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A Glimpse of Butterfly Diversity in Campus Area of Kirodimal Government Arts & Science College Raigarh, (C.G.) India

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Abstract:
Bu*tterflies are the most beautiful insect .India hosts about 1,504 species. The objective of the present study is to improve awareness towards the conservation of campus ecosystem. The butterfly diversity of this campus was recorded from march 2019 to February 2021. During the survey, a total of 48 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 17 % , Papilionadae with 6 species contributed 12 %, Hesperiidae with 3 species contributed 6%. Of total family wise frequency of occurrence of butterflies in the study area.*
Key Word*: Butterfly , Biodiversity,.*

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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. 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. 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)

II. Material And Methods

The present study is based on the field surveys .The study was carried out from March 2019 to February 2021 and data were collected regularly. Butterflies were photographed by using Canon EOS 700D 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 during sunny days hours (7.00 to 4.00) P.M.No specimen were killed or narcotized during the course of present study.

Study Area And Sampling Sites

The present study was conducted at college campus lies on south Chakradhar Nagar of Raigarh. The campus is spread over an area of 13 acre and it is surrounded by tall trees. Inside the campus there is a large garden which includes Croton, ornamental plants, flowering plants, herbs, shrubs, trees and well developed grassland. The butterfly diversity of the campus was not previously studied. An attempt has been made to explore and proper documentation of butterfly diversity in the study area.

N 21.891776 E 83.410307

Map indicating the sampling station Kirodimal Govt. Arts and Science College Raigarh

III. Observation

Table-1 List of butterflies observed in college campus

	Common Name	Scientific Name
	Family Hesperiidae (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 (6)	
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)
	Family Pieridae (8)	
10	Common Gull	Cepora nerissa (Fabricius 1775)
11	Common Jezbel	Delias eucharis (Drury, 1773)
12	Common Wanderar	Pareronia hippia (Fabricius 1787)
13	Common Emigrant	Catopsilia pomona (Fabricius 1775)
14	Mottled Emigrant	Catopsilia pyranthe (Linnaeus, 1758)
15	Small Grass Yellow	Eurema brigitta (Stoll, 1780)
16	Common Grass Yellow	Eurema hecabe Linnaeus, 1758)
17	Psyche	Leptosia nina (Fabricus, 1793)
	Family Lycaenidae (11)	
18	Pale Grass Blue	Pseudozizeeria maha (Kollar, 1884)
19	Tailless Lineblue	Prosotas dubiosa (Semper, 1879)
20	Common Pierrot	Castalius rosimon (Fabricus 1775)
21	Bright Babul Blue	Azanus ubaldus (Stoll, 1782)
22	Dark Grass Blue	Zizeeria karsandra (Moore, 1865)
23	Tiny Grass Blue	Zizula hylax (Fabricus, 1775)
24	Plain Cupid	Chilades pandava (Horsfield, 1829)
25	Common Guava Blue	Deudorix Isocrates (Fabricus, 1793)
26	Common Silverline	Spindasis vulcanus (Fabricius,1775)
27	Indian Red Flesh	Rapala iarbus (Fabricius, 1787)
28	Striped Pierrot	Tarucus nara (kollar 1848)
	Family Nymphalidae (20)	
29	Blue Tiger	Tirumala limniace (Cramer, 1775)
30	Plain Tiger	Danaus chrysippus (Linnaeus,1758)
31	Common Tiger	Danaus genutia (Cramer,1779)
32	Common Crow	Euploea core (Cramer, 1780)
33	Common Evening Broun	Melanitis leda (Linnaeus, 1758)
34	Common Castor	Ariadne merione (Cramer, 1777)
35	Tawny Coster	Acraea violae (Fabricius,1793)
36	Commander	Moduza procris (Cramer, 1777)
37	Common Sailer	Neptis hylas (Linnaeus, 1758)
38	Common Baron	Euthalia aconthea (Cramer, 1777)
39	Baronet	Euthalia nais (Forster, 1771)
40	Painted Lady	Vanessa cardui (Linnaeus, 1758)

41	Gray Pancy	Junonia atlites (Linnaeus,1763)
42	Peacock Pancy	Junonia almana (Linnaeus, 1758)
43	Yellow Pancy	Junonia hierta (Fabricius, 1798)
44	Chocholate Pancy	Junonia iphita (Cramer, 1779)
45	Blue Pancy	Junonia orithya (Linnaeus, 1758)
46	Lemon Pancy	Junonia lemonias (Linnaeus, 1758)
47	Great Egg fly	Hypolimnas bolina (Linnaeus, 1758)
48	Danaid Eggfly	Hypolimnas misippus (Linnaeus, 1764)

Table-2 Floral status of College campus

1	Tradescantia spathacea
2	Catharanthus roseus
3	Chromolaena odorata
4	Alstonia scholaris
5	Turnera ulmifolia
6	Azadirachta indica
7	Cupressus sempervirens
8	Duranta erecta
9	Cestrum nocturnum
10	Albizia julibrissin
11	Euphorbia milii
12	Cyanthilium cinereum
13	Clitoria ternatea
14	Tridax procumbens
15	Alternanthera sessilis
16	Mimosa pudica
17	Ageratina altissima
18	Parthenium hysterophorus
19	Calotropios gigantea
20	Hibiscus rosa-sinensis
21	Bougainvillea specabilis
22	Ixora inermis
23	Lantana camara
24	Jasminum auriculatum

IV. Result and Discussion

The plant diversity in the college campus in which the study of butterflies was conducted include Lantana camara, Ixora inermis, Hibiscus rosa-sinensis, Bougainvillea spectabilis, Solenum xenthocarpum, Tridax procumbans, Vinca rosia, Tradescantia spathacea, Catharanthus roseus, Chromolaena odorata, Alstonia scholaris, Turnaria ulmifolia, Azadiracta indica, Psidium guajava , Mangifera indica, etc.

Rich plant diversity attracting the butterfies 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 48 species of butterflies belonging to 5 families were identified. They are Hesperiidae (3 species), Papilionadae 6 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 17 %, Papilionadae with 6 species contributed 12 %, Hesperiidae with 3 species contributed 6% of total family wise frequency of occurrence of butterflies in the study area .

Figure – 1: Percentage abundance of families

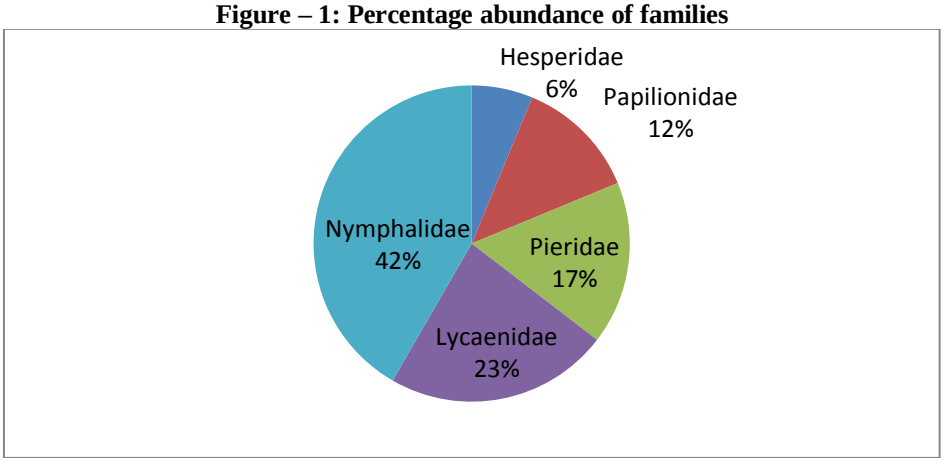
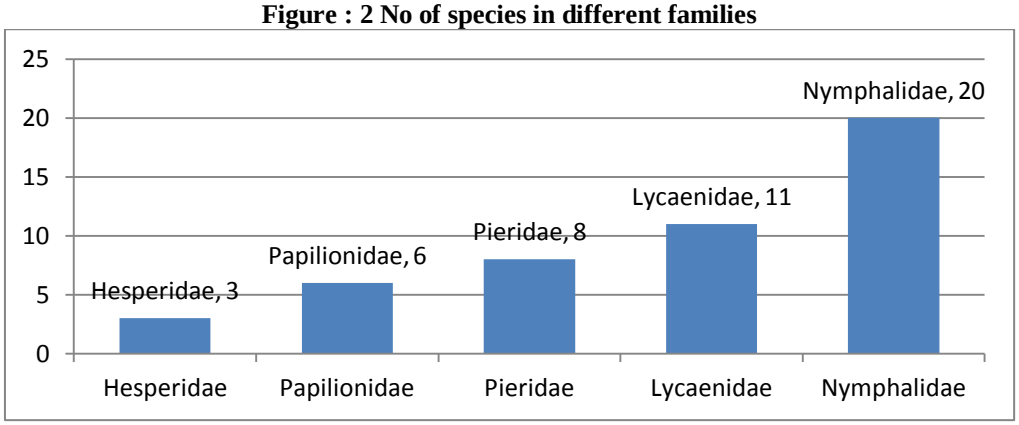


Figure : 2 No of species in different families



V. Conclusion

The occurrence of 48 species of butterflies shows that the environmental health of campus is good. The ecological condition of campus 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. Although the campus area supports a good number of butterfly species but it is necessary to conserve butterflies natural habitat by creating students awareness program at college.

Common Palm fly

Blue Pancy

Common Silverline

Common Pierrot

Commander

Common Baron

Psyche

Common Grass Yellow

Red Flash

Common Jezbel

Common Banded Awl

Plain tiger

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