

A STUDY OF ZOOPLANKTON GROUP ROTIFERA FROM TOKEWADI FRESH WATER BODY NEAR AHMEDNAGAR CITY, DIST. AHMEDNAGAR, (M. S.), INDIA.

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ABSTRACT

Zooplankton plays a crucial role in freshwater ecosystem. A study on zooplankton group Rotifera was undertaken for Tokewadi fresh water body near Ahmednagar city, District: Ahmednagar, Maharashtra State, India during the period July 2013 to March 2014. The study is very important because this may help to assess the environmental degradation. The analysis revealed that there were nine rotifer species belonging to two orders, seven families and seven genera recorded during study period from study area.

Figure:00

References:08

Table:01

KEY WORDS: Ecology, Quality of water, Reservoir, Rotifera, Zooplankton.

Introduction

The water quality is an emerging and important aspect of environmental assessment. Several researchers have been used zooplankton as indicators for monitoring water quality, trophic status and pollution levels^{3,6,8}. The water bodies in the form of manmade reservoirs are extensively used by people for several of purposes such as drinking, fisheries, irrigation, recreation and washing. All these activities have been resulted in altering the physicochemical nature and quality of water in the reservoir, which ultimately affects the diversity and density of biomass in the water-body.

The quality of available freshwater is the problem of greater and immediate concern. The present study is the attempt to investigate the status of fresh water body of this region. The water body Tokewadi is situated near Ahmednagar city at village Tokewadi, which is a hilly area with draught conditions. The dug wells and bore wells in command and catchment area used for drinking water source and agriculture is depending on this water body. The villagers use this reservoir for bathing, clothes washing, vehicle washing, cattle wading, pisciculture and other domestic activities. The agriculture runoff and deforestation are major sources of pollution.

Materials and Methods

The zooplankton sampling was carried out during the period July 2013 to March 2014. The zooplankton samples were collected using zooplankton net made of bolting nylon cloth. The samples were fixed in 5 percent formaldehyde solution and preserved. For preliminary identification of zooplankton, standard monographs and compound binocular microscope are used^{2,4,7}.

Results and Discussions

The qualitative analysis revealed that there were nine rotifer species belonging to two orders, seven families and seven genera recorded during study period from study area (Table 1). In the rural areas people used unprotected water drawn from rivers, lakes and wells for drinking and domestic purposes. Maintaining the quality of water is the most important one for man since; it is directly linked with his daily life. Any foreign matter contaminates water; this may be either natural or artificial. Zooplankton is a good indicator of changes in water quality because it is strongly affected by environmental conditions and responds quickly to changes in environmental quality. Hence qualitative studies of zooplankton are of great importance. Zooplankton plays a crucial role not only converting plant food to animal food but also themselves as source of food for higher

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organisms especially in the freshwater ecosystem. The availability and adaptations depends on the surrounding environmental factors.

The status report on Indian faunal wealth published by the Zoological Survey of India revealed that nearly 20% of the total fauna in India are aquatic and majority of them belong to freshwater¹ represented mostly by the major invertebrate groups such as Rotifers, Cladocerans, Ostracods, Copepods and Molluscs by about 300, 100, 100, 300 and

285 species respectively². The present study is the attempt to investigate the status of this water body of this region. Still more information on the physico-chemical and biological characteristics of the aquatic bodies of the zoo is necessary for proper understanding and management of the system, so that the aquatic animals and birds could be provided a better environment for living.

TABLE-1: The Species of Rotifera.

ORDER	FAMILY	GENUS	SPECIES
PLOIMA	Asplanchnidae	<i>Asplanchna</i>	<i>Asplanchna brightwellii</i>
	Brachionidae	<i>Keratella</i>	<i>Keratella cochlearis</i>
	Trichotriidae	<i>Trichotria</i>	<i>Trichotria tetractis</i>
	Trichocercidae	<i>Tricocerca</i>	<i>Tricocerca species.</i>
	Lecanidae	<i>Lecane</i>	<i>Lecane bulla</i>
			<i>Lecane arcuata</i>
FLOSCULARIACEAE	Testudinellidae	<i>Testudinella</i>	<i>Testudinella patina</i>
	Trochosphaeridae	<i>Horaella</i>	<i>Horaella brehmi</i>

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