

Macroinvertebrate communities associated with macrophyte habitats in a tropical man-made lake (Lake Taabo, Côte d'Ivoire)



An ecological study was done on Lake Taabo with the main objective of characterising macroinvertebrate communities associated with the microhabitats created mainly by *Eichhornia crassipes* and other littoral native macrophytes. We sampled organisms in patches of those aquatic macrophytes. Also, some abiotic variables (temperature, transparency, turbidity, pH, TDS, conductivity, dissolved oxygen, NH_4^+ , NO_3^- , NO_2^- , PO_4^{3-} and SiO_2^-) were measured. Overall, forty-three taxa of macroinvertebrates were identified. Ten of them were exclusively associated with water hyacinth while five were only associated with littoral macrophytes. Macroinvertebrate taxa with some of the highest family richness were Gastropoda, Coleoptera, Heteroptera, Odonata and Diptera. The taxon with highest density in both microhabitats was Chironomidae. Although higher values of taxonomic richness (R_s), the Shannon index (H') and evenness (J) were obtained with the water hyacinth habitat, significant differences between the two microhabitats were not observed. Canonical Correspondence Analysis revealed that samples of *E. crassipes* collected in the dry season were characterised by Gastropoda and Odonata, as well as higher values of transparency

and ammonia-nitrogen. Baetidae, Hydrophilidae, Chironomidae, Ceratopogonidae, Coenagrionidae, Naucoridae and Ostracoda were most abundant in both *E. crassipes* and littoral macrophyte habitats during the rainy season. This season was characterised by higher levels of nitrates and conductivity.

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