Diversity of Zooplankton from Chankapur Dam, Kalwan, Nashik.(MS)

Dhanaraj B. Goswami.
P.G.Department Of Zoology
K.V.N.Naik Arts, Commerce &Science College Nashik.

Abstract-

Water body contains variety of Zooplankton. These organisms by their adaptability are present in all possible environmental condition and are used as an indicator of pollution. Zooplankton diversity is one of the most important ecological parameter in water quality assessment. The Biodiversity of Zooplankton in water bodies shows a co-relation with reference to their occurrence and their physico-chemical factors. So in this study the attempt has been to evaluate the diversity of zooplankton at Chankapur dam, Nashik.

Keywords- Pollution, Parameter, Indicator.

Introduction-

Water is elixir of life and an abundant on earth but this vast natural resource has been depleted and turn into scarce commodity with increase usage. There is almost global shortage of water and the world most urgent and first rank problem today is supply and maintenance of clean drinking water.

Water bodies contain variety of zooplankton. Zooplanktons are microscopic free swimming animals which represent a major part of aquatic fauna. It occupies key position in the ecological energy pyramids and their role in trophodynamic is note worthy. Zooplanktons communities of fresh water represented by nearly all the invertebrate phyla. Zooplanktons are microscopic free swimming animals which represent a major part of aquatic fauna. Zooplankton diversity is one the most important ecological parameter in water quality assessment. These are important in breaking down the organic pollutant and thus and reducing the damage (Thrived and Goel 1886). The abundance and distribution of zooplankton was guided by variety of ecological factor. Physico-chemical parameters like temperature, pH, Alkalinity, turbidity, dissolved oxygen, biological oxygen demand, hardness, sulphates and phosphate contains. Zooplankton have an important function in transitional ecosystem, by filtrating phytoplankton and then acting as food source for larger organisms such as fish, there by linking primary production with higher tropic levels(Sharma k.k.2015)Their diversity and density is mainly controlled by availability of food as favorable water quality (Chandrasekhar and Kodarkar, 1997). Zooplanktons are bio-indicators and help in measuring water pollution status. Present investigation had made an attempt to study the diversity of the zooplankton of Chankapur Dam, Kalwan,Nashik.

Materials and Methods

Collection and Sampling

For the present study, water samples were collected from three different sites of dam randomly. Surface water was collected directly from each selected site of dam. The water samples containing zooplanktons were carefully transferred to the bottle and brought to the laboratory without disturbance. Samples were collected once in week from all three stations of dam, for period of three months from August 2017 to November 2017. The samples were collected during morning hours.

Preservation and Identification of Zooplanktons

Zooplankton were collected by filtering known quantity (500 ml) of sample water then these were filtered through the fine mesh zooplankton net and preserved in 4% formaldehyde solution. Animals are observed under a light microscope and identified by using standard Key, other literature (Harding and Smith, 1974; Tonpi, 1980; Pennak, 1989; APHA, 1998; Dhanpati, 2000 and Segers, 2007).

Preparation of permanent slides

The preserved material of zooplanktons were washed with distilled water then dehydrated through different grades of alcohol. After dehydration they were stained in acetocarmine and differentiated them and then mounted in D.P.X for preparation of permanent slide.

Results and Discussion

An attempt has been made to study the zooplankton from August 2017-November 2017

Group	S.N.	Genera
Cladocera	1	Chydorus species
	2	Bosmina species
	3	Simocephalus species
	4	Ceriodaphnia species
	5	Daphnia species
	6	Monia species
Copepoda	7	Nauplius larva
	8	Mesocyclops species
	9	Diaptomus species
	10	Dicyclops species
	11	Macro Cyclops
Rotifer	12	Brachionus species
	13	Eushlanis species
	14	Keratella species

Ostracoda	15	Cypris species

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