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**A PRELIMINARY SURVEY ON THE FOOD OF *ANOPHELES CULICIFACIES*
GILES AND *ANOPHELES VARUNA* IYENGAR LARVAE IN A DRY ZONE
VILLAGE ECOSYSTEM**

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Anopheles culicifacies and *Anopheles varuna* are important vectors of malaria in Sri Lanka. These mosquitoes breed in natural waterways, in specific microhabitats. This study investigates the natural food of two larval vector species found in stream bed pools of a natural water way (Yan Oya) found in the Huruluwewa watershed, Anuradhapura District. We report here the observations of the preliminary studies carried out within the study site.

Mosquitoes were collected from the natural habitat during the month of July 1998. Initially, DAPI (4',6-diamidino-2-phenylindol) stained gut contents of ten fourth instar *An. varuna* larvae were examined under epifluorescence microscopy to elucidate the different categories of food present. From the differential staining we observed that the food ingested consisted of decaying organic matter (detritus-yellow stain) of varying sizes, two types of bacteria (rods and cocci – blue stain), and algae (desmids and diatoms –red stain).

In a second set of mosquito larvae, comprising *An. culicifacies* (n=18 fourth instars) and *An. varuna* (n=8 second instars; n=21 fourth instars), quantitative estimates of the different categories of food types were made. Detritus was the most abundant food type, with mean percentage occurrence (\pm SEM) of 80.6 (\pm 0.27), 72.1 (\pm 0.5), and 79.0 (\pm 1.1) for fourth instar *An. culicifacies*, fourth instar *An. varuna* and second instar *An. varuna*, respectively. Of the two types of algae, desmids were present only in *An. culicifacies*. There were no significant differences in the proportions of detritus, cocci, rods and diatoms in the guts of the different instars observed (ANOVA and Tukey's procedure, $P > 0.05$).



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