

Investigation on Oviposition Responses of Container Breeding Mosquitoes to Different Coloured Containers and to the Location Using Tap Water, Hay Infusion and Ariconut Infusion

H M S N Fernando and G A S M Ganehiarachchi*

Department of Zoology, University of Kelaniya, Sri Lanka. *mangala@kln.ac.lk

The present study was conducted to investigate the effect of container colour and location on ovipositional preferences of mosquitoes that breed in containers. The study was conducted during the period of February to July, 2011. The oviposition preferences for container colour were studied using six different coloured plastic containers; black, white, yellow, blue, red and green. Plastic containers with similar apertures were used. The experimental design was randomized complete block. The set of 30 containers with six different colors (5 from each) were kept on tables at three pre-selected locations; indoor, outdoor sunny and outdoor shady. Tap water (1200 ml) was added to each container and observed every day for the presence of mosquito larvae. Number of larvae in each container was recorded. Each container was covered with a net with small mesh size after ten days. Observations were made every day for the emergence of adults. Once the adults emerged, they were collected and identified using identification keys for adult mosquitoes. The same experiment was carried out with hay infusion (20%) and ariconut infusion to test whether the mosquitoes show a significant preference to the container colour even in the presence of these ovitraps which generally attract more female mosquitoes for oviposition. Temperature, pH and dissolved oxygen content in the medium and humidity around the study location were measured with respect to each experiment. Data were analyzed using the software JMP version 5.01. Analysis of data revealed that *Aedes albopictus* bred in outdoor containers while *Aedes aegypti* bred in indoor containers. The results revealed that there is a significant effect of the container color for the oviposition of mosquitoes ($P < 0.05$), with respect to tap water, hay infusion and ariconut infusion where the highest number of larvae were recorded in black colour containers and lowest number of larvae found in yellow and white containers and significantly higher number of larvae were recorded at the outdoor shady location ($P < 0.05$).