

## Community Structure of Zooplanktonic Groups of Chimdi Lake, Sunsari, Nepal

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### Abstract

Community structure of zooplankton in Chimdi Lake was assessed during the year 2003-2005. During the period of investigation 15 species of zooplanktons representing 3 groups namely Rotifera, Copepoda and Cladocera were recorded.

*Key words:* Birju Tal, Chimdi Lake, Zooplankton

### Introduction

The knowledge of plankton in Nepal is still fragmentary, though a number of contributions are available. Rai (1983), Upadhyaya (1991), Jha (1994), Rundle *et al.* (1993), Ormerod *et al.* (1994) are some of the contributors. Present work is based on the two year limnological study made on Chimdi Lake. Chimdi Lake locally known as 'Birju Tal' lies between 87°10'51.3"E longitude and 26°29'23.5"N latitudes at an elevation of 70 m above mean sea level. The lake is in rehabilitation stage and an attempt has been made to highlight the community structure of zooplankton.

### Materials and Methods

Samples were collected regularly once in a month on the sampling day between 9 to 11 AM through a plankton silk net No. 30 and preserved in 5% formalin solution. Permanent slides of zooplankton were made for taking microphotographs.

Zooplanktons were identified following the works of Needham and Needham (1941), Tonapi (1980), Adoni (1985) and APHA (1998).

### Results and Discussion

The present study highlights good zooplank-

tonic diversity in the Chimdi lake. Fifteen species of zooplanktons representing 3 groups namely Rotifera, Copepoda and Cladocera were reported. Rotifers included 5 species, Copepods 6 species and Cladocera 4 species (Table 1). Zooplanktons play a significant role in determining the productivity of lake. Zooplanktons form food for many aquatic lives. Copepods were dominant over other groups. Similar results have been reported by Ganpati (1943). However, George (1966) recorded the dominance of rotifers and Le Fevre (1993) recorded the dominance of Cladocerans over other zooplanktons. Zooplanktons are good source of food for fishes which in turn are good sources of food for water birds.

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**Table 0. Community structure of zooplanktonic group of Chimdi Lake**

Rotifera (Wheel animalcules)	Copepoda	Cladocera (Water fleas)
<i>Brachionus caudatus</i>	<i>Cyclops</i> spp.	<i>Bosmina longirostris</i>
<i>Brachionus plicatilis</i>	<i>Diaptomus</i> spp.	<i>Daphnia</i> spp.
<i>Cephalodella</i> spp.	<i>Heliodyptomus viduus</i>	<i>Diaphanosoma excisum</i>
<i>Keratella tropica</i>	<i>Mesocyclops leuckart</i>	<i>Streptocephalus</i> spp.
<i>Trichocera similis</i>	<i>Naupilus</i> spp.	-
	<i>Picodiatomus chelospinus</i>	-

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