



A study on Mosquito Larval Diversity in Three Lentic Water Bodies in Matara District

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Abstract

A mosquito larval survey was carried out to find out the availability of mosquito larvae in three large lentic water bodies namely Kumbalgama, Makavita and Heendaliya in Matara District. Collected mosquito larvae were identified up to the genus level. Mosquito larval abundance was 60%, 27%, 13% in Kumbalgama, Makavita and Heendaliya, respectively. *Culex* sp. *Aedes* sp. *Anopheles* sp. and *Mansonia* sp were recorded and they were present in all study sites. *Culex* sp. was the most abundant species in Kumbalgama site. *Aedes* sp. and *Anopheles* sp. were highly abundant in Makavita site. Abundance of *Mansonia* sp was higher in Heendaliya site compared to the other two sites. Water quality parameters which are essential for the survival of mosquito larvae were also measured. Higher conductivity, nitrate and phosphate concentrations and lower pH were recorded in Kumbalgama throughout the study period and all these factors were positively correlated ($p < 0.05$) with mosquito larval abundance. However in Makawita, where *Aedes* sp. and *Anopheles* sp. were abundant, negative correlation ($p < 0.05$) was observed between the nitrate concentrations with the abundance of mosquito larvae. In Heendaliya site where *Mansonia* sp. were abundant nitrate concentration showed a positive correlation with mosquito larval abundance ($p < 0.01$). Findings of present study indicate that studied water bodies may act as suitable habitats for common mosquito genera in Matara District and the abiotic characteristics may determine the abundance of different genera.

Keywords: *Abiotic characters, Lentic water bodies, Matara, Mosquitos*