

## MAPPING SPATIAL PATTERN AND BIODIVERSITY OF KINGDOM ANIMALIA AT THE ANSEONG RIVER, CHANGWON CITY, KOREA

**Man Kyu Huh**

Department of Molecular Biology, Dong-eui  
University, 995 Eomgwangno, Busanjin-gu, Busan  
614-714, Korea

**KOREA**

### ABSTRACT

Biodiversity and water quality were widely used in river ecology and natural animal fauna. The study was described in the spatial patterns of animals for four stations at the Anseong River in Korea during four seasons. Although this area was not wide, but the fauna were very diverse with 35 taxa, representing four kingdoms. Birds (Aves) exhibited the greatest species diversity with 15 taxa identified, followed by invertebrate animals (10 taxa); reptiles/amphibians (Sauropsida/Amphibia) with six taxa, and mammals (Mammalia) represented by five taxon. Fish was absent in this river. Shannon-Weaver indices ( $H'$ ) of diversity for mammals was 1.120 across regions, varying from 0.562 to 1.517. Shannon-Weaver indices ( $H'$ ) of diversity for reptiles, and amphibians were also varied among the stations and season. Although richness indices and evenness indices were different from each other, there were not shown significant differences ( $P < 0.05$ ). The average value of BOD and COD were 4.55 mg/l and 4.73 mg/l, respectively. The portion of BOD and COD in the river increased exponentially along the upper-down gradient. Total nitrogen and phosphate were also accumulated downward. Thus there was decreased the number of species in this river. Many artificial actions reduced the water's natural filtration action and eliminated the habitat of fish.

**Keywords:** Animal fauna, biodiversity, BOD, COD, the Anseong River.