

**CHAPTER - V**

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# **SUMMARY**

## S U M M A R Y

Human health is affected by a variety of organisms which include insects and other pathogens. The insects related to epidemiology include mosquitoes, house flies, sand flies, rat flea, tse-tse fly etc. Among these insects mosquito play an important role in epidemiology as they cause fetal diseases like malaria, filariasis, encephalitis, yellow fever, dengue etc.

Mosquitoes are diversified taxonomical group of insects. Biodiversity of mosquitoes is one of the important aspects of medical sciences which is directly related to human diseases. Hence, in the present study, biodiversity with respect to the taxonomy, seasonal abundance and distribution have been studied from Kolhapur district of Maharashtra.

Kolhapur district comes under Western Maharashtra and is characterized by several kinds of water bodies, hilly regions and Western Ghats. The river Panchganga, Panchganga river system and heavy rainfall favours mosquitoes for breeding in the region which ultimately cause diseases like malaria, dengue etc. to human beings.

The dissertation have been divided into six chapters. The first chapter is devoted to the introduction which provides national and international status of the topic and review of literature. The second chapter deals with materials and methods. The third chapter narrates the biodiversity of mosquitoes with respect to taxonomy. In all 15 species belonging to the genera *Anopheles*, *Culex* and *Aedes* have been studied under this chapter. Four species of the genus *Aedes* have been described for the first time from India. The fourth chapter embodies the seasonal abundance and distribution of 15

species in this region. The results indicate that *Anopheles culicifacies*, *Culex pipiens* and *Aedes aegypti* were abundant throughout the year while *Aedes indica* sp.nov. was rarely found and reported for the first time. The fifth chapter embodies the summary of the thesis and the sixth chapter refers to bibliography.

The thesis has an appendix of three research papers accepted / presented for Journals / Symposia / Conference, etc.