

Japanese Encephalitis is a serious public problem causing significant mortality in children and old people in many countries of Asia including Sri Lanka. The JE virus is transmitted to the human by mosquitoes of the sub family culicinae. The vector species in Sri Lanka are *Cx tritaeniorhynchus*, *Cx gelius*, *Cx whitmorai* and *Ma uniformis* are also considered to be potential vectors. The aim of this study was to identify the source of blood meals of these vectors and to determine the host preference of the vector species. Mosquitoes were collected early morning from their natural resting places such as under bushes and heaped up cadjans/ husks, under bridges, in tree holes, earth cavities *etc* using an aspirator. These collections were made from Anuradhapura, Polonnaruwa, Kurunegala, Puttalam, Negombo, Kalutara, Wattala and Gampaha areas during the period from October 1997 to February 1998. Mosquitoes were identified to the species level and smears were made from blood meals of freshly fed mosquitoes on to filter paper sheets (Whatmann No. 3). These smears were then analysed by the gel diffusion technique for the presence of cow and human blood.

A total of 896 blood meals of vector mosquitoes were identified and 97.5% were found to be fed on bovines while the rest on humans. 3.3% of *Cx tritaeniorhynchus* (n=448), 1.2% of *Cx gelidus* (n=242), 2% of *Cx fuscocephala* (n=52) and 4.5% of *Ma uniformis* (n=66) were found to be positive for human blood. Blood smears of *Cx vishnui* were not available for analysis. Out of the total 448 blood smears of *Cx tritaeniorhynchus*, 201 smears were obtained from Hingurakgoda area in Polnnaruwaa in February 1998 and 7% of them were positive for human blood. It was observed that the density of this species was found to be high compared to that of previous observations. It was also observed that the cattle population in this particular area was low compared to the rest of the areas.

This study shows that all the potential vectors of Japanese Encephalitis virus are primarily zoophilic and their tendency to bite human increases when they are in high densities.