Arbovirus encephalitis occurs in distinct geographic distributions and vector patterns. Each continent tends to have its own arboviruses and names are usually suggestive, e.g. Venezuelan equine encephalitis (VEE), Japanese encephalitis (JE), Murray Valley (Australia) encephalitis (MVE) etc. All of the preceedings are togavirus infections spread by mosquitoes having a distinct ecologic pattern. On a given continent there may be a shifting distribution depending on virus, hosts and vectors in a given year.

Japanese encephalitis occurs throughout the orient. The disease was first recognised in Japan in 1871. The activity of JE in India is known to occur in the southern part since 50's of this century. JE recently drew considerable attention as an important emerging health problem after its sudden, unwarranted and explosive outbreaks in epidemic proportion for the first time in 1973 in Burdwan and adjoining Districts of the State of West Bengal in eastern India. Since then, JE with almost annual recurrence, high rate of case fatality and morbidity has been the source of a colossal problem for public health personnel in the State of West Bengal. Subsequently wide spread epidemics broke out in many parts of India. There are indications of the spread of these new foci of epidemics also to Bangladesh, a neighbouring country.
Because of the existence of susceptible human population and sufficient number of vector mosquitoes and availability of reservoir/amplifying vertebrate hosts in many parts of India including West Bengal State, apprehension has been raised in certain quarters that JE virus may pose an increasingly serious problem in the country in near future. For attaining success in controlling if not eradicating this newly entrant vector borne disease, in this particular zoogeographical set up of West Bengal, an elaborate and indepth study on the epidemiology of Japanese encephalitis in relation to vectors in an endemic area of the West Bengal State is urgently needed. The present study has been planned and performed, keeping in view the above perspective. The outcome of the study may prove helpful in understanding some of the basic problems related to and responsible for the spread and persistence of JE virus in West Bengal.

The Department of Medical Entomology of Calcutta School of Tropical Medicine, under the leadership of Professor A. K. Hati, is being engaged in research on Japanese encephalitis in relation to its vectors since 1973. The Department has also undertaken field studies in the affected areas, namely the District of Burdwan, State of West Bengal. The investigator had the opportunity to work as a research fellow in the well equipped departmental laboratory and to undertake a study on the epidemiology of Japanese encephalitis in relation to vectors.