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ZOOPLANKTON STUDY OF ROOP SAGAR TALAB OF MUKUNDPUR DISTT-SATNA (M.P.)

Dr. Vaheedunnisha
Department of Zoology
Govt. Maharaja P.G. College Chhatarpur (M.P.)

Abstract- Zooplankton diversity and physico-chemical parameter of Mukundpur Talab were studied for period of 2 year 2011-2013. During the present study period a total of 24 species of zooplankton were recorded out by 6 which Protozoa was represented by 6 species, Porifera by 1 species, Coelenterate by 1 species Platyhelminthes by 1 species Rotifera by 14 species, Copepoda 1 species. Zooplankton diversity increased in during summer season. Zooplankton from a important intermediary step in the grazing food chain in aquatic ecosystem.

KEYWORDS- Zooplankton, Roopsagar Talab.

I. INTRODUCTION-

The Zooplankton occupy a central position between the autotrophs and other heterotrophs and from an important link in food web of the fresh water ecosystem. Zooplankton is the intermediate link between phytoplankton and fish and which are the secondary producers in the aquatic environment. It contains Both herbivores and carnivores, the latter belonging to the tertiary producers or even to some higher level of production. Knowledge of their abundance, composition and seasonal variation, therefore is an essential pre-requite for any successful aquaculture programme Zooplankton is a good indicators of changes in water quality because it is strongly affected by environmental condition and responds quickly to changes in environmental quality. Among the Zooplankton, rotifers are apparently the most sensitive indicators of the water quality. Hence qualitative and quantitative study of Zooplankton are of great importance during present investigation the Zooplankton. A study may help to access the pollution of water due to heavy load of population of Mukundpur Distt-Satna (M.P.).

II. MATERIAL AND METHODS–

The samples of Macrozoobenthos were collected with Surbers sampler Ekmangrab (1 Sq. ft.) method at sites A, B and C benthic Macroinvertebrates were collected through washing of stones & pebbles in Surber's sampler. The samples from Ekman grab method were collected in polythene bags and brought to the laboratory. These samples were screened through a No. 30 standard seive (11 meshes /cm, 0.589 mm. opening) and organism were presented in alcohol, formalin fixative for identification.

III. RESULT AND DISSCUSSION-

Zooplankton constitutes an important source of food for fishes and integral part of the lotic community and significantly contributes to the fresh waters. Hynes (1979) reported that the water entering a Talab from the lake show 50 to 70 percent decline in plankton numbers in the present study of Roop Sagar Talab, Zooplanktons collected were representative of Protozoa, Rotifer, Cladocera, Copepoda, Ostracoda and Insecta.

Water temperature does not seem to be the only controlling factor for Zooplankton abundance during summers, since a number of at hours have reported dominance of Zooplankton during winter Chateraborty *et al.* (1959) and Bilgrami and Datta Munshi (1985) recorded Zooplankton abundance during winter our observation in Roop Sagar Talab agrees with the findings of Shrivastava (1989) observed nutrients and water temperature as the most

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important factors, while Bilgrami and Datta Munshi (1985). Concluded that increased Zooplankton diversity during summer was due to higher photosynthetic activity and nutrient concentration.

Table No. 1 Zooplankton diversity at all the study sites of Roop Sagar Talab of Mukundpur Distt-Satna during 2012-2013.

S.No.	Zooplankton & Classification	2012			2013		
		A	B	C	A	B	C
	PROTOZOA						
1.	***Amoeba protoeus***	4-6	3-5	3-6	5-6	3-5	4-6
2.	***Arcella vulgaris***	2-6	4-6	3-6	1-6	1-6	2-6
3.	***Difflugia corona***	1-6	5-6	1-6	5-6	5-6	4-5
4.	***Vorticella companula***	5-6	5-6	5-6	5-6	4-6	4-6
5.	***Euglena viridis***	1-6	1-6	4-6	1-6	1-6	2-5
6.	***Paramaecium caudatum***	1-6	5-6	1-6	5-6	5-6	4-6
	PORIFERA						
7.	***Spongilla sp.***	1-6	1-6	4-6	1-6	1-6	2-6
	COELENTERATA						
8.	***Hydra viridis***	4-6	1-6	1-6	1-6	1-6	3-6
	PLATYHELMINTHES						
9.	***Planaria dorotocephala***	3-6	5-6	2-6	5-6	5-6	4-6
	ROTIFERA						
10.	***Anuraeopsis fissa***	2-6	4	5-6	1-6	3-6	3-6
11.	***Asplanchna brightwelli***	5-6	4-6	5-6	5-6	5-6	5-6
12.	***Asplanchnopus multiceps***	4	1-6	3-6	6	1-6	1-6
13.	***B. caudatus***	4-6	4-6	5-6	5-6	5-6	5-6
14.	***B. havanaesis***	1-6	5-6	6	1-6	1-6	2-6
15.	***Epiphanes clavulata***	1-4	3-6	1-6	4-6	2-5	2-5
16.	***Keratella cochlearis***	1-6	3	4-6	2-6	3-6	4-6
17.	***K. tropica***	4-6	1-6	1-6	1-6	1-6	2-5
18.	***Monostyla bulla***	3-6	1-3	1-4	2-5	3-6	3-6
19.	***Notholca acuminata***	2-6	1-6	4-6	3	1-5	2-6
20.	***Platyias quadricornis***	1-6	2-6	5-6	4	1-6	2-6
21.	***Polyarthra vulgaris***	5-6	1-6	3-6	5	2-6	2-5
22.	***Scaridium longicaudum***	1-6	4	2-6	4	1-6	1-5
23.	***Synchaeta pectinata***	3-6	4-6	1-6	1-6	2-6	3-6
	COPEPODA Cyclopoida						
24.	***Cyclops viridis***	1-6	1-6	1-6	1-6	1-6	1-6

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IV. CONCLUSION:-

Zooplanktons were abundance during summer month. Their number was found reduces during rainy months due to low transparency, low phytoplankton density and diluting effect of rain water. A direct correlation was noted between the Zooplankton population and the temperature of the water surface Zooplanktons were composed of Protozoa, Porifera, Coelenterata, Platy helminthes, Rotifers and Copepoda showed the numerical superiority over the other groups of Zooplankton.

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