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

Wan Najdah Wan Mohamad Ali¹, Rohani Ahmad¹, Zurainee Mohamed Nor², Zamree Ismail¹ and Lee Han Lim¹

¹Medical Entomology Unit, Institute for Medical Research, Kuala Lumpur; ²Department of Parasitology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

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

Correspondence: Wan Najdah Wan Mohamad Ali, Medical Entomology Unit, Infectious Disease Research Center, Institute for Medical Research, Jalan Pahang, 50588 Kuala Lumpur, Malaysia.
Tel: 603 2616 2690; Fax: 603 2616 2689
E-mail: w_najdah@yahoo.com