

SOME NEW RECORDS OF DESMIDS FROM TURKEY

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Abstract

Euastrum oblongum, *E. verrucosum* var. *rhomboideum*, *Micrasterias americana*, *M. denticulata*, *M. rotata*, *Staurastrum pilosum*, and *Spondylosium planum* are recorded for the first time from Turkey.

Introduction

There are many lakes, streams, ponds and other artificial reservoirs in Turkey which support a rich algal growth. Little is known about the desmid flora and only a few species belonging to the genera *Closterium*, *Cosmarium*, *Euastrum*, *Pleurotaenium* and *Staurastrum* have been reported from Turkey (Aykulu, 1983; Cirik, 1984, 1989; Gönülol, 1986, 1993; Obali, 1984, 1989; Öztürk, 1994). The present paper describes the occurrence of 7 species belonging to the genera *Euastrum* (2), *Micrasterias* (3), *Staurastrum* (1) and *Spondylosium* (1) from Turkey. Besides, genera *Micrasterias* and *Spondylosium* are also first records from Turkey.

Material and Method

Algal samples were collected from Aygir and Balikli lakes (Fig.1) which are situated at 2700 m and 2600 m above sea level, (50-52°N) alt., (36-38°E) long., in Trabzon, on the East Blacksea region of Turkey. The lakes have an area of 3.75 km² Aygir lake and 4.25 km² balikli lake. Collections were made during the snow and ice-free period from June to September in 1996. Algae were collected and analyzed as suggested by Round (1953). Taxonomic determinations were carried out following the works of West (1904-1912), Scott & Prescott (1961), Lind & Brook (1980), Huber-Pestalozzi (1982) and Dillard (1993). Photographs were taken with on Olympus BH-2 microscope.

Collections preserved in 4% formaldehyde were deposited in the Biology Laboratory, Karadeniz Technical University, Trabzon.

Systematic Description

The genera are listed in the order adopted by Dillard (1993) while taxa under each genus are described alphabetically.

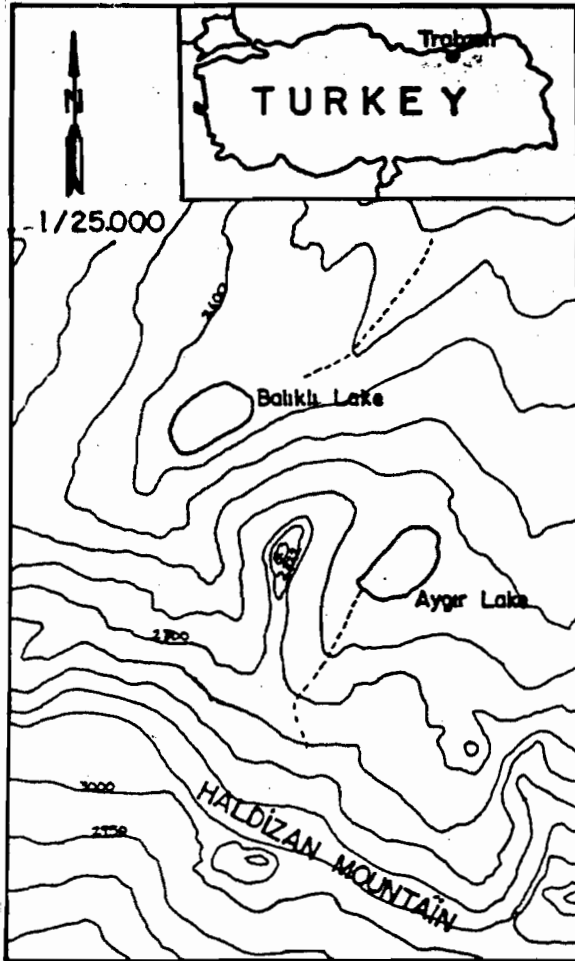


Fig.1. Map of the study area in Turkey.

Genus *Euastrum* Ehrenb. ex Rolfs 1848.

Euastrum oblongum (Grev.) Rolfs (Fig.2).

Cell longer than broad. Semicell five-lobed. Sinus narrow and closed. Cell wall punctate. Cell 172.5 μm long, width 75 μm , sinus 27.5 μm .
 Trabzon; Aygir lake, epipellic, 14 July, 1996, Sahin, 50.

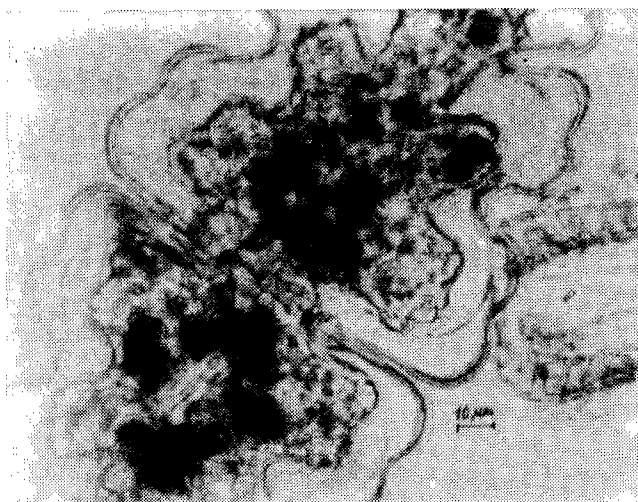


Fig.2. *Euastrum oblongum* (Grev.) Rolfs.

Euastrum verrucosum Ehr. ex Rolfs var. *rhomboideum* Lund. (Fig.3).

Cells subhexagonal. Sinus narrowly linear for half its length then widely open. Semicells 3-lobed. Cell wall granulata. Cell long 110-120 μm, width 100-105 μm. Trabzon: Aygir lake, epipelagic, 14 July, 1996, Sahin, 50.

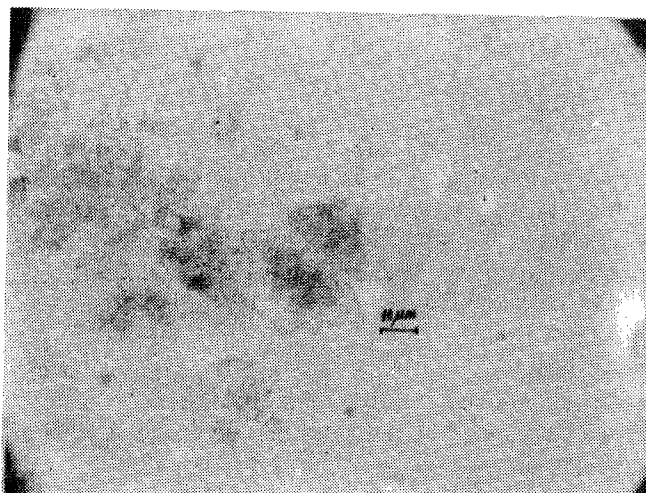


Fig.3. *Euastrum verrucosum* Ehr. ex Rolfs var. *rhomboideum* Lund.



Fig.4. *Micrasterias americana* (Ehr.) Rolfs.

Genus *Micrasterias* Agardh 1927

Micrasterias americana (Ehr.) Rolfs (Fig.4).

Cells subhexagonal. Sinus opening. Semicell 5-lobed. Polar lobe broad and outstanding with retuse apex, angles produced into divergent processes with toothed apex; from the base of each process arises a second similar but smaller processes, the two accessory processes disposed asymmetrically, one each side of the polar lobe. Cell long 175 μm , width 150 μm .

Trabzon; Aygir and Bolikli lakes, epipellic, 14 July, 1996, Sahin 50-52.

M. denticulata Breb. (Fig.5).

Cell subcircular, sinus narrowly linear, semicell 5-lobed; polar lobes not projecting, apical margin retuse with a median notch. Cell wall punctate. Cell long 245-260 μm , width 220-235 μm .

Trabzon; Aygir and Bolikli lakes, epipellic, 14 July, 1996. Sahin, 51-52.

M. rotata (Grev.) Rolfs (Fig.6).

Cell subcircular, sinus linear, closed; semicell 5-lobed; polar lobe widening outwards to a retuse apex with slightly produced dentate angles. Cell wall punctate. Cell long 280 μm , width 250 μm .

Trabzon; Aygir lake, epipellic, 18 August, 1996, Sahin, 51.



Fig.5. *M. denticulata* Breb.

Genus *Staurastrum* Meyen 1829

Staurastrum pilosum (Naeg.) Arch. (Fig.7).

Cells deeply constricted, sinus acute and open, semicell subelliptical; wall covered with spines. Cell long 42.5 μm , width 37.5 μm .

Trabzon; Bolikli lake, epipellic, 18 August, 1996, Sahin, 51.

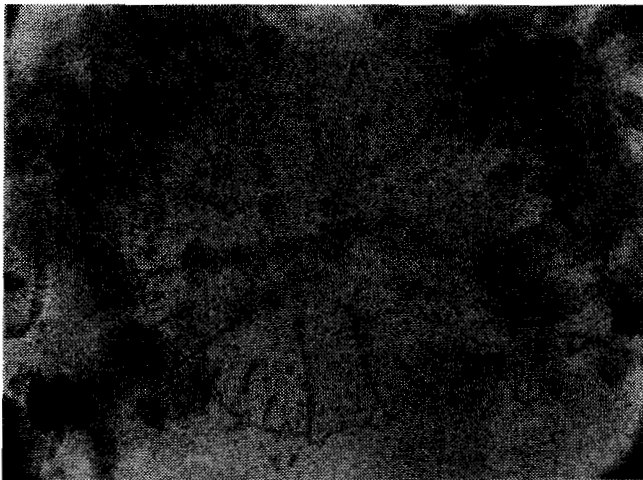


Fig.6. *M. rotata* (Grev.) Rolfs.

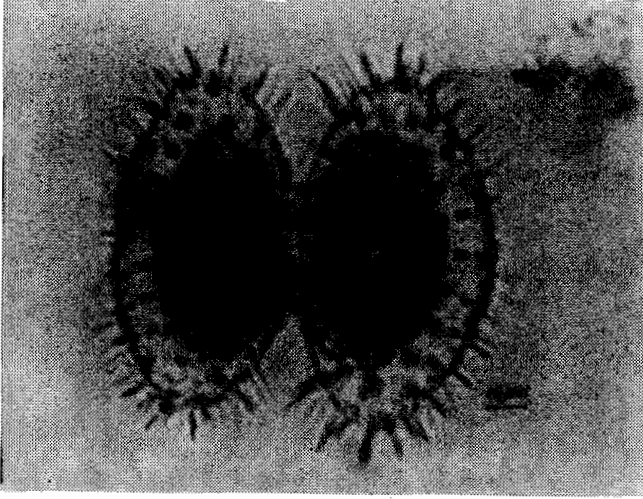


Fig.7. *Staurastrum pilosum* (Naeg.) Arch.

Genus *Spondylosium* Brebisson ex Kuetzing, 1849

***Spondylosium planum* (Wolle) West & West (Fig.8).**

Cell slightly wider than long, subquadrangular with rounded angles. Sinus obtuse and open. Cell wall smooth. Filaments not twisted and without a mucilaginous sheath. Cell long 10 μm ., width 12.5 μm ., isthmus 5 μm .

Trabzon; Bolikli lake, epilithic, 18 August, 1996. Sahin, 60.

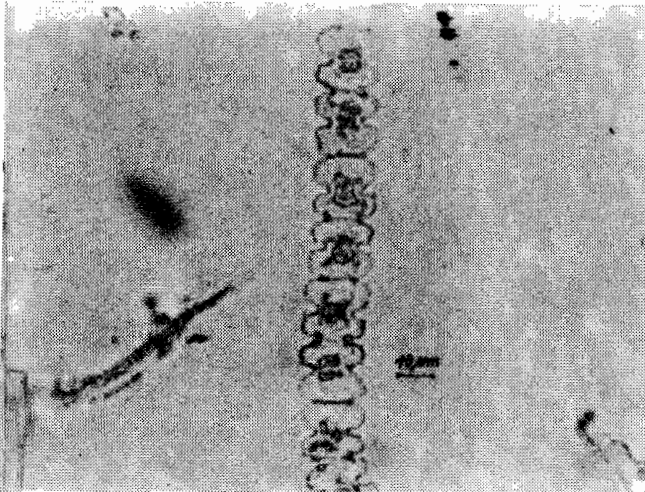


Fig.8. *Spondylosium planum* (Wolle) West & West.

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