

# On the Mollusca fauna of the Black Sea near Istanbul

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**Abstract.** For the study of the mollusc fauna of the Black Sea at the entrance to the Bosphorus, sampling was carried out at different depths between 0.5 and 65 m at 44 stations. Altogether 43 species belonging to 36 genera were found. 15 species belong to the Gastropoda and 28 to the Bivalvia. Two species are new to Turkey, and 9 new to the Black Sea coasts of Turkey. Two species are alien species. *Rapana venosa*, one of the exotic species whose negative effect on local bivalve populations has been described, was only rarely found.

**Kurzfassung.** Zur Untersuchung der Molluskenfauna des Schwarzen Meeres am Eingang zum Bosphorus wurden Aufsammlungen an insgesamt 44 Stationen in Tiefen von 0,5 bis 65 m gemacht. Insgesamt wurden 43 Arten aus 36 Gattungen gefunden. 15 Arten gehören zu den Gastropoden (Schnecken) und 28 zu den Bivalvien (Muscheln). Zwei Arten sind neu für die Türkei, 9 neu für die türkische Schwarzmeerküste. Bei 2 Arten handelt es sich um exotische Arten, darunter *Rapana venosa*, von der ein negativer Effekt auf die lokalen Muschelpopulationen beschrieben wurde. Im Untersuchungsgebiet wurde sie aber nur selten gefunden.

**Key words.** Gastropoda, Bivalvia, Mollusca, Black Sea, Bosphorus, Turkey.

## Introduction

The Black Sea is characterised by an exchange of water with the Sea of Marmara: nearly  $340 \times 10^9 \text{ m}^3$  of brackish water enters the Sea of Marmara annually from the Black Sea by a surface current through the Bosphorus, and  $176 \times 10^9 \text{ m}^3$  of subhalocline water flows back from the Sea of Marmara to the Black Sea in a bottom current (STANLEY & BLANPIED 1980, YÜCE & TÜRKER 1991). 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 (MUTLU et al. 1993). Pollution, hypereutrophication, damaged habitats, introduction of alien species and overfishing are factors that threaten the Black Sea ecosystem (ÖZTÜRK 1999).

Only relatively few studies have been carried out on the gastropods and bivalves of the Turkish Black Sea. Mollusca were included by CASPERS (1968), who studied benthic invertebrates, and PINAR (1974), who studied fouling and boring organisms. Other works on the Black Sea mollusc fauna include MUTLU & ÜNSAL (1991-1992), MUTLU et al. (1993), MUTLU (1994), UYSAL et al. (1998), and ÖZTÜRK (1999). ÖZTÜRK & ÇEVİK (2000) gave an overview of the mollusc fauna and reported a total of 14 gastropod and 36 bivalve species from the Black Sea. This study is an assessment of the Mollusca fauna of the Black Sea at the entrance to the Bosphorus.