

The first confirmed record of the alien jellyfish *Rhopilema nomadica* Galil, 1990 from the southern Aegean coast of Turkey

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Abstract

The scyphozoan jellyfish *Rhopilema nomadica* Galil, 1990 has been observed in June 2011 in Marmaris Harbour, on the southern Aegean coast of Turkey. Information on previous records of this invasive species from the Mediterranean coast of Turkey is provided.

Key words: *Rhopilema nomadica*, Scyphozoa, Marmaris Harbour, Turkey, invasive species

Introduction

Rhopilema nomadica Galil, 1990, a large scyphozoan, entered the Mediterranean through the Suez Canal in the 1970s and soon established a population in the SE Levantine Basin (Galil et al. 1990). This jellyfish forms great swarms each summer, which when drifting inshore stings bathers and impacts fisheries by obstructing fishing nets and covering catches with their stinging mucous. In present paper we report the first record of *R. nomadica* from the Aegean Coast of Turkey.

Results and discussion

A single specimen of *Rhopilema nomadica* was collected in June 2011 in Marmaris Harbour, Turkey (36°50'50.90"N, 28°16'13.29"E) (Figures 1-4). The specimen was found on the surface of the water, where water depth was 15 m. Its umbrella diameter measured 38 cm and it weighed 4.2 kg. Sea water temperature was 23.37°C, salinity was 38.02 psu and the dissolved oxygen of sea water was 5.59 mg/l. The specimen was kept for 24 hours in seawater

and then preserved and deposited in the Faculty of Fisheries in Mugla University in Mugla (Collection number: MUSUM/CNI/2011/1).

Rhopilema nomadica is known to shelter juveniles of a Red Sea carangid fish, *Alepes djeddaba* (Forsskål, 1775) among its tentacles (Galil et al. 1990), indeed, juveniles of this species were observed to accompany the specimen collected from Marmaris. The juveniles of *A. djeddaba* were also observed among the tentacles of *Phyllorhiza punctata* (Cevik et al. 2011).

Records of *Rhopilema nomadica* are also known for other coastal areas of Turkey (Table 1, Figure 1). In 1995 *R. nomadica* was recorded off Mersin, SE Turkey, where one bather reported stings and sought medical treatment (Kideys and Gücü 1995) and in Iskenderun Bay (Avsar et al. 1996). Ever since, large aggregations of *R. nomadica* have been observed in specific localities along the Mediterranean Sea of Turkey, mainly during the summer months (Kideys and Gücü 1995). Fishermen claimed that the gill net fisheries declined and that the jellyfish entangled in their nets were a major nuisance (Öztürk and Işinibilir 2010). In Mersin, due to mass jellyfish blooms in summer 2009,



Figure 1. Distribution map of *Rhopilema nomadica* records in coastal waters of Turkey (see Table 1 for details).



Figure 2. *Rhopilema nomadica* at the surface of seawater in Marmaris Harbour, Turkey. Photographs by A.N. Tarkan.

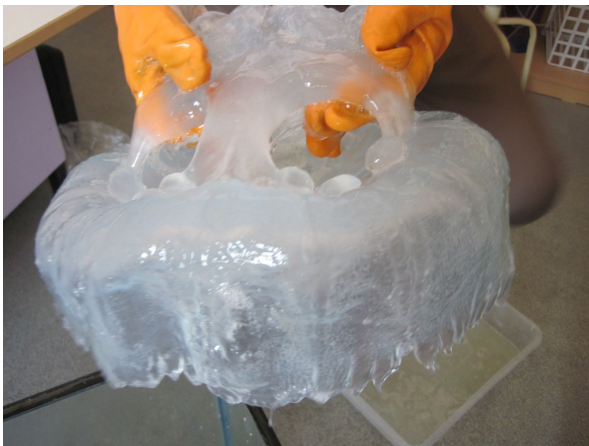


Figure 3. *Rhopilema nomadica* in the laboratory of Faculty of Fisheries in Mugla University. Photographs by N. Gülşahin.

Table 1. Previous records of *Rhopilema nomadica* in coastal waters of Turkey.

	Locality	Record dates	Number of collected specimens	References
1	Mersin Bay	August, 1995	247	Kideys and Gücü 1995
2	Iskenderun Bay	1996	bloom	Avşar et al. 1996
3	Finike	August, 2006	1	Öztürk and İşinibilir 2010
4	Kaş	December, 2009	3	Öztürk and İşinibilir 2010
5	Antalya Bay	Summer 2009	bloom	Öztürk and İşinibilir 2010
6	Adana	Summer 2009	bloom	Öztürk and İşinibilir 2010
7	Mersin Bay	Summer 2009, winter 2010 and January, February, March 2011	Large aggregations and blooms	Sakınan 2011
8	Marmaris Harbour	June 2011	1	This study

fish farmers could not lift their nets to the surface when they wanted to harvest in summer 2009, winter 2010 and January, February March 2011 (Sakınan 2011). The higher abundance of the species off SE Turkey was considered to be due to higher water productivity and pollution (Kideys and Gücü 1995). In 1998, Galil and Zenetos (2002) reported that a single specimen of *R. nomadica* was collected near Izmir. The information was based on personal communication with A. Karataş, and the specimen was not photographed or preserved.

A single specimen of *Rhopilema nomadica* was observed off the coast of Finike, in August 2006 (Öztürk and İşinibilir 2010). In summer 2009, several blooms of *R. nomadica* were observed and some people were hospitalized in Antalya, Mersin, Iskenderun and Adana Provinces (Öztürk and İşinibilir 2010). In December 2009 three specimens were observed off Kaş (Öztürk and İşinibilir 2010). This spread pattern follows the Levantine current along Lebanon, Syria, and the Mediterranean coast of Turkey (Avşar 1999).

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