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Short Communication

Trochiscia (Chlorococcales) a new taxon from Central Anatolian Region, Turkey

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A new species, *Trochiscia anatolicum,* is described from a fresh water habitat, Dam Lake in the middle Anatolian region. This new taxon was first found on examination of algal samples from Kesikkopru Dam Lake. Light microscopes indicate a clear relationship with species in the genus *Trochiscia.* Some of the characteristic features of the new taxon include a spines and irregular cell wall. And this taxon was under observation for two years.

Key words: *Trochiscia,* new species, phytoplankton, Kesikkopru Dam Lake, Turkey.

INTRODUCTION

Trochiscia Kütz. (*Acanthococcus* Lagerh.) (Oocystaceae, Chlorococcales, Chlorophyceae) is not widespread and occurs in the phytoplankton of bogs, ponds ad lakes particularly acid waters. Cells are spherical to subspherical and solitary (sometimes gregarious). The cell wall is thick and bears spines or irregularly and variously sculptured (e.g. ridged and sharp spines). The chloroplast is parietal, usually lobed and it has one pyrenoid (spine-bearing species) or one to several parietal disks and has one pyrenoid (sculptured species). Same species occur on snow; also terrestrial. They are fairly common, with different species colonizing aquatic, terrestrial and snow habitats (Korshikow, 1987; Ringer, 1970; Philopose, 1967; Wehr and Sneath, 2003).

Kesikkopru Dam Lake is located 110 km southeast of Ankara and above 750 m sea level and 650 ha size. Maximum depth is 30 m (Ahiska, 2005).

The plankton samples were collected twice a month from selected stations of the Dam Lake (Figure 1) and transferred to the laboratory for microscopic study. The phytoplankton samples were collected by Nansen water collecting by Hydrokiel (45 µ mesh size) apparatus. Determination of some physical chemical properties (pH, temperature, oxygen and light porous effect) is reported (Table 1).

RESULTS AND DISCUSSION

A new species, *Trochiscia anatolicum* is described (Figures 2A, B, C and D) from a freshwater habitat, Kesikkopru Dam Lake, Central Anatolian region of Turkey, and this species was under observation during two years. Using morphological, cytological and ecological characters (John et al., 2002), it was showed that it has some difference between the other Trochiscia members (www.algaebase.org). Key of the Genara Trochiscia consolidated in this new species (Table 2). Fresh samples of the materials were stored in formaldehyde solution and herbarium numbers of this species of the alga examined are listed in Gazi MACC.

According to the custody, this species usually exist as choromotophores, covered by fairly large spines, have several discoid pyrenoids, one or several nuclei, solitary, spherical, and with cells of 35-52 µm in diameter. In addition the cell wall is covered by sharp spines (Figure 2B). According the some physical-chemical properties this species has got wide range temperature, prefers high

Table 1. Some physical and chemical parameters of Kesikkopru Dam Lake.

Months (2006 average values)	pH	Water temperature (^{0}C)	Oxygen (mg l^{-1})	Light porous effect (m)
April	8.14	13.6	9.48	7
May	8.5	17.2	9.36	6.1
June	7.76	19.8	8.62	7.7
July	7.84	22.2	8.04	8.9
August	8.12	23	8.28	9.6
September	8.16	18.4	8.36	7.1
October	8.8	14.5	8.7	6.6
November	8.24	9.7	9.9	7.6
December	8.04	5.2	9.72	8.6
January	7.8	4	10.6	10.8
February	7.8	4.4	11.2	9.2
March	8.04	10.4	9.06	7

Table 2. Key of the Genara *Trochiscia.*

Character	Species
1- Cells with a net-like surface ornamentation without spines or papillae	*T .reticularis*
Cells with net-like on surface and surface granule	*T. granulata*
1- Cells with or without a net like surface ornamentation and covered by spines or papillae	2
2- Cells with net-like ornamentation and minute spines or papillae, often within a mucilaginous envelope	*T. planctonica*
2- Cells with net like ornamentation and long spines include a lot of pyrenoid	*T.hystrix*
2- Cells with net-like and cell wall is covered by a thick skin of mucilage, covered by sharp spines	*T. anatolicum*
2- Cells without net-like ornamentation and covered by fine papillae or minute spines, without mucilage	3
3- Walls covered by fine papillae	*T. aspera*
3- Walls covered by minute spines	*T. hirta*
3-Cell walls covered fine and wide spines like thorn	*T. verrucosa*

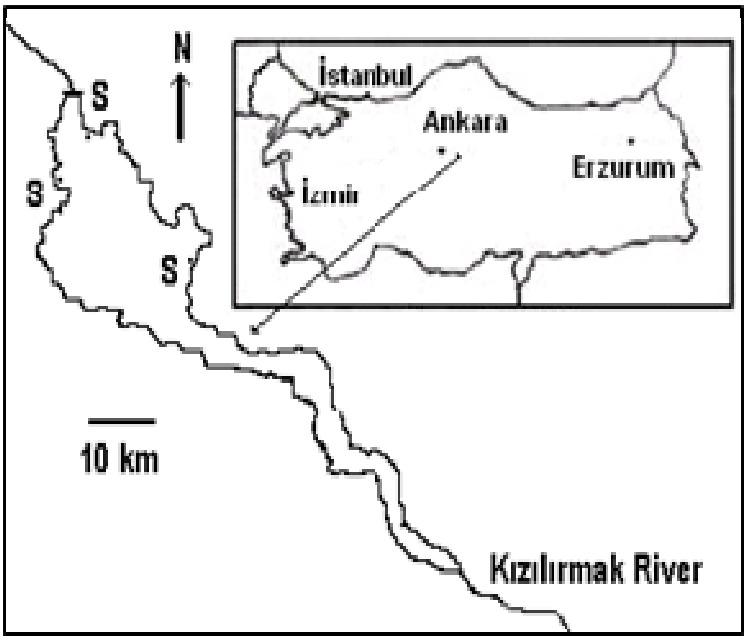
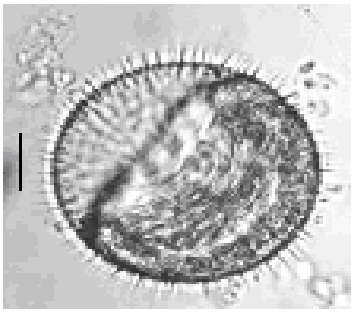
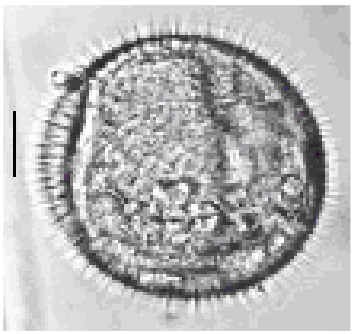


Figure 1. Location and stations (S) of Kesikkopru Dam Lake.



A



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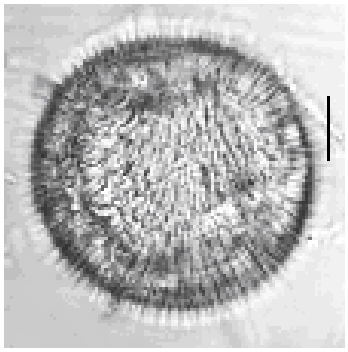

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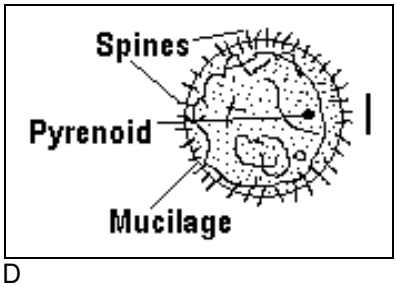

D

Figure 2 (A, B, C, D). A new species, *Trochiscia anatolicum* Atici is described from a freshwater habitat, Kesikkopru Dam Lake, Central Anatolian region of Turkey (scales 10 µ).

level oxygen and alkaline areas (Karaca and Pulatsü, 2003). Kesikkopru Dam lake waters take in freshwaters from high mountains snow waters also.

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