

STUDY OF PLANKTONIC DIVERSITY IN POTAMON SECTION OF WESTERN NAYAR, UTTARAKHAND, INDIA

V.P. BALODI, KOSHAL KUMAR, MOHD RASHID AND ANJU THAPLIYAL

Department of Zoology, H.N.B Garhwal University Campus , Pauri Garhwal 246001

Received: 12.12.2014

Accepted: 28.12.2014

ABSTRACT

The plankton community structure and species diversity were studied at Western Nayar during September 2012 to February 2013 at a selected site (Sankarsain). The samples were collected by 20 bolting silk cloth and were preserved in 4% formalin on the spot, Sample was brought to lab for further analysis. 18 genera of plankton were reported in the study belonging to three families i.e., the Chlorophyceae (9 genera) followed by Bacillariophyceae (7 genera) and Myxophyceae (2 genera). Highest numerical abundance was observed in November and lowest during October for Chlorophyceae and highest in January and lowest in October for Bacillariophyceae.

KEYWORDS: Plankton, Physico-chemical parameters, Potamon Zone, Western Nayar

REFERENCES

- APHA, AWWA WEF. (1995). Standard methods for the examination of water and waste water. American Public Health Association, American Water Works Association and Water Environment Federation, Washington, D.C.2005.
- Balodi, V.P., Dobriyal, A.K., Joshi, H.K., Uniyal, S.P. and Thapliyal, A. 2004. Epilithic periphyton and detritus ecology of the spring-fed stream Eastern Nayar in Garhwal Himalaya. *Environmental Conservation Journal*. 5(1-3): 1-5
- Bodola, S.P., and Singh, H.R.(1981). Hydrobiology of rivers Alaknanda of Garhwal Himalaya. *Indian Journal of Ecology*, 8, 269-276.
- Das, S.M. (1989): Handbook of limnology and water pollution with practical methodology, South Indian publisher, New Delhi.
- Das, S.M. and Pathani, S.S.(1979): A study on the effects of lake ecology on productivity of Mahseer (*Tor tor* and *T. putitora*) in Kumaon lakes, India. *Matsya*, 4:25-31.
- 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, Malhotra, Y.R and Suri, S.M. (1987): Annular oxygen records in dark and light bottles from a fish pond, Jammu. *Poll.. Res.* 6:95-96.
- Ganseela Galvoo, S.M.F.(1985): Primary production in ten reservoirs in Southern Brazil. *Hydrobiologia* 122:81-88.

- Hancock, F.D. (1973). The ecology of the diatom of the klip rivers, southern Transvaal. *Hydrobiologia*, 43 (243), 243-284).
- Jana, B.B. (1973). Seasonal periodicity of plankton in fresh water in west Bengal, India. *International Review Ges.Hydrobiologia*, 58, 127-143.
- Khan, M.A and Zutsi, D.P.(1980): Primary productivity and trophic status of Kashmir Himalayan Lake. *Hydrobiologia* 68:3-89.
- Kulshrestha, S.K., and Joshi M. (1991). Periphyton community of lower lake of Bhopal in relation sewage pollution. In GopalAthana V. (Eds), Aquatic Science in India. Indian Association for Limnology and Oceanology, pp. 65-75.
- Munawar, M. (1970). Limnological studies on fresh. Water ponds of Hyderabad India II. The biocoenose distribution of Cellular and colonial phytoplankton in polluted and unpolluted environments. *Hydrobiologia*, 36/05428
- Pieters, A.J.H and Roos, R.W.(1986): Primary productivity and phytoplankton association in the Vaal river at Balk fountain, South Africa. *Arch Hydrobiol* 110:499-518.
- Silva, E.I.L. and Davies, R.W. (1986): Primary productivity and related parameters in three different types of Inland waters in Srilanka. *Hydrobiologia* 137:239-349.
- Singh, H.R. and Dobriyal, A.K.(1981): Potamology of the stream chakagadera in relation to the productivity of cold water minor carps in Garhwal Himalaya. *Proc.Indian. nat.sci.Acad.* 47(5): 652-655.
- Sankala, S.K., Jain, S.L., Dhakar, M.L., and Vyas L.N (1981). Phytoplankton Periodicity in three lakes around Udaipur. *Acta Limnology India*, 1, 1
- Stanley,D.W. and Daley, R.T.(1976): Environmental control of primary productivity in Alaskan Tundra ponds. *Ecology* 57:1025-1033.
- Singh, M. (2011).Study of plankton abundance in fresh water fish pound at Malawan, Etah U.P. *Ind. J .Biol. Stud. Res.* Vol. 1(1) 39-44.
- Tilzer, M.M.(1988): Secchi's disc-chlorophyll relationship in a lake with highly variable phytoplankton biomass. *Hydrobiologia* 162: 163-171.
- Tripathy, A.K., and Pandey S.N. (1990).*Water Pollution*.Ashish Publishing House, 1, 326
- Vijay Raghavan, Sumitra (1971): Seasonal variation in primary productivity in three tropical ponds. *Hydrobiologia* 38:395-408.
- Velecha, V., and Bhatnagar, G.P. (1988). Seasonal changes of phytoplankton in relation to some physico-chemical factors in lower lake Bhopal. *Geobios*, 15, 170-173.
- Ward, H.B and Whipple, G.V. 1992. *Freshwater Biology* (ed. W.T Edmondson) J.Wiley and sons. Inc. New York