

SPECIES COMPOSITION OF BENTHIC MACROINVERTEBRATE AND WATER EVALUATION AT BACKCHEON RIVER IN KOREA

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ABSTRACT

This investigation on the structure of the benthic macroinvertebrate communities was conducted on Backcheon river South Korea to assess the cumulative effects of water quality on the aquatic biota. From the four seasons survey, a total of 24 macrobenthic species belonging to four phyla, five classes and eleven orders were identified. Dominant species was *Culicini* sp. which exhibited greatest individuals (141) and second dominant species was *Chironominae* sp. (88 individuals). The value of dominance index (DI) was varied from 0.124 (St. A) to 0.278 (St. C) with a mean of 0.226. Total ecological score of benthic macroinvertebrate community (TESB) was varied from 21 (St. D) to 41 (St. A) with a mean of 29.3. Benthic macroinvertebrate index (BMI) was varied from 18.916 (St. D) to 46.607 (St. A) with a mean of 29.462. The value of geometric density was 1.784. Mean Shannon-Weaver index (H') of diversity was varied from 2.024 (St. D) to 2.745 (St. A). H' at the upper region (St. A) was higher than those of low region (St. D).

Keywords: Backcheon river, benthic macroinvertebrate index (BMI), dominance index (DI), water quality.