

SUMMARY

An ecological study on the mosquito fauna of Sinharaja Forest was carried out during 1984-1986, at study sites situated around the Natural Resources Energy and Science Authority/March for Conservation Field Research Stations within the forest.

Mosquitoes belonging to 34 species from 10 genera were collected during the study. The dominant genus was Culex with 11 species, followed by Aedes with 7 species, Anopheles and Uranotaenia with 4 species each.

The main breeding habitats available for mosquitoes in this unique habitat are phytotelmata and ground water habitats. The phytotelmata consisted of tree holes, pitchers of Nepenthes distillatoria which were frequently occurring stable habitats and fallen leaves, leaf bracts etc. which were less frequent unstable habitats. The ground water habitats consisted of semi-permanent roadside ground pools, seepage marsh pools, rock pools and stream margins.

Four species of mosquitoes were found to inhabit the tree hole phytotelmata, the dominant being Or. flavithorax and Cx. uniformis. The diversity of the mosquitoes inhabiting tree holes was extremely low. The bamboo

receptacles used as tree hole surrogates to investigate elevational aspects of mosquitoes breeding in the forest yielded 6 species. The most prevalent mosquitoes were Tr. affinis, Cx. uniformis, Ae. chrysolineatus and Ar. subalbatus, the last species being absent in natural breeding habitats in the forest. Culex uniformis showed evidence of breeding close to ground level while Tr. affinis showed maximal breeding at subcanopy level. Pitchers of N. distillatoria were occupied by two species of mosquitoes, Tr. dofleini and Ar. magnus. The former was the dominant species, breeding in pitchers upto 15 m height above ground, but being most prevalent at ground level.

Ground water habitats yielded 21 species, the ground pools being dominated by Anopheles sp. (Aitkenii gp.) and Cx. mimulus, the seepage marsh pools by Anopheles sp. (Aitkenii gp.), Ur. gouldi and Cx. wardi and the rock pools by Ae. macdougalli. Fifty types of single and multi species occurrences were recorded from the roadside ground pools and marsh pools, the maximum number of species occurring together being not more than four. The ground pools contained more species in association indicating the diverse nature of this habitat.

Adult collections by diurnal human bait catches yielded 9 species of mosquitoes, Heizmannia sp. being the most prevalent, and the CDC light trap collections

yielded 6 species, with Ur. gouldi being the most frequently collected species.

Based on material collected during the study, all life stages (except the egg) of a new species of Anopheles (Aitkenii gp.) are described from Sinharaja Forest. The species, herein named Anopheles (Anopheles) peytoni n. sp. is distinguished from all other members of the Aitkenii group of Anopheles.