

Butterfly diversity in Ghodegaon area, Ambegaon, Pune, Maharashtra, India

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Manuscript Details

Available online on <https://www.irjse.in>

ISSN: 2322-0015

Editor: Dr. Arvind Chavhan

Cite this article as:

Kamal Dhakane and Ravindra Wale. Butterfly diversity in Ghodegaon area, Ambegaon, Pune, Maharashtra, India, *Int. Res. Journal of Science & Engineering*, 2020, Special Issue A10: 133-136.

Article published in Special issue of International e-Conference on "Role of Science and technology in Sustainable development-2020" organized by Department of Zoology & IQAC, Digambarrao Bindu ACS College, Bhokar, Dist. Nanded, Maharashtra, India date, August 17-18, 2020.



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Abstract

The objective of the present survey is focussed on the diversity of butterflies in the study area. Considering the diversity of Butterflies, the study was carried out over a period of four month from August 2019 to November 2019. Total 51 butterfly species were recorded from 38 genera, which belong to 5 families such as Nymphalidae, Pieridae, Lycaenidae, Papillionidae and Hesperidae. Nymphalidae was recorded as most dominant family in terms of number of species, represented by 21 species followed by Pieridae and Lycaenidae (Both 9 species), Papillionidae (7 species) and Hesperidae (2 species). All the values obtained from the diversity indices showed that the butterflies rich in studied area, which benefited for ecosystem.

Keywords- Lepidoptera, Butterfly, Biodiversity, Ghodegaon, Ambegaon, Pune

Introduction

Worldwide there are more than 28,000 species of butterflies. Butterflies are one of the most amazing and magnificent elements of [1]. These insects are identified as useful bio indicators. They are most beautiful and attractive than most other insects and have fascinated human imagination and creativity. They are helpful to natural ecosystems by pollinating different varieties of plant species and improve their quality [2]. There are number of scientific records of butterflies in various places of India. Western Ghats is considered as one of the most diversified area containing wide varieties of species of butterflies, about 1501 butterfly species

have been recorded from India. 350 species are from peninsular India, 331 species from the Western Ghats and 313 species from South India. A total of 721 individuals of butterflies belonging to 43 genera and 60 species recorded from Agricultural college campus, Killikulam, Tamil Nadu [1]. The diversity shows that the whole area is rich in butterfly abundance. A total 49 species of butterflies under 5 families and 36 genera were recorded during May, 2013 to April, 2014 in Sarojini Naidu college campus, Kolkata, West Bengal, India[3]. Many butterflies population are declines due to urbanisation, construction, forest fire, changes in climate, solar radiation, and pollution. Hence the study has been placed on examine the diversity of butterflies.

Methodology

Study area:

The study was done in Ghodegaon (19.04370 N, 73.83310 E), Ambegaon Tehsil, Pune, Maharashtra, from August 2019 to November 2019. The location of the studied area on hills at an elevation of about 619 m. The temperature ranges from minimum 250 C to maximum 350 C. The study area covered by Agriculture and Horticulture. The mean annual rainfall of the area

during the study period near about 130 mm. Butterflies were photographed to enable positive identification of specimen.

Butterfly Survey:

Photographs were taken with a digital camera. Butterflies were primarily identified directly in the field with the help of field guide chart of Butterflies. Unidentified specimens were identified with the help of field guide in laboratory. The present survey was aimed to prepare a checklist of Butterflies in Ghodegaon village area, Ambegaon, Pune.

Results and Discussions

Fifty one species of butterflies representing five families and Thirty eight genera have been recorded during the study. In which Nymphalidae is the most represented Family comprising 21 species (47.06 %), followed by Pieridae and Lycaenidae (both comprising 9 species 17.65%), Papillionidae (7 species 13.73 %) and Hesperidae (2 species 3.92 %). The reasons for butterfly diversity in Ghodegaon area are favourable climatic conditions, availability of more plants and vegetation for nectaring.

Table 1. List of Butterfly species:

Sr.No.	Common Name	Scientific Name
Family - Nymphalidae		
1.	Lemon pansy	<i>Junonia lemonias</i>
2.	Peacock pansy	<i>Junonia almna</i>
3.	Great eggfly male	<i>Hypolimnas bolina</i>
4.	Plain tiger	<i>Danaus chrysippus</i>
5.	Angled caster	<i>Ariadne ariadne</i>
6.	Orange staff sergeant	<i>Athyma cama</i>
7.	Blue pansy	<i>Junonia orithiya</i>
8.	Common fouring	<i>Ypthima hueneri</i>
9.	Common sergeant	<i>Athyma perius</i>
10.	Blue tiger male	<i>Tirumala limniace</i>
11.	Striped tiger	<i>Danaus genutia</i>
12.	Common crow	<i>Euploea core</i>
13.	Common nawab	<i>Polyura athaman</i>
14.	Painted lady	<i>Vanessa cardui</i>

15.	Yellow coster male	<i>Acraea vesta</i>
16.	Southern blue oakleaf	<i>Kallima harsfieldi</i>
17.	Red lacewing	<i>Cethosia biblis</i>
18.	Common fivering	<i>Ypthima baldus</i>
19.	Red cracker	<i>Hamadyayas amphinome</i>
20.	Starry night	<i>Hamadyayas laodamia</i>
21.	Banded orange heliconian	<i>Dryadula phaetusa</i>
22.	Common evening brown	<i>Melantis leda</i>
23.	Danaid eggfly male	<i>Hypolimnas misippus</i>
24.	Gorgone checkerspot	<i>Chlosyne gorgone</i>
Family- Pieridae:		
25.	Small grass yellow	<i>Eurema brigitta</i>
26.	Spotless grass yellow	<i>Eurema lacta</i>
27.	Common jezebel	<i>Delias eucharis</i>
28.	Yellow tip	<i>Ixias pyrene</i>
29.	Mottled emigrant	<i>Catopsilia pyranthe</i>
30.	Crimson tip	<i>Calotes danae</i>
31.	Common emigrant	<i>Catopsilia pomona</i>
32.	One- spot grass yellow	<i>Eurema andersonii</i>
33.	White orange tip	<i>Ixias marianne</i>
Family- Papilionidae		
34.	Tailed jay	<i>Graphium Agamemnon</i>
35.	Lime	<i>Papilio demoleus</i>
36.	Common bluebottle	<i>Graphium sarpedon</i>
37.	Fivebar swordtail	<i>Graphium antiphates</i>
38.	Crimson rose	<i>Pachliopta hector</i>
39.	Common jay	<i>Graphium doson</i>
40.	Red spot duke	<i>Dophla evelina</i>
Family- Lycaenidae		
41.	Red pierrot	<i>Talicauda nyseus</i>
42.	Pale grass blue	<i>Pseudozizeeria maha</i>
43.	Gram blue	<i>Euchrysops cnejus</i>
44.	Common silverline	<i>Cigaritis vulcanus</i>
45.	Persian glass blue	<i>Luthrodes galba</i>
46.	Western courtier	<i>Sephisia dichroa</i>
47.	Common jester bluetail	<i>Symbrenthia lilaea</i>
48.	Indian pierrot	<i>Tarucus indica</i>
49.	Small copper	<i>Lycaena phlaeas</i>
Family- Hesperidae		
50.	African marbled skipper	<i>Gomalia elma</i>
51.	Fulvous pied flat	<i>Pseudocoladenia dan</i>

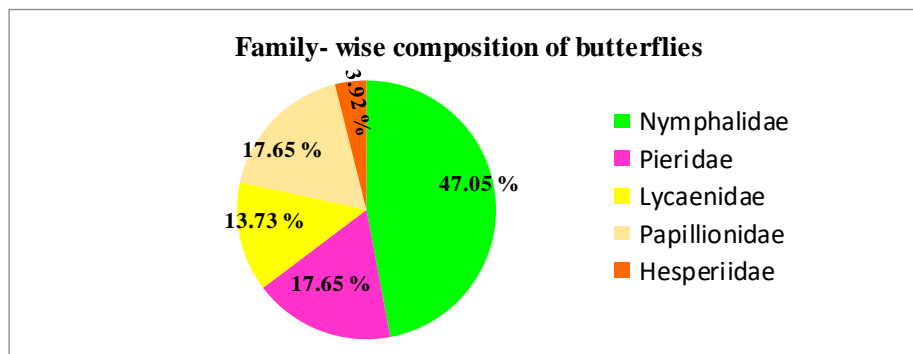


Fig.2. Family-wise composition of butterflies

Conclusion

The revealed a great diversity of butterflies from Ghodegaon area and 51 species reported during study period. Even though study was not done for a long period of time, we still could find a great variety of butterflies in samples. Result obtained from present study shows that Ghodegaon area is rich in butterfly diversity. Total 51 butterfly species were recorded from 38 genera, which belong to 5 families such as Nymphalidae, Pieridae, Lycaenidae, Papilionidae and Hesperidae. Nymphalidae was recorded as most dominant family in terms of number of species. Present study revealed that the study area provides favourable ecological conditions and habitat for butterflies.

Conflicts of interest: The authors stated that no conflicts of interest.

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