A-45: Some entomological and parasitological aspects of filariasis in the Colombo Municipal Council area

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The objective of this study was to find out (a) relative resting density, infection and infectivity rates, sex ratio and breeding habitats of the vector of Bancroftian filariasis - *Culex quinquefasciatus* and (b) prevalence of microfilariaemia in 3 Municipal wards of the Colombo Municipal Council (CMC) namely Mahawatta, Grandpass-South and Kollupitiya.

Collection of mosquitoes resting indoors was done from 0730h to 1100h and all *C. quinquefasciatus* females were dissected for filarial parasites. A larval survey was conducted and larvae were identified. Blood filming was done on residents by finger prick and thick smears were prepared using approximately 20mm^3 of blood. Smears were stained with Giemsa and examined for microfilariae.

Man-hour densities of *C.quinquefasciatus* in Mahawatta, Grandpass-South and Kollupitiya were 188.25, 53.58 and 33.74 respectively. Infection and infectivity rates of *C. quinquefasciatus* were 1.96% and 0.054% in Mahawatta, 1.62% and 0.2% in Grandpass-South and 0% in Kollupitiya respectively. Mean sex ratio (male : female) of *C. quinquefasciatus* was 1:3.08 and of all female mosquitoes collected, 96.35% were *C. quinquefasciatus*.

In the 3 wards surveyed, 65.85% of breeding places of *C. quinquefasciatus* were located in Mahawatta while 31.71% and 2.44% were in Grandpass-South and Kollupitiya respectively. Of the breeding habitats, 55.3% consisted of damaged septic pits while 19.2% and 10.6% consisted of cement and earth drains respectively. Relative density, infection and infectivity rates and microfilaria rates were significantly higher with breeding of *C. quinquefasciatus*.

Microfilaria (mf) rates for Mahawatta, Grandpass-South and Kollupitiya were 3.03%, 0.941% and 0% respectively. The age prevalence curve of mf rates did not show a significant difference between age groups. The mf rate of males (1.84) was significantly higher than that of females (0.77%).

The results indicate that infection rate, infectivity rate and mf rate were significantly higher in areas with high density of breeding habitats.