

protein (CSP). Biting behavior, parity rate, vectorial capacity and entomological inoculation rate was compared between seasons and location within the village. Results are discussed in the context of the malaria transmission dynamics in Kong Mong Tha.

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MORPHOLOGICAL VARIATIONS AMONG *ANOPHELES MINIMUS* A IN MAESOT DISTRICT, TAK PROVINCE, THAILAND

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Anopheles minimus Theobald is one of the major vectors of malaria throughout the Oriental Region. Its complex is known to comprise at least 2 sibling species (A and C) in Thailand. This study investigated the specific status of *An. minimus* from Ban Khun Huay, Ban Pa Dae and Ban Tham Seau, Maesot District, Tak Province, Thailand. Anopheline larvae were collected between October 2002 and September 2003 and allowed to emerge into adults under laboratory conditions. Adult *An. minimus* were then identified by morphological and molecular characterization. From morphological techniques, we observed that 1,715 of female *An. minimus* could be separated into 8 groups based on their wing scale patterns. Sampling from each group was then confirmed by molecular technique. Polymerase Chain Reaction Restriction Fragment Length Polymorphism (PCR-RFLP) assay developed by Van Bortel et al (1999) was used for the identification of *An. minimus* group. We conclude that all samples were in fact *An. minimus* A.

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NEW WAYS TO SCREEN CANDIDATE MOSQUITO REPELLENTS FOR HUMAN USE

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The insect/arthropod threat to a human can be both a nuisance and a source of disease. Personal protection by repellents is an effective and practical way to reduce biting activity of hemophagous arthropods especially when vaccines are not available. DEET, a synthetic broad spectrum repellent, has been widely used. Recent research has shown that DEET is not effective against some species of insect/arthropod vectors. Despite the broad spectrum effectiveness of DEET and the improvement in persistence and acceptability as a result of controlled-release formulation, the threat of insect-borne disease is still so grave as to demand continuing effort to develop innovative repellent/repellent formulations which may be more effective than DEET for some species of insect/arthropod vectors. We investigated the new candidate insect repellent: DM 159-2 by *in vitro* and *in vivo* methods against *An. dirus* A, *Ae. aegypti*, and *Ae. albopictus*