

Faunal Diversity of Ajmer Aravalis Lepidoptera Butterflies

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Abstract: Ajmer is located in the center of Rajasthan (INDIA) between 25° 38' " and 26° 58' " north 75° 22' " east longitude covering a geographical area of about 8481sq km hemmed in all sides by Aravalli hills . About 7 miles from the city is Pushcart lake created by the touch of lord Brahma. The Dargah of khawaja Moinuddin chisti is holiest shrine next to Mecca in the world.

Ajmer is abode of certain flora and fauna that are particularly endemic to semi-arid and are specially adapted to survive in the dry waterless region of the state. Lepidoptera integument covered with scales forming colored patterns. Availability of butterflies were more during the sunny hours and population seemed to be Confined to the sunlit areas.

Butterflies are among natures most beautiful gifts to mankind they have been admired and studied for centuries, every art form has used their colour and design as an embellishment. Following butterflies are recorded in AJMER

Key words: Ajmer, Faunal diversity, Lepidoptera, Aravalis.

I. Introduction

Ajmer is located in the center of Rajasthan (INDIA) between 25° 38' " and 26° 58' " north Latitude and 73° 54' " and 75° 22' " east longitude covering a geographical area of about 8481sq km hemmed in all sides by Aravalli hills . About 7 miles from the city is Pushkar lake created by the touch of lord Brahma. The Dargah of khawaja Moinuddin chisti is holiest shrine next to Mecca in the world.

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II. Methodology

Field observations were made during March to April and September to November in different areas of Ajmer East, West, North and South AJMER with varied habitats like gardens, hilly areas parks mountains, vegetable areas , open fields, agricultural areas and other cultivated areas. The specimens were identified with first auther (Evans, 1932, Talbot, 1939,1947, Wynter-Blyth, 1957, Haribal, 1992, Kunte,2006, Pajni et. Al. 2006; Kehimker, 2010).

III. Observations and Results

During the course of present field investigations about 40 species of butterflies distributed under 8 families viz, Danidae, Hesperidae, Lybitheidae, Lycaenidae, Nymphalidae, Papilionidae, Pieridae and Satyridae of 30 genera have been reported. The detail of Family, name of species and common name are given below . Pieridae was found to be most dominant family (40%), represented by 17 species followed by Nymphalidae (20.2 %) represented by 9 species . Papilionidae (10%), 4 species . Danidae and Satyridae Both (7%) 3 each, Lycaenidae (4.4%) 2 species, Acraeidae and Hesperidae (2.4 % each) 1 species.

Some species were found in all months except extreme winters i e march to October, November (Pieridae), others were restricted in distribution only in September October Papilionidae). Some species were quick fliers others were shy in nature.

The present study reveals that Danus chrysippus (Danidae) , and calotis etrida (Pieridae) were the first to emerge (March) and Papilio demolius (Papilionidae) was the most late arrival emerging in the month of April. The peak butterfly activity was observed in the month of april and October.

Papilionidae

Papilio deiphobus, P. demoleus, Pachlioptera aristolochiae, P. Iormie.

Acraeidae

Acraea violae.

Danidae

Danus crisyppus, Danus juvena, Idea leuconoe.

Nymphalidae

Hypolimnas misippus, Kallima paralecta, Junonia lavinia, J. atmana, J. atlites, J. hierta, J. lemonias, J. orithya, Precis clelia.

Pieridae

Dalias candida, D. descombesi, Calotis etrida, Anthocaris belia, Ascia Josephina, Anaphaeis Maurota, Eurema brigitta, E. eximia, E. mexicana, Colias hageni, C. alexandra, C. eurytheme. E. boisduvaliana, Pieris cruciferarum. Belenois thysa, B. aurota, Ilia catops, pyranthe.

Satyridae

Cercyinis meadii, Argyreuptychia penelope, Mandarinia regalis.

Lycaenidae

Lycaena mariposa, Lycaeides melissa.

Hesperiidae

Suastus gremius.

Table 1 Butterflies of AJMER

S. No.	Family/Scientific name	M	Abundance	Habitat
1	Papilionidae/Papilio diphobus	Rs	C	T
2	P. demolius	Rs	C	T
3	pachliopta aristolochiae	Wm	C	T
4	P. iormie	Wm	O	T
	Acraeidae			
5	Acraea violae	SM	O	T
	Danidae			T
6	Danus crisyppus	Rs	F	T
7	Danus juvena	Rs	F	T
8	Idea leuconoe	Wm	O	T
	Nymphalidae			
9	Hypolimnas misippus	Sm	C	T
10	Kallima paralecta	Rs	C	T
11	Junonia levinia	Rs	F	T
12	J. atmana	Rs	O	T
13	J. atlites	Rs	R	T
14	J. hierta	Wm	O	T
15	J. lemonias	Rs	O	T
16	J. orythya	Wm	O	T
17	Precis clalia	Rs	C	T
	Pieridae			
18	Dalias candida	Wm	C	T
19	D. descombesi	Wm	O	T
20	Calotis etrida	Rs	C	T
21	Anthocaris belia	Rs	C	T
22	Ascia josephina	Rs	C	T
23	Anaphaeis aurota	Rs	C	T
24	Eurema brigitta	Rs	C	T
25	E. eximia	Rs	C	T
26	E. mexicana	Rs	C	T
27	Colias hageni	Rs	R	T
28	C. alexandra	Rs	O	T
29	C. eurytheme	Wm	C	T

30	<i>E. boisduvaliana</i>	Wm	O	T
31	<i>Peiris cruciferarum</i>	Rs	C	T
32	<i>Belanois thysa</i>	Wm	R	T
33	<i>B. aurota</i>	Wm	O	T
34	<i>Ilia catops</i>	Wm	R	T
35	<i>Pyranthe penelope</i>	Wm	O	T
36	<i>Mandarinia regalis</i>	Wm	O	T
	Satyridae			
37	<i>Cercynis meadii</i>	Rs	R	T
38	<i>Argyreuptychia penelope</i>	Wm	O	T
	Lycaenidae			
39	<i>Lycaena mariposa</i>	Wm	O	T
40	<i>L. melissa</i>	Wm	R	T
	Hesperidae			
41	<i>Suastus gremius</i>	Wm	C	T

M-Migratory status, Rs- Resident, Sm- Summer visitor, Wm- Winter Visitor, C- common, F- Frequent, O- Occasional, R- Rare, T - Terrestrial.

IV. Results and Discussion

During the course of present field investigation, 41 species of butterflies under 8 families viz. Papilionidae, Acraeidae, Danidae, Nymphalidae, Pieridae, Satyridae, Lycaenidae, Hesperidae. The detail list of family, name of species habitat, status, abundance is provided. Pieridae was found to be the most dominant family represented by 19 species, followed by Nymphalidae-9, Papilionidae- 4, Danidae -3, Satyridae- 2, Lycaenidae- 2, Acraeidae- 1, Hesperidae- 1.

The present study revealed *Calotis etrida* and members of family Pieridae were first to emerge (from march) and members of family Hesperidae were most late in emerging. The peak butterfly activities were observed during the months of march april and September October and November incorporating all 8 families covering 41 species.

The highest butterfly diversity was during March, April, September, October and November.

There was no butterfly activity during peak summer (May, June) and peak winter (December January February). The overall butterfly activity was observed March April from 7 am to 7 pm and September, October, November 7am to 6.30 pm. Depending upon weather, month, season, host plant temperature and type of species concerned.

The species of pieridae *Calotis etrida*, *Eurima brigitta* were found in all months and were most dominant.

V. Conclusion

The present field investigation revealed that district Ajmer is rich in floral and faunal Wealth. Specially in Lepidoptera butterfly diversity. However its biological diversity not been documented till date. We cannot conclude that butterfly fauna of the area is increasing or decreasing. The area needs to be continuously monitored and efforts be made to document its unknown floral and faunal wealth and there is need to have a vision document on the sustainable development of the district care and focus on documentation and conservation of its rich biodiversity.

The Aravalis are being continuously cut for house construction and urbanization. There should be a check on the activity.

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