

Zooplankton Diversity in the Warwand Reservoir of Pune District, Maharashtra

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Abstract

The present study was undertaken to evaluate the seasonal variation in zooplankton diversity in the Warwand Reservoir. The Warwand reservoir is situated at 18°43'27.86" N latitude and 74°41'22.81" E longitude in Daund tahsil of Pune district, Maharashtra. A total of 36 water samples were collected. A total of 100 Liter water was filtered through plankton net no. 25 and then sample was immediately preserved in 4% formalin for qualitative analysis. A total of 15 zooplankton species were reported belonging to four main groups namely 6 from rotifers, 4 from cladocera, 3 from copepods and 2 from ostracoda. Further quantitative analysis was performed by using Sedgewick Rafter Counting Chamber. Zooplankton abundance varied among different groups. Rotifera recorded an abundance ranging from 30 to 146 no/L, with an average of 72.56 no/L. Copepoda ranged from 12 to 72 no/L, with an average abundance of 38.67 no/L, while Cladocera ranged from 7 to 52 no/L, with an average of 26.31 no/L. Ostracoda recorded an abundance ranging from 0 to 41 no/L, with an average of 20.72 no/L. Rotifera was the dominant zooplankton group throughout the study period. The order of dominance was found to be Rotifers>Copepoda>Cladocera>Ostracoda. The present investigation is the pilot study on zooplankton diversity and valuable baseline data for evaluating trophic status and the ecological condition of the reservoir. Continuous monitoring of zooplankton communities can support sustainable fisheries management and ecosystem functioning.

Keywords

Zooplankton diversity, Reservoir ecology, Rotifera, Cladocera, Copepoda, Ostracoda, Warwand, etc.