

Regular Article

A study of prevalence of Anopheline mosquitoes from a periurban locality of Bareilly District

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Abstract

Mosquitoes are dipterans causing transmission of harmful diseases viz. Malaria, Filariasis, Encephalitis, Dengue etc. These are hematophagous insects. These are attracted towards hosts mainly in night but attack in day time also, thus the feeding behaviour is studied in night easily. Anopheline species from human and cattle dwellings were studied during Nov. 2006 to Feb. 2006. Out of 1210 specimens, a total number of 819 Anopheline mosquitoes representing 9 species were identified. These were identified on the basis of ornamentation of wings and palpi. Observed species *An. culicifacies* (13%) and *An. splendidus* (16%) were found abundant in cattle shades while *An. stephensi* (11%), *An. vagus* (5%) and *An. subpictus* (8%) were abundant in human dwellings and the maximum frequency of *An. maculatus* (19%), *An. annularis* (12%), *An. fluviatilis* (8%), and *An. pulcherrimus* (7%) was seen in mixed dwellings.

Key words: Physico-chemical parameters, Water quality, Phytoplanktons, Kohargaddi dam

Introduction

Mosquitoes, the most important group of insects belongs to the order 'Diptera', the two winged flies. Following seven genera are mainly found in India viz. *Anopheles*, *Culex*, *Aedes*, *Mansonia*, *Haemagogus*, *Sabethes* and *Psorophora*. According to Bruce-Chwatt (1985), Anopheline species are medically important because of their role as vectors of human malaria.

In India, 58 species of Anopheles are found, of which following species viz. *An. culicifacies*, *An. stephensi*, *An. fluviatilis*, *An. minimus*, *An. dirus* and *An. sudaicus* have considered primary vectors of malaria.

The morphological variations provide clues to understand the role of a particular species/sibling species in the disease transmission. There are several reports about the studies on morphological variations found in the palpi, wings and legs of Anopheline mosquitoes (Christophers, 1993; Ramakrishna, 1954; Subramanian and Nagendra, 1955; Nagpal, 1990; Jauhari et al. 2000).

For the last decade or so, considerable environmental changes have created innumerable mosquito-genic habitat. Hence, the present investigation has been carried out to make a systematic analysis of seasonal statistical data of Anopheline mosquitoes from periurban locality of Bareilly district.

Objectives

To observe the occurrence of Anopheline species inhabiting the human and cattle dwellings in the selected locality.

To mark the abundant species in the locality.

Materials and Methods

The adult mosquitoes were captured in the morning time from the selected locality.

The mosquitoes were collected by test tube, by hand net, by drop net and by spray method.

The collected specimens were preserved in glass having cotton wet with petroleum ether.

Identifications were done under binocular microscope and the procedures adopted by Christophers (1993), Wattal & Kalra (1961) and catalogue of Knight and Stone were used.

Result and Discussion

Total nine species of Anopheles out of 1210 specimens were identified viz. *An. annularis* (12%, 98 specimens), *An. fluviatilis* (8%, 67 specimens), *An. pulcherrimus* (7%, 56 specimens), *An. maculatus* (19%, 156 specimens), *An. stephensi* (11%, 94 specimens), *An. vagus* (5%, 39 specimens), *An. subpictus* (8%, 63 specimens), *An. culicifacies* (13%, 109 specimens) and *An. splendidus* (16%, 137). These specimens were identified on the basis of ornamentation of wings and palpi.

Conclusion

It is concluded that *An. maculatus* is the most abundant species besides other species found in the selected locality. *An. splendidus* and *An. culicifacies* are also found in good number.

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