

A PRELIMINARY STUDY
OF SOME ASPECTS OF OVIPOSITIONAL BEHAVIOUR OF
Culex quinquefasciatus

PERMANENT REFERENCE

BY

MANORANJANI KANAGARETNAM

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Meena Dharmaretnam

Dr. Meena Dharmaretnam

(Supervisor)

Dept of Zoology

Eastern University Sri Lanka

Date: 16/7/2001

C. Balasundaram

C. Balasundaram

Head, Dept of Zoology)

Eastern University Sri Lanka

Date: 16/7/2001

Head / Zoology



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Abstract

Animals select ovipositional sites that maximize their fitness. Mature female mosquitoes select the oviposition site optimal for the survival of its offspring. Factors such as the presence of food, predators, conspecifics, attraction of pheromone etc. are important in determining oviposition. Pheromone released on the maturation of *Cx. quinquefasciatus* eggs and the polluted water sample significantly increased oviposition.

This short-term project was carried out to study the ovipositional behaviour of gravid female mosquitoes of *Cx. quinquefasciatus*: with respect to type of container, effect of different type of leaf, leaf infusion, the presence of conspecifics larvae. The effect of different type of leaf material and conspecifics larvae investigated.

Cx. quinquefasciatus shows peak activity of egg laying in the time zone of 7-9 am. Clay pots being preferred over other three type of container (coconut shell, plastic bottle and glassware) presented. Within the four type of leaf infusion, *Cycas* leaf was preferred for oviposition. Neem leaf infusion did not attract the gravid females but the leaf of neem shows slight attraction for *Cx. quinquefasciatus*. Gravid females of *Cx. quinquefasciatus* choose the presence of food with the early larvae of conspecifics as a good indication of the stable site for their egg laying than the absence of food with conspecifics.

The rate of egg hatching was higher in the duckweed and lowest in the Neem. But it did not differ when the conspecifics were presented. Larval survival was highest in duckweed, and lowest in neem. There was no difference observed with conspecifics. The rate of pupation was higher when reared with *Cycas* and grass when compared with duckweed. Pupation in duckweed ceased after 15 day of post hatching. 100-percentage larval death occurred in Neem. The rate of pupation did not differ between the early + and late +. The percentage adult emerged in duckweed and the mean percentage female emerged in this leaf was also less.

Larvae of duckweed medium spent most of the time thrashing and were found in all positions. In *Cycas* and grass medium the most predominant activity was filtering and resting respectively, in the surface. Browsing was only exhibited in the duckweed medium. Larvae of Neem spent most of the time resting and on the surface.

It is concluded that the clay pots with oviposition attractant *Cycas* leaves, *Cycas* leaf infusion, and early larvae of conspecifics can be used effectively to sampling of gravid *Cx. quinquefasciatus* within the time zone of 7-9 am. Neem can be used to prevent mosquito larvae from developing to adult stage.

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