

## First report of *Chromodoris annulata* Eliot, 1904 (Mollusca, Opisthobranchia, Chromodorididae) on the Levantine coast of Turkey, Eastern Mediterranean

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### Abstract

The present work reports the find of a new alien opisthobranch, *Chromodoris annulata* on the Levantine coast of Turkey. It constitutes also the second record for the Mediterranean Sea. One specimen of *C. annulata* was photographed and collected from a shallow rocky habitat in Beldibi, Antalya.

*Key words:* Mollusca, *Chromodoris annulata*, alien species, Antalya, Turkey, Eastern Mediterranean

Approximately 216 alien mollusca were listed from the Mediterranean Sea (Zenetos et al. 2008) and 98 of them were recorded from the Turkish coasts (Çınar et al. 2005; Zenetos et al. 2008). According to a compilation of alien mollusca in Turkish waters, 17 opisthobranch species had been reported by 2005 (Çınar et al. 2005) whereas their number had risen to 20 by 2006 (Aartsen and Goud 2006; Öztürk and Can 2006; Çınar et al. 2006). The present work reports the find of a new alien opisthobranch, *Chromodoris annulata* Eliot, 1904, Fam. Chromodorididae, in Turkey and second record for the Mediterranean Sea.

During diving surveys to detect possible Erythrean aliens in the Gulf of Antalya, a single specimen of *C. annulata* was found in a rocky habitat, at 2.5 m depth in Beldibi, Antalya, on July 2008. The water temperature was 29°C.

Beldibi (36°42'35"N, 30°34'22"E) is located 10 km southwest of the Antalya Province, on the south-western coast of Turkey (Figure 1). The specimen was photographed (Figure 2) and returned to the sea.

*Chromodoris annulata* is commonly distributed in the western and northern Indian Ocean and the Red Sea. The species was first reported from the Mediterranean Sea, from Salamina Island (Saronikos Gulf), Greece (Zenetos et al. 2006; Daskos and Zenetos 2007; Zenetos et al. 2007).

Our specimen is 40 mm in length and had the characteristic purple ring around the gills and the rhinophores and many yellow spots over the body. This colour form of *C. annulata* is similar to that reported from the Red Sea specimens (Yonow 1989; Mannak 2007; Mrutzel 2005; El Tawil 2007). However, the specimen reported by



Figure 1. Gulf of Antalya, south west coast of Turkey, showing the location of Beldibi



Figure 2. *Chromodoris annulata* Photos: Özcan Meydan

Daskos and Zenetos (2007) was a colour form of *C. annulata* with a purple line joining the two purple rings and only a few yellow spots. According to Daskos and Zenetos (2007) such a colour form was reported only from the Arabian Gulf and the Gulf of Oman at the NW corner of the Arabian Sea. Therefore they suggested that the presence of this species in Greek waters could not be the result of Lessepsian invasion due to its absence in the Levantine Sea. The find of the Arabian colour form near a port area in Greece, led them to the assumption that the species had been transported via shipping. According to Yonow (1989) this colour form occurs occasionally also in the Red Sea and the find of a normally coloured specimen on the Levantine coast of Turkey is strengthening the possibility that we are dealing with another case of Lessepsian invasion.

Long-term studies are required to monitor the alien species and their relation to native and endemic species, in order to examine possible competition and to document the displacement and replacement events. Special interest and monitoring studies are needed in the Levantine basin and Suez Canal due to prediction of the probable impacts to the native fauna and flora components.

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