Mediterranean Marine Science
Volume 8/2, 2007, 83-86

First observations of two talitrid crustaceans (Amphipoda: Talitridae) from Gokceada island (NE Aegean Sea)

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Abstract

The present paper reports the occurrence of Talitrus saltator (Montagu, 1808) and Orchestia gammarellus (Pallas, 1766) which are the first records from Gokceada (Imbroz) Island (NE Aegean Sea). It should be noted that, T. saltator is a new record for the Aegean Sea coast of Turkey.

Keywords: Amphipoda; Talitridae; Gokceada; Aegean Sea.

Introduction

Islands tend to have particular ecological conditions different from those of the continents. There are a great number of islands, from large to small in the Aegean Sea. Gokceada (Imroz, Imbroz, Imvroz) is the largest Turkish island, with an area of 279 km^2 (108 square miles) and is located at the entrance to Saros Bay, in the northern Aegean Sea.

Talitrids (Talitroidea, Amphipoda) are divided into four systematic-ecological units as palustral, beachhoppers, sandhoppers and landhoppers (SEREJO, 2004). The semi-terrestrial forms are highly modified, in order to bear the conditions of the supralittoral zone in marine, estuarine and inland waters.

Up to now a total of nine species *(Orchestia cavimana, O.gammarellus, O.kosswigi, O.mediterrenea, O.montagui, O.stephenseni, Platorchestia platensis, Talorchestia deshayesii, Talitrus saltator)* belonging to Talitridae family have been reported from Turkey (DEMIR, 1952; KOCATAS & KATAGAN, 1978; KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE MATTHAEIS *et al.,* 2000; KOCATAS *et al.,* 2001; BALKIS *et al.,* 2002; ASLAN & BALKIS, 2003; OZBEK & USTAOGLU, 2005, 2006; GONLUGUR-DEMIRCI, 2006; SEZGIN & KATAGAN, 2007).

A total of seven species *(O.montagui, O.stephenseni, O.cavimana, O.gammarellus, O.mediterranea, T.saltator, T.deshayesii)* have been recorded from some Greek islands (KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE MATTHAEIS *et al.,* 1998, 2000), whereas only two species *(O.montagui* and *O.stephenseni)* have been recorded from one Turkish island (Bozcaada) in the Aegean Sea (KOCATAS & KATAGAN, 1978; ASLAN & BALKIS, 2003). On the other hand, there is no record of talitrids from Gokceada Island in the study which was carried out by KOCATAS & KATAGAN (1978).

The current study focused on those talitrids which are adapted to semi-terrestrial life on Gokceada Island.

Materials and Methods

A total of ten beach localities was visited between June and September 2007 to investigate talitrid amphipod crustaceans on Gokceada Island, located at 40˚09'52"N 25˚50'23"E in the Aegean Sea. Sampling was made by hand or aspirator and collected specimens were preserved and carried to the laboratory in 70% alcohol in plastic bottles. KRAPP-SCHICKEL & BELLAN-SANTINI (1993), DE KLUIJVER & INGALSUO (1999), SPICER & JANAS (2006) were used to determine the specimens.

Results and Discussion

A total of 115 specimens (10 ♂♂; 105 ♀♀) belonging to *T.saltator* from four different localities and a total of 6 specimens (2 ♂♂; 4 ♀♀) belonging to *O.gammarellus* from one locality were recorded. *T.saltator* specimens were only found on sandy shores, whereas *O.gammarellus* specimens were found amongst debris and heaps of marine algae. However, they were not found together in the same locality. The other localities visited for sampling consisted of pebbles which are not a suitable habitat for these animals.

The sand-living amphipod crustacean *T.saltator* (sandhopper) is usually found on sandy habitats and extends a little up or down the shore. It has been widely recorded along European coasts from southern Norway to the Western Mediterranean and the Azores, the North-East Atlantic Ocean, the Mediterranean Sea and the North Sea (KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE KLUIJVER and INGALSUO, 1999). Up to now, *T.saltator* has been reported from the Marmara Sea, the Mediterranean (KOCATAS & KATAGAN, 1978) and the Black Sea (GONLUGUR-DEMIRCI, 2006; SEZGIN & KATAGAN, 2007) coasts of Turkey. Although it was recorded on some Greek islands (Anafi, Kos, Tilos, Karpathos, Kythira, Crete) located in the southern Aegean Sea (KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE MATTHAEIS *et al.,* 1998), there is no record from the Turkish coasts and islands of the Aegean Sea.

The seaweed-living amphipod crustacean *O.gammarellus* (beachhopper) has a wide habitat range from shallow water and intertidal marine and estuarine areas, to damp semi-terrestrial habitats well away from water. The species is most frequently found beneath decaying debris around the high water mark on shingle shores. *O.gammarellus* has an extensive distribution: the North-East Atlantic, the North Sea, the Mediterranean, European coasts, the Black Sea, South-West Africa, coastal areas in Western Norway and Iceland

(KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE KLUIJVER & INGALSUO, 1999). Regarding Turkish waters it has so far been reported from the Marmara Sea, the Aegean Sea, (KOCATAS & KATAGAN, 1978), the Bosphorus (BALKIS *et al.,* 2002), and the Black Sea (GONLUGUR-DEMIRCI, 2006; SEZGIN & KATAGAN, 2007). Although it was recorded on some Greek islands (Karpathos, Rhodos and Astipalea) located in the southern Aegean Sea (KRAPP-SCHICKEL & BELLAN-SANTINI, 1993; DE MATTHAEIS *et al.,* 1998), there is no record of *O.gammarellus* from the Turkish islands in the Aegean Sea.

According to the above, the *T.saltator* and *O.gammarellus* sampled on Gokceada Island are new records for the Turkish islands in the Aegean Sea. In addition, *T. saltator* is a new record for the Aegean Sea coast of Turkey.

Acknowledgements

We would like to thank T.Kirgiz, H.Balkis and Z. Okyar for their guidance in this study.

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Accepted in 2007