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**THE OCCURANCE OF CONTROPHIC SPECIES ON MOSQUITO LARVAL
POPULATION IN SELECTED HABITATS IN MBALE MUNICIPALITY, UGANDA.**

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ABSTRACT

The study assessed the occurrence of controphic species diversity and abundance on mosquito larval population in five categories of habitat in Mbale Municipality. The goal of this study was to determine the diversity and abundance of controphic species that may serve as potential biological control agents for mosquito larvae. The effects of physicochemical parameters on controphic species were also evaluated. A total of 992 species distributed across 11 orders were recorded. Controphic species diversity was lowest in Pond ($H' = 1.39$) and highest in Ditch ($H' = 3.47$) and Puddle ($H' = 2.48$), whereas Mosquito larvae diversity was lowest in rice field ($H' = 0.58$) and Pond ($H' = 0.60$), and highest in Ditch ($H' = 2.13$). One –way ANOVA (*post-hoc test*) showed that significant differences were observed in the abundance of both controphic species and mosquito larvae across habitat types. Ponds supported the highest number (51.60 ± 7.814) with a range of 31 to 74 of controphic species while swamps supported the least (16.71 ± 3.490) with a range of 3 to 27 individuals. That of mosquito larvae, Pond supported the highest number (28.33 ± 8.090) with a range of 14 to 42 larvae while rice field supported the least (16.00 ± 6.807) with a range of 3 to 26 larvae. There was a positive correlation between the diversity of mosquito larvae and that of controphic species ($r = .900^*$) and this was highly significant at ($p = .037$). Physical chemical parameters varied across habitats, with the pond having the highest amount of ammonia (mean value of 146.920 ± 2.731) while the rice field had the least with mean value of -1.320 ± 0.601 . The abundance of controphic species was also positively correlated with phosphorous composition ($r = .971$) and was highly significant at ($p = .006$). These findings should however be treated with caution because data collections lasted a period of only two Months and different techniques were used to collect samples in the different habitat types.