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Araştırma Notu / Research Note

Rotifera Fauna of Yamansaz Lake (Antalya) in South-West of Turkey

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Özet: *Yamansız Gölü (Antalya) rotifer faunası*. Bu çalışmada, Akdeniz kıyısına yakın bir alanda yer alan, tatlısu gölü Yamansaz Gölü'nün Rotifera faunası Ocak 1997-Aralık 1997 tarihleri arasında incelenmiştir. Örnekler, çalışma alanındaki 3 istasyondan aylık dönemlerde, göz açıklığı 55 µm olan plankton kepçesi ile toplanmış ve %70'lik alkol ile korunmuştur. Bu çalışma ile 13 rotifer cinsine ait 17 tür saptanmış olup türlerin tümü Yamansaz Gölü için yeni kayıttır.

Anahtar Kelimeler: Rotifera, Taksonomi, Yamansaz Gölü, Antalya, Türkiye.

Abstract: In this study, Rotifera of Yamansaz Lake, a freshwater lake located beside Mediterranean Sea in the Antalya, was investigated on the basis of field studies between January 1997 and December 1997. Samples were collected three different localities with 55 µm mesh sized plankton net and fixed with % 70 alcohol. Seventeen species belonging to thirteen rotifer genera were identified. All of these are new for Yamansaz Lake.

Key Words: Rotifera, Taxonomy, Yamansaz Lake, Antalya, Turkey.

Introduction

Anatolia is a rich land in respect to inland aquatic systems both quantitatively and qualitatively. Aquatic systems in Turkey roughly constitute a million hectare surface, 60% being freshwater, 20% saline water and 20% brackish water (Anonymous, 1993). A considerable percentage of these inland aquatic systems are the stagnant water, natural and artificial lakes. Of the seventy-three lakes (excluding semi-permanent lakes and ponds) reported from Anatolia, 20 from Central Anatolia, 12 from Mediterranean Anatolia, 12 from East Anatolia, 10 from Marmara Region (Thracian and North-west Turkey), 8 from Aegean Anatolia, 7 from Black Sea part and 4 from South-east Anatolia (Anonymous 1993). Because of variable climate in Anatolia, water bodies in its different parts have different ecological conditions and fauna. That is why to determine aquatic fauna of Anatolia it is necessary to study the representative water-bodies of different climatic regions of Anatolia. In this study is aimed to present fauna of a lake located in the coastal region of Mediterranean Anatolia.

Rotifera are common animals of the aquatic systems and some new publications have been published on Anatolian fauna of this group. One of the comprehensive studies about Anatolian rotifers is Dumont and De Ridder's (1987) study that includes a species list and some zoogeographical conclusions. In this study, Dumont and De Ridder reported 78 species from nineteen different localities in Anatolia and previously known rotifer species number from Turkey almost doubled with this study. After Dumont and De Ridder (1987), further studies on rotifers of Anatolia were conducted by different researchers. Ustaoğlu (1986), Ustaoğlu and Balık (1986, 1990a, 1990b) were reported 83 rotifer species live in lakes in Izmir district (in Aegean part of Anatolia). Emir (1989, 1990, 1999, 2001) present data about Rotifera fauna of the lakes in central Anatolia. She reported 165 species from the 15 water bodies from the region. Regarding Anatolian distribution of the rotifer species, most of them were recorded almost from all studied lakes while some only was being found in particular waters. Altındağ and his colleague (Altındağ 1999, 2000; Altındağ and Sözen 1996, Altındağ and Özkurt 1998, Altındağ and Yiğit 1999, 2002) sampled some water systems in Black Sea and central Anatolian parts. Abant Lake and Yedigöller lakes-cluster are located in Black Sea part of Anatolia, Altındağ (1999, 2000) reported 18 species (4 were new records for Turkey) from first and 31 (3 new records for Turkey) from the second. Altındağ and Sözen (1996) and Altındağ and Özkurt (1998) studied Seyfe Lake and Kunduzlar and Çatören dam lakes were from central Anatolia and recorded 21 rotifer species. Akşehir is a relatively large lake located in the border of Mediterranean and central Anatolian plateau. In a study in this lake, Altındağ and Yiğit (1999) observed 32 rotifer species. The only recent report from Mesopotamian Anatolia was by Bekleyen (2001) and she reported 34 species of this group in Devegecidi Dam Lake Mediterranean Anatolia is one of the poorly known regions in respect to Rotifera fauna. In a study by Göksu et. al. (1997), 17 species and a subspecies determined from Seyhan River in east part of the Mediterranean Anatolia. Bozkurt et. al. (2002) reported 31 species and 5 subspecies from Asi River in east part of the Mediterranean Anatolia. A checklist is prepared by Ustaoğlu (2004), which is based on compilation of previous zooplankton studies carried out at Turkish inland waters. After all studies referred above, totally 229 rotifer species have been reported from Turkey (Ustaoğlu 2004).

Except three species from three different localities by Dumont and De Ridder (1987), there is no rotifer record from

South-west Anatolia. With this study it is aimed to present data about rotifers live in south-west Anatolia on the basis of a coastal lake in Antalya.

Yamansaz is a freshwater lake located in the east of Antalya (Turkey) about 14 km from the city centre and 2 km from the coast of the Mediterranean Sea. It has about 15 km2 surface area and 2,5 m depth. The temperature of the water in Yamansaz Lake begins to increase at the beginning of spring, reaching a maximum in July and then decreases in the middle of autumn (10 0C in March to 27 0C in July). Dissolved oxygen values are low during summer periods but it has been recorded as increasing during the spring and winter months (7.32 mg/l in March to 5.24 mg/l in July), in this study area, pH values very between 7.22 and 7.78 (Yalım, 2001).

Material and Methods

This study was carried out between January 1997 and December 1997. Samples were collected monthly by using 55 m mesh-sized plankton net at three different stations in Yamansaz Lake. The collected samples were fixed in alcohol (70 %). The Rotifer species were identified according to Emir (1990), Kolisko (1974), Koste (1978).

Results and Discussion

Seventeen species belong to thirteen genera identified from water samples taken from Yamansaz Lake between January 1997 and December 1997 are given below.

Phylum: Rotifera
Ordo: Monogononta
Subordo: Ploimida
Family: Brachionidae Wesenberg-Lund, 1899
Species: *Notholca acuminata* (Ehrenberg, 1832)
Distribution: Cosmopolite.
Species: *Brachionus urceolaris* (O. F. Muller, 1773)
Distribution: Cosmopolite.
Familia: Mytilinidae Bartos, 1959
Species: *Mytilina mucronata* (O. F. Muller, 1773)
Distribution: West of Mediterranean sounds, the Alps, the Balkans, Central Europe, United Kingdom, Iceland, Caucasus, Anatolia
Species: *M. ventralis* (Ehrenberg, 1832)
Distribution: Cosmopolite.
Familia: Trichotriidae
Species: *Trichotria pocillum* (O.F. Muller, 1776)
Distribution: Cosmopolite.
Species: *Macrochaetus collinsi* (Gosse, 1867)
Distribution: Cosmopolite.
Familia: Colurellidae (Bartos, 1959)
Species: *Colurella uncinata* (O.F. Muller, 1773)
Distribution: Cosmopolite.
Species: *Lepadella patella* (O.F. Muller, 1786)
Distribution: Cosmopolite.
Familia: Lecanidae Bartos, 1959
Species: *Lecane lunaris* (Ehrenberg, 1832)
Distribution: Cosmopolite.
Species: *L. stichaea Harring*, 1913
Distribution: Cosmopolite.
Species: *L. hamata* (Stokes, 1896)
Distribution: Cosmopolite.
Familia: Notommatidae Remane, 1933
Species: *Scaridium longicaudum* (O.F. Muller, 1786)
Distribution: Cosmopolite.
Species: *Cephalodella gibba* (Ehrenberg, 1838)
Distribution: Cosmopolite.
Species: *C. catellina* (O.F. Muller, 1786)
Distribution: Cosmopolite.
Familia: Filinidae Bartos, 1959
Species: *Filinia longiseta* (Ehrenberger, 1832)
Distribution: Cosmopolite.
Familia: Trichocercidae Lamarck, 1801
Species: *Trichocerca stylata* (Gosse, 1851)
Distribution: Cosmopolite.
Familia: Asplanchnidae Harring & Myers, 1926
Species: *Asplancha priodonta* Gosse, 1850
Distribution: Cosmopolite.

Each of the Colurellidae, Lecanidae and Notammatidae are represented with three species, of the Brachionidae, Mytilinidae, Trichotriidae with two species and Trichocercidae and Asplanchnidae with one species in Yamansaz Lake.

Yamansaz is a small lake that covers roughly 12 km2 area. Also some parts of it are amphibic that dry during the summer. In spite of these characteristics many rotifer species inhabits in this lake. Though the study are located in Mediterranean coast, the warmest part of Turkey where never frozen during the winter, most of the recorded species are also common in other parts of Anatolia, especially central part (Emir, 1999; Ustaoğlu, 2004). Because rotifer species generally known to be euryic animals, the faunistic similarity between study area and central Anatolia may be because of the second being well studied.

Most of the species, *L. hamata, L. lunaris, L. stichaea, T. pocillium, L. patella, F. longiseta, S. longicaudum* and *T. stylata*, live in the littoral zone, inhabiting the aquatic macro-vegetation (Kolisko, 1974; Koste, 1978). Other species, *B. urceolaris, M. mucronata, M. ventralis, C. uncinata, C. catellina* and *C. gibba*, live in the benthos. All taxa except *N. acuminata* (this species is cold stenothermous) are thermophile and found to be tolerant of considerable variations in pH, temperature and solved oxygen (Kolisko, 1974; Koste, 1978). Though this species has been found in Yamansaz Lake (a warm water) it has been recorder only during winter, so, our supports other studies in this respect.

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