INTRODUCTION

Zooplanktonic organisms of lentic ecosystems form the second step of the food chain and are important food sources of some invertebrates and fishes (Saler and Sen, 2002). Copepods, cladocerans and rotifers form the main groups of zooplankton (Hutchinson, 1967). Amongst them, rotifers are of substantial importance to freshwater fishes (Kumar et al., 1991). For many fishes, rotifers constitute the basic food when they switch over from endothermal to the exothermal mode of feeding (Nikolsky, 1963). Representatives of rotifers are found in aquatic and semi-aquatic habitats, but are predominantly freshwater inhabitants (Pejlar, 1995). Rotifers can populate vacant niches with extreme rapidity and convert primary production into a form usable for secondary consumers, producing up to 50% of the total plankton biomass (Nogardy et al., 1993). The rotifer fauna mainly consist of cosmopolitan species. Ecological barriers have stronger influence on their distribution than geographical isolation. Rotifers also belong to pioneer organisms, which first appear in new created water bodies (Kippen, 2005). Anderson (1889) pioneered the taxonomic investigations on Indian rotifers. Later, a number of workers studied the rotifers in India viz. Sharma and Michael (1980), Sharma (1990), Sharma and Sharma (1987), Sarma (1988), Patil and Gouder (1989), Segers et al., (1994), Sharma (1998), Segers and Babu (1999), Sharma and Sharma (2001). Investigations on the rotifer ecology in the subtropical region of Jammu have been carried out by a number of workers viz. Jyoti and Sehgal (1979), Sehgal (1980), Gupta and Sudan (1985), Puri (1989), Malhotra et al., (1995), Sharma (2001), Sharma (2002), Kour (2002), Jan (2005), Kour (2006), Zuber (2007). The present study is done with an aim to enrich the data already available regarding the taxonomy and diversity of the rotifers inhabiting the subtropical waters of Jammu.

MATERIALS AND METHODS

The study was conducted for a period of one year (May, 2005 to April, 2006). For monthly planktonic collection, 50 liters of pond water was filtered through plankton net having a mesh size 60-70 µm. The samples so collected were fixed by adding few drops of 5% formalin. Preserved samples were then identified by studying the structure of the mastax in rotifers and following standard literature (Edmondson, 1963; Hutchinson, 1967; Adoni, 1985; Pennak, 1989 and Battish, 1992). The morphometric analysis of the rotifers was done with the help of a calibrated ocular micrometer.

Study area

ABSTRACT

A study on the rotifer taxonomy and diversity was undertaken in two freshwater ponds of Jammu, for a period of one year (May, 2005 to April, 2006). The study revealed the presence of 12 species of rotifers in the Botanical Garden Pond belonging to 10 genera, 3 orders and 9 families. In Fish Pond, a total of 13 species of rotifers were found which belonged to 3 orders, 10 genera, and 9 families.

KEY WORDS

Rotifer Genera Species Pond.
RESULTS AND DISCUSSION

Order- ploimida
Family- brachionidae
Brachionus angularis

Brachionus bidentatus

Brachionus calyciflorus

Keratella tropica

Order- ploimida
Family- asplanchnidae
Asplanchna brightwelli

Order- ploimida
Family- synchaetidae
Polyarthra sp.

Order- ploimida
Family- trichocercida
Trichocerca porcellus.

Order- ploimida
Family- mytilinidae
Mytilina ventralis

Order- ploimida
Family- lecanidae
Lecane ludwigi

Lecane luna

Monostyla bulla

Order- ploimida
Family- euchlanidae
Euchlanis dilata
Order- gnesiotrocha
Family- filinidae
*Filinia terminalis*

Order- gnesiotrocha
Family- hexarthridae
*Hexarthra mira*

Order- gnesiotrocha
Family- testudinellidae
*Testudinella*

Order- bdelloidea
Family- philodinidae
*Philodina*

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