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ECOLOGY OF COLIFORM BACTERIA IN A HEAVY METALS CONTAMINATED RIVER AT MIDNAPORE DISTRICT AREA, WEST BENGAL

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INTRODUCTION

A series of workers have published ecology as well as microbial communities of different aquatic ecosystem in India and abroad viz. Arnal (1958, 62), Carpelan (1961), Segers (1995), Rajkumar, Ramanibai and Devraj (1994), Krishnamoorthi and Sarkar (1979), Pandit (1986), Chattwal (1989), Sinha, Bruah, Singh and Sharma (1994), Verma and Delela (1975), Prasad (1988), Masood and Krishnamurthy (1990), Chakraborty and Asthana (1989), Chakraborty *et al.*, (2004). Several workers have studied the impact of heavy metals on microfauna viz. Faillkowski and Newman (1998), Deshpande (1988), Gadd and Griffiths (1978). From the above literature it appeared that the hydro biological research have been oriented to assess the impact of different biotic and abiotic factors on the distribution and diversity of aquatic micro fauna with special reference to total coliform and fecal coliform. In addition, impacts of polluting agents like heavy metals and pH gradation on the population of aquatic bacteria have also been studied. This pollution affects the growth of beneficial microorganism in water bodies and resulting to increase of population of total coliform and fecal coliform. So far there is no record have available on these aspects from Subarnarekha River in Midnapore Dist area. For this reason the present investigation was undertaken. Total area was about 60 km along the riverbed each station was about 20km apart from other. From each station 3-sample unit were taken and a total of 9 sample plots have been selected and collections were made at an interval of one month for a period of one year (Oct. 2002–Sept. 2003). During pre winter the P^H of river water was acidic ranges from 5.5–6.7 as a result level of heavy metals concentration was found to be maximum and the population of micro fauna minimum in number. might be due to increase level of heavy metals toxicity released from the industries

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