934/D

Oviposition Responses of *Aedes aegypti* and *Aedes albopictus* (Diptera: Culicidae) to Five Types of Grass Infusions

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Mosquito species exhibit a remarkable diversity of oviposition responses that ensure eggs are deposited into microhabitats favorable for successful larval development and the emergence of the next mosquito generation. The present study showed that there is a significant difference in the attraction of grass species withrespect to*Aedes aegypti* and *Aedes albopictus,* for oviposition. Ovitraps baited with grass infusions, *viz.*,*Cymbopogon confertiflorus* (Maana), *Bambusa vulgaris* (Bamboo), *Imperata cylindrica* ("Iluk"), *Cymbopogon citratus* (Lemon grass, "sera*"*), and *Zea mays* (Corn, "Badairingu") were evaluated as oviposition attractants or stimulants for *Aedes* mosquitoes. These grass species were selected for the research due to their abundance in Sri Lanka. Aged tap water was used as the control and mated blood fed females of *Aedes* mosquitoes were used for all the experiments. Significantly higher oviposition was observed with *Bambusa vulgaris* for both *Aedes aegypti* (82.75 ± 2.81) and *Aedes albopictus*(110.94 ± 1.37) mosquitoes. Significantly lower oviposition was observed with *Cymbopogon citrates* for both *Aedes aegypti* (10.25 ± 0.78) and *Aedes albopictus* (27.94 ± 0.69). Moreover, the mean number of eggs deposited in ovitraps baited with infusion made from fresh mature leaves was higher compared with dried mature leaves for both *Aedes* species. Combined grass infusion made from most attractive and least attractive grass species, *Bambusa vulgaris* and *Cymbopogon citratus*, respectively, was less attractive than the infusions made from single grass species. The repellency in *Cymbopogon citratus* for the *Aedes* mosquitoes was reduced by *Bambusa vulgaris* (Bamboo).These results indicate that individual leaf species are important in determining the oviposition responses towards different leaf infusions. Identification of chemical composition and microbial inhabitants are crucial components for future research. A better understanding of the wide diversity of *Aedes* mosquito oviposition responses towards the grass infusions will allow the development of new and advanced surveillance and control programs.

Keywords: *Aedes aegypti, Aedes albopictus,* Dengue, Grass infusions, Oviposition

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