DIVERSITY OF MOSQUITO (DIPTERA: CULICIDAE) IN THE SIPADOL V.D.C. OF THE BHAKTAPUR DISTRICT

A THESIS

BY
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SUBMITTED TO

Central Department of Zoology
Institute of Science and Technology
Tribhuvan University
In partial Fulfillment of the Requirements for the Master's Degree in Zoology (Entomology)

Central Department of Zoology
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Kirtipur, Kathmandu
Nepal
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Date: ……

RECOMMENDATION

It is my pleasure to mention that Miss Kusum Chetry has carried out the dissertation entitled **"Diversity of mosquito (Diptera: Culicidae) in Sipadol V.D.C. of the Bhaktapur District."** under my supervision and guidance. The entire work is based on the result of her own investigation and has not been submitted by any other degree to the best of our knowledge. Hence, I recommend for the acceptance in partial fulfillment for the degree of Master's of Science in Zoology (Entomology).

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APPROVAL

The dissertation submitted by Miss. Kusum Chetry entitled **"Diversity of Mosquito (Diptera: Culicidae) in the Sipadol V.D.C. of the Bhaktapur District"** has been accepted as a partial fulfillment of Master's Degree in Zoology specializing in Entomology.

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EVALUATION

The dissertation submitted by Miss. Kusum Chetry entitled "**Diversity of mosquito (Diptera: Culicidae) in the Sipadol V.D.C. of the Bhaktapur District"** has been accepted as a partial fulfillment for the Master's Degree in Zoology specializing in Entomology.

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Abstract

The collections of Mosquitoes were done from May2007 to September 2007 in Sipadol V.D.C. of Bhaktapur district. The collection of mosquitoes was done by random sampling. The collection include four genera of mosquitoes viz: *Culex, Anopheles, Aedes*, and *Armigeres.* These collected genera were statistically significant. The population of Culex was found high in the study area. The maximum collections were done from the dwelling in the vicinity of paddy field, surrounding with stagnant pond and ditches. The density of *Anopheles* and *Aedes* are lowest in comparison to Culex and *Armigeres.* The mosquito collection was done from 5to 7am in the morning and in the evening from 6 to 8pm with the help of self baited mosquito net and suking with hand-aspirator. Altogether 434 specimens of mosquitoes were collected from twenty sampled houses. The mosquito diversity in the study area includes the four different types of genera which were most prevalent in the month of June, July and August and least in the month of May and September. The mean density of mosquito was positively correlated with Temperature (r = 0.76022) Rainfall (r = 0.886) and Relative humidity(r = 0.896264).The study found out that the most diverse fauna in the study area during the study period was the genus Culex (H' = 0.157), similarly, Armigeres (H' = 0.154), *Anopheles* (H' = 0.1505) and the least diverse fauna was found to be the genus *Aedes* (H' = 0.048). About 44% of *Culex*, 28% of *Armigeres*, 25% of *Anopheles* and 3% of *Aedes* were collected from the study area during the study period.

Key words:

Diversity, fauna, *Aedes, Anopheles, Armigeres, Culex,*
Seasonal prevalence, Correlation.

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