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SHORT COMMUNICATION KISA BİLGİLENDİRME

THE DISTRIBUTION OF THE ALIEN GASTROPOD *Melibe viridis* (KELAART, 1858) (OPISTOBRANCHIA: TETHYIDAE) IN THE MEDITERRANEAN SHORES OF TURKEY

Yaşar Özvarol*

Akdeniz University, Fisheries Faculty, Antalya

Abstract: In this study, distribution of *Melibe viridis* (Kelaart, 1858) which is an alien dendronotacean nudibranch (Gastropoda) in Turkish Mediterranean Shores is determined. This mollusc was observed on a soft sediment bottom (sandy) covered with algal beds mainly composed of *Acetebulum acetebularia*, neptun grass (*Penicillus capitatus*) and the invasive chlorophyta *Caulerpa scallpeliformis*. One specimen of *M. viridis* was observed during SCUBA diving activity in Konyaaltı beach at a depth of 12 meters, 4 September 2011, in the Gulf of Antalya.

Keywords: Gastropoda, Nudibranchia, *Melibe viridis*, Gulf of Antalya, Mediterranean Sea

Özet: **Yabancı Gastropod *Melibe viridis* (Kelaart, 1858) (Opistobranchia: Tethyidae))'in Türkiye' nin Akdeniz Kıyılarındaki Dağılımı**

Bu çalışmada, yabancı bir tür olan *Melibe viridis* dendronotacean nudibranch (Gastropoda)'in Türkiye'nin Akdeniz kıyılarındaki dağılımı incelenmiştir. Bu tür yumuşak (kumlu) zeminde *Acetebulum acetebularia*, neptun çayırı (*Penicillus capitatus*) ve istilacı bir tür olan *Caulerpa scallpeliformis*.(chlorophyta)'in yoğun olarak bulunduğu alg yataklarının olduğu kesimde görülmüştür. Bu çalışmada bir adet *M. viridis* Antalya Körfezinde, Konyaaltı plajında 12 m derinliğinde, 4 Eylül 2012 tarihinde gözlemlenmiştir.

Anahtar Kelimeler: Gastropoda, Nudibranchia, *Melibe viridis*, *Antalya Körfezi*, *Akdeniz*

* **Correspondence to:** Yaşar ÖZVAROL, Akdeniz University, Fisheries faculty, 07050 Campus, Antalya, Turkey.

Tel.: (+90 539) 632 86 16

E-mail: ozvarol@akdeniz.edu.tr

Introduction

The Mediterranean Sea is undergoing a sharp modification in its physical features, leading to changes in the composition of its biota, and stimulating the scientific community to forecast the potential ecological scenario of a tropicalised Mediterranean Sea to form (Bianchi, 2007) by reviewing and analysing the responses of the Mediterranean biota to global warming (Boero et al., 2008)

Mediterranean records of *Melibe* were originally referred to as *Melibe fimbriata* (Alder and Hancock, 1864), but as pointed out by Gosliner and Smith (2003) in their systematic review of the genus, Rudman (1999) could find no consistent characters for separating *Melibe fimbriata* from *Melibe viridis,* and suggested that the former be considered a junior synonym of the latter. The Mediterranean *Melibe* is now accepted as *Melibe viridis* (Rudman, 2004; Zenetos *et al.*, 2008).

Materials and Methods

One specimen of *M. viridis* was encountered by scuba divers on 4th September, 2011, during a marine benthic survey of the Gulf of Antalya (Image 1). The site (centred on 36° 51.309'N, 30° 37.816' E) where the nudibranch was recorded, is characterised sandy, with bi-stones and pebbles, at a water depth of 12 m. Extensive algal forests (on bedrock and large boulders), together with meadows of *Penicillus capitatus, Caulerpa scallpeliformes*, surround the soft bottom where the nudibranch was encountered.

M. viridis was recorded for the first time in the Gulf of Antalya and reported previously in Mersin shores, Fethiye bay (Yokeş and Rudman, 2004) and Marmaris (Cem, 2011), (Figure 2).

Image 1. Underwater photograph of *Melibe viridis* (12 cm long)

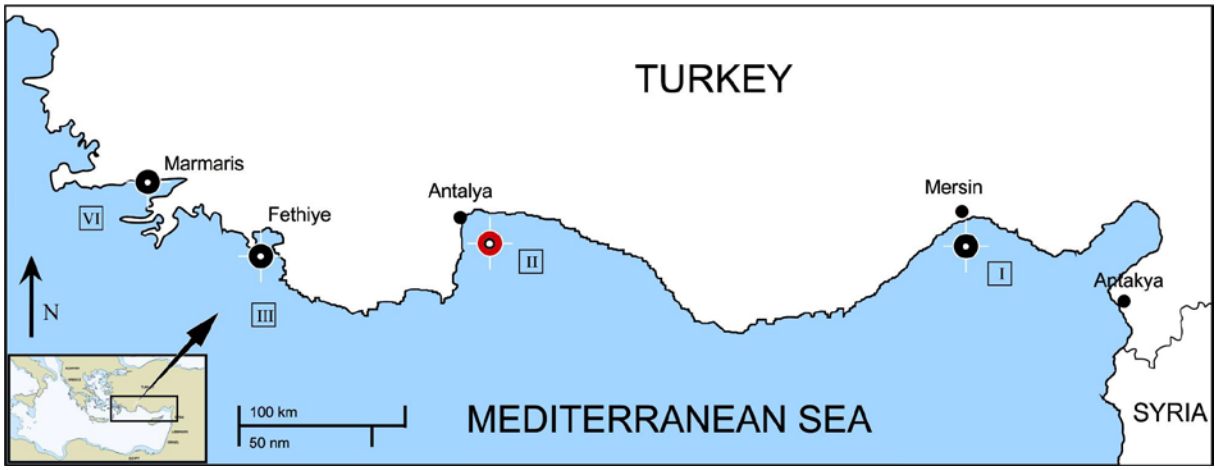

Figure 2. Map showing the localities where *Melibe viridis* species were found in Turkey Coasts (latest record in red).

Short Description

Body large, resembling a mass of vegetal debris, with large cerata and a greatly dilated and rounded oral hood around its mouth, fringed with retentive tentacles. Rhinophores very small and lamellate, emerging from tall sheaths, into which they can be retracted. Large cerata arranged along the notal edge (up to 10 pairs), easily autotomized and regenerated. Each one is oar-like shape, with a cylindrical stem and a flattened distal blade. Surface of the body and cerata bearing tubercles and ramified appendages (gills).

Color

Somewhat translucent with a pale yellow-brown or greenish ground color. The tubercles are brown, and the branched appendages paler.

Size

12 cm.

Results and Discussion

The rate of marine biotic invasions to the Mediterranean Sea has increased in recent decades (Galil and zenetos, 2002). The successful invasion through the Suez Canal of a great many Red Sea species into the Mediterranean is seen as a process to which most of these species were preadapted in the littoral environment of the Red Sea (Por, 1971). Morever some of them already adapted themself to new substrats and replaced native species.

As a result of this invasions many lessepsian molluscs have been reported to occur on the coasts of the countries (Çevik and Öztürk 2001).

The biodiversity of Turkish Mediterranean shores are considerably increasing. *M. Viridis* is an alien gastropod which is adapted itself to the Turkish Mediterranean coast. In this study it is shown that it can be found throughout Turkish mediterranean shores.

Conclusions

According to the findings, new detailed studies are needed to monitor the distribution of the alien species and their relation to native and endemic species in the Turkish Mediterranean Shores. Because it becomes necessary to ensure its continuous updating and revision and promote more systematic efforts supported by modern taxonomi.

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