

DISTRIBUTION OF *CULEX PIFIENS* (DIPTERA: CULICIDAE) COMPLEX IN YOKOHAMA, JAPAN

¹KEIKO KOSONE, ¹MAYUMI ITO, ²KIMIO KOSUGE,
AND ¹AKIHIRO KANAYAMA

¹Yokohama City Institute of Health, 1-2-17 Takigashira, Isogo-ku,
Yokohama 235-0012, Japan

²Yokohama Hodogaya Public Health Center, 2-9 Kawabe-cho, Hodogaya-ku,
Yokohama 240-0001, Japan

Abstract Several species of mosquitoes are well known to be the serious vectors of epidemic diseases in the world. As a part of the basic survey to watch possible invasion of West Nile virus into Japan, mosquitoes were collected to elucidate their geographic and seasonal distributions in the urban area of Yokohama, one of the city with a big international port in Japan. Dry ice light traps were settled to gather adult mosquitoes in two residential districts and a cowshed during the period from April to December in 2005, while in four residential districts and a cowshed in 2006. The total numbers of adult mosquitoes collected in 2005 and 2006 were 7,158 and 2,518, respectively and they were divided into four genera, nine species.

The principal species in the residential districts identified was *Culex pipiens* complex (97.0%; 2005, 83.2%; 2006), and *Aedes albopictus* (2.1%; 2005, 14.5%; 2006). *Culex pipiens* complex might be the main vector of West Nile disease in Japan. *Culex pipiens* complex was observed at each point throughout the research period, but the number of individuals was larger in the residential districts than that in the cowshed. *Culex pipiens* complex was classified into two species, *Culex pipiens pallens* and *Culex pipiens molestus* by using the method to count the number of individual eye in the fifth line of the adult female compound eyes and measure the D/V ratio of the adult male genitalia. Sixty-five percent of the adult female *Culex pipiens* complex (548/847) was determined to be *Culex pipiens molestus* in 2006. However, the ratio of *Culex pipiens molestus* among the male *Culex pipiens* complex captured in the residential districts in 2005 and 2006 was 10.6% and 11.2%, respectively. A similar survey is being conducted in 2007.