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RESEARCH ARTICLE

Impact on dimnological studies related to physico-chemical characteristics of river Gangi in district Ghazipur (U.P.) India

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SUMMARY : The limnological study deals with the seasonal physio-chemical parameters of water of the river Gangi in district Ghazipur (U.P.). Besides the temperature, limnological data, standard method of sampling sites of free CO_2, alkalinity, $CaCO_3$ chloride, BOD showed various seasonal variations in river Gangi. The physical parameter of water showed maximum contamination of water due to sewage effluents and industries.

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Man's interest in environment is as old as his own history. The increased environment studies during the past 40 years are because modern civilization is excersizing its tremendous potential to alter our environment too frequently in adverse way. Water is an absolute basic need for its so, it is known as "elixir of life". Water has multifarious uses as domestic, agricultural and industrial activities for the reason that civilization has mainly grown on the bank of river and near parrenial as sources of water from the time immemorial. The problem interaction between human society and aquatic environment has become quite acute in contemporary world, the depletion of non-renewable resources like water are quite evident of all levels the global regional and local also.

In modern civilization, pollution problems are becoming more serious. Most of our rivers, lakes, streams and other water bodies are being increasingly polluted.

Zooplanktons are the integral part of the lotic community and contribute significantly to biological productivity of fresh water ecosystems. Thus, the zooplankton represents one of the most important group of aquatic animals in relation to fish particularly with respect to food. About the knowledge of zooplanktons of fresh water in India was made by Philipose (1940), Nayar (1968), Seenaya (1971) and Patnaik (1973).

The present study, aims to investigate qualitative distribution pattern of zooplankton at different sites of Gangi river in district Ghazipur. It was also aimed to see the effect of opium factory effluents on the abundances, growth and reproduction, developmental pattern of zooplanktons. The present investigation was for a period of one year *i.e.* July, 2004 – June, 2005.

EXPERIMENTAL METHODOLOGY

Study area:

Ghazipur district has its extension in middle Gangetic plane at east end of Varanasi from $25^0$18' north to $25^0$54' north latitude and $23^0$4' east to $83^0$57' east longitudinal at on average height of 75 meters from sea level. The field study of river Gangi enters into Uttar Pradesh near Sonapar village after travelling a distance of 68 km. It meets to river Ganga near Mainpur village in Ghazipur.

Climate:

In general the weather of whole year can be classified in three seasons – winter, summer and monsoon.