NOTES AND NEWS

FIRST RECORD OF EURYCARCINUS INTEGRIFRONS DE MAN, 1879 (DECAPODA, PILUMNIDAE) FROM THE MEDITERRANEAN SEA

BY

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Biological invasions of alien species constitute a significant environmental problem at present. Major pathways for the introduction of non-native organisms in the marine realm are established through hull fouling and/or ballast water from ships. The maritime traffic along the coast of Turkey and in the Mediterranean Sea has been increasing in recent years. Indeed, shipping activity resulting from this kind of traffic is believed to make the dominant route for biological invasions in the Mediterranean Sea, with some 191 alien species of Metazoa recorded thus far (Galil et al., 2008).

The pilumnid crab, Eurycarcinus integrifrons De Man, 1879, is native to the Indian Ocean (De Man, 1879; Apel, 2001), reaching to the Red Sea and Madagascar. To date, five species of alien Pilumnidae have been recorded in the Mediterranean Sea: Actumnus globulus Heller, 1861; Glabropilumnus laevis (Dana, 1852); Pilumnopeus vauquelini (Audouin, 1826); Pilumnus minutus De Haan, 1835 (= Pilumnus hirsutus Stimpson, 1858); and Halimede tyche (Herbst, 1801) (cf. CIESM, 2010). Only two of these have been found along the Turkish coast, P. vauquelini and P. minutus. Three of those five species, P. vauquelini, P. minutus, and H. tyche are likely to have entered the Mediterranean via the Suez canal, while two species (G. laevis, A. globulus) probably did so through shipping activity (Galil et al., 2006).

E. integrifrons was described from an unspecified location in the Indian Ocean; but the species has been reliably reported from the Persian-Arabian Gulf, Pakistan,

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the Gulf of Aden, and from Bombay to the Andaman Islands (India) (see Apel, 2001; Naderloo & Sari, 2007). Although the species had been confused with *Eurycarcinus orientalis* A. Milne-Edwards, 1867 in the past, the two taxa actually are quite different, and their types differ markedly (see Apel, 2001; PKLN, unpubl. data). The present specimens agree well with the original description and we have no doubt about their identity. No species of *Eurycarcinus* has previously been reported from the Mediterranean.

Three female specimens of *E. integrifrons* were recently collected in Iskenderun Bay, Turkey (36°52′08″N 35°56′14″E to 36°51′42″N 35°55′43″E) on 25.x.2009, at a depth of 16-25 m (fig. 1). The specimens were obtained with prawn trammel nets over sandy-muddy bottoms. Two specimens (carapace length 14.2-15.1 mm, carapace width 19.4-20.2 mm) including the one photographed (fig. 2) are preserved in 4% formaldehyde and deposited in the Museum of the Faculty of Fisheries, Mustafa Kemal University, Iskenderun-Hatay (collection numbers: MSM-MAL/2009-7). One non-ovigerous specimen (carapace length 13.9 mm, carapace width 19.1 mm) is deposited in the Zoological Reference Collection of the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC).

The main abiotic parameters in the study area by the time of collection were as follows: at the surface, salinity 35‰, water temperature 26°C, pH 8.16,