi* in Mersin Bay (vicinity of the port), on eastern Mediterranean coast of Turkey. Shiganova

(1997) reported *M. leidyi* in the vicinity of Latakia port on northern Syrian coast. Lately Galil et al. (2009) reported dense populations of *M. leidyi* along the entire Israeli coast throughout spring. It must be pointed out that this species has been nominated as among 100 of the "World's Worst" invaders (ISSG 2010).

During May and June 2010, diving were performed and we observed 10-15 *M. leidyi* from the intertidal to depth of 17 m in the warm temperate water (23-26°C) on coast of Yayladagi in Antakya Bay (Fig. 1). Moreover, during July 2010, there was no observation of *M. leidyi* at the same area. The species identification was done according to Mianzan (1999) and Faasse & Bayha (2006).



Figure 1. General view of *Mnemiopsis leidyi*, on the coast of Yayladagi, May 2010
[Photo by Cemal Turan]

The comb jelly *M. leidyi* may have been transported to Antakya Bay in vessels arriving from ports in the Black Sea, northern Adriatic, Baltic, North seas or from its native range on the Atlantic coast. On the other hand it may have been drifted from Israeli coast to Antakya Bay by northern currents since there are dense populations of *M. leidyi* along the entire Israeli coast (Galil et al. 2009).

The native habitats of *M. leidyi* are temperate to subtropical estuaries along the Atlantic coast of the North and South America, where it is found in an extremely wide range of environmental conditions (temperatures of 2-32°C, salinities of <2-38‰) (Mayer 1912, Işinibilir & Tarkan 2002). *M. leidyi* feeds on copepods, cladocerans, mollusc larvae and on pelagic fish eggs and larvae also (Tzikhon-Lukanina & Reznichenko 1991, Niermann et al. 1994). It caused the decline in the amount of pelagic fish such as anchovy and of zooplankton in the areas of the Black Sea where it occurred intensively (Vinogradov et al. 1989, Kideys 1994).

At present, biological invasions of alien species is a significant environmental problem. The present paper is the first report on *M. leidyi* presence along the coast of Yayladagi, Antakya Bay, Eastern Mediterranean Sea, Turkey. The comb jelly probably does not have established population in this area since we observed it during May and June 2010 and there was no observation in July 2010. Therefore it may be occurred seasonally in this area. Its possible establishment in the area may detrimentally affect the fish community and fisheries. Therefore, surveys of this species in this region or in the Mediterranean Sea must be carried out.

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