

THE DISTRIBUTION OF *Carinaria mediterranea* Blainville, 1825 (HETEROPODS) IN THE MEDITERRANEAN SHORES OF TURKEY

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Abstract: *Carinaria mediterranea* is a species of minute floating sea snail, a pelagic marine gastropod mollusc in the family Carinariidae. It is a cosmopolitan species with a wide north-south range between 60°N and 45°S. In the Mediterranean, it is common everywhere and penetrates deep into the Caribbean (<http://species-identification.org/>). In this paper, the distribution of *C. mediterranea* specimens are given in Mediterranean coasts of Turkey.

Keywords: *Carinaria mediterranea*, Mollusc, Distribution, Turkey, Mediterranean Sea

Özet: *Carinaria mediterranea* Blainville, 1825 (Heteropods)'nin Türkiye'nin Akdeniz Kıyılarındaki Dağılım Alanları

Carinaria mediterranea, Carinariidae familyasına ait yüzebilen pelajik bir deniz salyangozu türüdür. 60°N, 45°S enlemleri arasındaki bölgede geniş bir dağılım alanına sahip kozmopolit bir türdür. Akdeniz'in hemen her yerinde yaygın olarak görülebilen bu tür Karayip'lerde bile tespit edilmiştir (<http://www.species-identification.org/>). Bu çalışmada *Carinaria mediterranea*'nin Türkiye'nin Akdeniz kıyılarındaki dağılımı verilmiştir.

Anahtar Kelimeler: *Carinaria mediterranea*, Mollusc, Dağılım alanları, Türkiye, Akdeniz

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Introduction

Nutrition is the process by which organisms The Mediterranean Sea contains between 4% and 18% of all known marine species although it constitutes only 0.8% of global ocean surface (Cool et al, 2010; Bianchi and Morri, 2000). This unique biodiversity is being damaged by several human pressures, including fisheries, aquaculture, ever-increasing density of coastal towns and cities, and pesticide and fertilizer runoff from agriculture (Mouillot et al, 2011). The Mediterranean basin has been proposed as a hot spot of terrestrial and coastal marine biodiversity but is impoverished in terms of pelagic and deep-sea species richness. The coastal areas of the Eastern Mediterranean region are rich ecosystems with very high flora and fauna diversity.

C. mediterranea is almost a transparent mollusc and living in water column. It hunts large prey such as fish, shelled pteropods and other heteropods. It lives in the upper layers of the warm waters of all oceans (<http://species-identification.org/>). Now it is found in Turkish Mediterranean Sea shores several times by divers or harpooners.

Materials and Methods

The specimens were observed in water column, at depths of 1-15m; from 6 different places of Turkey Mediterranean shores (Gazipaşa, Antalya Falezler, Örnekköy, Kemer, 3 Islands and Izmir), during SCUBA activities and spearfishing in 2004-2012 (Figure 1). All record coordinates were noted during activities (Table 1). Specimens were sensitive so we only took a short video, some photos and then released back to the sea. Lengths of specimens were 6-12cm.

Short Description: The body is long and cylindrical with one swimming fin. Body is almost completely transparent, only the broad triangular visceral nucleus is darkly pigmented. Whole body except tail has small white points. The large eyes are black, and the mouth organs are clearly seen in red. The intestine is frequently full and easily visible. The tail is transparent with a ventral tail keel and an unpigmented clasper (Image 1, 2).

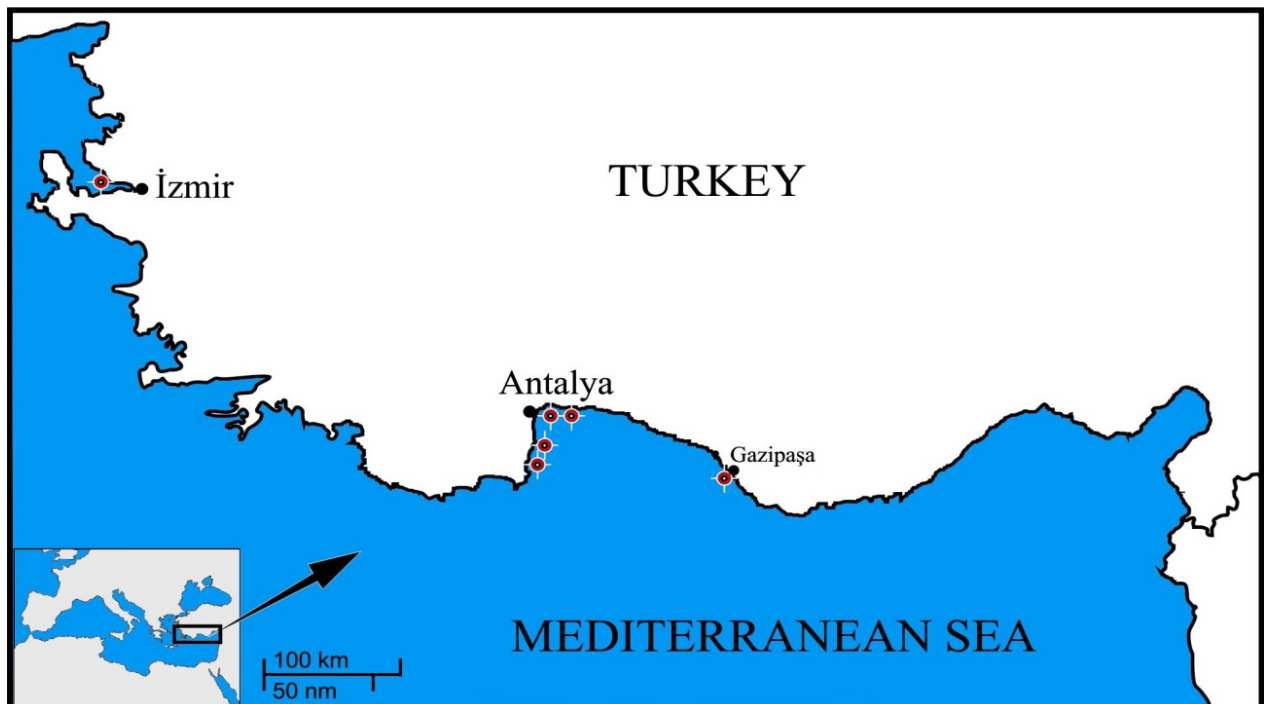


Figure 1. Records showing on the map. (By red marks)

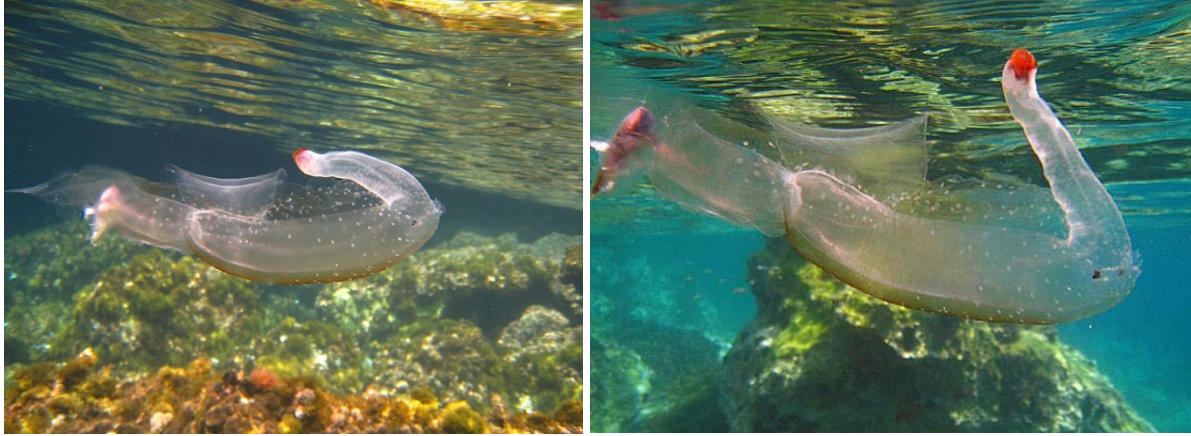


Image 1. *Carinaria mediterranea* Blainville, 1825 (photo by Sercan ZENGİN)



Image 2. Invisible specimen of *C. mediterranea* in box (a photo from laboratory) (Antalya)

Table 1. Records coordinates and depths

Places	Depths (m)	Coordinates	
1 Gazipaşa	8	36°13'20.15"N	32°18'27.39"E
2 Örnekköy	3	36°50'45.38"N	30°48'8.27"E
3 Antalya Falezler	1	36°53'1.63"N	30°40'47.99"E
4 Kemer	15	36°35'21.45"N	30°35'42.54"E
5 3 Islands	8	36°27'54.09"N	30°33'2.88"E
6 İzmir	1	38° 9'44.40"N	26°46'31.43"E

Synonyms:

Carinaria challengerii Bonnevie, 1920
Carinaria oceanica Vayssière, 1904
Carinaria grimaldi Vayssière, 1903
Carinaria atlantica Adams & Reeve, 1850
Carinaria punctata D'Orbigny, 1836
Carinaria australis Quoy & Gaimard, 1833
Carinaria mediterranea Blainville, 1825

Results

C. mediterranea was found at the first time in 2004 by a diver in the Gulf of Antalya (Falakalı Mutaf et al., 2008). After this time it was seen several times again in the Gulf of Antalya 2004-2010. Finally, it was found in 1 m depth of Turkish Aegean Sea shores in 2008 (İzmir). Actually this species is a common mollusc in the whole Mediterranean Sea. However its transparent body does not let anybody to realize its existence.

The Mediterranean Sea surface covers only 0.8% of the world ocean but between 8-9 % of

the worlds marine species live in this enclosed sea. This means that this area is a pool of rich biodiversity for the region. Because of this, we have to allocate more marine areas for fish and other living resources in this unique ecosystem.

Turkey is surrounded by four different seas (The Black Sea, Marmara Sea, Aegean Sea and The Mediterranean Sea). These seas contain numerous islands and islets and Turkish seas are very rich in the diversity of fish species.

Conclusions

According to these results, new detailed studies are needed to monitor the indigenous species in the Mediterranean shores of Turkey.

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