

POPULATION DYNAMICS OF ADULT MOSQUITOES (DIPTERA: CULICIDAE) IN MALARIA ENDEMIC VILLAGES OF KUALA LIPIS, PAHANG, MALAYSIA

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Abstract. Mosquitoes in malaria endemic areas needs to be monitored constantly in order to detect demographic changes that could affect control measures. A 12-month mosquito population survey was conducted in several malaria endemic areas in Pos Lenjang, Kuala Lipis, Pahang, Malaysia. Collection of mosquitoes using a human landing catch technique was carried out indoors and outdoors for 12 hours from 7:00 PM to 7:00 AM for 42 nights. *Anopheles maculatus* Theobald (31.0%), *Armigeres flavus* Leicester (11.3%), *Armigeres annulitarsis* Leicester (11.0%), *Culex vishnui* Theobald (9.6%) and *Aedes albopictus* Skuse (7.0%) were the predominant species caught in the study area. The salivary gland and midgut of all anopheline mosquitoes were dissected to determine the presence of malaria parasites but none were positive. A high rate of human biting by *An. maculatus* was detected during December, but the rate was lower in January. Mosquito larvae were carried by the rapid current of the river downstream causing a decrease in the larvae population. Of the five predominant species, only *Ar. annulitarsis* exhibited a significant positive correlation in numbers with monthly rainfall ($p < 0.05$). *An. maculatus* biting activity peaked during 10:00 PM to 11:00 PM. *Ae. albopictus*, *Ar. annulitarsis*, and *Ar. flavus* exhibited similar activities which peaked during 7:00 PM to 8:00 PM.

Keywords: adult mosquito, population dynamic, malaria endemic villages, Malaysia

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