

DISTRIBUTION, DIVERSITY AND ABUNDANCE OF MACROINVERTEBRATES IN

KINAWATAKA WETLAND

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Abstract

Macroinvertebrate surveys of various habitats namely water pools, litter, and macrophytes particularly papyrus at four sampling sites yielded five classes macroinvertebrates namely oligochaete, Bivalve, hirudinea, Gastropoda and Insecta. Class Insecta was represented by four orders namely Diptera, Odonata, hemipteran, and Coleoptera.

The five classes comprised of 4310 macroinvertebrate individuals. During the study it was found out that the macroinvertebrate community in Kinawataka wetland were not evenly distributed in all the three habitats. The water pool habitats were richer followed by the macrophytes with different species of macroinvertebrates. The litter habitat had the least number of macroinvertebrates species. These differences were attributed to the ability of Diptera and Oligochaeta species to survive in the habitats with low levels of dissolved oxygen concentration due to the presence of haemoglobin.

The study also revealed that the abundance and distribution of macroinvertebrates in Kinawataka wetland varied among the three habitats sampled. Some macroinvertebrates were more abundant

some habitants than others for example class Oligochaeta and Diptera were highly abundant in the latter habitat.

By using diversity indices, it was found that sampling site P had the highest richness index while sampling site T2 had the least richness index.

ANOVA was used to find out if there was any difference in distribution within transects. But t-test was used to compare distribution of macroinvertebrates between the transects. The findings were that there was no significant differences within both transects (T_1 , $F = 2.46$, $p < 0.05$; T_2 $F = 2.03$, $p < 0.05$). However, there were significant differences between transects T_1 and T_2 ($t = -1.2$, $p > 0.05$).