



## Original Article

### Investigation of Dengue Vector Mosquito Density in Tainan, 2010-2012

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#### Abstract

In this paper, we analyzed the frequency and seasonal distribution of dengue vector mosquito, *Aedes aegypti*, using the data from 2010-2012 dengue vector mosquito density survey in Tainan City. We expect to provide further understanding of mosquito ecology and reference information on the control of the breeding source more clearly. Information was retrieved from database of Disease Prevention Information Collection Platform in the Centers for Disease Control; the Tainan mosquito information was analyzed. Tainan City has 37 districts, 752 neighborhoods; and all neighborhoods were surveyed in the three years. The *Aedes aegypti* was found in 21 (57%) neighborhoods, while the *Aedes albopictus* was found in 29 (78%) neighborhoods. Moreover, *Aedes aegypti* was found in 8 districts (22%), and *Aedes albopictus* was found in 7 districts (19%) every year. Among 8 districts which *Aedes aegypti* was found, Northern, Western, Eastern, Southern and Anping District have higher *Aedes aegypti* rates (above 90%). In the view of month, *Aedes aegypti* rate is higher in two periods, the May-June and October-November. The *Aedes aegypti* rate in North district is high (above 80%) every month. The proportion of *Aedes aegypti* and dengue incidence was found with moderate correlation ( $r = 0.54$ ). The results of high risk regions and periods provide a reference for application of prevention and control resources, and hoping to make prevention and control measures more efficiently.

**Keywords:** Dengue fever, *Aedes aegypti*, dengue vector mosquito density survey, Mosquito Index