

STUDY ON SOME ENTOMOLOGICAL, PARASITOLOGICAL AND SOCIO-  
ECONOMIC ASPECTS OF BANCROFTIAN FILARIASIS IN THE COLOMBO  
MUNICIPAL COUNCIL AREA.

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## ABSTRACT

The study was conducted to determine the present filarial situation in three wards of Colombo Municipal Council, Sri Lanka. The entomological, parasitological and socio-economic aspects of bancroftian filariasis were investigated in three wards of Colombo City, namely Mahawatta, Grandpass South and Kollupitiya. The resting densities of *Cx. quinquefasciatus* which is the main vector of bancroftian filariasis in Sri Lanka were 188.25, 53.58 and 33.74 C/MH in Mahawatta, Grandpass South and Kollupitiya respectively. The infection rates and infective rates of *Cx. quinquefasciatus* were 1.96% and 0.05% in Mahawatta, 1.62% and 0.2% in Grandpass South and 0.00% in Kollupitiya respectively. The mean sex ratio (male:female) of *Cx. quinquefasciatus* ranged from 1:0.5 to 1:6.32, the average being 1:3.08. Of all the resting female mosquitoes collected from all the three wards, 96.35% were *Cx. quinquefasciatus*. Of the total breeding places of *Cx. quinquefasciatus*, 65.85% were from Mahawatta while 31.71% and 2.44% were located in Grandpass South and Kollupitiya respectively. Damaged septic pits comprised of 55.3% of the breeding places while 19.2% and 10.6% consisted of cement drains and earth drains respectively. The parasitological investigations which were conducted to detect microfilariae of *Wuchereria bancrofti* in the human population showed that the mf rate for Mahawatta, Grandpass South and Kollupitiya were 3.03%, 0.94% and 0.00% respectively. The age prevalence curve of mf rates did not show a significant difference between age groups but there was an increasing trend in 11-20 and >40 age groups. The mf rate for males (1.84%) was significantly higher than that of females (0.77%). The relative density, infection rate and infective rate of *Cx. quinquefasciatus* and the mf rate of the surveyed population were significantly higher in areas with a higher density of *Cx. quinquefasciatus* breeding habitats. More than 80% of the households in all three wards used at least one type of protection method against mosquitoes. But this has failed to bring significant reduction in the relative density, infection rate and infective rate of *Cx. quinquefasciatus* or mf rate of the population. The relative density and infection rate of *Cx. quinquefasciatus* and mf rate of the population were significantly related to the income level of the surveyed population and significant relationships were also obtained between relative density, infection and infective rates of *Cx. quinquefasciatus* and occupational status of the chief householder. The study emphasized the need of combining entomological, parasitological, socio-economic and environmental factors in controlling lymphatic filariasis in the area.