

Comparative study of the macroinvertebrate community composition and water quality of Ona and Opa rivers, Southwestern Nigeria

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Abstract

Macroinvertebrate samples of Ona and Opa rivers were taken fortnightly between April and August, 2013 with the aid of a dip net of 500µm mesh size with the aim of evaluating the macroinvertebrate community composition and the water quality of the rivers. A total of 617 individuals macroinvertebrate belonging to 29 species were collected. Ona River was dominated by Chironomid larvae while Opa River was dominated by Trichoptera species. Margalef's species richness and Shannon-wiener's species diversity indices both revealed that Opa River is higher in terms of species richness and diversity. The physico-chemical parameters of the two water bodies showed a slightly marked variation, especially for Dissolved Oxygen, Conductivity and Total Dissolved Solids. Ona River was relatively lower in DO level but showed a higher TDS level than Opa River. The species composition and the water quality both indicated that Ona River is more stressed than Opa River due to greater impacts of anthropogenic activities which brought about the observed organically-induced pollution in the water body.