

A Taxonomical Study on the Rotifera Fauna in Pertek Region of Keban Dam Lake

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Özet: *Keban Baraj Gölü Pertek Bölgesi'nin rotifer faunası üzerine taksonomik bir çalışma.* Bu çalışmada, Keban Baraj Gölü Pertek Bölgesi'nin Rotifera faunası Ağustos 2002- Temmuz 2003 tarihleri arasında taksonomik açıdan incelenmiştir. Gölde, Rotifera filumuna ait 20 tür tespit edilmiştir, bu türlerden 6'sı (*Polyarthra remata*, *Asplanchna sieboldi*, *Hexarthra mira*, *Hexarthra fennica*, *Testudinella patina* ve *Trichocerca cylindrica*) bu göl için yeni kayıttır.

Anahtar Kelimeler: Rotifera, zooplankton, taksonomi, Keban Baraj Gölü.

Abstract: In this study, the Rotifera fauna in Pertek region of Keban Dam Lake was taxonomically investigated between August 2002 and July 2003. Twenty species belonging to the phylum Rotifera were identified, six of which *Polyarthra remata*, *Asplanchna sieboldi*, *Hexarthra mira*, *Hexarthra fennica*, *Testudinella patina* and *Trichocerca cylindrica* were new for this lake.

Key Words: Rotifera, zooplankton, taxonomy, Keban Dam Lake.

Introduction

Rotifers, which from the second step of the food chain, are important food sources for some invertebrate animals and fishes. Rotifera are one of the basic groups of the zooplankton community providing the energy flux of freshwater ecosystems and they inhabit virtually all aquatic habitats. Certain species and genera of rotifers are used as indicators of water quality, eutrophic status and productivity of a lake ecosystem (Marneffe et al. 1998, Haberman 1998, Davis 1955).

Only a few studies on rotifera fauna of Turkey's Dam Lakes was conducted by Altındağ and Özkurt (1998) in Kunduzlar and Çatören Dam Lakes (Kırka-Eskişehir), Bekleyen (2001, 2003) in Devegeçidi Dam Lake (Diyarbakır) and Göksu Dam Lake (Diyarbakır), Saler (2001, 2004) in different regions of Keban Dam Lake (Elazığ), Saler and Şen (2000, 2002) in Cip Dam Lake (Elazığ), Şen and Özdemir (1994) in Uluova Region of Keban Dam Lake (Elazığ).

The purpose of this paper was particularly to determine the Rotifera fauna of Pertek region of Keban Dam Lake.

Materials and Methods

Keban Dam Lake is located between latitudes 35°20' and 38°17' N and longitudes 38°152' and 39°52' in eastern Anatolia (Fig.1). Formed at the confluence of Munzur, Peri and Karasu rivers. Storage volume of the reservoir is 30.6 billion m³. The maximum water depth is 163 m at the high supply level (Anonymus, 1993). The study was carried out between August 2002 and July 2003. The samples were collected monthly at three different stations in Pertek region Keban Dam Lake (Fig.1). The rotifer samples were collected

with the aid of a plankton net (25 cm diameter and 55 µm mesh size) by horizontal and vertical hauls at each station. The samples were preserved in 4% formaldehyde solution immediately after collection. The identification of the rotifer species was made according to Kolisko (1974), Koste (1978), Edmondson (1959), Voigt and Koste (1978), Nogrady et al. (1993), Ward and Whipple (1945) and Brown (1967).

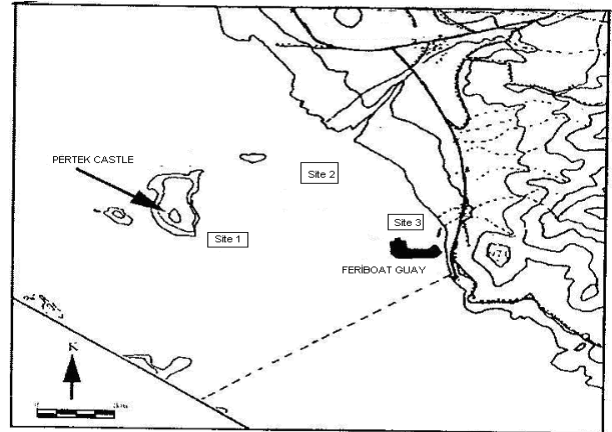


Figure 1. Map showing sampling sites in Pertek region of Keban Dam Lake.

Result and Discussion

The Rotifera species living in Pertek region of Keban Dam Lake are as follows:

Phylum: Rotatoria
Classis: Eurotatoria
Subclassis: Monogononta

- Order: Ploimia
 Familia: Epiphanidae
 - *Epiphanes senta* (O.F. Müller, 1773)
 Familia: Brachionidae
 - *Keratella cochlearis* (Gosse, 1851)
 - *Keratella quadrata* (O.F. Müller, 1786)
 - *Brachionus angularis* Gosse, 1851
 - *Notholca squamula* (O.F. Müller, 1786)
 - *Kellicottia longispina* (Kellicott, 1879)
 Familia: Lepadellidae
 - *Colurella uncinata* (O.F. Müller, 1773)
 Familia: Trichocercidae
 - *Trichocerca cylindrica* (Imhof, 1891)
 Familia: Asplanchnidae
 - *Asplanchna priodonta* Gosse, 1850
 - *Asplanchna sieboldi* (Leydig, 1854)
 Familia: Synchaetidae
 - *Synchaeta pectinata* Ehrenberg, 1832
 - *Polyarthra remata* (Skorikov, 1896)
 - *Polyarthra vulgaris* Carlin, 1943
 Familia: Gastropodidae
 - *Ascomorpha saltans* (Bartsch, 1870)
 Familia: Notommatidae
 - *Cephalodella forficula* (Ehrenberg, 1838)
 - *Cephalodella gibba* (Ehrenberg, 1838)
 Order: Flosculariaceae
 Familia: Testudinellidae
 - *Testudinella patina* (Hermann, 1783)
 Familia: Hexarthridae
 - *Hexarthra mira* (Hudson, 1871)
 - *Hexarthra fennica* (Levander, 1892)
 Familia: Filiniidae
 - *Filinia longiseta* (Ehrenberg, 1834)

It was found that the main part of the identified species is cosmopolitan includes distinctive species of oligotrophic lakes. In Çemişgezek region of Keban Dam Lake, the 17 rotifer species, *Brachionus urceolaris*, *Brachionus calyciflorus*, *Keratella cochlearis*, *Notholca squamula*, *Kellicottia longispina*, *Mytilina trigona*, *Trichotria tetractis*, *Colurella uncinata*, *Lepadella costata*, *Lepadella ovalis*, *Lecane luna*, *Lecane (M) pyriformis*, *Synchaeta pectinata*, *Polyarthra vulgaris*, *Asplanchna priodonta*, *Filinia longiseta* and *Filinia terminalis* were identified by Saler (2004). Similarly in Gölüşkür bay of Keban Dam, the 27 rotifer species, *Keratella cochlearis*, *Keratella quadrata*, *Notholca squamula*, *Kellicottia longispina*, *Colurella uncinata*, *Cephalodella forficula*, *Cephalodella gibba*, *Ascomorpha saltans*, *Synchaeta pectinata*, *Polyarthra vulgaris*, *Asplanchna priodonta*, *Brachionus urceolaris*, *Brachionus calyciflorus*, *Brachionus plicatilis*, *Trichotria tetractis*, *Lepadella costata*, *Lepadella ovalis*, *Lecane patella*, *Lecane luna*, *Lecane lunaris*, *Lecane cornuta*, *Lecane pyriformis*, *Polyarthra dolicoptera*, *Hydatina senta*, *Filinia terminalis*, *Philodina roseola* and *Asplanchna*

hyalinus were identified by Saler (2001).

In Pertek region of Keban Dam Lake, 20 species of the phylum Rotifera were identified, six of which (*Polyarthra remata*, *Asplanchna sieboldi*, *Hexarthra mira*, *Testudinella patina*, *Trichocerca cylindrical* and *Hexarthra fennica*) were new records for Keban Dam Lake. The most numerous species were representatives (5 species) of the family Brachionidae, with 25% of the species listed, followed by species of the family Synchaetidae, Epiphanidae, Lepadellidae, Trichocercidae, Gastropodidae, Testudinellidae and Filiniidae with 5% during the sampling period.

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