



A Preliminary study on Butterfly (Lepidoptera) diversity of Indira vihar, Raigarh (C.G.) India

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Abstract : Butterflies are the most beautiful insect .India hosts about 1,504 species. The objective of the present study is to inventorize the butterflies fauna of Indira Vihar Park, Raigarh, Chhattisgarh India. The butterfly diversity of this area was recorded from March 2020 to May 2021. During the survey, a total of 50 species of butterflies belonging to 5 families were identified. The highest number of butterflies were representing the family Nymphalidae with 20 species, which contributed 42 %, followed by the Lycaenidae with 11 species, contributed 23 %, Pieridae with 8 species contributed 16 %, Papilionadae with 8 species contributed 16 %, Hesperidae with 3 species contributed 6%. Of total family wise frequency of occurrence of butterflies in the study area.

IndexTerms - Butterfly , Biodiversity,.

I. INTRODUCTION

Butterflies are scaly winged insect under the order Lepidoptera of the class Insect. Butterfly are living ornament of nature. Butterflies are masterpiece of art and beauty of nature. (Rafi et al.2000) Butterfly play an important role as pollinators which help to increase hetrozygosity in flora. The study of butterflies is very important because these animal are useful indicators of ecological changes. More than 17,000 species of butterflies are found all over the world. India hosts about 1,504 species (Tiple, 2011). Butterflies are considered as a good indicator of terrestrial biotopes (Kunte).

Raigarh is an industrial area of Chhattisgarh state known as cultural capital of Chhattisgarh state.. Geographical location of Raigarh is 21°54'0"N/83°24'0"E, Butterflies are useful indicators of health of the ecosystem. So the study of Butterflies is very significant. The habitat of butterflies is very specific and their habitat is seasonal (Kunte , 1997) This study is first approach to explore the Butterflies fauna of Indira Vihar Park Raigarh C.G.

II. MATERIAL AND METHOD

The present study is based on the field surveys .The study was carried out from March 2020 to May 2021 and data were collected regularly. Butterflies were photographed by using Canon EOS 1500 D The morphometric and taxonomic characters of the photographed specimens were studied and identified with the help of standard books Butterflies of India Issac Kehimkar, Butterflies of India Peter Smetacek, Evans (1932),Wynter Blyth (1957), kunte(2000), .The butterflies were monitored every Sunday during sunny days hours (7.00 to 4.00) P.M. No specimen were killed or narcotized during the course of present study.

III. STUDY AREA AND SAMPLEING SITE

The present study was conducted at Indira Vihar on south Chakradhar Nagar of Raigarh. Inside the park there is a large garden which includes Croton, ornamental plants, flowering plants, herbs, shrubs, trees and well developed grassland. The butterfly diversity of the Indira Vihar was not previously studied. An attempt has been made to explore and proper documentation of butterfly diversity in the study area.



N 21.910721 E 83.427907

Map indicating the sampling station Indira Vihar Raigarh

IV. OBSERVATION

Table-1 List of butterflies observed in Indira Vihar Raigarh, (C.G).

	Common Name	Scientific Name
	Family Hesperidae (3)	
1	Brown Awl	Badamia exclamationis (Fabcius 1775)
2	Common Banded Awl	Hasora chromus (Cramer 1780)
3	Grass Demon	Udaspes folus (Cramer 1775)
	Family Papillionidae (8)	
4	Common Jay	Graphium doson (C&R Felder)
5	Tailed Jay	Graphium agamemnon (Linnaeus 1758)
6	Spot Swordtail	Graphium nomius (Esper 1799)
7	Common Mormon	Papilio polytes (Linnaeus 1758)
8	Blue Mormon	Papilio polymnestor (Cramer 1775)
9	Common Banded Peacock	Papilio crino (Fabricius 1793)
10	Lime Butterfly	Papilio demoleus Linnaeus 1758
11	Common Rose	Pachliopta aristolochiae Fabricius 1775
	Family Pieridae (8)	
12	Common Gull	Cepora nerissa (Fabricius 1775)
13	Common Jezbel	Delias eucharis (Drury, 1773)
14	Common Wanderar	Pareronia hippia (Fabricius 1787)
15	Common Emigrant	Catopsilia pomona (Fabricius 1775)
16	Mottled Emigrant	Catopsilia pyranthe (Linnaeus, 1758)
17	Small Grass Yellow	Eurema brigitta (Stoll, 1780)
18	Common Grass Yellow	Eurema hecabe Linnaeus, 1758)
19	Psyche	Leptosia nina (Fabricus, 1793)
	Family Lycaenidae (11)	
20	Pale Grass Blue	Pseudozizeeria maha (Kollar, 1884)
21	Tailless Lineblue	Prosotas dubiosa (Semper, 1879)
22	Common Pierrot	Castalius rosimon (Fabricius 1775)
23	Bright Babul Blue	Azonus ubaldus (Stoll, 1782)
24	Dark Grass Blue	Zizeeria karsandra (Moore, 1865)
25	Tiny Grass Blue	Zizula hylax (Fabricus, 1775)
26	Plain Cupid	Chilades pandava (Horsfield, 1829)
27	Common Guava Blue	Deudorix Isocrates (Fabricus, 1793)
28	Common Silverline	Spindasis vulcanus (Fabricius,1775)
29	Indian Red Flesh	Rapala iarbus (Fabricius, 1787)
30	Striped Pierrot	Tarucus nara (kollar 1848)
	Family Nymphalidae (20)	
31	Blue Tiger	Tirumala limniace (Cramer, 1775)
32	Plain Tiger	Danaus chrysippus (Linnaeus,1758)
33	Common Tiger	Danaus genutia (Cramer,1779)
34	Common Crow	Euploea core (Cramer, 1780)
35	Common Evening Broun	Melanitis leda (Linnaeus, 1758)
36	Common Castor	Ariadne merione (Cramer, 1777)
37	Tawny Coster	Acraea violae (Fabricius,1793)
38	Commander	Moduza procris (Cramer, 1777)
39	Common Sailer	Neptis hylas (Linnaeus, 1758)

40	Common Baron	<i>Euthalia aconthea</i> (Cramer, 1777)
41	Baronet	<i>Euthalia nais</i> (Forster, 1771)
42	Painted Lady	<i>Vanessa cardui</i> (Linnaeus, 1758)
43	Gray Pancy	<i>Junonia atlites</i> (Linnaeus, 1763)
44	Peacock Pancy	<i>Junonia almana</i> (Linnaeus, 1758)
45	Yellow Pancy	<i>Junonia hierta</i> (Fabricius, 1798)
46	Chocholate Pancy	<i>Junonia iphita</i> (Cramer, 1779)
47	Blue Pancy	<i>Junonia orithya</i> (Linnaeus, 1758)
48	Lemon Pancy	<i>Junonia lemonias</i> (Linnaeus, 1758)
49	Great Egg fly	<i>Hypolimnna bolina</i> (Linnaeus, 1758)
50	Danaid Eggfly	<i>Hypolimnna misippus</i> (Linnaeus, 1764)

V. RESULT AND DISCUSSION

The plant diversity in the study area is very rich..Rich plant diversity attracting the butterflies by providing the nector and breeding ground. Modes of feeding and food are different in the adult and larval stage (Kunte, 2000). A habitat that includes sufficient adult and larval food resources is a successful butterflies habitat (Ramesh et al. 2010).

During the survey, a total of 50 species of butterflies belonging to 5 families were identified. They are Hesperidae (3 species), Papilionadae 8 species, Pieridae 8 species, Lycaenidae 11 species, Nymphalidae 20 species. The observation have been listed with their common name and scientific name .in the table 1.The most dominant family was Nymphalidae with 20 species, which contributed 42 %, followed by the Lycaenidae with 11 species, contributed 23 %, Pieridae with 8 species contributed 16 %, Papilionadae with 8 species contributed 16 %, Hesperidae with 3 species contributed 6% of total family wise frequency of occurrence of butterflies in the study area .

Figure – 1: Percentage abundance of families

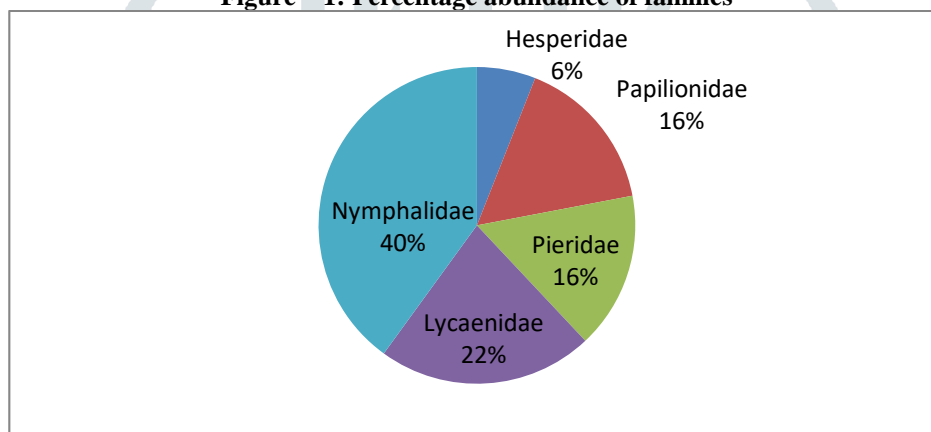
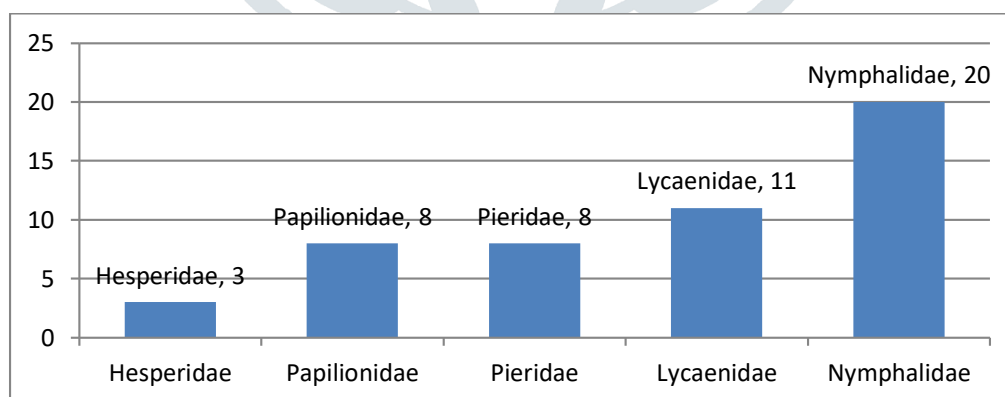


Figure : 2 No of species in different families



VI. CONCLUSION

The occurrence of 50 species of butterflies shows that the environmental health of study area is good. The ecological condition of Indira vihar Park Raigarh, Chhattisgarh is helpful in butterfly's conservation. The present study will prepare a preliminary data of butterfly diversity for future study. This study is a pioneer scientific study on butterfly in this region..

VII. REFERENCES

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