

Public Abstract

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Department:Plant, Insect and Microbial Sciences

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Title:COMPARISON OF MOSQUITO COMMUNITIES COLLECTED FROM DIFFERING LIVESTOCK LOCATIONS AND AN EXAMINATION OF PHENOTYPIC TRAITS EXHIBITED BY FOUR LATITUDINALLY SEPARATED POPULATIONS OF Aedes albopictus (SKUSE)

Mosquitoes play important roles in the spread of pathogens that affect humans, livestock and wild populations of animals. This research looked at (1) the differences in the kinds of mosquitoes collected from mid-Missouri agricultural locations that maintain different main livestock hosts and (2) the genetic differences between groups of the Asian Tiger mosquito *Aedes albopictus* (Skuse) that were collected in four different climates running north to south. Adult mosquitoes were collected from 15 trapping locations that maintained 5 different main livestock hosts during the summers of 2009 and 2010. We found differences between the kinds of mosquitoes collected at locations that kept cows and those that kept goats. We also found three species of mosquitoes that might indicate the presence of cows at the location. Female mosquitoes are the only sex that take blood from humans and animals, and how well they spread pathogens is directly related to how fit, or healthy, they are. During the summer of 2010 we collected four groups of *A. albopictus* from Ohio, Tennessee, Georgia and Florida. We found differences in body sizes, how long it took the immature mosquitoes to develop and differences developmental time in the presence of other kinds of mosquitoes. Even though the mosquitoes were the same kind, the differences in where they were collected seem to affect body size and developmental time. The information collected from this research is important for the prediction of disease outbreak areas and for mosquito control efforts.