

Prevalence and Insecticide Resistance of Members of the *Anopheles subpictus* Species Complex-the Reported Vector of Malaria in Jaffna District

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Anopheles subpictus, the well established subsidiary vector of malaria in many parts of the country, including the Jaffna District, exists as a species complex comprising four sibling species viz A, B, C and D. There are no reported studies on the bionomics of the sibling species that exist in the Jaffna district. A study was carried out from November 2005 to July 2006 in selected endemic localities in the district to establish the prevalence and insecticide resistance of the members of the species complex. Blood-fed adult mosquitoes were collected using cattle-baited traps with the assistance of the AMC, Jaffna. Sibling species status was established based on egg morphology. 1-2 day old adult female progeny of identified field caught blood-fed females were exposed in batches to recommended dosage of DDT (4%) and malathion (5%) following the WHO protocol. The results showed subspecies B to be predominant (n=198; 67%) along with species C (n=33; 11%) and D (n=65; 22%). Spatial map to show the prevalence of sibling species in the District, was created using Arc View GIS software. All the sibling species were highly susceptible to 5% malathion whilst being highly resistant to 4% DDT. This study establishes for the first time, the presence of more than one sibling species of the *An. subpictus* complex in this area, which warrants a detailed study on the bionomics of sibling species of this taxon.