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On the Presence of *Melarhaphe Neritoides* (Linnaeus, 1758) (Prosobranchia, Gastropoda, Mollusca) in the Sinop Peninsula (Central Black Sea, Turkey)

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Abstract

The present study is concerned with 1 prosobranch gastropod species [*Melarhaphe neritoides* (Linnaeus, 1758)], obtained during the benthic sampling by surveying at the supralittoral zone (upper part of 0-0,5 m.) of the Sinop Peninsula coasts in April 2006.

A total of 51 species of marine Prosobranchia-Gastropoda (Mollusca) are known in the Black Sea coast of Turkey. However, the Prosobranch gastropod *Melarhaphe neritoides* (Linnaeus, 1758) is recorded for the first time from the central Black Sea of Turkey. Previous records of the species were confined to the western part of the Black Sea, it is occurrence at Turkish coast of the Black Sea extends its distribution range to the central Black Sea continued to Turkish coastal waters of Black Sea.

Key words: *Melarhaphe neritoides*, Littorinidae, Prosobranchia,Gastropoda, Mollusca, Black Sea.

INTRODUCTION

Only about 20–25% of the zoobenthos of the Mediterranean Sea is shared with the Black Sea, due to the less saline water which is unsuitable for most Atlantic and Mediterranean species, and due to the restriction of suitable habitats to the upper water layers because there are deep zones with anoxic conditions containing hydrogen sulphide [1].

Investigation concerned with Prosobranchia species in the Black Sea coasts of the Turkey is quite scanty and limited regarding depth, except for Russian and Romania coasts of the Black Sea [2-10].

Atlanto-Mediterranean originated *Melarhaphe neritoides* was first described from the Turkish coastal zone of Mediterranean, Aegean and Marmara Sea were given by [11-14], First record on this species for the Black Sea coasts of Turkey were given by [15]. This paper reports the presence of *Melarhaphe neritoides* (Linnaeus, 1758) in the Sinop Peninsula and vicinity of the Central Black Sea.

MATERIAL AND METHODS

The study area is shown in Fig. 1. Samples were collected by spatula from large rocky blocks (above level of sea) on zone of splash and nearly cut of water in supralittoral. Some brown (*Cystoseira barbata* etc.) and green algae (*Ulva* and *Enteremorpha* species) holding onto small rock blocks were collected and washed in tray containing 70 % ethyl alcohol. *M. neritoides* (Linnaeus, 1758) specimens which is above (sea level) were identified together with few *Tricolia pullus pullus* (Linnaeus, 1758) which is below level of the sea within *Cystoseira barbata* [35].

M. neritoides (Linnaeus, 1758) was identified and listed according to the revisions given [14-20] and animals identified to the species level through [21-23]. Moreover, the original photograph of the species was taken.

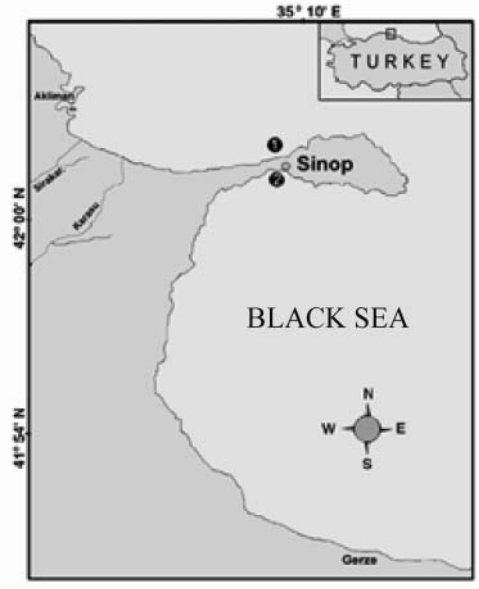

Figure 1. Map of the study area

RESULT AND DISCUSSION

***Melarhaphe neritoides* (Linnaeus, 1758)**

Synonyms: *Helix petraea*, Montagu, 1803; *Turbo caerulescens* Lamarck, 1822; *Paludina glabrata* Pfeiffer, 1828*; Littorina insularum* Locard, 1892

Material examined: 25 specimens, Sinop Peninsula, Black Sea

Station **1**: 35°08'18"E–42°01'03"N;

Station **2**: 35°09'20"E-42°01'02"N

Systematic Category: [32-33]

PROSOBRANCHIA Milne Edwards, 1848
APOGASTROPODA Salvini-Plawen & Haszprunar, 1987
CAENOGASTROPODA Cox, 1959
LITTORINOIDEA Children, 1834
LITTORINIDAE Children, 1834
LITTORININAE Children, 1834
Melarhaphe Linnaeus, 1758
Melarhaphe neritoides (Linnaeus, 1758)

In this study, lenght of the largest specimen is 9 x 6 mm (see Fig. 2). The shell may be 3 to 9 mm high [24]. Sometimes, the size of the shell may be up to 9 x 7 mm [20] and 10 x 8 mm [10].

Figure 2. *Melarhaphe neritoides* (Linnaeus,1758)

Range and habitat: Habitat of this species is on rocks, above level of sea, in supralittoral, on zone of splash and nearly cut of water [10]. Lives very high on rock shores, even on places that are never submerged (splash zone). They are locally abundant [24]. In crevies and empty barnacles cases on upper shore and in splash zone. Often several metres above EHWST (Extreme high water spring tide) on exposed shores [25]. Common in the Mediterranean and in the Black Sea [4, 25, 26, 27, 10 ,15]. Also, the coasts of Marmara Sea and Bosphorus Sea [27-30]. In Aegean Sea, [12, 13, 14]. From western Norway south to Morocco, the Canaries and the Azores.

DISCUSSION

In the present study, *Melarhaphe neritoides* (Linnaeus,1758) obtained during the benthic sampling by surveying from the supralittoral zone of the Black Sea (Sinop Peninsula coasts) in April 2006.

A total of 51 species of marine Prosobranchia-Gastropods (Molluscs) are known in the Black Sea coast of Turkey [31]. *M. neritoides* is reported for the first time from the Black Sea coasts of Turkey by [15]. Previous records of the species were confined to the western part of the Black Sea, it is occurrence at Turkish coast of the Black Sea extends its distribution range to the central Black Sea continued to Turkish coastal waters of Black Sea. These findings extend the range of the species to the central Black Sea and possibly also the locations along the eastern part of the Black Sea.

Especially, in this study, it was found on the cavity of the stones at the supralittoral zone of the Sinop Peninsula coasts (see Fig. 1). In contrast to this, there was no observations at the another points of the Sinop Peninsula and vicinity. At some studies, it is found in cracks and crevices on rocky shores and also in shells of dead *Balanus*, high in the littoral fringe, its upper limit increasing with increasing exposure to wave action [32-35]. When the sea is calm, it is found in the mediolittoral zone for feeding [14, 25].

As a consequence, a lot of study about ecologic and taxonomic must be conducted in supralittoral zone of the Black Sea coasts of Turkey. Also, the further advance of this species to the coasts of Eastern Black Sea must be monitored and reported.

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