

ARBOVIRUSES IN SRI LANKA - I BATAI VIRUS

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A survey of Arboviruses was undertaken in two areas - Kandy and Zone 4 System C of the Accelerated Mahaweli Development Project. The methods used were : (a) isolation of viruses from field caught mosquitoes by inoculation into newborn mice and Vero cell cultures *in vitro*, (b) seroepidemiological survey of animals and man using plaque reduction neutralization test (PRNT); antibody dependent plaque enhancement test and the haemagglutination inhibition test.

42,599 mosquitoes representing 18 species have been tested to date and five viruses have been isolated. All isolates have been confirmed by re-isolations from the original frozen mosquito pools. Three isolates CBC 79 (from *An. vagus*); CBC 80 (*An. peditaeneatus*) and CBC 190 (*Cx. fuscocephala*), all collected in the Kandy area, were presumptively identified to be Batai by PRNT tests using standard antisera and confirmed by reciprocal PRNT tests comparing the isolates to prototype Batai (YARU) using rabbit sera raised to the respective viruses. This is the first isolation of Batai virus in Sri Lanka.

The prevalence of Batai in the Kandy area was confirmed by the seropositivity (by PRNT) observed in cattle (29/91). The widespread prevalence of the virus in other parts of Sri Lanka and the range of vertebrates infected was shown by significant seropositivity found in cattle, goats, dogs, sheep and pigs in the Mahaweli System C, Anuradhapura and Kotukachchiya areas.

Whereas human sera collected in the Kandy area were seronegative for Batai, a few (2/72) PRNT seropositive sera were detected in persons resident in the North Central Province. Seroconversions in the Mahaweli System C areas. No disease association could be established in these persons. However the role, if any, of Batai virus in human and animal disease in Sri Lanka remains to be documented.

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