

# ICHTHYOFAUNAL DIVERSITY AND LIMNOLOGICAL STUDY OF RIVER RUPNARAYAN AT PURBA MEDINIPUR DISTRICT (W.B.)

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MRINMAY GHORAI<sup>1</sup>

<sup>1</sup> Centre for Fisheries Research, Dept. of Zoology, Panskura Banamali College

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## Abstract

The fish community of the Rupnarayan river in relation to limnological parameters was studied by monthly samples taken from June-2016 to May-2017. This river is located at 22° 25' N latitude and 87° 05' E longitude situated at near Kolaghat of Purba Medinipur district of West Bengal. The riverine water is used for producing electricity of Kolaghat thermal power station (KTPP), fishery and tourism activities. Fish collections were made with gill nets of standardized dimensions with several mesh sizes. Twenty three (23) fish fauna identified during the study belongs to Cyprinidae 8 species, Clupeidae, Bagridae and Siluridae with each 2 and 3 species and a species each of Engraulidae, Gobiidae, Mastacembelidae, Ammassidae, Polinemidae, Schilbeidae, Anguillidae, and Mugilidae respectively. The Shannon-Weiner diversity index of up and down stream sampling station indicated a strong relationship with overall species richness showed variation and ranged from 3.00 to 2.83. The most dominant order Cypriniformes (29%) found to be dominant with 8 fish species followed by Siluriformes (25%) 6 species and Clupeiformes (23%) 3 species. The species diversity is climax in post monsoon, coinciding with favourable conditions such as sufficient water and ample food resources. The diversity was low in pre monsoon probably due to the shrinkage of the water spread of the river. The high value of dissolved oxygen united with low biochemical oxygen demand and other nutrient levels indicate that the water body is moderately oligotrophic in nature. To put aside this diversity and to develop a sustainable fishery practices and proper documentation leading to diversity information system is an insistent need.

## Key words

Abundance, Fish diversity, Fish fauna, Moderately oligotrophic, Water quality, Rupnarayan River, Kolaghat Thermal Power Station.

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