

Resting Sites and Bloodmeal Source Identification of *Anopheles minimus* in Taiwan

Abstract

This project uses sucking machines to investigate the resting sites and analyzed blood source of *Anopheles minimus* by PCR and ELISA methods. No *Anopheles* adults were collected inside the houses and only single female *An. minimus* and *An. maculatus* outside the houses in 185 premises of 17 villages. The number of *An. minimus*, *An. maculatus*, *An. ludlowae*, *An. tessellatus*, and *An. sinensis* collected in the surroundings of breeding streams and ditches were 18 ♀ 5 ♂, 2 ♀, 2 ♀, 1 ♀, and 2 ♂. The total numbers of mosquitoes collected per light trap per night in the villages were *An. minimus* 67 ♀ 2 ♂, *An. maculatus* 18 ♀ 1 ♂, *An. ludlowae* 59 ♀ 3 ♂, and *An. sinensis* 31 ♀ ♂, while *An. minimus* 56 ♀ 8 ♂, *An. maculatus* 12 ♀ 2 ♂, *An. ludlowae* 97 ♀ 1 ♂, and *An. sinensis* 45 ♀ 4 ♂ in the surroundings of breeding sites. For blood source analysis, if the mosquitoes were collected from animal shelters, the same animals were the main blood source. If the *An. minimus* mosquitoes collected by other areas, this species fed on dog, cattle, pig and one non-chicken bird. Based on this result, we concluded that the indoor residual spray was not effective to control *An. minimus*. The nighttime space spray can be applied after 10 PM and the residue sprays in animal shelters, its breeding sites and outdoors are still effective. Special caution on the selection of breeding sites should be evaluated before application to avoid water pollution by insecticides.

Keyword: *Anopheles minimus*, Resting sites, Blood source analysis