Geophysical Research Abstracts, Vol. 7, 06605, 2005
SRef-ID: 1607-7962/gra/EGU05-A-06605

The impact of stream regulation and pollution on phytobenthos community in the Glinscica Stream, Slovenia

N. Smolar-Zvanut

Limnos Water Ecology Group, Podlimbarskega 31, 1000 Ljubljana, Slovenia, Email: natasa@limnos.si/Fax:+386 1 5057 386

The sampling of phytobenthos in the Glinscica Stream was carried out in 2004 at five sampling sites, which were selected according to water pollution and stream regulation. A total of 44 taxa of phytobenthos algae were recorded. Diatoms (29 taxa) were most frequent, followed by green algae (9 taxa), cyanobacteria (5 taxa) and a representative of red algae. The Bray-Curtis coefficient of similarity showed that the regulation and pollution of the Glinscica Stream characteristically influenced the species composition of phytobenthos. The reason for the increased number of species along the Glinscica Stream is that the phytobenthos community is most variegated and abundant in less polluted watercourses at the beta-mesosaprobic level than at oligosaprobic level, which was observed at first sampling site in unregulated and unpolluted section of the Glinscica Stream. Another reason is in low to medium current velocity that facilitates the colonisation by green algae providing the basis for settlement of diatoms at good lighting. With regard to the value of the Pantle-Buck saprobic index, the water quality decreased downstream from 1st to 2nd quality class. Biological changes were most strikingly evident in the overgrowth of the bottom with green algae in regulated and also polluted section of the Glinscica Stream.