

Entomological Survey of Mosquitoes Responsible for the Transmission of Lymphatic Filariasis in Biase Cross River State, Nigeria

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Abstract : Entomological survey of mosquitoes responsible for the transmission of lymphatic filariasis in Biase Local Government area of Cross River State, Nigeria within March and June 2017. Lymphatic filariasis is a mosquito-borne parasitic disease that is caused by three species of tissue dwelling filaroids (*Wuchereria bancrofti*; *Brugia malayi*; *Brugia timori*): *Wuchereria bancrofti* is responsible for 90% of cases and is found throughout the tropics and in some sub-tropical areas worldwide. The mosquitoes were caught using human landing catches, and pyrethrum spray catches method. The entomological analysis of mosquitoes which include speciating into genus and dissecting them to unveil any microfilaria in the thoracic region, abdomen, and mouth parts of the mosquitoes. Entomological analysis shows that, from the 1296 mosquitoes caught 795 (61.3%) were *Culex* species, 342 (26.4%) *Anopheles* species, 102 (7.9%) *Aedes* species, and 57 (4.4%) of other Genera. There was a statistically significant difference in the number of mosquitoes caught in the dry and rainy season ($X^2=0.62$, $P < 0.05$). Out of 1213 mosquitoes dissected, 24(0.02%) contained developed stages ($L_1 - L_3$) of *W. bancrofti* larvae. 13 (0.01%) of the infected mosquitoes were of *Culex* species, and *Anopheles* species accounted for the other 11 (0.009%). There was a statistically significant difference in the infection rate between the two seasons ($X^2=0.87$, $P < 0.05$). The correlation analysis showed a positive correlation between the infection rate among mosquitoes in the dry and rainy season ($r=0.85$, $P < 0.05$). The entomological studies showed that *Anopheles* species and the *Culex* species are the vectors of lymphatic filariasis in the study area.

Keywords : entomological survey, mosquitoes, lymphatic filariasis, biase

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