



Sipunculans along the Aegean coast of Turkey

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Abstract

Faunistical analysis of benthic samples collected from different depths and biotopes (0–195 m) at 108 stations along the Turkish Aegean coast yielded 11 species and 5 subspecies of Sipuncula. Two species (*Phascolion (Isomya) tuberculosum* and *Aspidosiphon (Aspidosiphon) misakiensis*) are new to the eastern Mediterranean fauna and 8 species are new to the Turkish fauna. *Onchnesoma steenstrupii steenstrupii* has the highest dominance and frequency index values in the study area. *Aspidosiphon (Aspidosiphon) elegans* and *Apionsoma (Apionsoma) misakianum* are alien species. Of the biotopes examined, muddy sand was characterized by the highest number of species and specimens, whereas sponges and coral-ligenous substrata were characterized by the lowest number of species and specimens. The biometrical and reproductive features of the species are presented and discussed.

Key words: Sipuncula, ecology, biometry, reproduction, Aegean Sea, Turkey

Introduction

Sipunculans are widely distributed in the world's oceans, from intertidal to abyssal depths (Cutler 1994). They sometimes form dense populations in hard and soft biotopes, and play important roles in recycling organic matter and energy in a given ecosystem. Some species of *Aspidosiphon*, *Lithacrosiphon* and *Phascolosoma* are bio-eroders and cause habitat changes, especially in calcareous habitats such as coral reefs (Peyrot-Clausade *et al.* 1992).

The phylum has almost 162 species world-wide (Cutler 1994) and 34 species in the Mediterranean Sea (Açık 2007). Sipunculans have not been studied in detail on the coasts of Turkey. The first record of sipunculans from Turkey was given by Ostroumoff (1896), who found *Nephasoma (Nephasoma) diaphanes diaphanes* (Gerould 1913) (as *Petalostoma minutum* Keferstein, 1863) at 45–77 m depth in the Sea of Marmara. Afterwards, Demir (1952) and Caspers (1968) found *Aspidosiphon (Aspidosiphon) muelleri*, *Nephasoma (N.) diaphanes diaphanes* and *Phascolion (Phascolion) strombus strombus* in the Sea of Marmara. On the Aegean coast of Turkey, a total of 7 species [*Sipunculus (Sipunculus) nudus*, *Golfingia (Golfingia) cf. elongata*, *Golfingia (G.) vulgaris vulgaris*, *Phascolion (P.) strombus strombus*, *Onchnesoma steenstrupii steenstrupii*, *Aspidosiphon (A.) muelleri* and *Phascolosoma (Phascolosoma) granulatum* Leuckart, 1828] were reported from general ecological studies (Kocatas 1978; Ergen & Çinar 1994; Ergen *et al.* 1994; Çinar *et al.* 2002; Dogan *et al.* 2005). Recently, Açık (2007; 2008) reported *A. (A.) misakianum* and *A. (A.) elegans* from the Aegean Sea.

In the other basins of the Mediterranean, there is relatively more information about the distribution and ecology of sipunculans (see Pancucci-Papadopoulou *et al.* 1999). A total of 16 sipunculan species were reported in the Adriatic Sea (Pancucci-Papadopoulou *et al.* 1999); 14 species in the Alboran Sea (Saiz Salinas & Villafranca-Urchequi 1990); 23 species on the coast of Spain (Saiz Salinas 1993b); and 19 species from the Levantine Sea (Açık *et al.* 2005).