



**POPULATION STRUCTURE AND DIVERSITY ANALYSIS OF BENTHIC
EPHEMEROPTERANS IN WESTERN NAYAR RIVER DURING 2014-15**

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ABSTRACT

The paper deals with population structure and diversity of benthic ephemeropterans in the river Western Nayar at Pabau and Chipalghat stations. It was observed that the group was represented by 6 genera in dominating sequence as *Cinygma*, *Caenis*, *Baetis*, *Choroterps*, *Leptophlebia* and *Ephemerella*. Water quality of ricer at Pabau was more conducive than at chipalghat.

KEYWORDS: Benthos, mayfly, Western Nayar, Pabau, Chipalghat, population, diversity

REFERENCE

- Balodi,V.P (2000) *ecological study of macrozoobenthiccommunitiesof river Nayer system correlated with its fishery potential*. D Phil. Thesis submitted to H.N.B Garhwal Univeristy Srinagar Garwal.
- Bhatt, S D., Bisht Y. and Negi, U. (1985). Hydrology and phytoplankton population in the river kosi of Western Himalaya, UP. *Proc. Natl Sci Acad. B* 50: 395-405
- Chakraborty, R. D., Ray, P. and Singh, S.B. (1959). A quantitative study of the plankton and the physio-chemical conditions of the river Yamuna at Allahabad in 1954-55. *Indian J. Fish* 6 (1) : 186-203.
- Dobriyal,A.K(1983). Bioecology of some cold water *fishes correlated with hydrobiology of the Mandakini and the Nayar*.D.Phil Thesis submitted to the Univeristy of

Garhwal.

Dobriyal, A.K., Bahuguna, A.K., Kotnala, C.B., Kumar, N. and Singh, H.R. (1992).

Preliminary observation on seasonal trends in Macro-zoobenthic diversity in the river Nayar of Garhwal Himalaya. In: (Sehgal, K.L. Eds), *Recent Researches in cold water fisheries*. Pp 119-127.

Dobriyal, A.K. (1991). An appraisal of the fishery resource of riverine ecosystems of Garhwal, Central Himalaya. In: Bhatt, S.D. and Pandey, R.K. (Ed.). *Ecology of Mountain waters*. Ashish Publishing House, New Delhi. Pp. 306- 312.

Dobriyal, A.K., Kumar, N., Kotnala, C.B., Bahuguna, A.K. and Singh, H.R. (1991).

Preliminary observations on seasonal trends in macrozoobenthic diversity in the river Nayar of Garhwal Himalaya. In : Sehgal, K. L. (Ed.) : *Recent researches in Coldwater Fisheries*. Today and Tomorrow Printers and Publishers, New Delhi Pp. 119- 127.

Dobriyal, A.K., Balodi, V P, Joshi, H.K., Bahuguna, P. and Kumar, N. (2011).

Seasonal cyclicality of Macrozoobenthos correlated with detrimental abiotic factors in the Eastern Nayar of Garhwal Himalaya, Uttarakhand. In: Himalayan Aquatic Biodiversity Conservation and new tools in Biotechnology (Eds. J P Bhatt, Madhu Thapliyal and Ashish Thapliyal). Transmedia Publication, Srinagar Garhwal PP. 94-103

Dobriyal, A.K. and Singh, H.R. 1989. Observations on temporal trends of phytoplankton diversity in the river Nayar of Garhwal Himalaya. *J. Freshwater Biol.* 1: 1-6.

Dutta, S.P.S and Malhotra, Y.R. (1986). Seasonal variation in the macrozoobenthic fauna of Gadigarh stream (Miran Sahils) Jammu. 113(1) 136-145.

Goswami, S (2009) Ecology and biodiversity of Mandal from Garhwal Himalaya. D Phil Thesis H.N.B. Garhwal University Srinagar Garhwal.

Hynes, H.B.N. (1979). *The ecology of running waters*. Liverpool University press. Liverpool. 4th impression: 555 pp.

Kulshrestha, S.K., Adholia, U.N., Khan, A.A., Bhatnagar, A., Saxena, M. and Baghail, M. (1989).

Community structure of Plankton and microzoobenthos, with special reference to environmental studies. 35:83-96.

- Kumar Neeraj (1991) Ecological studies on the macrozoobenthic community of some hillstream of the Alaknanda river system. D Phil. Thesis, HNB Garhwal University, Srinagar Garhwal
- Kumar,N,Kumar,B.and Dobriyal,A.K.(1998). Geomorphic influence on the distribution of benthic diversity in two hillstream of the Garhwal Himalaya.*Proceeding of Indo-US workshop Punjab Univeristy, Chandigarh.*Pp.53-56
- Kumar,N.and Dobriyal, A.K.(1993).Benthic diversiy of Garhwal Himalayan hill stream in relation to their fishery potential.*Third Indian fisheriesfourm.proceeding.* Pp.159-162.
- Nautiyal, R., Nautiyal, P. and Singh, H.R. (1996) Pennate diatom flora of a clodwater mountain river Alaknanda II: suborder arephidese . *Phykos* 35 (142)57-63.
- Negi, K S (1999): Some aspects of fish biology of *Crossocheilus latius latius* (Ham.) correlated with its riverine environment. D Phil. Thesis, HNB Garhwal University, Srinagar Garhwal
- Odum.E.P.(1971).*Fundamental of ecolgy.*
- Srivastava,U.S.andKulshrestha,A.K.(1990).seasonal variation in certain Physio-Chemical parameters in Ganga,Yamuna and Tons in Allahabad region (U.P.,India).*In recent trend in Limnology* (Agawani,V.P.andDas, P.Eds).*Society of bioscience.*351-363
- Vasisht, H. S. and Jindal.R.(1979). Seasonal variation of benthic fauna in some North India lakes and ponds. *India.J.Ecol.*6:33-37.
- Ward, H.B. and Whiplle, G.V. (1966). *Freshwater biology* (ED: W T Edmundson).John Wiley and Sons, Inc, New York., pp. 1203.
- Welch, P.S. (1948). *Limnological Methods*. Mc Graw- Hill Book Co. NY, Toronto, London.