

The Effect of Height from Ground Level and the Age of Coconut Shell on the Oviposition and Fecundity of *Aedes albopictus* Mosquitoes

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In this study, the effect of height from ground level for *Aedes albopictus* oviposition in coconut shells and the attraction to old and new coconut shells were studied in the premises of University of Kelaniya. Sets consisting of 10 coconut shells with equal diameter (9 cm) were placed at three heights from ground level (0 m, 6 m and 16 m). Each set was filled water (250 ml) and placed at their respective heights and were allowed for mosquito oviposition. The total number of larvae was counted after 5 days. In addition, two sets of coconut shells including old (9 months after scraping) and new (within 20 days of scraping), each consisting of 120 shells were randomly placed at the experimental site and were allowed for mosquito oviposition. Temperature, pH, dissolved oxygen and total dissolved solids of water in the coconut shells were measured during the study period. The larval count was taken after 5 days and larval samples were reared up to adult stage of mosquitoes and wing lengths of adult female mosquitoes were measured as an index of fecundity. Data were analyzed using MINITAB 14.0 statistical software. Although previous studies indicated that both *Aedes albopictus* and *Aedes aegypti* were present in the study area, in the present study only *Aedes albopictus* was found as an outdoor container breeding mosquito species indicating seasonality and/or difference of indoor/outdoor preference for breeding. Significantly higher number of mosquito larvae was observed at ground level when compared to 6 m and 16 m heights ($F_{2, 74} = 25.80, P < 0.05$). The results also revealed that the old coconut shells were preferred by *Aedes albopictus* for oviposition (Two sample t-test, $P < 0.05$). It was also found that wing lengths of female mosquitoes are higher in larvae developed in new coconut shells (Two sample t-test, $P < 0.05$) than those in old coconut shells indicating high fecundity of mosquitoes in new coconut shells.