



STUDIES ON THE DIVERSITY OF BUTTERFLY FAUNA IN AND AROUND DR. VASANTRAO NAIK MARATHWADA AGRICULTURAL UNIVERSITY, PARBHANI. M. S. INDIA

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ABSTRACT:

Butterflies are one of the most conspicuous species of Earths biodiversity. Being extremely responsive to any change in their environment namely temperature, humidity, light and rainfall patterns these insects are identified as useful bioindicators. Owing to habitat destruction for development activities in urban environment and unscientific management of natural resources, much of native butterflies are fast disappearing and at present, their survival is under threat. The objective of the present survey is focused on the assessment of the diversity of butterfly in the study area. In present investigation, during July 2016 to Feb. 2017 a total 14 species of butterflies under 3 families and 9 genera were recorded around the Dr. VasantNaikMarathwada Agricultural University campus. Nymphalidae was recorded as the most dominant family in terms of number of species, represented by 7 species followed by Papilionidae (5) and Pieridae (2). This study is aimed towards contributing to the plan of biodiversity restoration in Dr. V.N.M.A.U. Parbhani.

KEYWORDS: Butterfly, biodiversity, Dr. V.N. M. A. U., Parbhani.

INTRODUCTION

Butterflies are generally regarded as one of the best taxonomically studied group of insects. Butterflies are scaled wing insects belonging to the order Lepidoptera of class Insecta. They provide the best rapid indicators of habitat quality.

Butterflies are also called the „Beauty of the Insect World“ (Duncan, 1934). India is described as a „butterfly paradise“ by Venkataramani. Some larvae (caterpillar) are useful for weed control as a biological agent in place of herbicides. Among the insects, butterflies occupy a vital position in ecosystems and their occurrence and diversity are considered as good indicators of the health of any given terrestrial biotope.

Of late, we are rapidly losing greenery in the name of development. There has also been an alarming rise in industrial and automobile pollution in Indian metropolitan cities with shrinking of greenery and increase in pollution, butterflies, birds and all our wildlife are fast disappearing. The net result is a complete imbalance of the ecosystem and extinction of many species.

Dr. VasantNaikMarathwada Agricultural University is one of four agricultural universities in the state of Maharashtra. It is located between 17° 35” N and 20° 40” N latitude and 70° 40” and 78° 15” E longitude. The Dr. V.N.M.A.U. falls in Deccan plateau zone. It is basically an intense agrarian region with geographical area of 6.5 m.ha. occupying 21% of total area of the state. The study area experience a subtropical climate with hot summer from March to June, the humid monsoon season from mid June to late September and cool dry winter from late November to early February. The area receives an average rainfall of 918 mm.

The present survey was aimed to prepare a checklist of the butterflies found in Dr. V.N. M. A.U. campus.

MATERIAL AND METHODS:-

The present study was conducted at Dr. V.N. M.K.V. located in the Parbhani district. Butterflies from different places at and around Entomology and Horticulture department campus during July 2016 to February 2017 to determine their diversity. The photographs of the butterflies are taken from the area with the help of digital camera Nikon (D 3100).

Butterflies were primarily identified directly in the field with the help of field guides followed by photography. Classification was done in the light of available literature (Mani 1974) using the standard keys and descriptive catalogue of swallowtail butterflies (Akinori et al. 2004) as well as different websites from the internet. Survey was conducted between 9.00 am to 5.00 pm the active biological hours for butterflies.

RESULT AND DISCUSSION

Fourteen species of butterflies representing three families and nine genera have been recorded during the study. The family Nymphalidae and Papilionidae was common with seven species in Nymphalidae families and five species in papilionidae followed by Pieridae with two species.

The preference of butterfly for particular habitat is associated with the availability of larval host plants and adult nectar plants. The rich diversity of butterfly especially Nymphalidsae in Dr. V.N. M. K.V. indicates a varied assemblage of floral species. The flora is a mixed type with herbs and shrubs dominating the vegetation in the tropical climate. Butterfly diversity varies with season. They are abundant for only few months and rare or absent during other months of the year. During the present study the numbers of the butterflies were peaked during post-monsoon season (late August to October) which was similar to the findings of Tiple et al., 2007, Tiple 2012, Tiple and Khurad, 2009. The species abundance was less during monsoon. Apart from being one of the most prominent biodiversity indicators, butterflies also act as our native gardener for their dependence on indigenous plants for completion of the life cycle. Therefore, an abundance of butterflies usually indicates a healthier ecosystem. Butterflies also serve as major pollinators of both wild and cultivated plants. With the pressing needs of the growing human population in India, loss of prime habitat is the major threat to all wildlife including butterflies.

List of butterflies recorded from Dr. V.N.M.A.V. campus with status.

Sr.no.	Family	Common Name	Scientific Name	Status
1.	Papilionidae(5)	Black shallow tail butterfly	Papiliopolixens	Common
2.		Green Triangle butterfly	Graphiumagamemnon	Rare
3.		Lemon butterfly	Papiliodemoleus	Very common
4.		Shallowtail butterfly	papilionidae	common
5.		Common mormon	Papiliopolytes	Very common
6.	Nymphalidae(7)	Blue tiger butterfly	Tirumalalimniace	common
7.		Common crow butterfly	Euploea core	Very common
8.		Monarch butterfly	Danausplexippus	common
9.		Plain tiger	Danauschrysippus	Very common
10.		Striped tiger	Danausgenutia	Very common
11.		Glassy tiger	Paranticaaglea	Not rare
12.		Common evening brown	Melanitisleda	Very common
13.	Pieridae (2)	Lemon emigrant butterfly	Catopsiliapomana	Common
14.		Cabbage butterfly	Pierisrapae	Common

CONCLUSION-

The data revealed knowledge of butterfly diversity around Dr. V.N.M.A.U., Parbhani. Out of the total fourteen species of butterflies encountered so far fall in the category of common and very common category. One species of Papilionidae fall into rare category. Destruction, degradation of nature and unwise use of pesticide are the most worrying causes of butterfly species extinction hence conservation of the natural habitats is very essential for the existence of species of butterfly and need to increase butterfly diversity. It

provides useful information about their diversity as well as baseline data for upcoming researchers and gives wide scope for further study in said area.

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Papiliopolyxens



Papiliodemolus



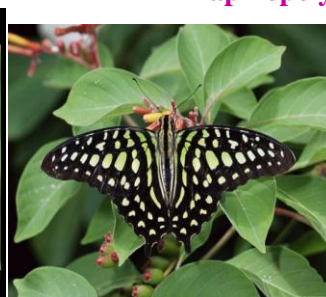
Papiliopolytus



Trimulalimniace



Euploea core



Grepiumagamemnon



Danausplexippus



Danauschrysippus



Danausgenutia



Paranticaaglea



Melanitiseda



Catopsiliapomana

PHOTOPLATE SHOWING DIFFERENT SPECIES OF BUTTERFLY



Pierisrapae



Papilionidae(Swallow tail)

PHOTOPLATE SHOWING DIFFERENT SPECIES OF BUTTERFLY