

# **IMPACT OF PULP AND PAPER MILL EFFLUENTS ON THE DIVERSITY OF MACRO-INVERTEBRATE FAUNA OF GANGA RIVER AT BIJNOR, U.P., INDIA**

**R. K. NEGI & ANJANA RAJPUT**

Department of Zoology & Environmental Sciences, Guirukula Kangri University, Haridwar, Uttarakhand, India

## **ABSTRACT**

Impact of pulp and paper mill effluents on the diversity of benthic macroinvertebrate in Ganga river at Bijnor, UP, India was investigated from four selected sites July, 2007 to June, 2009. A total of 13 genera of benthic fauna belonging to 6 orders viz. ephemeroptera (4 genera, 30.7%), plecoptera (2 genera, 15.3%), diptera (3 genera, 23%), odonata (2 genera, 15.3%), leptostraca (1 genus, 7.6%) and decapoda (1 genus, 7.6%) were recorded where Ephemeroptera was reported as the most abundant order at all the sites. It has been observed that as the site-II is the discharge point of the effluents, minimum diversity was recorded, while site-III has the maximum generic diversity which was 500 mts away from the discharge point which is clearly documenting the harmful effects of industrial effluents on the benthic fauna. Diversity index was also recorded maximum at site-IV with value of  $H'$  as 0.557 while it was found to be minimum at site-II as 0.248. Benthic density was reported to be higher during winter months.

**KEYWORDS:** Benthic Fauna, Pulp and Paper, Diversity, U.P. Macro-Invertebrate